

AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

Vol. 45.

CONTENTS FOR APRIL, 1928

No. 1.

COPYRIGHT, 1928, BY AMERICAN CARPENTER & BUILDER CO.

Page	Page
AMERICAN BUILDER Service Department.....115	A Fire Resistant Residence.....154
Around the Family Table.....117	Most Efficient Garage Design.....156
Presenting the Famous Green Paper Directory Section, The Buyers' Guide for Contractors and Dealers.	Chicago School Boys in Home Planning Com- petition158
Editorial Page119	Outline of the St. Lawrence Seaway Project...161
Everybody's Business—By Floyd W. Parsons..121	Details of Home Building.....162
Unexpected Discoveries Remould Industries.	Modified Bungalow Types.
Many Old Homes in Decatur, Illinois, Modern- ized During General Remodeling Campaign..123	Furnace Heating.....164
What the Public Wants.....126	Comments on Pipeless Furnaces.
West Coast Woods Prize Winning Home Is Completed129	Chips and Quips.....167
Free Information Service for Home Planners and Home Builders.....132	How Dan Does It.....168
KOLORKEED HOME PLANS.....133-144	Mitering Stair Treads.
The RavenswoodColorplate I	Removing Old Putty.
The RichwoodColorplate II	Another Door Jack.
The RangerColorplate III	Handy Saw Horse and Tool Box.
Two Low Cost Cottages.....Colorplate IV	Settling Floor Nails.
The Prosperity; the Princeton.	When Making Storm Sash.
The RichardsColorplate V	Matching Floor Finish.
The RamonaColorplate VI	For Garage Doors.
The RaviniaColorplate VII	To Straighten a Warped Board.
The RidgewayColorplate VIII	Instructions in Roof Framing.....170
Our Front Cover Home.....141-145	Rafter Details for a Hip Roof.
Photographs and Complete Set of Working Drawings to Eighth Inch Scale of the Charming Norman Design. Cottage Illustrated in Full Colors on Our Front Cover.	What's New?...172, 176, 178, 180, 182, 184, 186, 188, 191, 194, 196, 198, 200, 202, 204, 209, 212, 244
The Park Central Hotel, New York City.....146	News of the Field.....214, 216, 218, 234
Set-Backs Used for Terraces Surrounding Apart- ment Suites.....148	Catalogs220
Real Estate and Subdivision Work.....149	CONTRACTORS' EQUIPMENT SECTION—
How Good Homes Are Built in Ninety Days.	Concrete Mixed in Transit.....225
Insulation's Part in Modern Construction.....153	How a Power Crane Reduces Material Hand- ling Expense226
	Mechanical Hoeman Saves in Mixing Mor- tar226
	Casting Concrete Chimney Caps and Coping.230
	New Electric Hammer versus Man Power..231
	Motor Trucks and Trailers.....239
	Points on Truck Maintenance.
	CLASSIFIED DIRECTORY AND BUYERS' GUIDE319 to 350
	TRADE NAMES.....340 to 350
	ADVERTISERS' INDEX371-373

Published on the first day of each month by American Carpenter and Builder Co.; Wm. A. Radford, *President, Treasurer and Editor-in-Chief*; Wm. A. Radford, Jr., *Vice-President*; E. L. Hatfield, *Vice-President and General Manager*; Bernard L. Johnson, *Vice-President and Editor*; Roland D. Radford, *Secretary*; S. C. Kellenberger, *Dealer Service*; Charles G. Peker, *Eastern Editor*; Juan Homs, *Export Editor*; Delbert W. Smith, E. B. Wolfrom, C. R. W. Edgumbe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, H. P. Sessions, J. J. Dubro, R. E. Clement, *Advertising Staff*.

Publication Offices:

Radford Building, 1827 Prairie Ave., Chicago

Telephone: Calumet 4770

Eastern Office, 250 Park Ave., New York City

Telephone: Vanderbilt 3185

Entered as second-class matter July 1, 1905, at the post office at Chicago, Ill., under the Act of March 3, 1879. Additional entry as second-class matter at Binghamton, N. Y.; Columbus, Ohio; Seattle, Wash.; Los Angeles, Calif.; San Francisco, Calif.; Denver, Colo.; Dallas, Texas; St. Paul, Minn., and Kansas City, Mo.

SUBSCRIPTION RATES—One year, United States, Canada, Mexico, and U. S. Possessions, \$2.00; six months, \$1.00; single copies, 35 cents. Foreign countries, \$4.00.

PROTECTION FOR OUR READERS—The publishers of the AMERICAN BUILDER reserve the right to decline any advertising they believe is detrimental to the interest of its readers; to edit advertising copy and to change or eliminate any statements that reflect injuriously or cast discredit upon other building products, machinery, equipment, supplies or tools.

Be sure in writing to advertisers to say: "I saw your advertisement in the AMERICAN BUILDER."

ADVERTISING RATES—Furnished on application. Advertising forms close on the 10th of the month preceding date of publication.

MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

Vol. 45.

CONTENTS FOR APRIL, 1928

No. 1.

COPYRIGHT, 1928, BY AMERICAN CARPENTER & BUILDER CO.

Page	Page		
AMERICAN BUILDER Service Department.....	115	A Fire Resistant Residence.....	154
Around the Family Table.....	117	Most Efficient Garage Design.....	156
Presenting the Famous Green Paper Directory Section, The Buyers' Guide for Contractors and Dealers.		Chicago School Boys in Home Planning Com- petition	158
Editorial Page	119	Outline of the St. Lawrence Seaway Project...	161
Everybody's Business—By Floyd W. Parsons..	121	Details of Home Building.....	162
Unexpected Discoveries Remould Industries.		Modified Bungalow Types.	
Many Old Homes in Decatur, Illinois, Modern- ized During General Remodeling Campaign..	123	Furnace Heating.....	164
What the Public Wants.....	126	Comments on Pipeless Furnaces.	
West Coast Woods Prize Winning Home Is Completed	129	Chips and Quips.....	167
Free Information Service for Home Planners and Home Builders.....	132	How Dan Does It.....	168
KOLORKEED HOME PLANS.....	133-144	Mitering Stair Treads. Removing Old Putty. Another Door Jack. Handy Saw Horse and Tool Box. Settling Floor Nails. When Making Storm Sash. Matching Floor Finish. For Garage Doors. To Straighten a Warped Board.	
The Ravenswood	Colorplate I	Instructions in Roof Framing.....	170
The Richwood	Colorplate II	Rafter Details for a Hip Roof.	
The Ranger	Colorplate III	What's New?... 172, 176, 178, 180, 182, 184, 186, 188, 191, 194, 196, 198, 200, 202, 204, 209, 212, 244	
Two Low Cost Cottages.....	Colorplate IV	News of the Field.....	214, 216, 218, 234
The Prosperity; the Princeton.		Catalogs	220
The Richards	Colorplate V	CONTRACTORS' EQUIPMENT SECTION—	
The Ramona	Colorplate VI	Concrete Mixed in Transit.....	225
The Ravinia	Colorplate VII	How a Power Crane Reduces Material Han- dling Expense	226
The Ridgeway	Colorplate VIII	Mechanical Hoeman Saves in Mixing Mor- tar	226
Our Front Cover Home.....	141-145	Casting Concrete Chimney Caps and Coping..	230
Photographs and Complete Set of Working Drawings to Eighth Inch Scale of the Charming Norman Design. Cottage Illustrated in Full Colors on Our Front Cover.		New Electric Hammer versus Man Power..	231
The Park Central Hotel, New York City.....	146	Motor Trucks and Trailers.....	239
Set-Backs Used for Terraces Surrounding Apart- ment Suites.....	148	Points on Truck Maintenance.	
Real Estate and Subdivision Work.....	149	CLASSIFIED DIRECTORY AND BUYERS' GUIDE	319 to 350
How Good Homes Are Built in Ninety Days.		TRADE NAMES.....	340 to 350
Insulation's Part in Modern Construction.....	153	ADVERTISERS' INDEX	371-373

Published on the first day of each month by American Carpenter and Builder Co.; Wm. A. Radford, *President, Treasurer and Editor-in-Chief*; Wm. A. Radford, Jr., *Vice-President*; E. L. Hatfield, *Vice-President and General Manager*; Bernard L. Johnson, *Vice-President and Editor*; Roland D. Radford, *Secretary*; S. C. Kellenberger, *Dealer Service*; Charles G. Peker, *Eastern Editor*; Juan Homs, *Export Editor*; Delbert W. Smith, E. B. Wolfrom, C. R. W. Edgumbe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, H. P. Sessions, J. J. Dubro, R. E. Clement, *Advertising Staff*.

Publication Offices:

Radford Building, 1827 Prairie Ave., Chicago

Telephone: Calumet 4770

Eastern Office, 250 Park Ave., New York City

Telephone: Vanderbilt 3185

Entered as second-class matter July 1, 1905, at the post office at Chicago, Ill., under the Act of March 3, 1879. Additional entry as second-class matter at Binghamton, N. Y.; Columbus, Ohio; Seattle, Wash.; Los Angeles, Calif.; San Francisco, Calif.; Denver, Colo.; Dallas, Texas; St. Paul, Minn., and Kansas City, Mo.

SUBSCRIPTION RATES—One year, United States, Canada, Mexico, and U. S. Possessions, \$2.00; six months, \$1.00; single copies, 35 cents. Foreign countries, \$4.00.

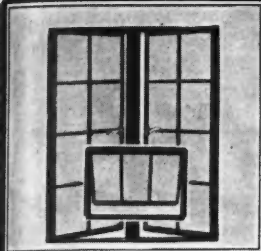
PROTECTION FOR OUR READERS—The publishers of the AMERICAN BUILDER reserve the right to decline any advertising they believe is detrimental to the interest of its readers; to edit advertising copy and to change or eliminate any statements that reflect injuriously or cast discredit upon other building products, machinery, equipment, supplies or tools.

Be sure in writing to advertisers to say: "I saw your advertisement in the AMERICAN BUILDER."

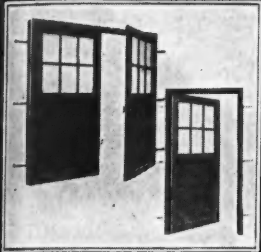
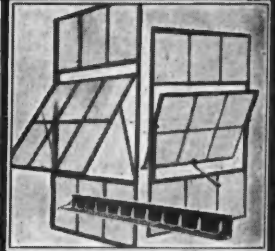
ADVERTISING RATES—Furnished on application. Advertising forms close on the 10th of the month preceding date of publication.

MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

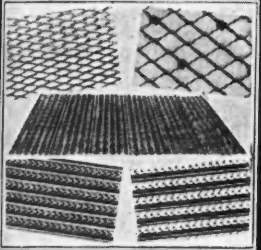
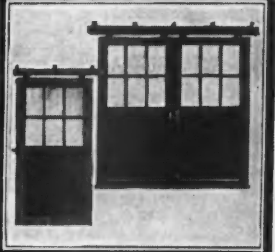
PERMANENT STEEL BUILDING PRODUCTS



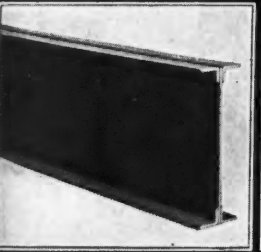
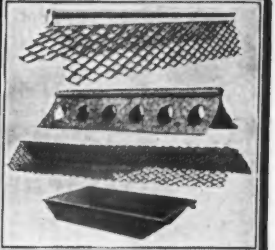
STEEL WINDOWS for Commercial Industrial, Residential and Institutional Buildings. Quality windows, conforming with the most exacting specifications at low cost.



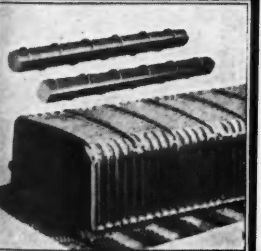
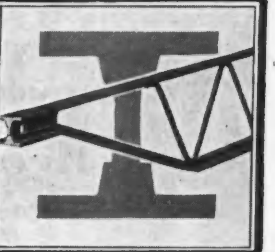
STEEL DOORS in Swing or Slide types. Also Vertical Folding, Vertical Lift, Vertical Lift-Swing, Airplane Hangar and Fire Department types, hand or power operated.



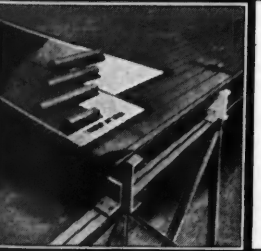
METAL LATH for plaster, concrete or stucco construction. Plastering accessories including Corner Beads, Cornerite, Strip-It, Furring Channels, Steel Mortar Boxes.



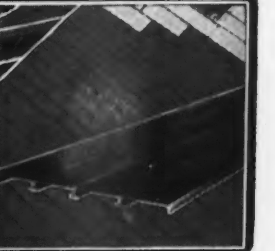
STEEL JOISTS, all types for economical, speedily erected fireproof floor construction. Come to the job ready for placing, eliminating all form-work and centering.



REINFORCING STEEL. Permanent or Removable Floretyles and Floreforms for all reinforced concrete floor systems. Bars, Inserts, Curb Bars, Welded Steel Fabric.



STEELDECK ROOFS. I-Plates construction, insulated to prevent heat loss and waterproofed with any standard roofing. Weighs not more than five pounds per square foot.



TRUSCON WAREHOUSES AND SALES OFFICES LOCATED IN ALL PRINCIPAL CITIES

TRUSCON

COMMODITY PRODUCTS HANDLED BY BUILDING SUPPLY DEALERS EVERYWHERE

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO

SLIDE THE *Slidetite*

Think of having garage doors that work as easily as the front door of your home!

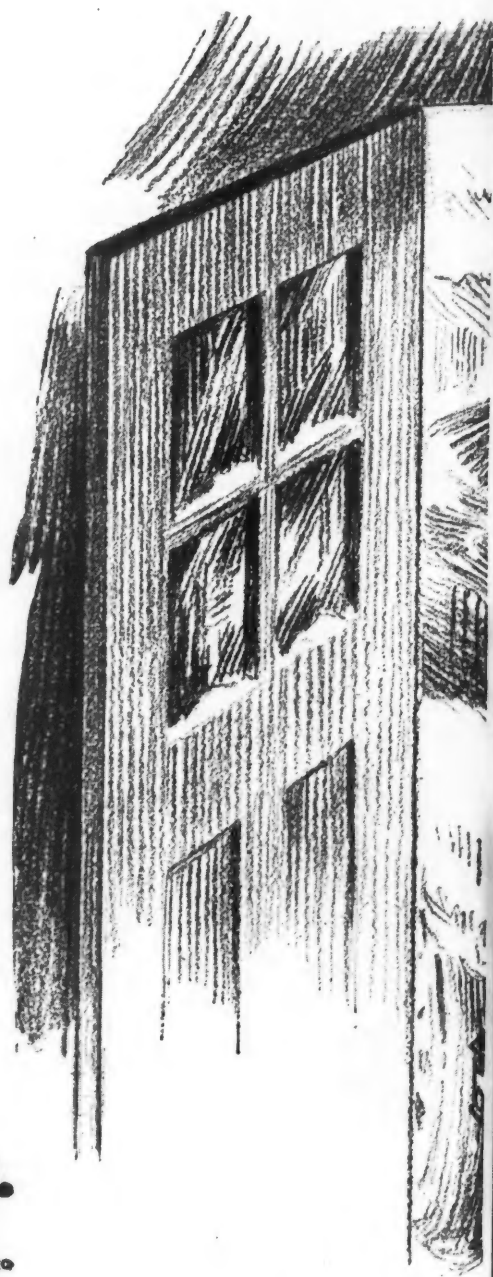
This you are sure of when you install *Slidetite* garage door hardware.

Because the doors slide *inside* the garage, they are forever free from the elements.

They can't blow shut. They are trouble-free the year 'round. They won't stick. They won't sag, swell or shrink.

And because all the hardware is inside, *Slidetite* will not rust. Remember, too, that dangerous center posts are done away with, thus giving you an unobstructed, full-width opening.

Slidetite, with lock-joint brackets, is packed in complete sets for 3, 4, 5, 6 and 8 doors. To insure satisfaction, buy complete sets *only*.



Richards-Wilcox Mfg. Co.

A Hanger for any Door that Slides.

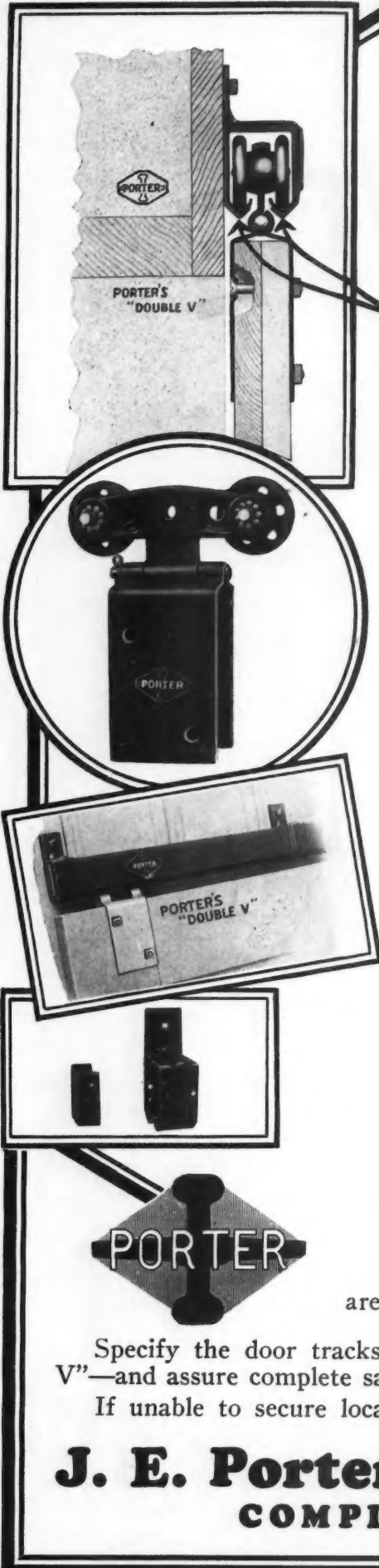
New York . . . AURORA, ILLINOIS, U.S.A. . . . Chicago
 Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines
 Minneapolis Kansas City Los Angeles San Francisco Omaha Seattle Detroit
 Montreal • RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. • Winnipeg

DOORS INSIDE

the best method for doorways of any width



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



PORTER'S "Double V" DOOR TRACK and HANGER

See This "Double V" Tread

The tread of this Superior Porter Door Track forms a double V. This novel shape gives four important features.

- 1—The shape of the tread insures maximum strength.
- 2—It permits the least contact or friction with the hanger wheel.
- 3—The hanger is kept in perfect alignment at all times.
- 4—It is self-cleaning.

The Most Practical Track Ever Designed

This tread has the same shape as the famous Porter "Hummer Track"—popular with the trade everywhere and proved by use to be the most practical tread ever designed.

Durably Made—Bird and Storm Proof

Porter "Double V" track is formed on a huge press to insure uniformity. The track is made of 14-gauge special steel and is furnished in 6, 8 and 10 foot lengths.

It is bird and storm proof, brackets closing the ends.

Two end brackets and one center bracket with lag screws are packed with each pair of hangers.

The hanger is made with double tandem trucks and the axles turn on roller bearings. Note the illustration.

NOTE: The back of the strap next the building has no projecting bolt heads to interfere with the free rolling of the door. This means a close fit which is a big feature for cold or stormy weather.

Free Rolling Wheels

The "Double V" hanger wheels can never stick or bind. They are shaped to conform somewhat with the "V" tread of the track.

Specify the door tracks having the distinctive "V" tread—"Hummer" and "Double V"—and assure complete satisfaction for owner and operator.

If unable to secure locally, write us direct.

J. E. Porter Corporation, Ottawa, Ill.
COMPLETE BARN EQUIPMENT



HOUSEWIRING DATA FOR BUILDERS

To sell a house you build into it those things which appeal to the buyer—and feature them.

For example: hardwood floors, tile bath, breakfast nook; nationally advertised plumbing fixtures and heating systems; nationally advertised wiring.



Millions of people have stood in line to learn the lesson of complete wiring and the comfort it brings. In this interest there is a lesson for us all.

This is *merchandising houses*—the plan now followed by practically every successful builder.

This is a *logical* plan for several reasons, prominent among which are two.

First, because of the spot light cast upon them by publicity, nationally advertised products must of necessity be good products.


Second, the greatest advantage a builder can hold in his community is a reputation for *sound building*. Nothing carries to the skeptical buyer more assurance of quality than the fact that the house offered for sale is equipped with material which he knows and considers good.

Consider for a moment the countless millions of pages of advertising and magazine articles through which the public is being educated to the advantages of complete electric service. The backbone of electric service is the wiring installation. Without complete, permanent wiring, complete service is impossible. Your customers know it.

More than two million copies of General Electric advertisements appear each day.

To be specific there are three essentials in housewiring:

- (1) A sufficient number of outlets to provide



WIRING SYSTEM
—for lifetime service
made by **GENERAL ELECTRIC**

Installed by
JOHN DOE ELECTRIC CO.
125 MAIN STREET

The nationally advertised sign on your houses is an assurance to home seekers of quality within.

- for every lamp or appliance any buyer of a home might have or desire. The tastes of different prospects vary. For this reason it is essential that wiring be complete—that it suit the taste of every prospect.
- (2) Convenient control is one of the greatest advantages of electric service. No wiring can be said to be complete unless there is a switch accessible to each doorway for control of light.
 - (3) Permanence is essential, for wiring is buried behind lath, plaster and floor boards. It must be of the highest quality to last for the life of the house.

Your buyer wants these things and the distinction, prestige and resale value that goes with them. This is just as true for the buyer of a co-operative apartment as for the buyer of an individual home.

There is only one nationally advertised wiring installation—it is the G-E Wiring System.



G-E Wiring System advertisements to the Public, as now appearing in The Saturday Evening Post and Woman's Home Companion.

MERCHANDISE DEPARTMENT GENERAL ELECTRIC COMPANY BRIDGEPORT, CONNECTICUT



HOW TO PLAN WIRING

The G-E Wiring System has been developed in order that you and your customers may be assured of quality materials properly arranged and assembled without the necessity of writing detailed specifications covering a wide variety of products.

The G-E Wiring System is a system of housewiring embodying adequate outlets, conveniently controlled and using G-E materials throughout.

It consists of the following elements:

- A G-E Safety Meter Service Switch.
- A G-E Safety Panelboard.
- A G-E Bell Ringer.
- G-E Code Wire.
- G-E Metal-covered Conductors (BX or Rigid Conduit).
- G-E Metal Boxes for Switches, Convenience Outlets and Lighting Outlets.
- G-E Tumbler Switches.
- G-E Convenience Outlets.

The following standards of adequacy are based on an analysis of a large number of adequately wired homes. If they seem to exceed present practice it should be remembered that—

- (1) Even those who have long been users of electricity are increasing their consumption at an average of nearly ten per cent each year.
- (2) A house is purchased for use over a long period of years. Houses built five years ago are

totally inadequate in the matter of wiring today.

- (3) A complete nationally advertised wiring installation is one of your greatest sales points. Some six million people have shown the truth of this statement by their attendance at Electrical Homes in various parts of the country. To the best of our knowledge, every one of these homes has been sold at or before the conclusion of the showing for a price well in advance of the normal price plus the cost of the additional wiring which they featured.

The standards of adequacy are:

A Tumbler Switch accessible to each doorway for control of lights.

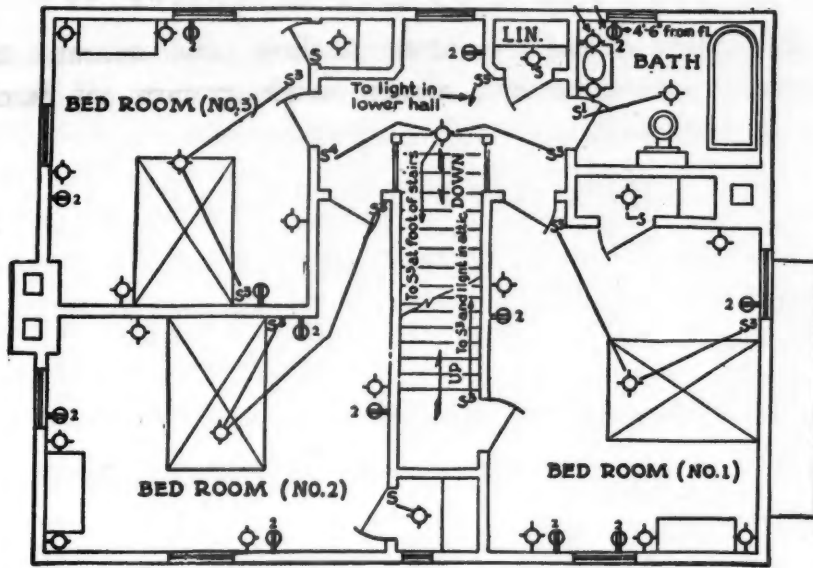
A minimum of one convenience outlet for every 50 square feet of floor space.

A minimum of one lighting outlet for every 50 square feet of floor space.

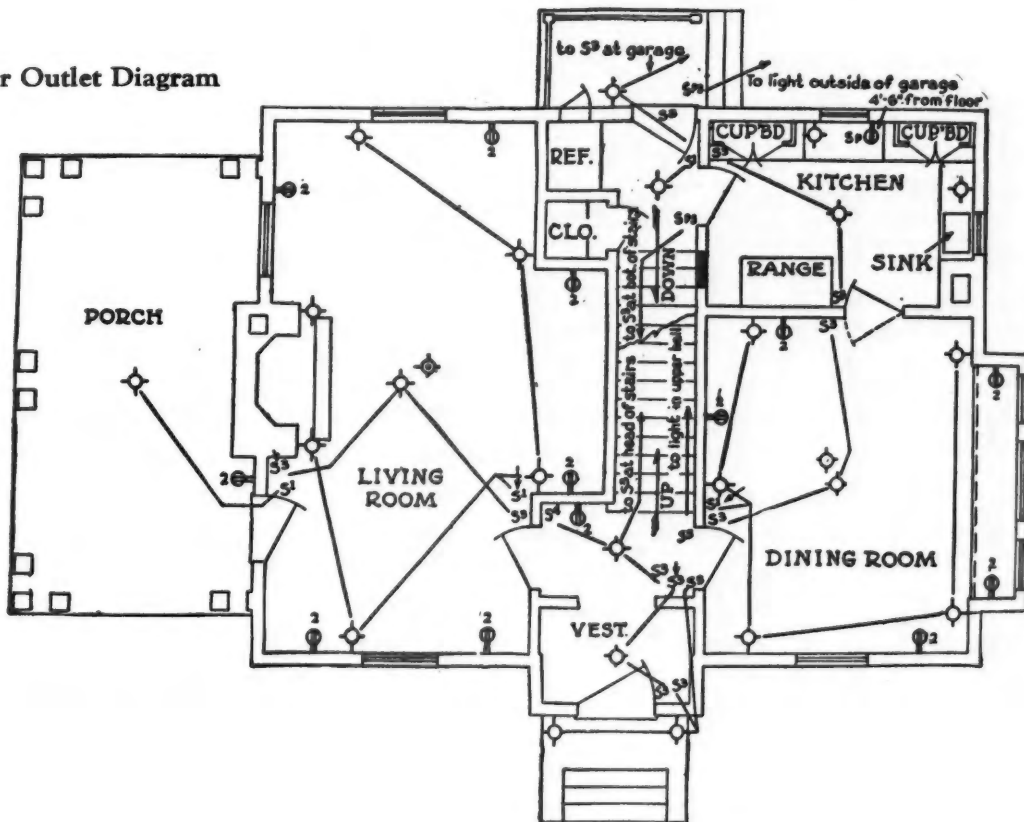
To plan the wiring it is simply necessary to indicate on the room plans of your house the necessary switches and outlets, following the above standards as a guide.

The following typical layouts will aid you in arrangement. The symbols used have been standardized and should be followed in order that the electrical contractor may easily interpret your instructions.

Second Floor Outlet Diagram



First Floor Outlet Diagram



KEY

- | | | |
|--|---|--|
| = Ceiling Outlet | = Floor Outlet | S ⁴ = Four-way Tumbler Switch |
| = Wall Outlet | = Panelboard | S ^{P3} = Three-way Tumbler Switch and Pilot |
| = Switch, Pilot and Convenience Outlet | S ¹ = Single-pole Tumbler Switch | S ^P = Tumbler Switch and Pilot |
| = Double Convenience Outlet | S ³ = Three-pole Tumbler Switch | |

MERCHANDISE DEPARTMENT GENERAL ELECTRIC COMPANY BRIDGEPORT, CONNECTICUT

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



HOW TO SPECIFY WIRING

Make a copy of the specifications shown below and submit to your electrical contractor, or contractors, along with copies of floor plans marked in conformity with instructions given under

"HOW TO PLAN WIRING"

This is all the information necessary for the electrical contractor to have in order to submit his proposal on the installation of a G-E Wiring System.

ELECTRICAL SPECIFICATIONS FOR WIRING SYSTEM

The electrical contractor shall furnish and install the G-E Wiring System (Group 1—1926) complete from the lighting company's service to all outlets; locating all outlets as indicated on the drawings.

The electrical contractor shall do all necessary cutting for the installation of his work.

The electrical contractor shall leave his work ready for the lighting company to connect to, doing all work required by their rules.

The work shall conform to the rules of the "National Electrical Code" and the local regulations governing electrical installations.

All necessary certificates shall be obtained by the electrical contractor at his expense and delivered to the builder before work is accepted.

The electrical contractor shall guarantee to make good any defects in his work which shall develop within one year of date of acceptance.

The electrical contractor shall furnish and in-

stall a complete bell system locating bells and buzzers as indicated on the drawings. The bell system shall be operated by a bell-ringing transformer feeding from a separate circuit on the lighting distribution panel. All bells, buzzers, and push buttons shall be of high grade as approved.

Outlets shall be located as follows:

Wall light outlets: 5 feet 6 inches above finished floor to center of outlet.

Wall switches: 4 feet above finished floor to center of outlet.

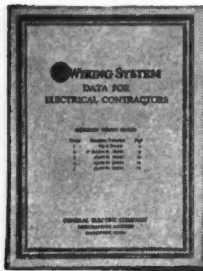
Convenience outlets in kitchen, laundry, basement and garage, and in combinations: 4 feet above finished floor to center of outlet.

Convenience outlets in all other locations: In baseboard, mounted horizontally.

Bids shall be submitted in duplicate on G-E Wiring System proposal forms.

EXCEPTIONS AND ADDITIONS

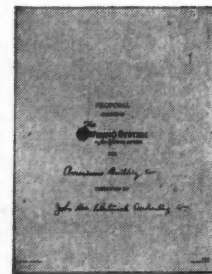
In the G-E Wiring System, all material is made and guaranteed by one manufacturer—the General Electric Company. In place of an assembled assortment of nondescript material, you specify a system, each part of which is designed and made to fit the other.



Any electrical contractor who installs the G-E Wiring System can obtain a copy of this book from the G-E Merchandise Distributor from whom he buys his wiring materials.

When the G-E Wiring System is specified your customer is assured of a com-

plete service which will last as long as the house endures. You are assured of getting the quality material for which you pay. Your specifications are simplified. You are relieved of the trouble of examining, classifying and specifying the diversified products of a number of manufacturers, yet enabled to tell bidding contractors exactly what you want.



This G-E Wiring System Proposal Form is furnished to electrical contractors through G-E Merchandise Distributors, so they can submit their bids in the form most acceptable to you.

MERCHANDISE DEPARTMENT of GENERAL ELECTRIC COMPANY of BRIDGEPORT, CONNECTICUT



HOW TO SELECT YOUR ELECTRICAL CONTRACTOR

The contractor who is to do the job must be able to interpret and follow your specifications. He must be able to make an installation worthy of the material he is using—to install a job which will help *sell* a house or make it a more desirable place in which to live.

The selection of the electrical contractor is obviously not a matter to be decided on price alone—there are other considerations. However, when the plans and specifications have been drawn and submitted to contractors, and the proposals start to come in, the question of price does arise.

The amount to be invested in wiring naturally varies with the size and quality of the house. A careful analysis of a large number of adequately wired homes indicates 3 per cent of the total cost of the building, exclusive of ground, as a reasonable amount to be budgeted for wiring.

So you have an index of cost on which to base your judgment and if bids are in the neighborhood of this 3 per cent figure, they may be considered satisfactory from the price standpoint.

In the great majority of cases, bids which are substantially lower than this figure will be found to be lower at the sacrifice of *workmanship, material or adequacy*. These are the factors which require your closest attention—for these mean *sales value*. Your spec-

ifications have covered these points—and these are the things which you must be sure the contractor covers in his proposal.

For your convenience we have furnished contractors who install the G-E Wiring System, a Proposal Form which covers your specifications and which enables you to quickly compare bids and see that they are on a real competitive basis. Proposals submitted on this form may be compared and checked in a few minutes time. On it the contractor specifically indicates exactly what he intends to furnish and where it is to go. You know what you are getting for your money and it is only logical that you should have confidence in the contractor who gives you such a straightforward statement of what he proposes to do.

Choose your contractor from those whose prices are found to be fair in accordance with the above index, but select the contractor to do the job on the basis of the confidence you have in him to give you the adequacy, quality and sales value your specifications call for.

Any builder who fails to take advantage of the prestige of nationally advertised products is overlooking one of his greatest opportunities for profit.


There is only one nationally advertised housewiring installation. It is the G-E Wiring System.

MERCHANDISE DEPARTMENT • GENERAL ELECTRIC COMPANY • BRIDGEPORT, CONNECTICUT


WIRING SYSTEM
— for lifetime service

MATERIALS COMPRISING


ENTRANCE



$\frac{3}{4}$ in. Spragueduct
Rigid Conduit with suitable
Weatherdrip Fittings.
Black Enamel Finish
(From lighting companies'
lines to panelboard)



No. 10 Code Wire
(From lighting companies'
lines to panelboard)



No. 8 Code Wire with
Suitable Clamps, etc.
(For all grounding)

METER SERVICE SWITCH

Cat. No. GE2351
Safety Meter Service
Switch

Complete with Fuses
(For two-wire service
Cat. No. GE2354 is used)

Note.—In Communities where
the local lighting company has
standardized on a meter service
switch of a type other than that
illustrated above, the contrac-
tor will substitute an approved
switch.



BELL RINGER



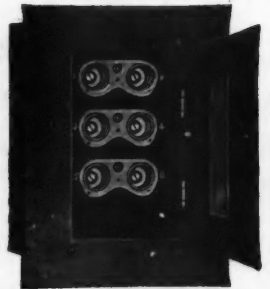
Cat. No. GE2488

Bell-ringing Transformer
(Feed from a separate cir-
cuit on the panel-board)

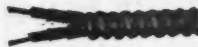
PANELBOARD

The location of the panel-
board on the main floor
is recommended.


Cat. No. GE2363
Safety Panelboard
Complete with Fuses
(For two-wire service
Cat. No. GE2368 is used)



BRANCH CONDUCTORS




Cat. No. 14BXSS
"BX" Armored Conduc-
tors. Galvanized Finish
—Two Conductors




Cat. No. 14BX3SS
"BX" Armored Conductors, Gal-
vanized Finish. Three Conductors
(For three-way switches)

Armored conductors provide protection against mechanical injury both during and after installation. Furthermore, their use minimizes the fire hazard which may result from short circuits, overheated wires, etc. Therefore, a metal installation is always preferable to a knob and tube installation.

However, where knob and tube wiring is the prevailing custom and local regulations permit, G-E No. 14 Code Wire with suitable loom, knobs, tubes and cleats may be specified for branch conductors.



No. 18 Code Wire
(For bell wiring)




No. 14 Code Wire
(For overhead wiring to detached
garage)

In transcribing the specifications, it will be necessary to indicate whether "BX" or "Knob and Tube" wiring is desired.

SWITCH AND OUTLET BOXES





Cat. No. SP6972
Sectional Switch Box,
Black Enamel Finish
(For switches and convenience
outlets)



Cat. No. SP24151
 $\frac{3}{4}$ in. Octagon
Outlet Box
with Fixture Stud,
Black Enamel Finish
(For wall light
outlets)



Cat. No. SP26625
Ceiling Outlet Box
with Fixture Stud
Black Enamel Finish
(For ceiling light outlets)

MERCHANDISE DEPARTMENT  GENERAL ELECTRIC COMPANY  BRIDGEPORT, CONNECTICUT

THE G-E WIRING SYSTEM

CONVENIENCE OUTLETS



Cat. No. GE2258
Twin Convenience
Outlet
(For baseboard
mounting)



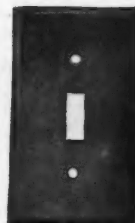
Cat. No. GE2257
Single Convenience
Outlet
(For combination
mounting)

PILOT LAMP RECEPTACLE

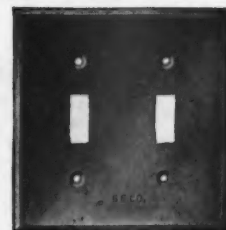


Cat. No. GE853
Pilot Lamp Recep-
tacle

FLUSH SWITCH PLATES

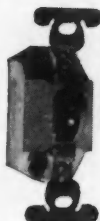


Cat. No. GE1701
Single Flush Switch
Plate 0.040-in. Metal



Cat. No. GE1702
Two-gang Flush Switch
Plate 0.040-in. Metal

FLUSH SWITCHES

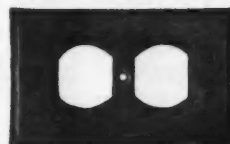


Cat. No. GE1688
Single-Pole Tum-
bler Switch.
Porcelain Box



Cat. No. GE1690
Three-Way Tum-
bler Switch.
Porcelain Box

CONVENIENCE OUTLET PLATE

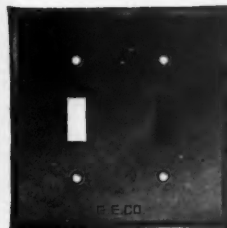


Cat. No. GE695
Twin Convenience Out-
let Plate 0.040-in Metal

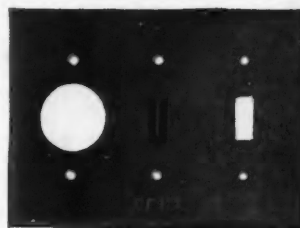
The combination of switch and pilot lamp receptacle is recommended for the control of all remotely located lights.

The combination of switch, pilot lamp and convenience outlet is recommended for the connection and control of heating appliances.

COMBINATION PLATES



Cat. No. GE1702
Two-gang Plate
with GE2331 Re-
movable Bull's
Eye, for Switch
and Pilot
Lamp Receptacle
0.040-in Metal



Cat. No. GE2456
Combination Plate
with GE2331 Re-
movable Bull's Eye,
for Switch, Pilot
Lamp Receptacle
and Single Con-
venience Outlet.
0.040-in. Metal

CEILING LAMP RECEPTACLES



Cat. No. GE721
Pull Socket Receptacle
(For closets, pantry, etc.)



Cat. No. GE1245
Porcelain Pull Socket
Receptacle
(For independently con-
trolled ceiling lights in
cellar, garage, etc.)



Cat. No. GE088
Porcelain Keyless Socket
Receptacle
(For switch controlled
ceiling lights in cellar,
attic, garage, etc.)

LIGHTING EQUIPMENT

An allowance of approximately 3 per cent of the cost of the house is recommended to cover the lighting equipment. The use of lighting fixtures equipped with G-E sockets is recommended.

NOTE

Where local ordinances, the rules of the lighting company or the requirements of the connected load conflict with any item of material covered by this specification, the electrical contractor will substitute material having local approval making the selection where possible from the G-E Wiring System Data Book for Electrical Contractors.

MERCHANDISE DEPARTMENT & GENERAL ELECTRIC COMPANY & BRIDGEPORT, CONNECTICUT

SEE WHAT ETERNITS AND

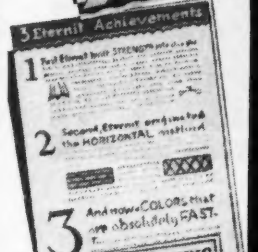


ETERNIT Asbestos Shingles offer you a combination of beauty, permanence, fire-safety, and economy not duplicated in any other roofing made. Colors? For the first time in the history of asbestos shingles, Eternit has made colors *absolutely fast!* They can't fade. Can't bloom. They are more beautiful than ever before—just because of the exclusive Eternit colorfast process. The Autumn Bronze, Indian Red, Quarry Blue, Emerald Green, and Colonial Gray, will fit into any color scheme you may have in mind.

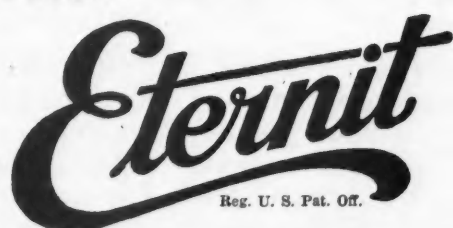
Eternits are permanent. They are fire-proof. They are stronger, harder to break, and much easier to lay. Acting as a binder, evenly distributed asbestos fiber reinforces the Portland cement just as steel bars reinforce concrete.

There are three styles—the familiar hexagonal, the American, and an exclusive Eternit method—the Horizontal. This last is particularly handsome. It gives the shadow effects that builders and architects have so much admired in slate. It costs no more than the hexagonal method.

ETERNIT ADVERTISING WILL DO FOR YOU



Eternit national advertising in *The Saturday Evening Post* will tell the great Eternit story of beauty, permanence, and safety throughout the coming year. Fast color in roofing—Eternit color—will be demanded by home-owners, prospective home-owners, and architects. You can make this advertising help you to sell homes. Put on Eternits. Show them to prospects. Point out their unusual features. Use them as proof that everything in beauty, long-life, and protection has been added to your home. Give Eternits a trial on your next job. Mail the coupon for complete information. Eternit, Inc., Philadelphia, Boston, New Orleans, Houston, Jacksonville, St. Louis.



ASBESTOS SHINGLES

Eternit, Inc., Dept. A, 15th and Locust Sts., Philadelphia, Pa.
Please send me full details, roofing directions and samples.

Name _____
 Street _____
 City _____ State _____
 Dealer's Name _____



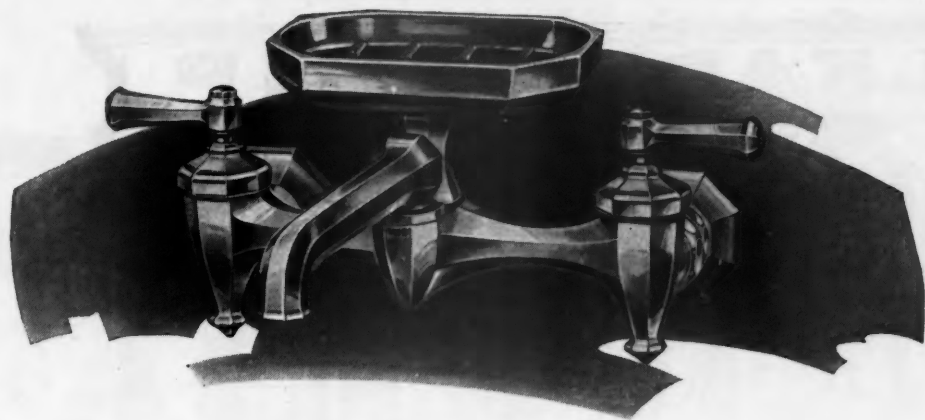
This modern sink stimulates sales

FEW women today will be satisfied with a kitchen sink that does not include any one of the many revolutionary features that are combined only in the "Standard" "Three 8's" Sink. Homes and apartments that have this advanced sink are easiest to rent and sell.

The "Standard" "Three 8's" Sink has an eight-inch back that permits its installation under even the lowest windows. Over-rim splashing is now prevented because the sink compartment is eight inches deep. The extra two inches also makes the working space beneath the faucet thirteen inches. The 8-inch deep front adds to the cheerfulness and beauty of this modern sink. Only the "Standard" "Three 8's"

Sink is finished in hard, glass-like Acid-Resisting Enamel. It is impervious to the action of cleansers and acids in foods. It will never become roughened or discolored. The gleaming enamel repels dirt—this is easiest of all sinks to clean and keep clean.

The "Standard" "Three 8's" Sink is made in many styles and seven sizes and several beautiful colors as well as white. It may be seen at "Standard" Showrooms in principal cities. A copy of the book "Standard" Plumbing Fixtures for the Home, describing this sink and the other new and striking "Standard" fixtures that make homes easier to rent and sell, will be sent you upon request. Write for it. The trademark "Standard" is impressed in every fixture.



This distinctive fitting design is finished in CHROMARD

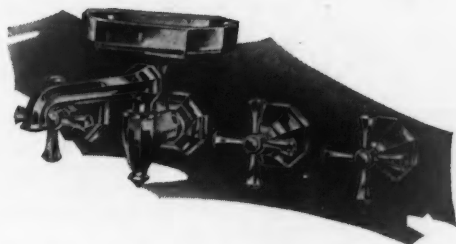
Here, at last, is a kitchen faucet assembly that is designed on pleasing, graceful, original lines. It will not tarnish, corrode or lose its original beauty because it is finished in Chromard—an exclusive "Standard" development.

Chromard is a new metal that is many times harder than nickel. It has a distinctive, platinum-like sheen that requires little attention. Just an occasional wiping is all that is needed to restore its newness—no polish, no scrubbing or scouring required.

The spout swings back out of the way when not in use. The "Three 8's" Sink permits its installation with a full 13-inch clearance between spout and drain opening.

Never before has such beauty of design been available in a kitchen sink fitting. Prospective tenants and buyers who see this fixture installed in the home they are inspecting will have assurance and confidence in the builder's integrity.

A complete showing of the new kitchen sinks, fittings, garbage containers, is on display at the "Standard" Showrooms. They are fully described in the book "Standard" Plumbing Fixtures for the Home, which will be sent upon request. Identify the products of "Standard" by the trademark "Standard" impressed on every fixture.

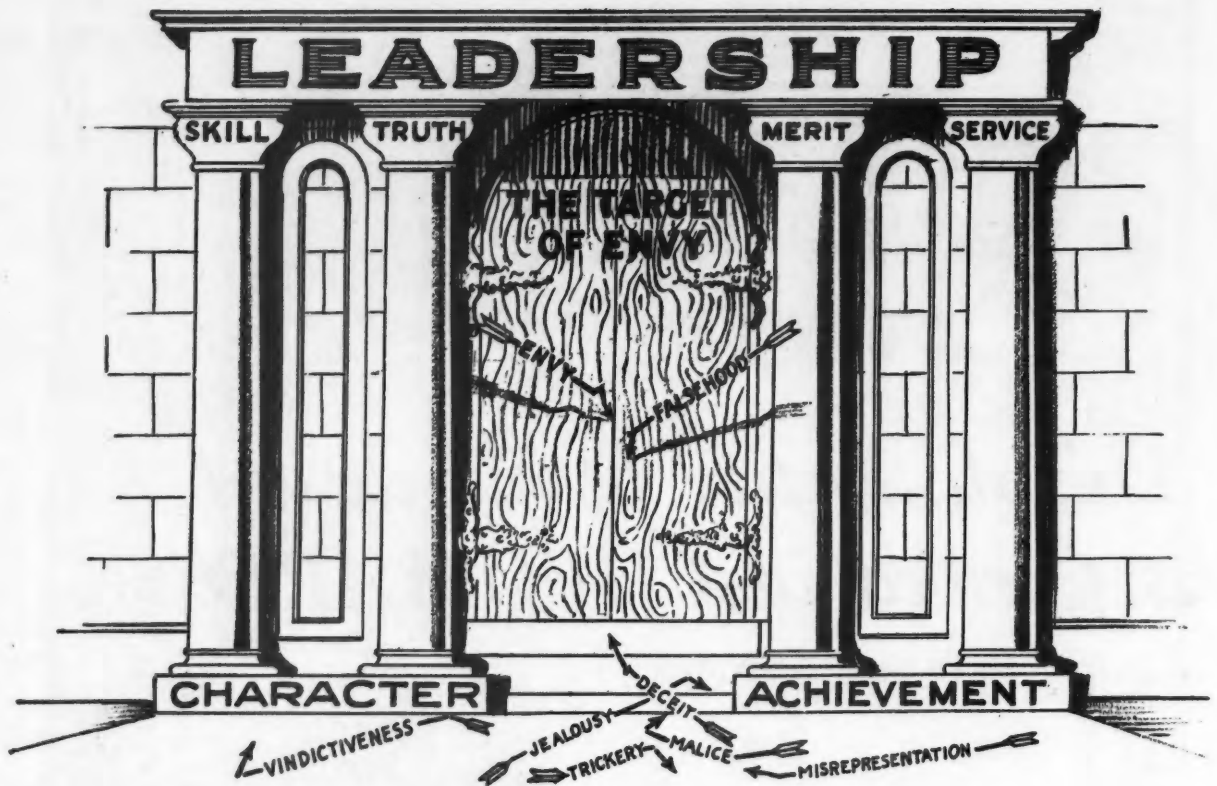


For those homes built in hard water territory, the beautiful new "Standard" octagonal design faucet may be secured with three water supplies. This fixture provides a convenient mixing outlet for cistern or softened water. "Standard" valves permit easy replacement of parts most subject to wear.



The directly attached garbage container is another convenience that helps to sell and rent homes. It is of vitreous china with removable aluminum receptacle and may be pushed back out of the way on a folding bracket. This container is also made in heavy aluminum.

Standard Sanitary Mfg. Co. PITTSBURGH



WHEN a man or a company by originality of design—by quality of material and workmanship, manufactures a machine that better serves mankind, the petty souls of less successful rivals burn with envy at the achievement. The markets the leader has captured and sold, they yearn to win for themselves through trickery. They attempt to destroy Leadership and its resultant prestige, popularity and prosperity by malicious lies, misrepresentations, imitations and vicious attacks. They stop at nothing in their attempts to discredit.

However, there are worthy competitors who seek progress through renewed constructive efforts by honorable methods. All honor to those who seek to displace the Leader by building a better product, and by selling that product on its merit. That's the kind of competition which inspires inventive genius, and the resourcefulness that makes for progress. But shame to the man or company, which because it will not, or cannot, earn Leadership on merit, seeks to attain it by imitation or destructive attacks—by trying through misstatements to destroy Public confidence in the achievement of the Leader.

With Leadership goes the penalty of being misrepresented, lied about, maliciously attacked and imitated by the envious; an indirect admission, by the envious ones, of their incompetence and inferiority.

The Public benefits through fair honest competition. It loses when competition descends to seeking customers by misrepresentation, or outward imitation. For then the Public sometimes buys and pays for something it does not GET.

Fortunately for the Leader—fortunately for the honest competitor—and fortunately for the Public, too, such tactics are soon recognized and discredited.

Those few who are misled, by the false, soon discover their mistake, and henceforth find protection in the true. For from actual expensive experience they have found:

- (1) That superficial imitation is a poor substitute for real quality and performance.
- (2) That those who attempt to discredit others, are trying to distract attention from their own shortcomings.

Always beware of buying anything from the man or company, which failing to sell you on the merits of its product, starts knocking the competitor.

CLARKE SANDING MACHINE CO.

Facts the Buyer of a Sanding Machine Should Face

- (1) *The CLARKE SANDING MACHINE CO., originators and pioneer builders of light-weight Portable Sanding Machines, is the recognized Leader in its field.*
- (2) *That others may imitate, but no one can duplicate the light, powerful, fast-cutting CLARKE VACUUM PORTABLE SANDER, or the work it will do. For it is fundamentally different, and is fully protected by patents.*
- (3) *That by originality in design, quality of material, and skill of workmanship, the CLARKE SANDING MACHINE CO. attained, and continues to maintain leadership. CLARKE leads in improvement.*
- (4) *That the growth of this business is due not only to the outstanding all around performance of the CLARKE, but also to its sturdiness—dependability, and long life under heavy duty.*

CLARKE SANDING MACHINE COMPANY

Dept. AA-24, 3815 Cortland St., Chicago, Ill.

For 11 Years Originators and Manufacturers of Portable Sanding Machines

COUPON

CLARKE SANDING MACHINE CO.
Dept. AA-24, 3815 Cortland St., CHICAGO, ILL.

Name.....

Address.....

City..... State.....

Please send me the actual facts on the Clarke Vacuum Portable Sander. No obligations to me.



COLD FACTS

backed by Guaranteed Performance

Claims are easy to make. Anybody can make them—on anything. But just how much are "claims" in themselves worth? Not a cent!

There has never been a Clarke Vacuum Portable Sander sold on unsupported "claims". For eleven years—since the first one was built—every CLARKE sander has been sold on facts. Plain, uncolored, cold facts that have shown themselves in performance. And these facts have been sufficient to sell every CLARKE ever made.

With so worthy a product, the Clarke Sanding Machine Company can back it to the limit. It can—and does—offer the most definite, most inclusive, and strongest guarantee ever made on any sanding machine!

A guarantee that is put on what you look for in any purchase—performance. And a Guarantee of Performance that is put in actual figures!

FACTS made this possible. FACTS consistently proved by Clarke performance. And because they are facts, the Clarke Sanding Machine Company can afford to make a money-back guarantee completely covering them.

Such an absolute guarantee is complete assurance to you, and every other purchaser that the CLARKE is the safest buy in its field.

Do not be misled by claims and representations. Demand facts! Facts on performance and a money-back guarantee of performance.



POWERFUL - FAST CUTTING
CLARKE
VACUUM PORTABLE SANDER
TRADE MARK

- The Clarke Vacuum Portable Sander finishes 800 to 1600 square feet of new floors in eight hours.
 - resurfaces 300 to 800 square feet of old, varnished floors in eight hours—without the aid of Varnish Removers or Neutralizers, and without clogging or filling the paper.
 - finishes floors to unequalled smoothness and beauty.
 - operates without special power wiring. The Clarke runs off any light socket, either direct or alternating current.
 - works so close to the base-board that the base-board and quarter-round cover what's left.
 - is carried with one hand—no truck, and two or three men to move it from place to place.
 - is absolutely dustless in operation, with a genuine in-built vacuum for taking care of the dust.
 - is almost as easy to run as a vacuum cleaner.
 - does the work of the larger sanding machines much more economically.
- If you want to realize the most profit on sanding new and old floors, shop-work and bench work—if you want the utmost in sanding machine performance—write us for the actual facts on the Clarke Vacuum Portable Sander. Now is the time to act. Get the facts today!
Mail the coupon—right now!

CLARKE SANDING MACHINE CO.
DEPT. A-24 3815 CORTLAND ST. CHICAGO, ILL.
*For 11 years, Originators, and Manufacturers of
Portable Sanding Machines*

Do not buy
any sander, at
any time, at any
price, at any place,
until you see what
the CLARKE
will do for
you.



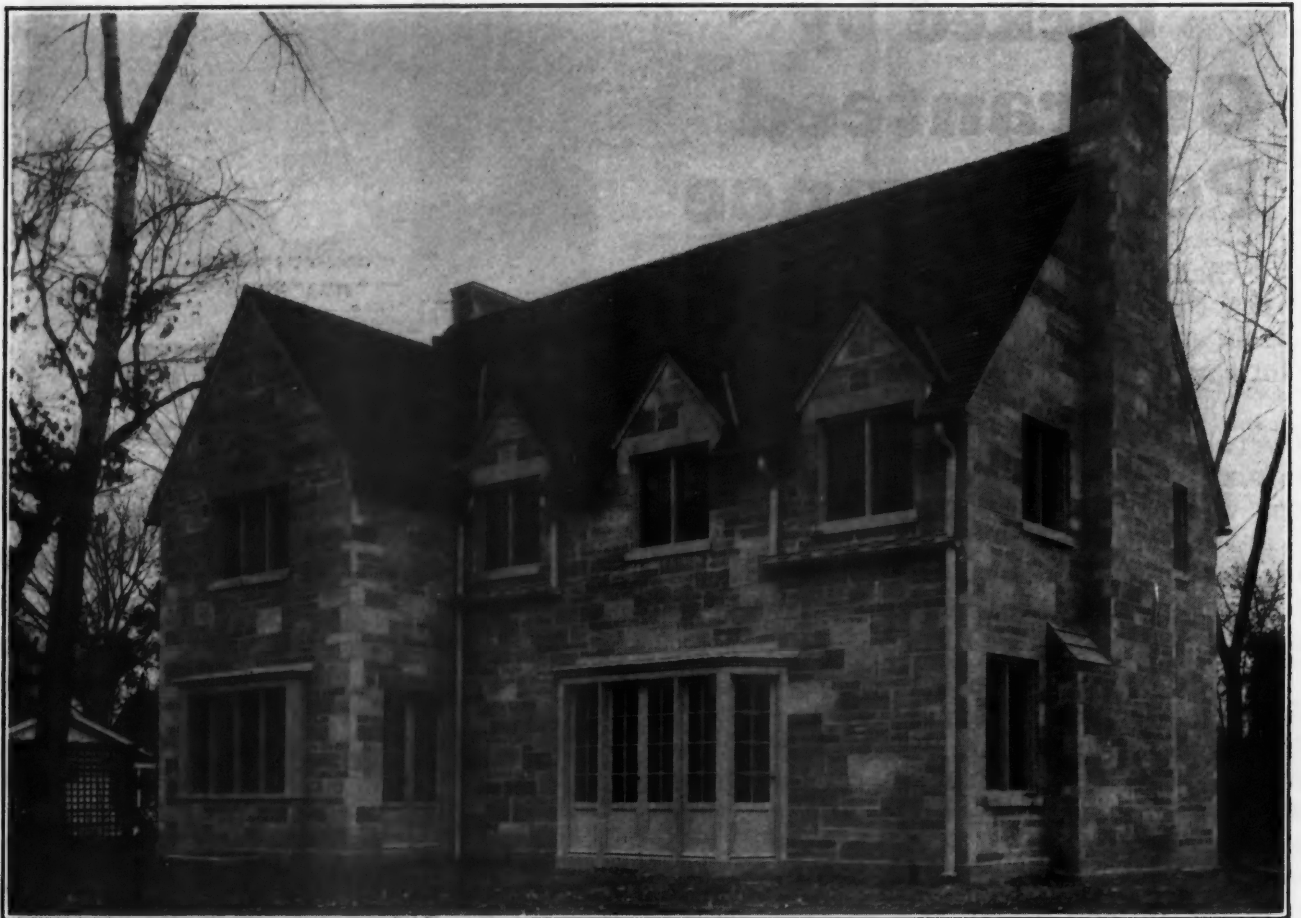
—answers all calls.

Clarke Sanding Machine Co.
Dept. A-24
3815 Cortland St.
Chicago, Ill.
Please send me the actual facts
on the Clarke Vacuum Portable
Sander. No obligation to me.

Name.....
Address.....
City.....
State.....

Be First to Build Stone Houses

Get the jump on your competitor in the new profit field now opened up by dollar-saving methods of preparing, handling and setting Indiana Limestone



Randolph Owsley residence, Lake Forest, Ill. Anderson & Cicknor, Architects. Illustrating the application of Random Ashlar construction to a residence of the better type.

GREAT changes have taken place in the stone industry in recent years. New ways of preparing, handling and setting Indiana Limestone now make the use of this beautiful, natural stone just as practicable for residences as brick, stucco or wood.

Many attractive houses and bungalows of Indiana Limestone have already been built. Above is shown one of the better types of Indiana Limestone residences. These houses are moderate in cost. Yet they give the owner the satisfaction of having the best there is in home construction. We will send

you illustrations and descriptive matter featuring houses of this type, also others costing less.

As you know, Indiana Limestone remains beautiful year after year without expensive exterior upkeep. Resale value increases steadily. These are features which make the sale of such houses very easy for you.

How this stone is used

In this type of residence construction an Indiana Limestone Random Ashlar facing is used. The Indiana Limestone for this purpose is supplied in

INDIANA LIMESTONE COMPANY • GENERAL OFFICES: BEDFORD,

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

sawed strips. The stone is sawed on four sides—face, back, top and bottom.

We do all this work right at the quarry and ship the stone direct to the job. There these strips are broken, jointed and laid up. A stone mason or a bricklayer can do the work. No expensive stone-cutting is required. The only cut stone used is for trim. Carefully prepared drawings for jointing and laying up are not necessary.

These strips of Indiana Limestone are jointed to required lengths by the use of an electric carborundum saw. This takes the place of the old-fashioned mallet and chisel. With the saw, a groove is cut in the face of the stone. Then the strip is turned over and a slight tap with the mallet breaks it cleanly along the line of the groove. One man with one of these saws can break enough stone to keep six stone masons busy. Your stone mason's time by this new method is spent on the wall setting stone instead of jointing it.

Applied as veneer

Indiana Limestone prepared in this way is applied as a veneer, much as any other veneer is used. Sometimes it is applied to stud-frame walls. Or it may be used as a structural facing over hollow tile or brick. It is secured to the wall with galvanized metal ties, the same as a veneer of face brick work. This method is quick, simple and effective. Construction goes ahead with maximum speed.

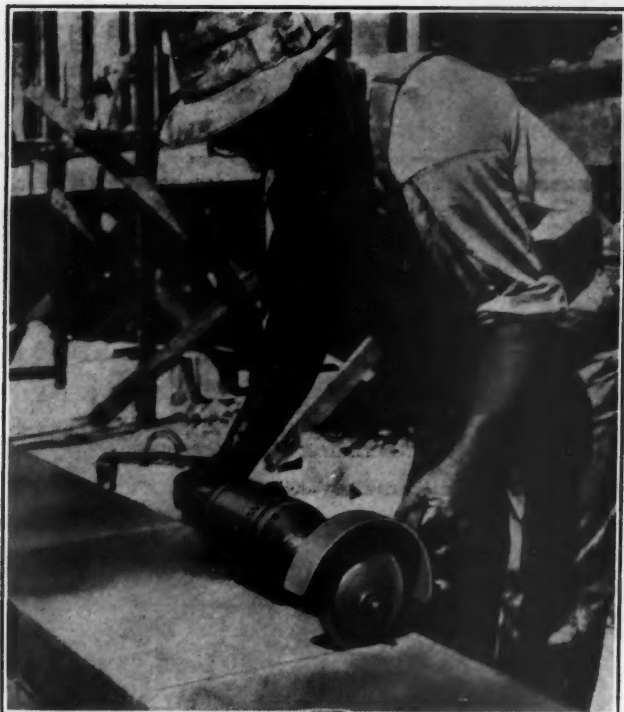
We will help you

We will gladly supply you with plan books and all information needed to thoroughly inform yourself on this wonderful building stone.

There is an opportunity for a live contractor in each community to get ahead of his competitors by building stone houses. Stone construction takes you



This detail view shows one of the common schemes for laying up the Random Ashlar class of Indiana Limestone.



Electric carborundum saw displaces old-time mallet and chisel for breaking. One man with this tool keeps six stone-setters busy.

out of the class of ordinary competition. One of these houses will advertise you as no work you've ever engaged in before has ever done.

Let us send you at once all the facts about Indiana Limestone facing. You will be under no obligation. We simply want to tell you of this tremendous opportunity. We show you how easy it is to do something different from the other fellow.

Fill in your name and address on the coupon and mail at once. Booklets and other information will be sent you immediately.

—Fill in, Clip and Mail—

Box 757, Service Department
Indiana Limestone Company, Bedford, Indiana
Send me full information on Indiana Limestone for Random Ashlar facing for residences.

Name.....

Address.....

City.....State.....

INDIANA • EXECUTIVE OFFICES: TRIBUNE TOWER, CHICAGO

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

This is the stairway that is revolutionizing house construction!

The modern way of reaching the attic



Slides up into the ceiling when not in use.

Can be operated from above or from below.

Hand rail may be placed on either side.



Extra Bedroom



Children's Play Room



Dad's Office and Den



Storage Room

A BESSLER makes the attic a regular floor of the home

ASK YOUR DEALER

or write to

THE BESSLER
DISAPPEARING STAIRWAY CO.
AKRON, OHIO

BESSLER

DISAPPEARING
STAIRWAYS

BESSLER DISAPPEARING STAIRWAYS

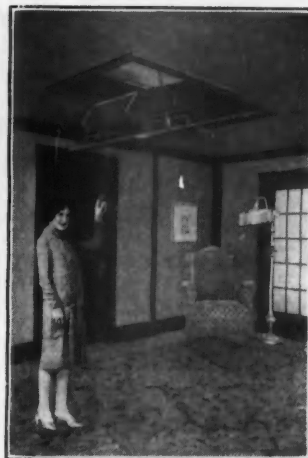
Add \$1000 to the Value of a Home!

Cost only 5% of that amount

The day of the empty attic has gone, forever. Think of the waste, —\$1,000 worth of good space, all unused. No reason for it whatever, now that a Bessler Disappearing Stairway costs so little, and is so easy to install. It takes up no space on the floor below when not in use. The Bessler fully meets the demand of builders for more space at less cost. It is practical,—proved so by 20 years

of use. Tens of thousands are in use the country over, all giving unlimited satisfaction.

You can include a Bessler Disappearing Stairway to the greatest advantage in every home you build. It enables you to deliver more space for the same money, or the same space for less money. Both you and the house-owner win either way.



This shows how the Bessler is easily drawn into position by giving a slight pull on the chain suspended from the ceiling panel. If ventilation is needed, the panel may be left in position here shown, for the Bessler is perfectly balanced.

20,000 Dealers Can Supply the Bessler

Mr. Contractor and Builder,—Every dealer in the United States can sell you Bessler Disappearing Stairways. Go to your dealer and get the facts. He has all the details, specifications and prices. He can show you how the Bessler will make the attic a regular part of any house, old or new. Any carpenter can make the installation in a few hour's time.



When flush with the ceiling, the panel of the stairway makes a pleasing appearance. It may be finished to match the other woodwork in the room.



Showing the stairway half way up or down. So perfectly balanced and constructed is the Bessler that anyone can operate it with ease. Is as strong as any stationary stairway.

The Bessler Guarantee

You can have the use of the Bessler for one month, and if it does not prove satisfactory, return it to us at our expense. The Bessler Disappearing Stairway is warranted to last as long as the life of the building.

F. E. BESSLER, President

For Every Door and Window

TRIMPAK The Ultimate Interior Trim



TrimPak's sturdy cartons protect the finely-sanded surfaces from the mill to the job. The lumber mills send only their finest kiln-dried stock to their TrimPak machines. There is no "job-lot" lumber in TrimPak. It is made at producing centers by large planing mills that cut from virgin timber. After cartons are sealed, they are not opened until the carpenters are ready to use the trim.



Clean, bright, dry stock comes from every TrimPak carton, the finest trim that can be bought, which carpenters and painters like to work on because of the perfect job they can produce. The exact number of pieces, cut long enough to fit, is in every carton, eliminating shortages and delays.

Insures Highest Quality — Saves Time and Money

THE ultimate solution to your interior door and window trim requirements is TrimPak. Thousands of builders now use it exclusively, and they are so enthusiastic about it that nothing could induce them to return to oldstyle bulk trim.

Builders tell us that in addition to giving them a better job and saving them time and money, TrimPak enables them to schedule their construction operations much more smoothly. They do not have to spend hours figuring the amount of each piece of trim needed; they do not have to plan far ahead for the time they will need it nor fear that too early delivery may result in damage. They merely

tell the lumber dealer the size and number of openings they want to trim, and orders are filled and delivered in less than a day. Thus TrimPak may be ordered in advance of its need and will be safe around the job where many men are working, or it may be ordered at the last minute with assurance that the order can be filled at once.

No sorting is necessary with TrimPak. Carpenters take the pieces from the cartons as they are used. No sanding or cleaning is necessary before paint is applied.

TrimPak is sold by retail lumber dealers everywhere in all woods and patterns desired by good builders.

CAN YOU DO THIS?

With TrimPak, three carpenters can completely trim a 6-room house in one day. Send coupon below for full complete information about TrimPak

TRIMPAK CORPORATION, 44 Whitehall St., N. Y. C.
Please send complete information on TrimPak.

Name.....

Address.....

Please check the square that identifies you, so we may reply most intelligently: Architect Builder Contractor Retail Lumber Dealer Home Builder



TRIMPAK CORPORATION
44 Whitehall Street, New York, N. Y.
624 S. Michigan Avenue, Chicago, Ill.

For Every Home and Apartment

INWALL BREAKFAST NOOKS

**Sturdy...Simply Constructed...
Attractive...Smoothly, Silently
Operated...Complete**

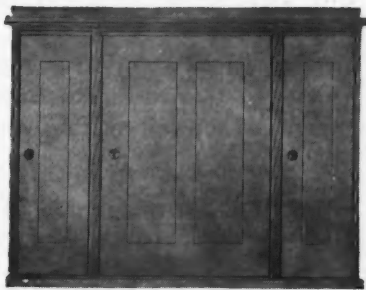
INWALL Breakfast Nooks are designed on a new principle, table and seats being pivoted at one end into the frame. They open and close silently with a single motion of the hand. Made and assembled by skilled artisans like a piece of fine handmade furniture, and are as solidly built as the finest house. The pinioned position of the table when open establishes a strainless, rigid support which will sustain a weight exceeding 200 pounds at the free end.

Inwall Nooks are quickly installed at small labor cost, fitting into a 4-inch partition so that the frame is flush with the wall, leaving ample space for plaster key on reverse side. Can be trimmed to match doors and windows. Now giving satisfactory service in hundreds of homes and apartments. Made in various woods, sizes and styles.



Shown above is the Handinook Model Inwall. Note that there are no obstructive supports beneath table. Table and seats are attached at rear on sliding pivots, and are balanced by gravity, making opening and closing silent and effortless.

Three Different Models



At left: Inwall Cabinetnook, fits against surface of any wall. Table and benches are same size as Handinook. Ideal for installation in existing houses and apartments that are to be remodeled or improved. At right: As Inwall Nooks appear when closed, illustrated by the Cabinetnook Model.



At left: Breakfast on the Prestonook. All Inwall Nooks are absolutely sanitary and fool-proof. Table may be set while benches are closed out of the way. Model seats six persons comfortably. Table top in two sections which fold back to reveal ironing board. At right: The Prestonook ironing board in use. Electrical outlet may be placed in frame below.

A Permanent Home Accessory, Instantly Popular with Women

INWALL Breakfast Nooks make attractive kitchen and dining room installations to help you sell your houses sooner and rent your apartments faster. They fit into the most compact of floor plans. No need to allow space and expense for an elaborate set of breakfast room furniture when you use Inwall.

Inwall appeals to housewives because it can be instantly closed out of the way and quickly opened for use. There is nothing to get out of order, no catches, fasteners or springs of any kind. Table and bench tops are paneled to add strength and prevent warping. All surfaces are sanded. Shipped complete, ready for instant installation in any convenient wall space, set into the wall or on the wall, as the models shown at left demonstrate.

Every Inwall Nook is guaranteed as to quality and workmanship. Sold by leading lumber and building specialty dealers throughout the United States. For complete information, send coupon below to TrimPak Corporation, 44 Whitehall St., New York, N. Y.

INWALL

Dealers! Write Us For Special Proposition!

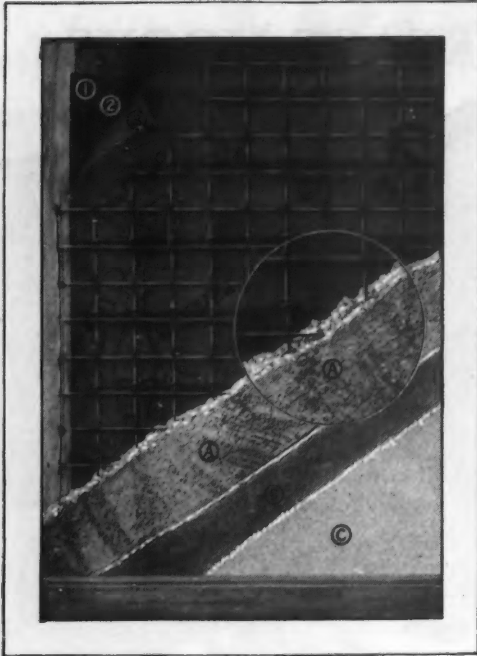
TRIMPAK CORPORATION, 44 Whitehall St., N.Y.C.
Please send complete information on Inwall.

Name.....
Address.....

AB-4

Please check the square that identifies you, so we may reply most intelligently: Architect Builder
 Contractor Retail Lumber Dealer Home Builder

Now plaster is reinforced



Section showing STEELTEX
and how it is used

- ① Waterproof backing
- ② Waterproof compound
- ③ Second tough backing
- ④ Furring device
- ⑤ Rust-proofed steel reinforcing fabric
- A Scratch coat of plaster
- B Straightening coat
- C Finishing coat

YEARs of experience in the manufacture of welded steel reinforcing for concrete enables us to offer you a new product, STEELTEX, that brings to plaster walls and ceilings the same time-tested reinforcing principle. STEELTEX reinforces plaster—with steel—exactly as concrete is reinforced.

This modern plaster base builds a network of fabricated steel right into the plaster slab—completely embedded. Cold-drawn steel is wrapped around each room, guarding against strains from every direction.

At the same time, the specially processed STEELTEX backing locked to the reinforcing fabric throws around the whole home an insulating barrier against cold and heat, against all dampness, and against noise from within and without. And the backing automatically “back-plasters” the job—without additional operations!

STEELTEX for Plaster is an improvement on the widely accepted National Reinforcing P-214. Thoroughly tested in over 110,000 installations since 1921. Send the coupon for a detailed description of this practical building material.

STEELTEX for Stucco

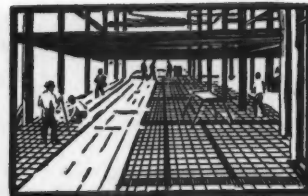
For new houses or “overcoating” old ones, STEELTEX for Stucco combines the reinforcing and insulating advantages of STEELTEX for Plaster. Similar in design, its heavier steel fabric and backing give ample strength for all exterior work. Can be nailed direct to the studs where desirable, saving the time and expense of sheathing. The special STEELTEX furring nail separates fabric and backing, insuring thoroughly embedded reinforcing throughout. STEELTEX for Stucco provides a permanently satisfactory exterior job. The coupon brings you full information.

STEELTEX



Roads, Pavements, Driveways, Etc.

All engineers recognize the necessity for steel reinforcing for concrete roads or the concrete bases of roads, streets, alleys, and driveways. The effective area of steel reinforcing required depends upon local conditions. National Reinforcing is ideal for these purposes.



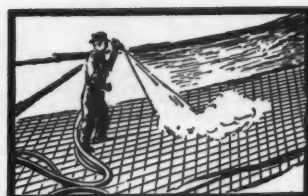
Fireproofing, Beam and Column Wrapping

Principal load-bearing members—beams, girders, and columns—should be enveloped with an efficient fire-resisting material—concrete, reinforced with welded steel fabric. National Reinforcing in the proper styles is adaptable to thin layers of concrete and to the shapes and extensive areas of such work.



Concrete Pipe

The use of National Reinforcing in the manufacture of reinforced concrete pipe has grown rapidly, chiefly because the rigidity of the welded intersections keeps the wires in their proper places and prevents slipping of the transverse wires. Considering the comparatively thin pipe shell, these two points are of great importance.



Cement Gun Work

Wherever “gunite” is suitable, welded steel fabric is invariably specified as the reinforcing material. National Reinforcing gives the equal reinforcing value in all directions required for the lining of reservoirs, canals, swimming pools, or the protection of exposed steel bridge members.

—exactly like concrete

Reinforcing for every purpose

STEELEX is made by the world's largest manufacturers of welded steel fabric for reinforcing plastic material of all kinds. On these pages are shown a few of these products, designed for various types of construction in which the use of steel reinforcing is indicated. Check the coupon for the information desired.

A practical development—STEELEX for floors

This entirely new application of the STEELEX principle is the most rapid, efficient, and economical concrete slab construction ever devised. A method has been perfected for applying it to any type of wood or metal joist, truss or beam.

It entirely eliminates the use of forms, because of its waterproof backing which is an integral part of the material. Permits a wetter and more uniform mix without dropping or waste, retains all moisture needed for perfect curing, and allows work to proceed on floors below while concrete is being poured.

Other superiorities include a sound-deadening factor, elimination of roof condensation, continuous centered reinforcing throughout the floor slab, "back-plastered" finish and clean-cut open joist ceiling.

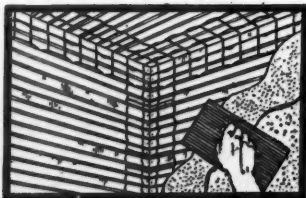
National Steel Fabric Company

404 Union Trust Bldg.  Pittsburgh, Penna.

The World's largest manufacturers of welded steel fabric

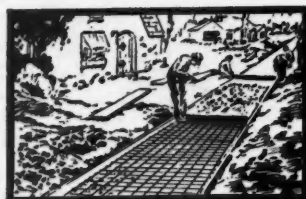
Branch Offices: Atlanta, Ga.; Chicago, Ill.; Cincinnati, O.; Cleveland, O.; Detroit, Mich.; Los Angeles, Cal.; New York, N.Y.; Philadelphia, Pa.; Pittsburgh, Pa.; Portland, Ore.; San Antonio, Tex.; San Francisco, Cal.; Seattle, Wash.; St. Louis, Mo.; Syracuse, N. Y.

Three types—same principle—same protection for plaster . . . for stucco and "overcoating" . . . for floors and roofs (concrete and gypsum)



National Corner and Joint Reinforcing

is a network of fabric of galvanized steel wires, electrically welded on 2" centers, with an automatic furring feature (crimps). Each leg of each angle of corner reinforcing is 3" wide; joint reinforcing, flat strips, are 4"; both come in 50" lengths. For use over wood lath, insulating lumber or wall board.



Sidewalks, Driveways, and Cellar Floors

The use of a comparatively light style of National Reinforcing for sidewalks, driveways, garage and cellar floors, is the best insurance against cracks and spalling. It strengthens the slab and gives many added years of trouble-free service at an additional cost of only a few cents a square yard.



STEELEX for Floors is an extra-heavy, specially-processed backing locked to an electrically-welded steel fabric similar to National Reinforcing. The latter has been used for many years for all concrete, terrazzo, or gypsum floor work wherever wood forms are desirable. Send the coupon for complete details.

National Steel Fabric Company
404 Union Trust Bldg., Pittsburgh, Pa.

Gentlemen: Send without obligation full information covering the selection and use of the proper type of STEELEX and National Reinforcing for the purposes checked below:

- | | |
|---|--|
| <input type="checkbox"/> For all interior plaster | <input type="checkbox"/> For sidewalks, driveways, and cellar floors |
| <input type="checkbox"/> For stucco exteriors | <input type="checkbox"/> For fireproofing, beam and column wrapping |
| <input type="checkbox"/> For "overcoating" with stucco | <input type="checkbox"/> For temperature reinforcement |
| <input type="checkbox"/> For floor construction without forms | <input type="checkbox"/> For roads, pavements, and driveways |
| <input type="checkbox"/> For floor construction with forms | <input type="checkbox"/> For cement gun work |
| <input type="checkbox"/> For concrete and gypsum roofs | <input type="checkbox"/> For concrete pipe |
| <input type="checkbox"/> For corner and joint reinforcing | <input type="checkbox"/> For dams, bridges, canals |

Name _____

Company _____

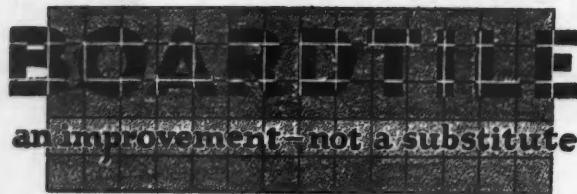
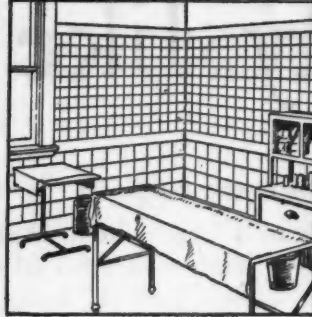
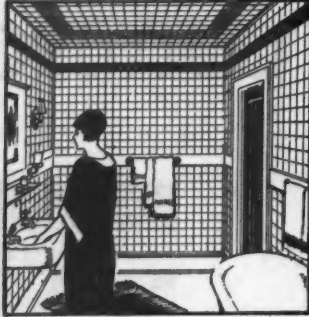
Title _____

Street _____

City _____

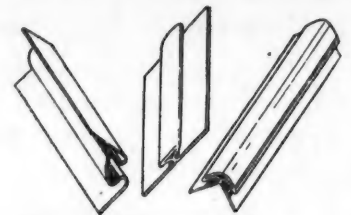
State _____





Better and More Economical Wherever Tile Has Been Found Desirable

In Bathrooms, Kitchens, Doctors' and Dentists' Offices, Nurseries, Chapels, Churches, Barber Shops, Halls, Laundries, wherever anything of durability or beauty is desired, Boardtile has proven



These division strips are furnished for convenience in installing.

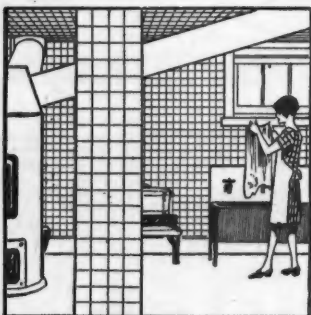
A Boon to Builders With A Score of Advantages for Building Owners

- Looks Better, Lasts Longer, will not crack, chip or craze.
- Furnished in a variety of colors and designs.
- Standard size wall board sheets.
- May be nailed or glued over old walls or direct to new studding.

- Easy to install—any carpenter can do the work perfectly.
- No muss or fuss.
- Costs only one-third to one-half as much as tile.
- Attractive proposition for building material dealers.

Manufactured Only By
GIBBS BOARDTILE CORPORATION
344-350 North Ogden Avenue
CHICAGO, ILL.

Mail Coupon to Secure **FREE SAMPLE** and Full Information



GIBBS BOARDTILE CORP.
344-350 N. Ogden Ave., Chicago, Ill.

Please send sample and complete information regarding Gibbs Boardtile.

I am a Contractor and Builder
 Building Material Dealer

Name.....

Address.....

City and State.....

You Need Bondex Waterproof Cement Paint to put the finishing touches on every job



BUILDERS, contractors and home owners are becoming more enthusiastic about Bondex every day as thousands of homes, apartments and factory buildings are beautified with this remarkable paint.

Now, as never before, the builder who puts color into his homes reaps the added profits of quick sales. For everybody wants color today. Warm shades of tan, beautiful creams, yellows and the modernistic greens, blues, reds, pinks and lavenders—a riot of color for you to choose from. A tint or shade to harmonize with every style of architecture or setting.

Wherever you have stucco work, brick, stone, concrete or hollow tile, Bondex will produce a very pleasing and practical finish at a remarkably low cost. Bondex is not only waterproof, but it is permanent. It won't

**Beautiful Bondex colors
make houses sell quickly ~
Walls, basements, foundations, all can
be made attractive at very low cost**

crack, chip or peel. It can be washed with soap and water or ammonia.

Try Bondex on one job

See what a big difference this cement paint will make. See how quickly the Bondex colors appeal to women—the real home buyers!

Bondex the basement as well as the stucco. Instead of leaving the basement walls a dirty gray, Bondex them a spotless white.

Light, airy, dry basements are a big selling point. Bondex waterproofs as it beautifies, so it is ideal for basement walls, whether they are made of stone, brick, hollow tile or concrete. Any damp places will be dried up by the Bondex and sealed against further moisture.

If you would like to buy one of these specially constructed Bondex Spray Pumps, write for the prices.



On the exposed portions of the foundations outside Bondex will give a neat finished appearance. Use the color which harmonizes with the outside finish.

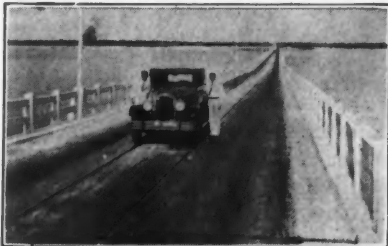
Apply Bondex with a spray or brush

Bondex is ideal for use in any type of spray outfit from the simple hand pump spray (which may be purchased direct from us) to the elaborate pressure tank outfits. It sprays smoothly and gives an even colored effect.

For small jobs Bondex works perfectly when applied with a wide brush.

Send for the Bondex Booklet and sample

We want you to try Bondex and see for yourself the remarkable beautifying and waterproofing qualities of this paint. Send for the booklet, color card and a sample. They will be sent absolutely free.



FREE SAMPLE

THE REARDON COMPANY
103 Clinton St., St. Louis, Mo.

Please send me your FREE booklet and a sample of BONDEX.

Name.....
Street.....
City..... State.....
Business.....

Reardon's

BONDEX
WATERPROOF

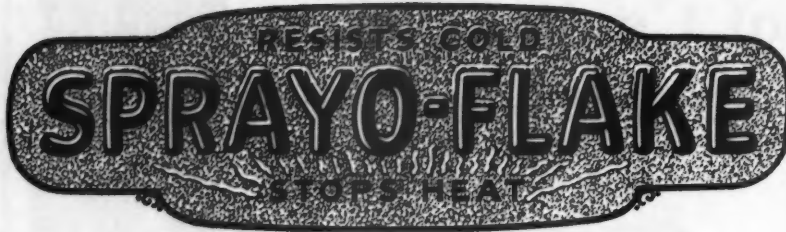
CEMENT PAINT

THE REARDON COMPANY

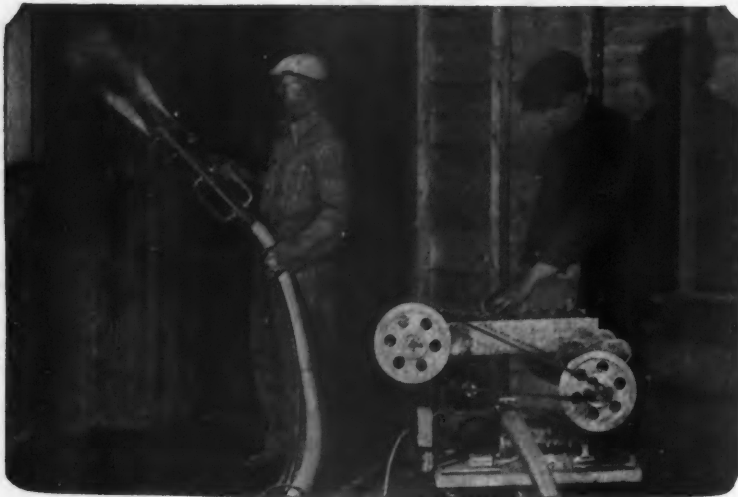
St. Louis — Chicago — Los Angeles

Other Reardon Products • Solarite, Cresto, Lumnite, Alfresco, Wall Size

Investigate Now—the Exclusive Franchise on



— an entirely new and more efficient insulation that pays **REAL PROFITS!**



Sprayo-Flake is an amazing advancement in insulation—the big step ahead that contractors and home builders have long waited for. It is capturing the interest of the building trade everywhere.

An exclusive product, Sprayo-Flake eliminates all the difficulties usually encountered with bulk, sheet, or roll type of insulating material. The Sprayo-Flake process, also method of application, are protected by patents. The Sprayo-Flake franchise enables licensed contractors or representatives to meet all competition, and realize a substantial profit on every job.

Sprayo-Flake insulation is manufactured and applied on the job in one operation. It is fire-resisting, vermin-proof, and sound deadening. Can be applied more efficiently than any other insulation. It is *sprayed*—making a tight-sealing insulation blanket; covers around pipes, window jambs, and in every nook and crevice.

We are interested in hearing from responsible parties who are established in, or affiliated with the building industry, and are in a position to take advantage of this unusual opportunity. Write us on your letterhead for complete details.

SPRAYO-FLAKE CO. Administrative Offices 56 So. Bay Street Milwaukee, Wisconsin

Important Facts about SPRAYO-FLAKE

Non-competitive — license is issued to representatives on exclusive basis.

Patented process. Applied by patented equipment.

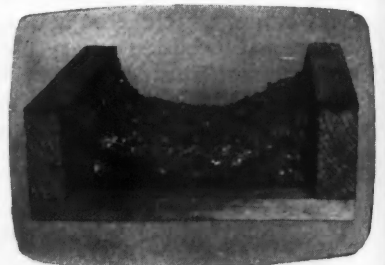
Sprayo-Flake has highest insulating value per inch of thickness of any insulation on the market. It is *sprayed* — making a tight sealing insulation blanket, even around pipes, window jambs, and in every nook and crevice.

Two men can apply 2000 square feet of Sprayo-Flake one inch thick per eight-hour day, per machine.

Any thickness of Sprayo-Flake may be applied—from ½ inch to full depth of studding.

Low cost of Sprayo-Flake enables you to meet all competition, with a larger margin of profit.

The thickness of Sprayo-Flake is not restricted in any way. Illustration below shows the structure of Sprayo-Flake as it appears when sprayed between wood studding. Sprayo-Flake can be applied to metal, or masonry surfaces as easily as to wood. Ideal for homes, apartments, warehouses, garages, factories, etc.



Sprayo-Flake licensed representatives operate on an exclusive franchise. Representatives in principal cities can devote their entire energy to Sprayo-Flake and build up a big, highly profitable, specialized business. Building contractors, or material dealers in smaller cities can handle Sprayo-Flake in conjunction with their established business — greatly increasing their annual profits. Many licensed Sprayo-Flake representatives in larger cities are now handling this superior insulation and are making a phenomenal success with it. Many choice territories still open, particularly in medium size cities.

Dependable Hardware

-ALWAYS

For 30 years the name "Garcy" has signified substantially—built hardware at moderate cost. The items listed here represent a very small part of our entire line. It will be worth your time to investigate "Garcy" Hardware— "Garcy" Prices and "Garcy" Service.

REMEMBER THE NAME—

GARCY
TRADE MARK REG.



The "Garcy" Adjustable Push Button Catch (for Swinging Doors). A neat, attractive catch that guarantees a closed door when it should be closed. All exposed parts are

Brass. Stocked in three finishes: Brush Brass, Statuary Bronze and Nickel Plated. Made in two sizes:

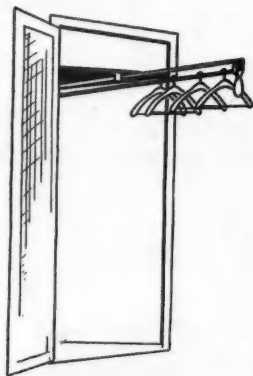
No. A-502—For doors $\frac{5}{8}$ " to $1\frac{1}{8}$ " thick.
No. B-502—For doors $1\frac{1}{4}$ " to 2" thick.

SPECIAL QUOTATION IN ANY QUANTITY
(Other finishes supplied if desired)



EXTENSION GARMENT CARRIERS

The Clothes Closet Fixture that saves Closet Space and cuts Building Costs. These fixtures are economical and pay big dividends by materially increasing the value of the house. They are genuine Roller Bearing, made in all sizes from 15-inch and up.



Write for Special Garment Carrier Folder NOW.



No. K-73 Pilaster Strip and A-73 Brackets for Construction of economical Adjustable Shelving. Ideal for the home, in Butlers' Pantries, Linen Closets, and Built-In Wardrobes. Shelves may be placed just where you want them for the slots in the pilaster are one-half inch apart. Always in stock in nickel plated finish, in lengths of 3, 4, 6 and 12 feet. Other sizes and finishes can be furnished.

Free Sample and Special Folder on Request

GARDEN CITY PLATING & MFG. CO.
1430 South Talman Ave., Chicago

We also make LIGHTING REFLECTORS for Show Cases, Wall Cases, Banks, etc.

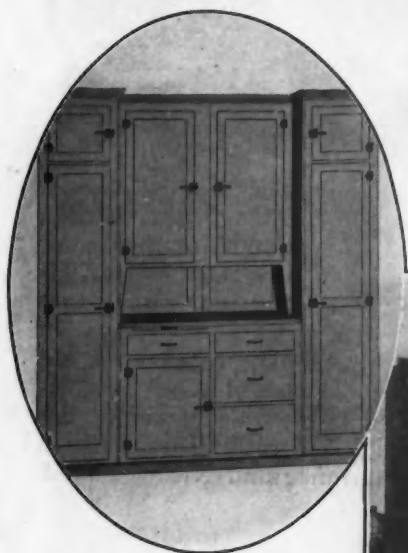
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Vari-uni-cab

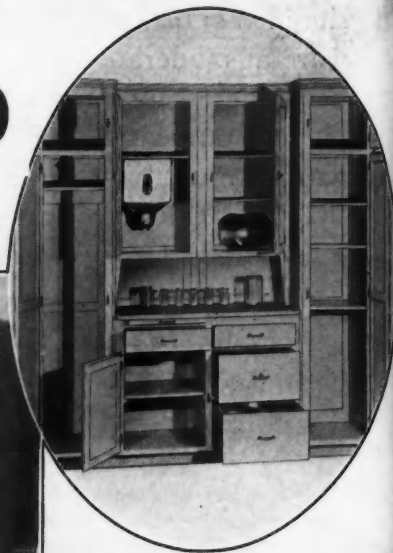
BUILD THE CABINET TO THE KITCHEN

not

THE KITCHEN TO THE CABINET



A pleasing Vari-uni-Cab combination demonstrating possibilities of unusually convenient arrangement, permitting adaptability to any kitchen and apartment limitations. Every cabinet need is arranged for!



Here is a cabinet combination opened up showing the spacious and extremely accessible interior. By alterations in arrangement of units any desired combination can be obtained . . . for any space or condition!

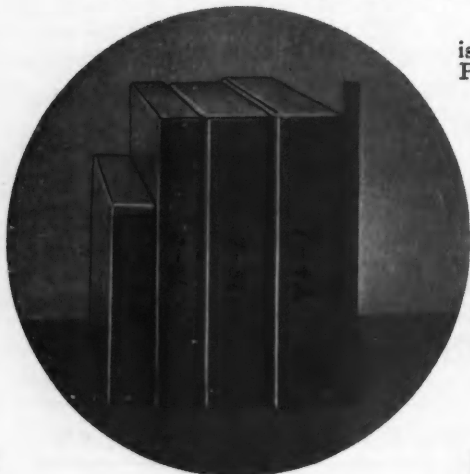
IN this beautiful, richly appointed Cincinnati apartment home 68 Vari-uni-Cab combinations, including refrigerators, were installed. These Vari-uni-Cab units, simple in design yet rich enough for the most pretentious apartment, have a tremendous appeal to the Home Owner and Tenant.

Architects, Builders, Contractors, Lumbermen, and Home Owners are quick to visualize the wide adaptability of the Vari-uni-Cab units. The cost is astoundingly low!

The Vari-uni-Cab is available in combinations with refrigerators. Also with arrangements for sinks and gas stoves. Ideal for apartments. Grooved parts fitted together securely, insuring rigid assembly.

Conveniently Packed

The illustration below shows a complete 11-foot Vari-uni-Cab base section packed for shipment and deliver. Each unit in natural wood, complete with all hardware, is packed in separate corrugated fiber box containing full directions for assembling, with the back, sides and front plainly marked.



A hammer and screwdriver is all that is needed to completely assemble a unit. Perfect fitting parts make the assembly so easy that only a few minutes are required to assemble the most difficult unit. Nickel plated, rust resisting hardware is included and easily applied.

Write for complete information and details about the Vari-uni-Cab. No obligations.

VARIABLE UNIT CABINET CO.

Factory and General Office

KOKOMO, INDIANA





Here is the way a Laminex one-panel door would look, if the outer layers were cut away, exposing the construction of panels, stiles and cross-rails. Read how this construction, welded together permanently with Laminex waterproof cement, makes Laminex doors absolutely immune to damage by moisture.

Here are the inside facts

DAMPNESS makes ordinary doors buckle, split and blister, because it is the nature of wood to swell when wet. Because of the scientific construction and Laminex waterproof cement, dampness cannot possibly damage Laminex panels, stiles or rails. Even though a Laminex door is installed before the plaster is dry, the panels will not buckle or blister, and the door will never warp or stick.

You can obtain popular designs of Laminex doors from progressive lumber and millwork dealers at reasonable prices. If you are unable to get Laminex doors from your local dealer, write us and we will give you the name of a dealer who will supply you. The success of Laminex has tempted others to offer ordinary veneered doors, outwardly resembling Laminex doors, but lacking the moisture-resistance of genuine Laminex waterproof cement. Such doors cannot stand the famous Laminex soaking test. For your own protection, insist on doors that bear the yellow replacement guarantee label and the name "LAMINEX."

LAMINEX DOORS
WILL NOT SHRINK, SWELL OR WARP



Fill in and mail the coupon today for our new book that explains the advantages of Laminex construction, and for a sample of Laminex wood to test.

THE WHEELER, OSGOOD CO.
Tacoma, Washington.

Gentlemen:

Please send me your new book about Laminex doors and a sample of Laminex wood to test.

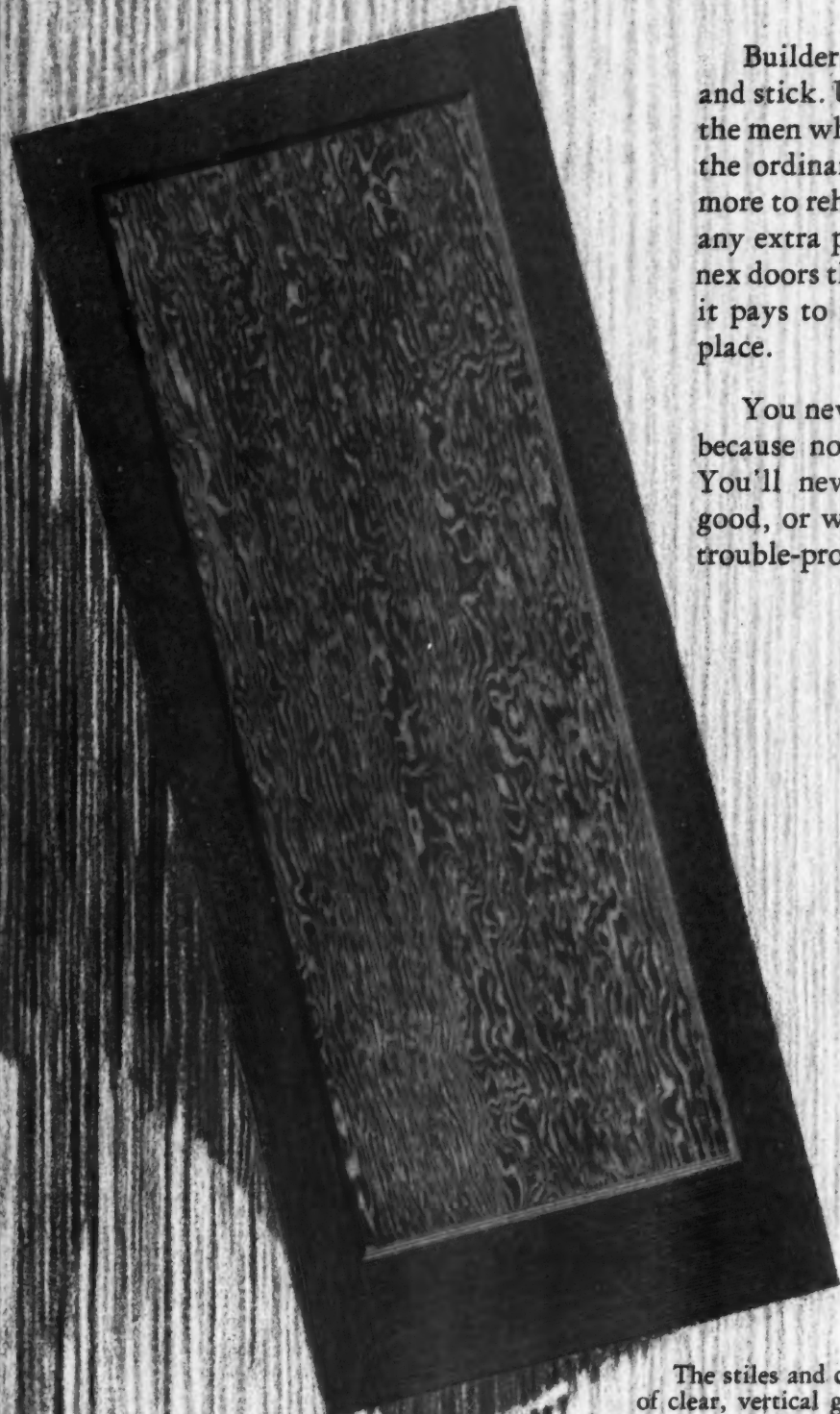
Name.....

Address.....

City..... State.....

I buy.....doors per year.

This substantial door will never have to be rehung and refinished



Builders are blamed when ordinary doors warp and stick. Usually the doors are to blame, and not the men who install them, for moisture will make the ordinary door swell, warp or stick. It costs more to rehang and refinish one warped door than any extra price you might have to pay for Laminex doors throughout an entire house. That's why it pays to install trouble-proof doors in the first place.

You never have trouble with a Laminex door, because no amount of moisture can damage it. You'll never have to refit one—it must make good, or we will. Laminex doors are guaranteed trouble-proof.



The famous Laminex door soaking test, that retail dealers make publicly in all parts of the country, proves that no amount of dampness can make a Laminex door warp, split or come apart.

The stiles and cross-rails of Laminex doors are built on cores of clear, vertical grain blocks. Any tendency of one core block to shrink, swell or warp is immediately neutralized by opposing forces in adjoining core blocks. Laminex waterproof cement, made by a secret formula, holds all parts of a Laminex door together, even after days of soaking in water.

LAMINEX REG. U.S. PAT. OFF. **DOORS**
WILL NOT SHRINK, SWELL OR WARP

NATIO



Provide for Outside Icing

Homes and Apartments Should be Planned to Include this Convenience

THE importance of providing for outside icing should not be overlooked in drawing up plans for houses and apartment buildings.

Outside icing, which permits the iceman to deliver ice without entering the house at all, can be arranged for, at very slight extra cost, when the building is under construction.

Many refrigerator manufacturers build special models designed for outside icing. These cost very little more than the regular models and are becoming very popular. The modern

housewife appreciates the advantage of outside icing. Ice refrigeration is so economical and satisfactory that a great many prefer it. They realize that ice safeguards the purity of food because it provides constant circulation of air, which carries the impurities and odors to the melting ice and thence down the drain.

Some of the leading refrigerator manufacturers furnish blue prints which are very helpful to architects and builders in providing proper outside icing facilities.

NATIONAL ASSOCIATION OF ICE INDUSTRIES



163 WEST WASHINGTON STREET, CHICAGO, ILL.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Protection

The Lind Construction Co., Chicago, used 10,000 bags of mortar cement in Bates Multi-Wall Paper Bags on this apartment hotel job.

Bates Multi-Wall Paper Bags, made in 8 modern plants throughout the country by the Bates Valve Bag Corporation, are the Contractor's insurance against loss on cement and plaster.

Bates Bags empty out clean. They do not have to be returned. And their five strong separate walls are the surest protection against moisture and rough handling.

Buy your Cement and Plaster in Bates Multi-Wall Paper Bags and avoid loss.

BATES VALVE BAG CORPORATION
35 E. Wacker Drive, Chicago, Ill.

—no loss

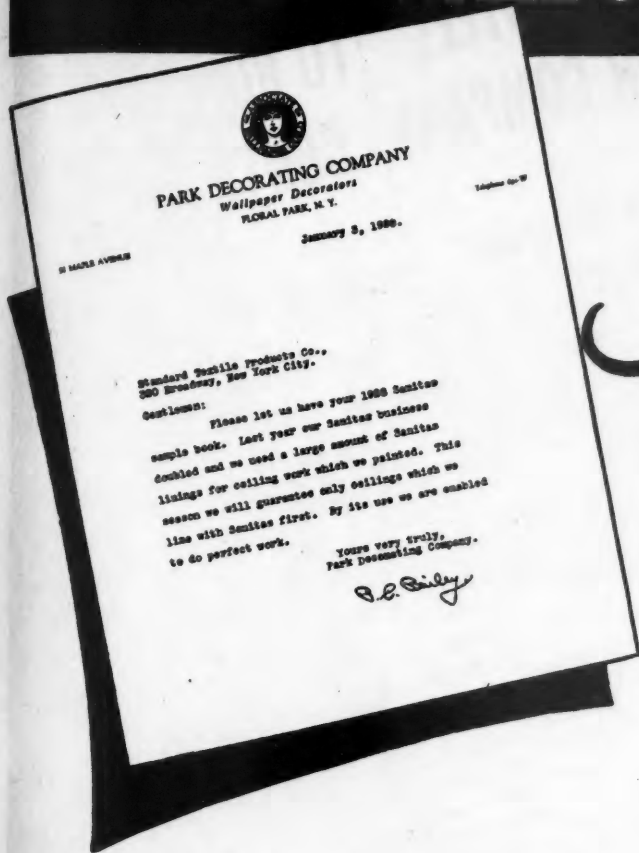


BATES MULTI-WALL PAPER BAGS



SANITAS

MODERN
WALL COVERING



for Ceilings also

HOW to finish a ceiling, may be answered in many ways, but one thing is certain, if you want ceiling decorations to be durable, use Sanitas as a base, and satisfaction will be assured.

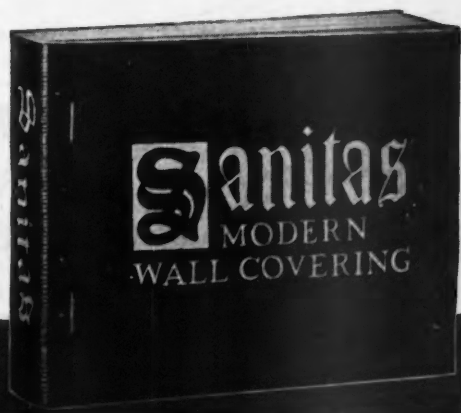
The tensile strength of Sanitas adds longer life to a ceiling, cracks will not show through. No flaking or peeling.

Sanitas is the cloth wall and ceiling covering that has been on the market for twenty-five years, giving good service in all parts of the world, in all kinds of climate.

There are Sanitas styles for every room in the house, from the simplest plain dull finished tints to the ornate Metalline Brocades for the richest effects.

The complete line of 140 styles is shown in the Sanitas Sample Book. This book is issued only to the trade. If you haven't received a copy, write us on your business letterhead and mention wholesaler's name.

THE STANDARD TEXTILE PRODUCTS CO.
320 BROADWAY, NEW YORK
DEPT. 51



Send for this Sample Book

**HER
ERY;
RGAIN**

**U. S. PURCHASES
PACIFIC STEEL
BOILER COMPANY**

**Announce Important
Merger**

**MAY
TO BO
CONT**

**Goes to W
Aid F**

**BY JAM
(Picture
Mayor WUM**

s Little
Work.

HAIGHT.

on city streets
automobile traffic
by the existing
street, including that
Garfield boulevard
by the south park
55th street has the
for continuous east
from the lake straight
and beyond that
Vesvelt road. It is
street south of
ers direct pas-
unimpeded by
western county
is a paved
ern avenue,
out" as a
condition
considera-
d.
through
at actu-
be.
to pro-
between
avenue,
ve this
Kostner
avenue,
ed that it
of these
h street as
ake Michi-
west of the

Detroit, Mich., Feb. 20.—[Special.]—
Of interest to the entire heating indus-
try is the purchase of the Pacific Steel
Boiler Company of Waukegan, Ill., by
the United States Radiator Corpora-
tion of Detroit, Mich.
Both concerns now occupy high
places in their respective fields. The
United States Radiator Corporation is
the country's second largest manufac-
turer of cast iron heating boilers and
radiators, maintaining thirty-two branch
and sales offices, thirty-eight distribut-
ing points, and nationally known as
the sponsors of Capitol Guaranteed
Heating.

The Pacific Steel Boiler Company is
the largest maker in the United States
of electrically welded steel heating
boilers. Successfully developing the
application of arc welding to steel boil-
ers, the company has grown rapidly
and now has modern plants at Wauke-
gan, Ill., and Bristol, Pa.

Combining the products and the dis-
tributing facilities of both companies
will undoubtedly result in superior
service to heating contractors all over
the country. Hence, this merger should
be of interest not only to dealers who
have been handling the product of
either concern, but also to those who
have before this represented other
lines only.

parted for
night to give
as chairman
trol confere
Reid bill, w
gress.
Accompan
mer Senator
R. Pike, In
board; Cas
business
and Rebe
or's staff
Mayor
the feder
tire cost
Mississi
of disas
last spr
Reid of
flood bo
of repr
bill carr
montha
subject
Because
the war
and Presi
that the
pay about
rest to be
the affect
son was urg
"The affe
20 per cent
Thompson sa
levee boards
have spent a
revenue, and la
be taxed so there
in sight.
"President C
shown a symp
flood control
Nicholas Long
Martin B. M
appropriation
Chicago con
cord with
we'll

**MADDEN PICKED TO
LEAD COOLIDGE FIGHT
FOR FLOOD CONTROL**

Washington, D. C., Feb. 22.—[Spe-
cial.]—Representative Martin B. Mad-
den [Rep., Ill.] has been selected to
lead the administration flood control
fight in the house.
As chairman of the appropriations
committee which controls the pur-
sings of the government the pur-
ment of a Missi-
Madden

"The affe
20 per cent
Thompson sa
levee boards
have spent a
revenue, and la
be taxed so there
in sight.
"President C
shown a symp
flood control
Nicholas Long
Martin B. M
appropriation
Chicago con
cord with
we'll

Shades that can be kept as clean as the windows

Save their cost in years of service



*Terrace Court Apartments
Pittsburgh, Pa.*

THE distinction and attractiveness which you are endeavoring to secure for your buildings can be secured by a careful attention to the details of equipment.

Du Pont Tontine, the washable window shade, can be kept as clean as the windows, and through years of service without replacement they more than save their original cost.

Tontine is made by a special du Pont process. It contains no "filler" and cannot crack or pinhole. It is impregnated with pyroxylin, the basic sub-

stance of that other famous du Pont product—Duco—which has brought enduring beauty to the American highway and the American home. Always clean and attractive, new and spotless, du Pont Tontine shades will dress up your windows for many years. Investigate the Tontine story now.



E. I. DU PONT DE NEMOURS & CO., Inc.
NEWBURGH, N. Y.

Canadian Distributors:
CANADIAN FABRIKOID Limited
New Toronto, Ontario, Canada



TONTINE

REG. U. S. PAT. OFF.

THE WASHABLE WINDOW SHADE

E. I. DU PONT DE NEMOURS & CO., Inc.
Newburgh, N. Y. Desk AB-15

Please send me complete and full information about Tontine, the washable window shade.

Name.....
Address.....

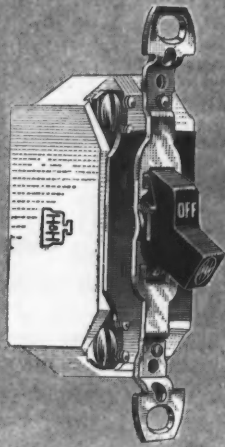
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Architect — CHARLES NOBLE, DETROIT
 Builder — RALPH T. LEE, DETROIT
 Elec. Contr. — HOGAN ELECTRIC COMPANY, DETROIT



THE LEE PLAZA APARTMENTS — DETROIT — with 2500 H&H Tumbler Switches.



LIGHTING makes a building livable; we help you make it dependable. Whatever your plan of day-lighting a job, you know it will not fail. Whatever your plan of *electric* lighting, you know *that* will not fail if controlled by *H & H* Switches.

No. 8601 Tumbler with Brown Handle — Exclusive in looks and in works

THE HART & HEGEMAN MFG. CO.
 HARTFORD, CONN. MAKERS OF ELECTRIC SWITCHES SINCE 1890



Ball-room and dining room of Half-Way House, Glen Falls, N. Y. Heated with Trane Concealed Heaters.

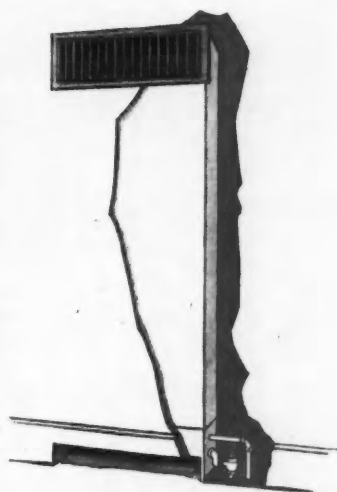
With Trane Concealed Heaters

MORE SPACE—GREATER BEAUTY—INSTANTLY CONTROLLED HEAT

THE present-day demand for clear, unobstructed space is fast crowding radiators out of modern rooms. Instead, Trane Concealed Heaters, "Successors to the Radiator," are installed between the walls.

Trane Concealed Heaters are not hidden or recessed radiators, radiator shields or screens. This up-to-date equipment is far more than a modified radiator. It operates on an entirely different heating principle, with a copper-fin heating element. The inconspicuous damper grille—the only visible evidence that the room is heated—provides instantaneous control.

You can install this advanced equipment in any building originally designed for radiators. It connects with the same pipes, fits between standard walls. Thousands in use. Capacities guaranteed. Mail the coupon for practical bulletin, "How to Select and Install Trane Concealed Heaters".



The complete Trane Concealed Heater. Installed with stacks of various heights (note use under windows in photographs above.)

HEAT TRANE CONCEALED
CABINETS TRANE HEATERS
*** PUMPS AND HEATING SPECIALTIES ***

THE TRANE CO., (Est. 1885)
276 Cameron Avenue, La Crosse, Wis.

Send along your Bulletin 24, "How to Select and Install Trane Concealed Heaters."

Name.....
Address.....
City..... State.....
Type of Building.....

Hundreds of Contractors every week ask this question:

"Can I insulate my houses with Balsam-Wool and still sell them in competition?"

The answer is YES—and here are the reasons —

Balsam-Wool

—the flexible insulating and sound deadening blanket.



SOLD THROUGH RETAIL
LUMBER DEALERS



THIS flexible insulating blanket is such an efficient insulator that it costs almost nothing to use it in your houses. You can almost save its first cost by reducing the size of the heating system.

As an insulator Balsam-Wool is the practical equivalent of sheep's wool. And it's flexible—*tucks into* the cracks, crevices and open joints. Caulks those places where the most heat escapes.

Put Balsam-Wool between the studs, roof rafters and floor joists. Tuck it in around the window frames and door frames. Then you'll have a *perfectly insulated* house. And the total cost of the house will be but little, *if any*, more than a house that's not insulated at all.

That will give you an advantage over competition.

Special Correspondence Invited. Write us for anything you want to know about Balsam-Wool. Our Technical Department will gladly tell you about specifications covering various methods of application, its use for sound deadening purposes, etc. Balsam-Wool is made in both *full inch* and *half-inch* thicknesses. If your lumber dealer doesn't handle it, let us know. We will direct you to a reliable dealer who does.

WOOD CONVERSION COMPANY

Makers of both flexible and rigid insulations

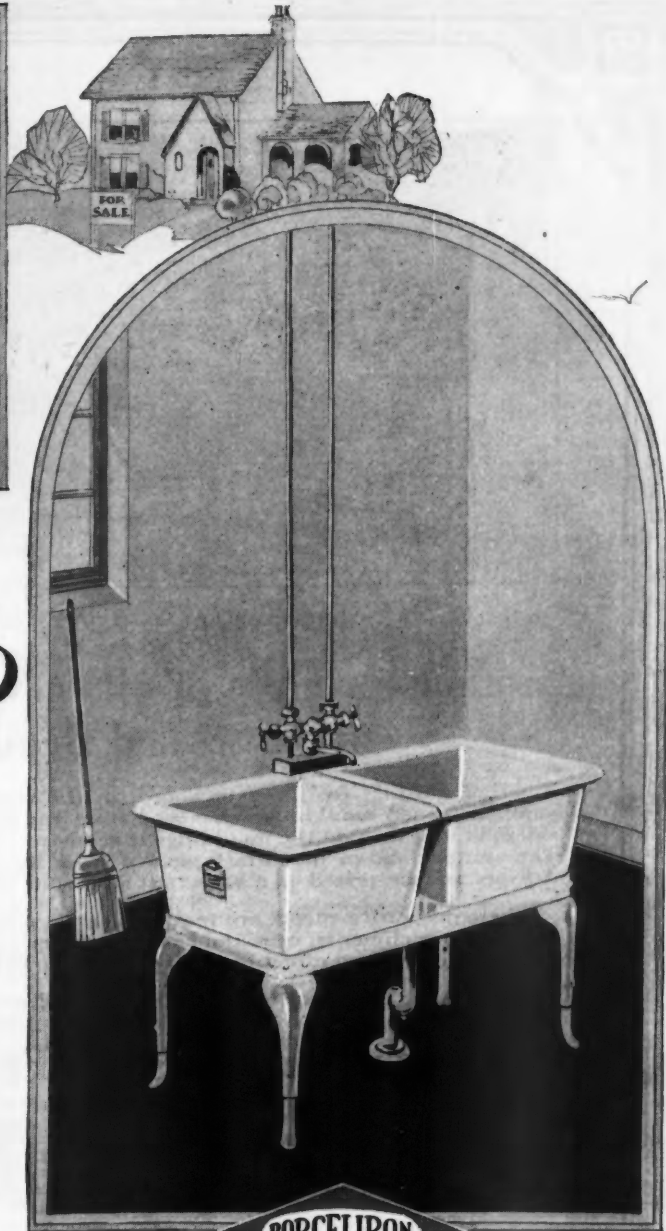
Mills at CLOQUET, MINNESOTA

Sales Offices:

MINNEAPOLIS, Baker Bldg. CHICAGO, 360 N. Michigan Ave.
NEW YORK, 101 Park Ave. DETROIT, 503 Stephenson Bldg.
KANSAS CITY, 3525 Broadway



The Weyerhaeuser Guarantee is behind Balsam-Wool. It assures highest quality and lasting satisfaction to users.



Which?

would YOU choose?

PUT yourself in the position of the prospective purchasers of your houses, Mr. Contractor.

Suppose you were buying the house in which, very likely, you will spend the rest of your days—

Wouldn't you vote for the laundry equipped with the Porceliron Laundry Tray?

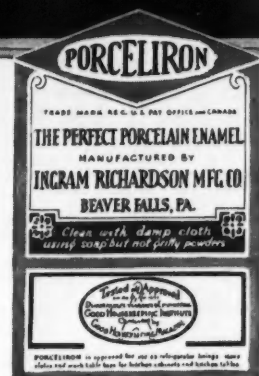
Wouldn't you choose this glistening, sanitary, snow-white unit installed in the center of the floor; made to meet modern methods of housekeeping—

In preference to the inconvenient, old-fashioned affairs—relics of the back-breaking days of the wash board and hand wringer—

Particularly when such a unit costs very little more than cement or slate—Wouldn't you?

Mr. Contractor, The Porceliron Laundry Tray—embodying everything a modern housewife could ask in such a unit—adds to the sales value of a house many times the slight difference between its cost and the cost of the cheapest unit you can buy.

Investigate it, now. Full details and several suggestions for efficient laundry arrangements prepared by nationally known authorities will be sent you on request.



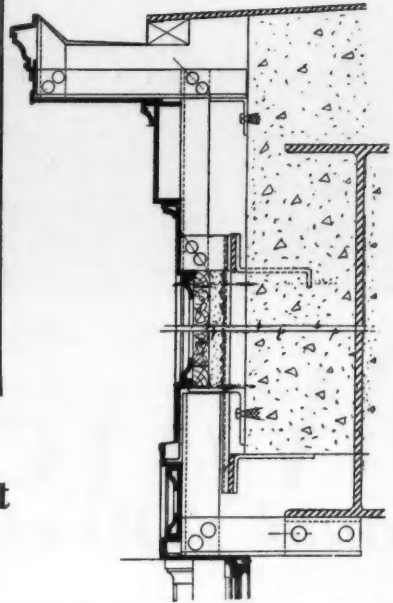
INGRAM-RICHARDSON MANUFACTURING COMPANY
410 THIRTY-SECOND STREET, BEAVER FALLS, PA.

Porceliron Factories at
BEAVER FALLS, PA. FRANKFORT, IND. BAYONNE, N. J.
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

A.I.A.-26 B-1



Side elevation—MARCUS CO. STORE, WORCESTER, MASS.
CUTTING, CARLETON & CUTTING, Architects



Another example of exterior treatment with Extruded Bronze

A rather unusual treatment is shown in the side elevation of this store. Extruded mouldings were used from the cornice down to the sidewalk and include the mouldings that retain the marble in place. The sections shown here are typical of stock shapes for immediate delivery and are priced on a basis that allows for general use.

Where decorative effects are required, sections such as ornamental cresting, enrichments, caps and bases, et cetera, are available in cast Bronze and are used direct in relation with the Extruded sections.

We welcome the opportunity of submitting drawings and details.

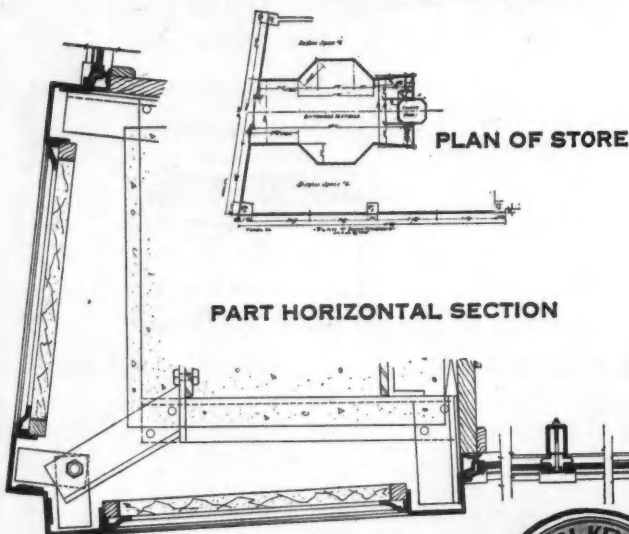
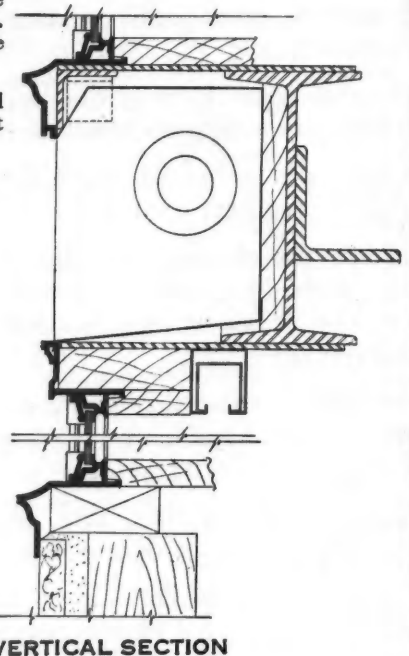
Modern Bronze Store Front Co.

And Associated Companies:

International Distribution

Zouri Drawn Metals Company
 International Store Front Company
 Standard Store Front Construction Co.
 Zouri Company of California
 Zouri Drawn Metals Co. of New York, Inc.
 Factory and General Offices: Chicago Heights, Illinois

Names on Request



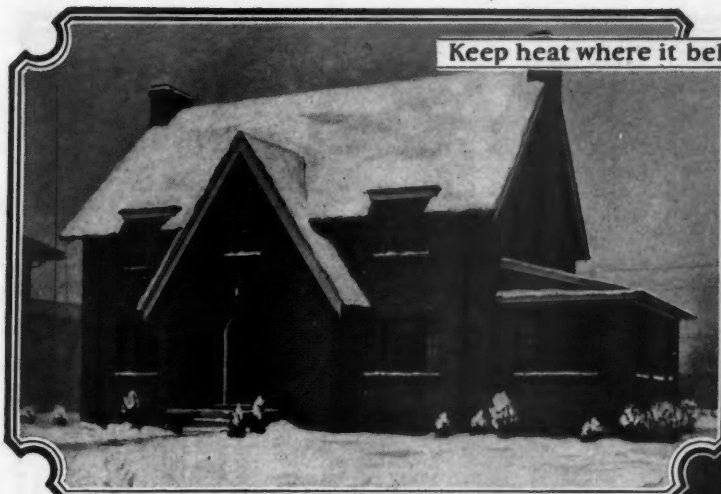
PLAN OF STORE

PART HORIZONTAL SECTION

VERTICAL SECTION



Keep heat where it belongs ~ outdoors in summer, indoors in winter



Masonite Insulating Lath was used as a plaster base in this attractive home located in South Bend, Indiana. Owner, Mrs. Carolus C. McNamara. Architect, Russell H. Stapp. Contractors and Builders, Whitcomb & Keller Real Estate Builders



Here is another one of the many fine modern residences in which Masonite Insulating Lath has been used as a plaster base. Owner, G. A. Stockhus, Rockford, Ill. Architect, Jesse A. Barloga, Rockford. Contractor, Al. Anderson



Residence of John A. Saerman, 9927 S. Robey St., Chicago. This also has Masonite Insulating Lath as a plaster base. Architect, Bert Hubbard. Contractor, Geo. A. Nordgren

This *thermostatic wood* also gives you a beautiful job of plastering!

Masonite Insulating Lath pioneered the small plaster board. Ask your lumber dealer to show you a sample, and send for a copy of free book

NO WONDER leading architects and builders, as well as owners, are so enthusiastic about these small plaster boards pioneered by Masonite!

Many tests have proved that Masonite Insulating Lath practically eliminates shrinking and swelling, a truly remarkable fact. Walls and ceilings plastered on Masonite Insulating Lath remain smooth and even.

No headers are necessary when Masonite Insulating Lath is used; no tape joint except at corners. Instead of two or three men on the scaffold, one man can readily apply it—because it is a small board. And as a general rule the job can be done in about three-fourths of the time it ordinarily takes.

Further, Masonite Insulating Lath offers great resistance to moisture. And there is no need to wet the board before applying the plaster.

Masonite Insulating Lath holds plaster with a sure and enduring grip; a grip so tenacious that it will not break under a pull of one thousand pounds per square foot!

No matter what type of home or apartment building you plan to erect—no matter whether you use wood or stucco, stone or brick—you can get a beautiful, enduring job of plastering with Masonite Insulating Lath. And at the same time you are assured *permanent* insulation, plus the advantages of sound deadening.

Ask your lumber dealer to show you samples of Masonite and of Masonite Insulating Lath. Then send coupon for free book telling the detailed story of these two wonderful products.

MASON FIBRE COMPANY

Sales Office: 111 West Washington Street, Chicago, Illinois
Mills: Laurel, Mississippi

"Masonite Insulating Lath has shown very satisfactory results in the ten residences where we have already used it. In fact, I would say that the cracking in these homes has been reduced 75% under the homes where ordinary lath was used."

Whitcomb & Keller
Per H. Russell Stapp
Architect

Send for Sample and FREE Booklet!



MASON FIBRE CO.
111 W. Washington St.,
Chicago, Ill.

Please send me your free Masonite booklet, "Building for Permanence, Comfort and Value," and sample.

Name.....
Street.....
City..... State.....

YOUR LUMBER DEALER HAS MASONITE IN STOCK, OR CAN READILY GET IT FOR YOU



Masonite advertising is now appearing regularly in leading metropolitan newspapers, and in half a dozen magazines of national circulation, including the "Architectural Forum." A campaign on Masonite Preswood is also running month by month in "Nation's Business" and other publications. Remember, too, that we provide job signs, yard signs and direct mail

campaigns. Take advantage of Masonite advertising and sales helps, and you will make more money. There's no doubt about that! Write for sample, and for book of Specifications and Details.

MASON FIBRE COMPANY
Dept. 148, 111 W. Washington Street, Chicago, Ill.

Mills: Laurel, Mississippi

© M. F. Co.



Apartment House at 817-23 Forest Ave., Evanston, Ill.
Owners and Builders, R. C. Ostergren and R. H. Reid.
Architect, R. C. Ostergren. Fully equipped with
Reliable Gas Ranges with Lorain.

The Most Important Room in the Home!

WHAT IS the most important room in the home? The kitchen, no doubt, for that is where the meals for the entire family are prepared, and—one must eat to live! What is the most important piece of equipment in the kitchen? The gas range. And what is the ideal kind of gas range? A gas range with the Lorain Red Wheel.

With a gas range equipped with this device all oven cooking and baking is done by means of accurate oven temperatures, measured and automatically controlled by the Lorain Red Wheel. It creates economy in food for there is no waste due to burned foods—every dish is cooked or baked “just right” by means of Time and Temperature methods made possible by Lorain.

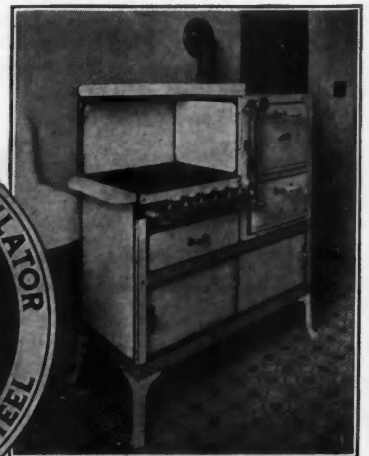
Lorain-equipped Gas Ranges are well-known nationally since they have been advertised in leading national publications for nine years. Over 2400 schools, colleges and universities use Red Wheel Gas Ranges to teach their students the art of scientific cookery.

Unless the Gas Range has a RED
WHEEL it is NOT a LORAIN

Each line of stoves equipped with a Red Wheel (there are but six: Clark Jewel, Direct Action, Dangler, New Process, Quick Meal and Reliable) offers a wide selection of sizes, styles and finishes suitable for kitchens in houses, apartments, schools, churches—in fact, any building where cooking is done. For data, see Sweet's Catalog, 22nd Edition, Pages C3245-C3254, incl.

AMERICAN STOVE COMPANY
233 Chouteau Ave. ∴ ∴ St. Louis, Mo.
Largest Makers of Gas Ranges in the World

Representative kitchen in apartments
at 817-23 Forest Ave., Evanston, Ill.,
showing the Reliable Red Wheel
Gas Range as installed.

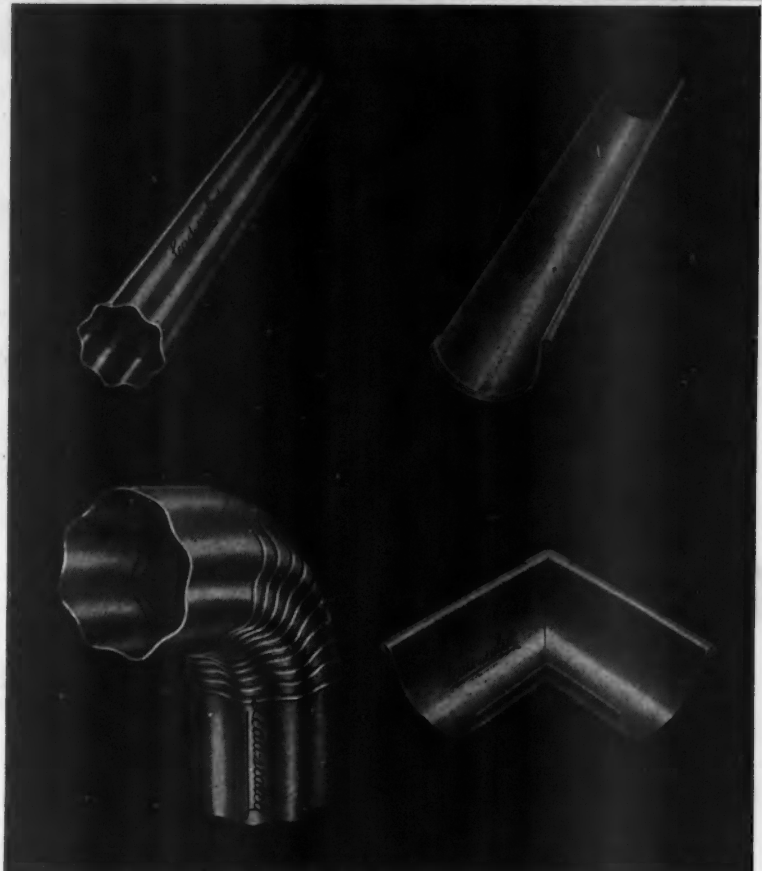


L O R A I N

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

PURE LEAD - *most beautiful and enduring of materials - is now available for Metalwork in Inexpensive and Workable form*

This Metalwork is a Selling Feature on \$50,000 Homes - yet \$6,000 Houses Can Afford It!



AN additional investment of perhaps ten dollars will equip a house with Superior Lead-Sealed metalwork—surfaced inside and out with pure lead.

These heavy lead surfaces are *completely* amalgamated to an inner core of special analysis, copper content steel, from which they will not break or peel when formed into roofing, conductor pipe, eaves trough, gutters and accessories.

The steel base remains *sealed* against moisture and smoke acid, and gives strength and easy workability to the metal sheet. Any competent sheet metal worker can install Superior Lead-Sealed in place of galvanized, where it adds a known value in beauty and longer life.



For sample and detailed information tear off and mail the coupon

Superior
Lead-sealed

THE SUPERIOR SHEET STEEL CO., Canton, O.,
Division of Continental Steel Corp.—Makers of *Super-Metal*
Galvannealed, Galvanized and Long Terme Sheets

Please send sample and detailed information on Superior Lead-Sealed.
Name.....
Address.....

"As Good As Good Looking"



The Realization of Anticipation

TAPERED

Ambler Asbestos Shingles

The above photograph of a suburban home shows the definite charm and distinctive effect produced by this sturdy asbestos fire-proof shingle, known as—

English Thatch

The shingles come in random widths and when applied in irregular courses the heavy ragged butts and rough surface produce a texture roof that cannot be duplicated with any other material, they completely fulfill the owners' and architects' desires for a *serviceable, fireproof and artistic* roof.

They are made in a variety of non-fading colors: Green, Red, Brown, Gray, etc.

First of all, Tapered Ambler Asbestos Shingles have the taper of the old wooden shingles. They are $\frac{1}{2}$ in. thick at the upper end, $\frac{1}{2}$ in. at butt and 20 in. long. They are strong, rigid shingles, not paper or rag felt, never curl or warp, not affected by zero blasts of winter, the heavy rains of spring and the blazing heat of summer year in and year out, for they are made of Asbestos and Hydraulic Cement—Nature's imperishable materials.

FIRE-PROOF

Tapered Ambler Asbestos Shingles are absolutely fire-proof, not merely "fire resistant." Ask your fire insurance agent what the difference is, he will tell you and show you the saving in rates—a matter of serious consideration over a term of years and years. It will pay you to write us now for complete information covering these superior shingles.

Made by the **AMBLER ASBESTOS COMPANY**, at Asbestos, Penna., and sold by the

**ASBESTOS
SHINGLE, SLATE & SHEATHING CO.**
AMBLER PENNA.

Pittsburgh, Penna.
Omaha, Nebraska
Washington, D. C.
Wilkes-Barre, Penna.

Boston, Mass.
Buffalo, N. Y.
Chicago, Ill.

Havana
New York, N. Y.
Philadelphia, Penna.

Cleveland, Ohio
Milwaukee, Wis.
Detroit, Mich.
Minneapolis, Minn.

Starret Bros. Inc., Builders, Rely On CEL-O-GLASS *for protection from weather*



NEW YORK LIFE INSURANCE CO. BUILDING, NEW YORK
STARRET BROS., INC., CONTRACTORS (BOTH BUILDINGS)



CHEMICAL
NATIONAL BANK
BUILDING, NEW YORK

THE use of CEL-O-GLASS for temporary enclosures in the huge New York Life Insurance Company building was somewhat of an experiment.

But the use of CEL-O-GLASS by the same contractors on another of their important contracts was based on one thing only—*satisfaction*.

CEL-O-GLASS has many advantages over tarpaulins (muslin or paper) for this type of work. It is *unbreakable*. It is highly translucent—lets in plenty of daylight. It is weather-proof—keeps heat in and keeps cold out. It is light in weight—easy to handle. It is flexible—can be rolled up when not in use. It is durable, practical and economical.

There are many uses for CEL-O-GLASS in the building industry. It makes a highly satisfactory substitute for glass in most places where glass is ordinarily used. It lets through the healing Ultra-Violet rays of the sun, making it ideal for sun and sleeping porch enclosures. Use it for barns, garages, field offices and tool houses—wherever you need daylight and want to eliminate glass breakage.

If your supply dealer does not carry *genuine* CEL-O-GLASS, write us for samples, prices and descriptive folder No. 60.

ACETOL PRODUCTS, INC.

21 Spruce Street © 1928, Acetol Products, Inc. New York, N. Y.

CEL-O-GLASS

REG. U. S.

PAT. OFF.

WON'T
AN UNBREAKABLE



BREAK
TRANSLUCENT

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



TRANSPLANTED from an estancia in old Seville to a distinguished residence in town, this bathroom is as Spanish as the sharp click of castanets. Though the shutters dull the direct stare of the sunlight, the room is bright with the gleam of tile and porcelain; rich with an old world beauty, replete with sanitary convenience that is truly American. A good idea? You will find many

more, equally good, in the special 47-page edition of *New Ideas for Bathrooms*, a book liberally illustrated, with floor plans, wall elevations, and many helpful decorating suggestions. It will gladly be sent on request . . . It is a pleasant surprise for your clients when they discover that a complete Crane installation rarely costs more than any other of comparable quality.

CRANE

EVERYTHING FOR ANY PLUMBING INSTALLATION ANYWHERE

Address all inquiries to Crane Co., Chicago

GENERAL OFFICES: CRANE BUILDING, 836 S. MICHIGAN AVENUE, CHICAGO

Branches and Sales Offices in One Hundred and Sixty-two Cities

National Exhibit Rooms: Chicago, New York, Atlantic City, San Francisco, and Montreal

Works: Chicago, Bridgeport, Birmingham, Chattanooga, Trenton; Montreal, and St. John's, Quebec; Ipswich, England

CRANE EXPORT CORPORATION: NEW YORK, SAN FRANCISCO, MEXICO CITY, HAVANA

CRANE LIMITED: CRANE BUILDING, 1170 BEAVER HALL SQUARE, MONTREAL

CRANE-BENNETT, LTD., LONDON

CIE CRANE: PARIS, BRUSSELS

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

INTERNATIONAL CASEMENTS



Residence
Scarsdale, N. Y.

Karl W. Bradley
Architect

COTSWOLD—A Metal Casement of Moderate Cost

OFTENTIMES one appealing feature is the deciding factor in creating the quick sale or rental of a house. A particularly effective argument is that it is equipped with International Cotswold Casements—a window built of the same sections as the International Custom-Made Casement, but in standard shapes and sizes to permit quantity production and keep down cost. When installed by International erectors, the Cotswold is guaranteed weathertight.

SEND FOR OUR DESCRIPTIVE LITERATURE

INTERNATIONAL CASEMENT CO INC

JAMESTOWN, NEW YORK

AGENTS IN PRINCIPAL CITIES

PLASTERING IS 90% OF THE VISIBLE INTERIOR OF THE HOME

INVESTMENT BUILDERS

Plaster *with* LIME

—they know *the* value of better plastering



PLASTER *with* LIME

Plaster is a word too often used in a broad sense. There are many kinds of plaster. Specify LIME plaster for this very important building item.

Beautiful lime-plastered walls and ceilings to greet the scrutiny of the prospective home purchaser!—a powerful selling influence. They bespeak permanence, lasting satisfaction, quality building... Use lime, the assured base for decorating or papering. Specify Gibsonburg, Ohio's Super-Finish... snow-white, pure, very easily worked and uniform in quality.

THE GIBSONBURG LIME PRODUCTS COMPANY : GIBSONBURG : OHIO

Gibsonburg

Finishing Lime

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Three Kernerator-equipped two-family duplexes, 2432 Calow Ave., Baltimore, Md. Joseph Levy, Builder, Charles T. McClure, Arch.



Twice as Necessary for Duplexes

EVER talk with a housewife who's used the Kernerator? Multiply her enthusiasm by two and you'll wonder how anyone could overlook the Kernerator in building a duplex—it aids selling and renting so much! Considered indispensable for single family residences, the Kernerator is twice as necessary for duplexes.

Twice as necessary, because it eliminates two sets of garbage cans — saves twice as many trips in all sorts of weather — banishes twice as many odors and twice as much garbage, that attracts dogs and flies and doubles the dangers of the unhealthy play-yard for children.

Twice as necessary, because it removes the trash piles of two families from the basement, attic and closets — a hazard accountable for three out of every four fires in residences and apartments.

Duplex Models as Low as \$150

— and the masonry costs but little more when regular chimney is used. Dividing this low cost between two families — what device could offer so many permanent advantages for so small a cost! All garbage and waste is dropped through handy hopper doors in the kitchens of both flats and falls to the combustion chamber in the basement. An occasional match burns the accumulation without odor and sterilizes metallic and glass objects for removal with the ashes. No fuel used or necessary, and the Kernerator lasts as long as the building.

See Sweet's; write for catalogs or phone nearest representative. Offices in 89 cities.

KERNER INCINERATOR COMPANY
753 E. WATER ST. MILWAUKEE, WIS.

KERNERATOR

REG. U.S. PAT. OFF.
THE CHIMNEY-FED INCINERATOR

*Garbage and Waste Disposal
without Leaving the Kitchen.*



86



Two duplexes at 1501-1509 Summit Ave., St. Paul, Minn., both Kernerator-equipped. Realty Service Co., St. Paul, Architect-Builders.



Two family apartment on Commonwealth Ave., Buffalo, N. Y., Kernerator-equipped. Hager Askey Co., Builders.



Kernerator-equipped duplex, 1241 Burlingame Ave., Detroit, Mich. Joseph Alexander, owner. J. H. Gustave Steffens, Architect.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

You're up against NEW CONDITIONS



PEOPLE today insist on getting *bigger values* for their money. This demand is evident in every industry—it is noticeable particularly in the field of home-building operations . . . Builders are aware that conditions have changed—that the market today is a “*buyers market*”. They know that every one who buys or builds considers a home from two angles. It must be worth the price, first, from the standpoint of *value*, and second, from the standpoint of satisfaction it gives the owner. . . . Alert builders realize that they must now put exceptional value in the homes they build. They are installing those features that add to quality, convenience and comfort—products such as the Majestic Coal Window, Milk and Package Receiver, Underground Garbage Receiver, Fireplace Damper and other Majestic products that help make a home complete . . . It is misguided economy to use non-descript products of doubtful value in homes you build to sell—or in homes you build on contract. Products built down to a price and not up to a standard seldom please clients or attract buyers.

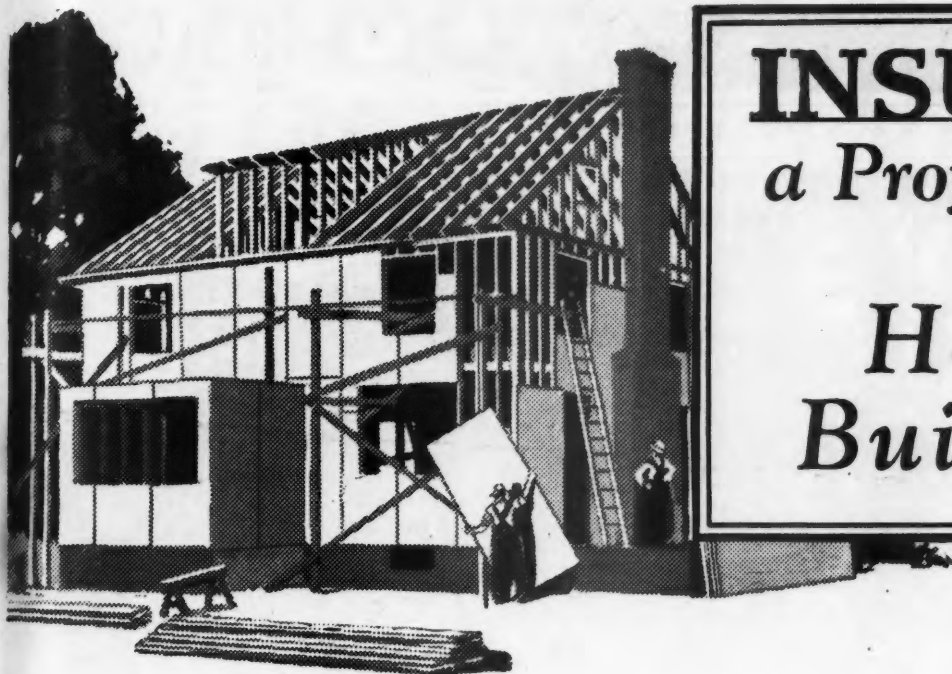


Majestic Products have long been known as outstanding values in the building industry. They are used wherever good homes are built and equipped with only the most modern conveniences. Write for catalog.

THE MAJESTIC COMPANY • 300 Erie Street • HUNTINGTON, IND.

Majestic Coal Window and BUILDING SPECIALTIES

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



INSULITE
a Profit Factor
in
House
Building

INSULITE helps builders to sell their houses.

Insulation in itself is more and more in demand on the part of house buyers.

When you can offer them the high insulation efficiency found in INSULITE—plus the great advantages of this wood-fiber insulating board as a structural material—you have a talking point that is bound to speed up sales.

INSULITE is a many-purpose material: Used as a sheathing, plaster base, wall board; for lining attics and converting waste space into usable rooms; as roof insulation; for lining garages, and in many other ways.

Write for free samples and complete information.

THE INSULITE COMPANY
 1202 Builders Exchange, Minneapolis, Minn.

INSULITE
the Wood-Fiber Insulating Board



THE INSULITE COMPANY
 1202 Builders Exchange, Minneapolis, Minn.
 Please send free samples of INSULITE and booklet describing its uses.

Name.....
 Address.....
 City..... State.....

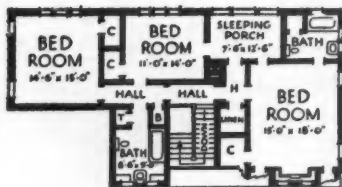
BUILD WEATHER-TIGHT WITH INSULITE

WEST COAST WOODS ARCHITECTURAL COMPETITION - - DESIGN NO. 3

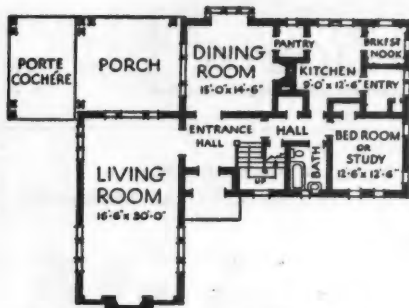


John J. Landon, Architect, Los Angeles

An all-timbered home —in half-timbered style



Second floor plan



First floor plan

THIS unusually attractive all-timbered home in half-timbered style won first mention in the West Coast Woods Architectural Competition and is advertised this month in The Saturday Evening Post, House and Garden, House Beautiful, Better Homes and Gardens, and a number of leading architectural publications.

Construction of vertical grain Douglas Fir or Western Red Cedar plank set into grooved timbers, or of vertical grain plank with joints covered by heavy battens.

Framing to be of Douglas Fir or West Coast Hemlock. The roof is

of vertical grain Western Red Cedar shingles or shakes with doubled ridges and eaves . . . fastened with zinc coated or copper nails to insure a permanent roof.

The four woods of the West Coast offer ideal material for the contractor and builder who wants to build, at a moderate cost, a home that is unique, attractive and easy to sell. No woods offer such a variety of attractive uses and finishes, nor complement each other so ably as Douglas Fir, West Coast Hemlock, Western Red Cedar and Sitka Spruce.

We will be glad to send you without charge a brochure of the architect's sketches and construction suggestions for this and many other of the prize winning homes of West Coast woods, together with a book describing the four outstanding woods, of the Douglas Fir region. Address West Coast Lumber Bureau, Mt. Hood Building, Longview, Washington.

Durable
Douglas Fir
America's Permanent Lumber Supply

Important West Coast Woods — Douglas Fir - West Coast Hemlock - Western Red Cedar - Sitka Spruce

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

the new **MORTON** Georgian and Vanitie Venetian



Artistic lines—distinctive beauty—rich design—these are the chief characteristics of two new all-mirror door bathroom cabinets which are offered for your consideration in 1928.

THE Vanitie Venetian will be approved by architects, builders and realtors who appreciate the unusual in bathroom cabinets. It is made in one size only, with standard etched mirror, 18 x 32 in., and side wings 8 in. wide. The absence of miter lines permits a clear 3-way vision. The cabinet, 5 in. deep, recesses in a wall opening 14¾ x 25½ in., and is completely concealed when the door is closed. There is no cabinet space behind the wings.

The Georgian was designed to meet the demand for an attractive cabinet between Models A and B and the Venetian type. It is made in one size only, a 16 x 20 in. beveled, etched mirror, having slightly rounded corners, decorative rosettes and clear vision. It requires a wall opening 12¾ x 16¾ in.—recessing a full 5 in. if desired.

A Complete Line

11 models in the **MORTON** Line of Bathroom Cabinets, to recess or hang on the wall. Built of steel, electrically welded; finished in a beautiful white enamel, permanently baked on. Many distinctive features of construction. Installed instantly—“Out of the carton into the wall.”

Send the Coupon for a **MORTON** Catalog

MORTON MANUFACTURING COMPANY

5102 WEST LAKE STREET-CHICAGO, ILL. U.S.A.

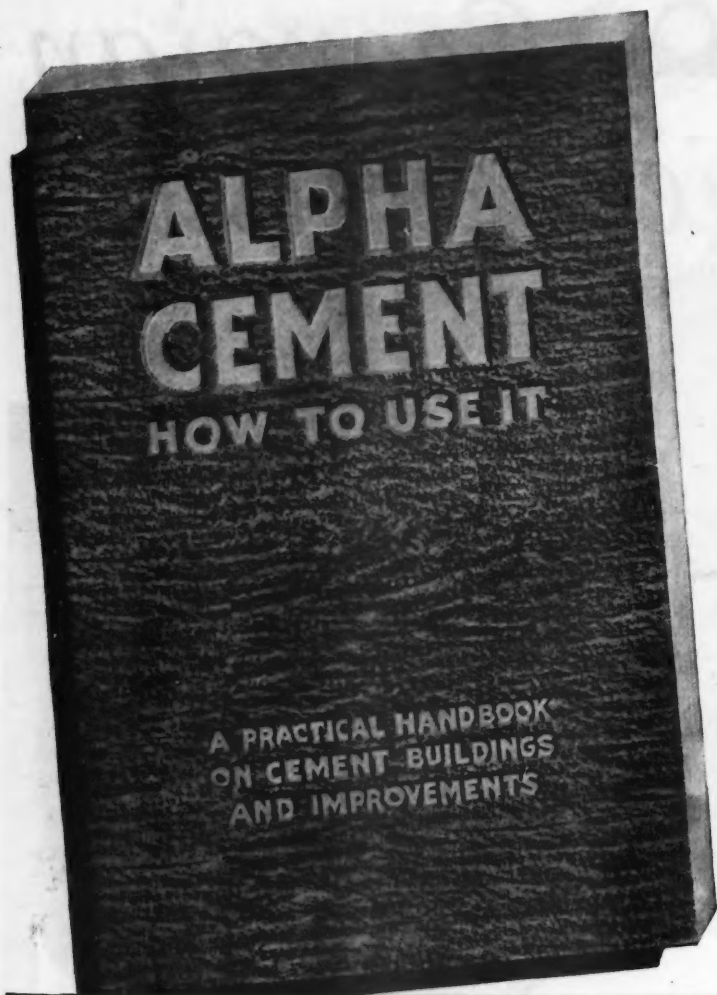
MORTON MANUFACTURING CO., 5102 West Lake St., Chicago, Ill.

Without obligation, please send me a catalog of the **MORTON** Line of Steel Bathroom Cabinets.



Name.....
 Address.....
 City.....
 State.....

Please check business or profession:
 Architect..... Builder..... Contractor..... Realtor..... Home Builder.....



New and
revised edition
of a very practical
volume

112 pages
freely illustrated

SIX EDITIONS of this useful treatise have been distributed. While the greater part of the text is devoted to the smaller type of concrete improvements, the volume contains much in the way of data and formula useful to everyone who designs or builds cement constructions.

It's a handy helper to have around the shop or the office. Aids in discussing matters with customers.

May we send you a copy of the latest edition, with our compliments?

Alpha Portland Cement Company

EASTON, PA. - - CHICAGO, ILL.

New York

Philadelphia
St. Louis

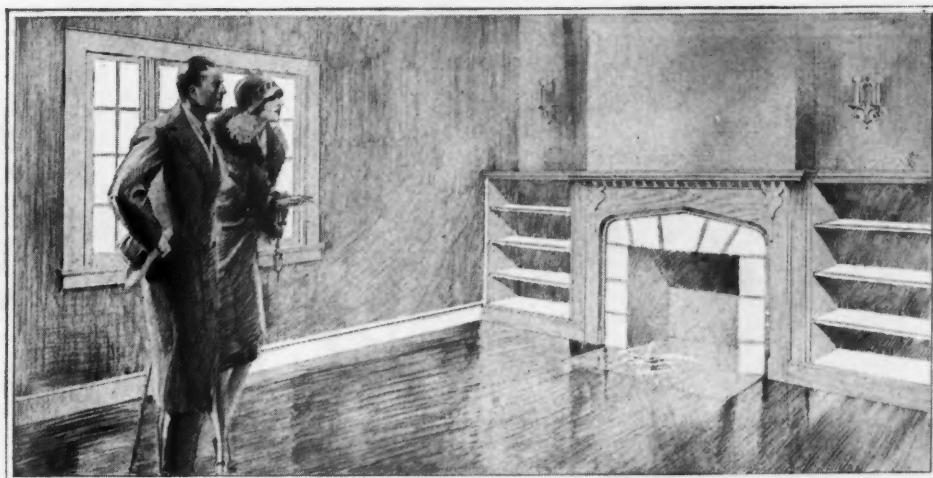
Boston
Battle Creek, Mich.

Baltimore
Ironton, Ohio

Pittsburgh

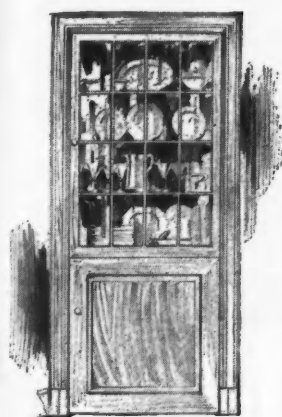
**Bookcase
Material
C-6000
Mantel C-6070**

In Curtis bookcase material and mantels you are offered permanent furniture for the living room of the highest architectural character. This is the first room the prospect enters and the one of which he or she is most critical.



**Surprisingly
Low in Cost**

A room-end like the one shown here is a sure-fire sales argument. The combination shown, for a room 14 feet wide, can be had at retail for approximately \$75.00.



Corner Cupboard C-6504

This beautiful corner cupboard is suited to houses of English, Spanish or French styles. Only 28 1/2 inches along each wall are necessary to install it. Price at retail, in pine, oak or birch, from \$48.75 to \$54.84.

Prospects Buy With Their Eyes!



Kitchen Cupboard C-6700

This Curtis cupboard is 54 inches wide, 100 1/4 inches high and 21 1/4 inches deep and costs, in southern pine, only \$82.48 to \$92.79. There are other sizes for other spaces. See the Curtis line at your dealer's.

Homes and apartments with Curtis Cabinetwork look half-furnished even when they are empty . . . So they sell much quicker and at much better prices.

LET me see the place." That is what every prospect asks to do of any property in which he is interested.

But what is there to show in the average unfurnished house or apartment?

The latest wall finishes, the trickiest light fixtures, the shiniest floors have little appeal in themselves. And electric conveniences and mechanical devices are expected as a matter of course.

But there is one element that you can put into not only the houses and apartments that you are building, but into structures now standing, that add sales appeal out of all proportion to the cost.

That is Curtis Cabinetwork. Open

bookshelves along the walls and in the corners in the living room and bedrooms . . . quaint corner cupboards in the dining room . . . spacious handsome cupboards in the kitchen . . . real dining sets in the dining alcove or kitchen—

These are things that make a vacant house look like something more than a hollow shell. They are permanent furniture—and add a furnished appearance to even blank walls and bare floors.

Like doors, windows, trim, frames and other items of Curtis Woodwork, this cabinetwork can be purchased from any Curtis dealer. The leading dealer in woodwork in your

town (if you are east of the Rockies) is probably a Curtis dealer.

If there is no Curtis dealer near you, fill in and mail the coupon and get a FREE copy of our fully illustrated 48-page book on Curtis Cabinetwork. Write TODAY.

*The Curtis Companies Service Bureau
854 Curtis Building, Clinton, Iowa*

Representing

Curtis Bros. & Co., Clinton, Iowa; Curtis & Yale Co., Wausau, Wisconsin; Curtis Sash & Door Co., Sioux City, Iowa; Curtis, Towle & Paine Co., Lincoln, Nebraska; Curtis, Towle & Paine Co., Topeka, Kansas; Curtis Door & Sash Co., Chicago, Illinois; Curtis Detroit Co., Detroit, Michigan; Curtis-Yale-Holland Co., Minneapolis, Minnesota.

*Curtis Companies Incorporated, Clinton, Iowa
Curtis Woodwork Inc., Display Rooms and Sales Office, Room 201, 9 E. 41st Street, New York City*

1866 CURTIS WOODWORK

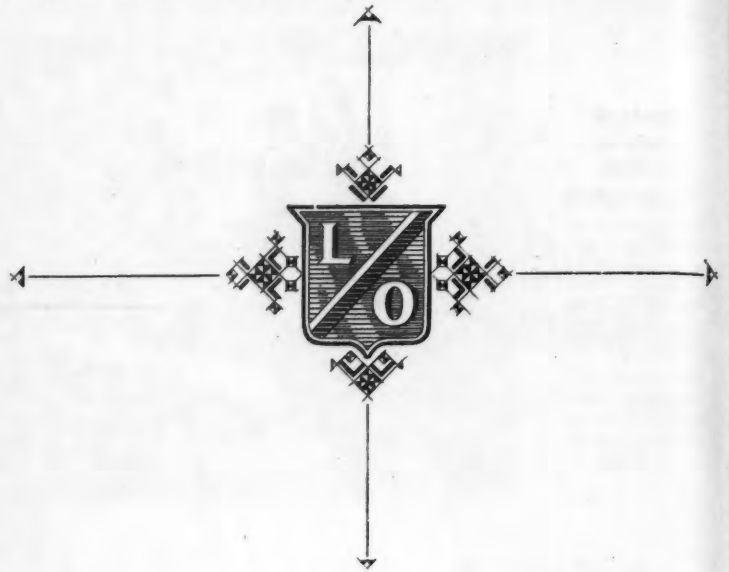
CURTIS COMPANIES SERVICE BUREAU
854 Curtis Building, Clinton, Iowa

Please send me a copy of your new book with complete information about Curtis Cabinetwork.

Name.....

Address.....

City..... State.....



Libbey-Owens
 FLAT-DRAWN
 CLEAR SHEET GLASS

LIBBEY-OWENS glass in the windows of a home means so much from the standpoint of beauty, attractiveness, and clear vision that there is no reason why every home-builder should not insist on having this quality glass.

There is a real difference between Libbey-Owens glass and "just window glass" — a difference due to the exclusive process of manufacture used by Libbey-Owens.

Drawn from the molten state in a flat continuous sheet, and then carefully annealed during its slow passage through a 200-foot annealing oven, *Libbey-Owens glass is truly flat, uniform in thickness and strength, and has a beautiful lustre of sparkling brilliance.*

For all fine windows we recommend Libbey-Owens "A" quality glass. This superior glass comes paper-packed to protect its brilliant lustre, and each individual light bears the familiar Libbey-Owens label. *Look for it when you buy glass.*

THE LIBBEY-OWENS SHEET GLASS COMPANY
 TOLEDO, OHIO

Libbey - Owens
 FLAT-DRAWN CLEAR SHEET GLASS FOR WINDOWS

Libbey-Owens flat-drawn sheet glass is a nationally advertised product which millions of people are being taught to identify by its name



SOFT WHITE HANDS
 SMOOTHER SKIN
 GLOWING LUSTROUS HAIR
 FULL FLAVORED FOODS
 CLEANER WHITER LINENS
 SPARKLING DISHES
 BRIGHT WINDOWS
 NO LIME-CHOKED PIPES

~ for those who live in Homes Equipped with DURO

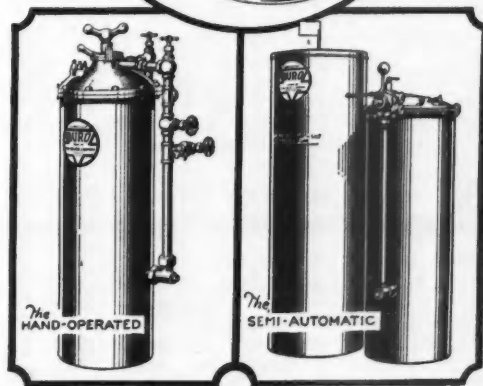
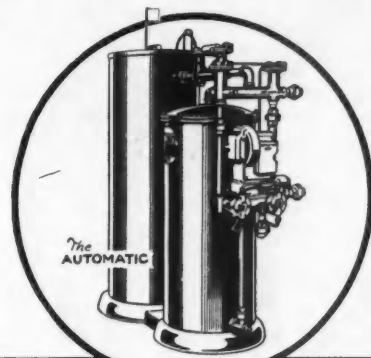
A Duro Water Softener is the most appreciated convenience you can install in a home. *Every hour of the day, every day of the year, Duro Softened Water serves every member of the family.*

Under the magic of its caressing touch all the loveliness of a soft, white skin is brought out. Hands no longer fear the dish pan. House work is made easier. Hot water pipes are freed of the scale which causes frequent plumbing repairs. That's why every *modern* home, in hard water localities, *must* have a Water Softener.

Duro Water Softeners have patented mechanical advantages which insure softened water service in the easiest, surest and most economical way, year after year. There are three types, as follows:

- (1) The Automatic, which is the ultimate in carefree service. It reconditions itself.
- (2) The Semi-Automatic, which has a single lever control. It has many advantages, yet its cost is low by comparison.
- (3) The Hand-Operated, which is the lowest priced water softener. Duro's large output and modern manufacturing facilities make it possible to offer a remarkable value at very low cost.

Duro dealers and branch offices have factory-trained men to estimate on your requirements. Write for descriptive booklet on Water Systems, Water Softeners, Filters and Septic Tanks.



THE DURO COMPANY

104 Monument Ave.

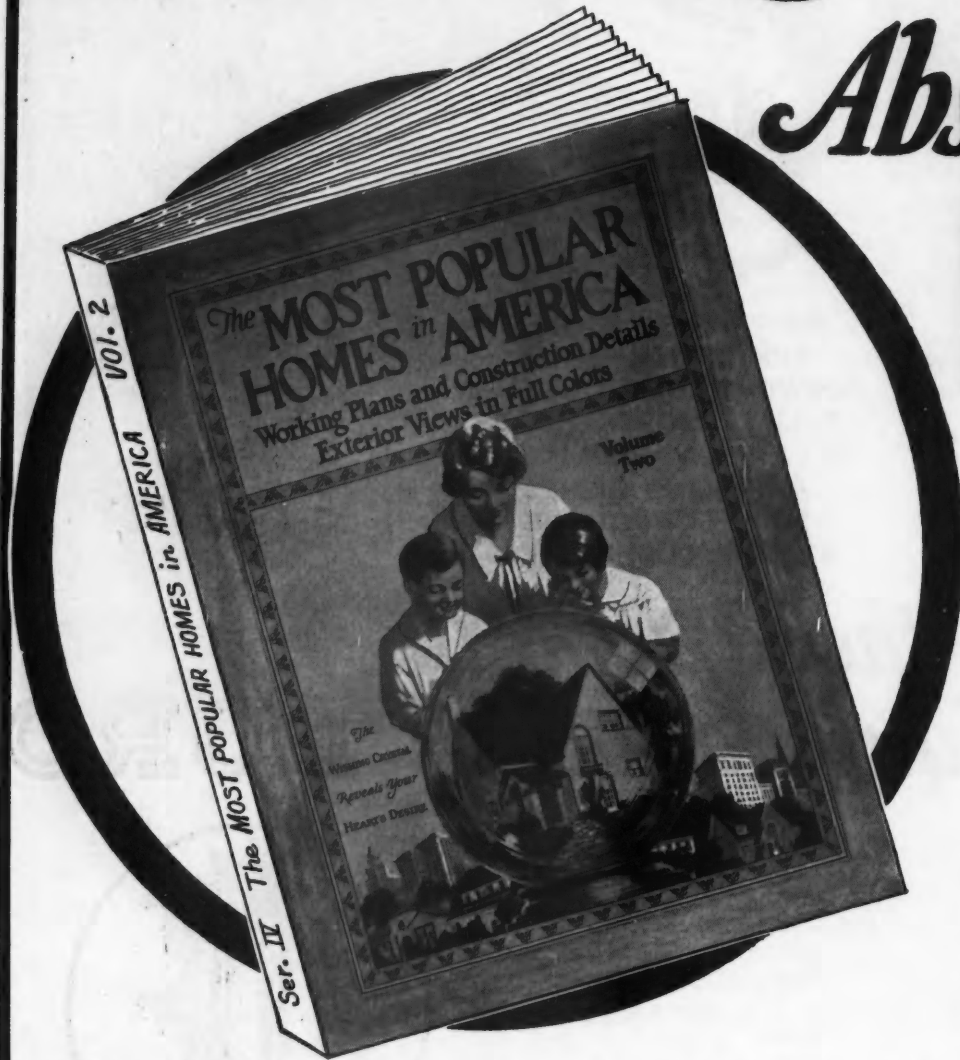
DAYTON, OHIO

DURO WATER SOFTENERS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

You Get This Big New Book

Absolutely Free!



“Most Popular Homes In America —VOLUME TWO”

is a companion book to *Volume One*, which has had a phenomenal sale in the past year. *Volume One* has been repeatedly called the most beautiful and useful home design book ever printed.

The new book, “*Volume Two*”, is even more beautiful in appearance and contains 20 more full color plates than *Volume One*. If you already have *Volume One*, you will certainly be delighted with *Volume Two*.

We have on hand only a limited number of this new book—they are going rapidly. If you want yours, send for it now, *today*, before the supply is exhausted.

15 Sets of Complete Building Plans

FIFTEEN of the home designs in this wonderful book have complete working drawings, scale one-eighth inch and larger. You can build direct from these drawings, thus giving you an architectural service worth a neat sum of money, yet we include them in this wonderful book and send it to you absolutely free of cost.

These working drawings are only one of the many valuable features of this remarkable book. In addition, there are *Twenty Pages* of designs printed in four colors. Many pages of high-class half-tones reproduce actual photographs of beautiful interiors, furnishings, modern home conveniences, etc., etc.

Clip and Mail This Coupon—NOW!

THE AMERICAN BUILDER A.B. 4-28
 1827 Prairie Avenue, Chicago, Ill.,1927

Enclosed find \$2.00 for which **ENTER RENEW** my subscription to The American Builder for one year and send me free and postpaid a copy of your book “**MOST POPULAR HOMES IN AMERICA**”—Vol. 2.

NAME.....

ADDRESS.....

POST OFFICE.....STATE.....

My occupation is (Check Only One)
 Dealer Builder Architect Real Estate Miscellaneous

How to Get Your Free Book

This useful and handsome book will be sent you Free and Postpaid with a new or renewal subscription to “*American Builder*” at the regular subscription rate, \$2.00 for one year. \$2.00 pays for the subscription—the book is a gift.

The subscription may be new or renewal, or it can be an extension of present subscription, but in all cases *must be sent direct to “American Builder” and be accompanied by check, money order or currency for \$2.00.* Subscriptions sent in any other way will not entitle sender to free book.

OFFER GOOD IN U. S. AND CANADA
Add \$2.00 to Foreign Countries



A Design of Beauty— A Trade Mark of Distinction

Kawneer is the most widely advertised—the best known of all store front construction. Retail merchants know its quality and its sales power. Through this nation wide popularity thousands of contractors are finding Kawneer store fronts easier to sell and more profitable to install. For the protection of retail merchants, we have identified all Kawneer high quality store front construction with the new ornamental chased design. Look for it—your clients will. May we furnish you with complete information about the many new improvements that have been made in the new Kawneer designs for 1928.



THE
Kawneer
COMPANY
2526 Front St., Niles, Mich.

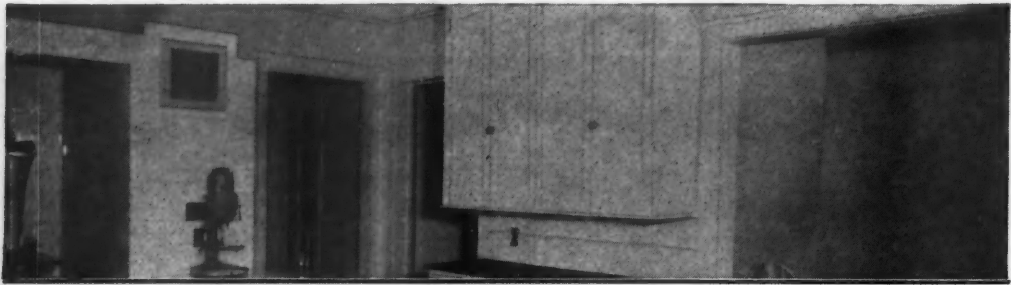
SEND THIS BOOK TO

Name _____

Address _____

Kind of business _____

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Laboratory cleanliness in floors



Lamson Floor Company made this fine installation of Goodyear Rubber Tiling in the kitchen, service dining room, butler's pantry and service hallways of the Studor Thompson residence, Cleveland, Ohio

IF you think of a kitchen as a food laboratory, you will give added thought to its floor.

Cleanliness and permanence you will want of course. And quietness too will be desirable. Also color and tone will have their place because at last beauty has entered the kitchen.

Make a mental sketch of the kitchen floor your best judgment would approve, then fill in the picture with Goodyear Rubber Tiling.

A material that measures up to such

a test would naturally make a fine floor for any room in the house.

You will be especially pleased by the variety of good designs including many rich marbled effects and various other two- and three-colored combinations.

Sold under a name that insures satisfaction. Used successfully in every kind of business structure.

Complete architectural data will be gladly forwarded upon request. Address Goodyear, Akron, Ohio, or Los Angeles, California.

The Greatest Name in Rubber

GOODYEAR

Copyright 1928, by The Goodyear Tire & Rubber Co., Inc.

RUBBER TILING

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Here's a new book

of up-to-date facts for up-to-date builders



ARE you familiar with the special merits of concrete made with Structolite Cement?

If you are, you will find the very latest facts on the uses of this material in this new booklet, just off the press.

You may have it without cost, simply for the asking.

It may be that Structolite Cement is something new to you.

If so, this book tells you all about it, briefly and clearly.

Tells you about its quick set, its light-weight qualities, its insulating value, its nailability, its economy.

Everyone who uses or specifies concrete should know the facts about Structolite Cement as given in this book. Mail the coupon today for your free copy.

• STRUCTOLITE •

Reg. U. S. Pat. Off.

THE QUICK-SET INSULATING CEMENT

Made by the United States Gypsum Company

MAIL THIS TODAY

UNITED STATES GYPSUM COMPANY
Fireproofing Dept., 300 W. Adams Street,
Chicago, Illinois

Send me your new booklet, Structolite Concrete.

Name

Address

City..... State.....

American Builder, Apr.-28



STANDARD BUILDING MATERIALS



STANDARD BUILDING MATERIALS

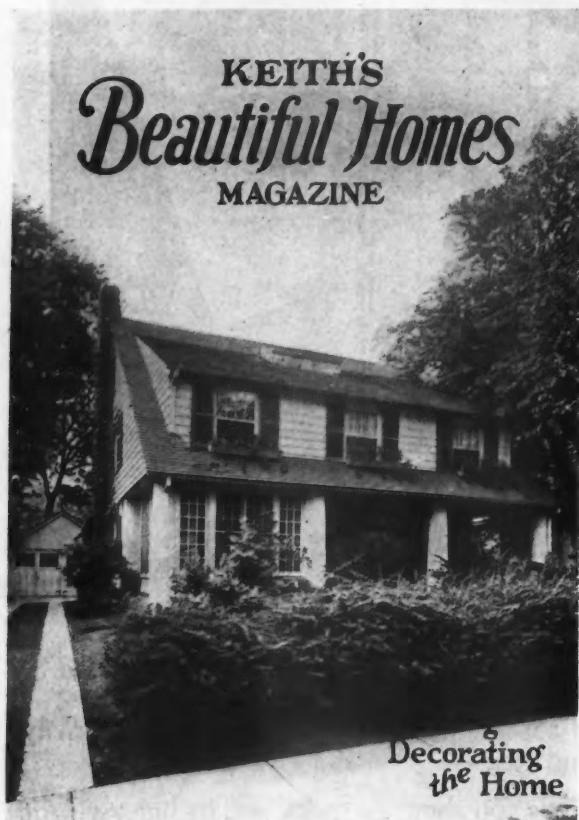
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Special Contractor's Edition

OF OUR

BIG PLAN BOOK

**WITH EMBOSSED
LEATHERETTE COVER**



is now offered the building trade at a reduced price.

The 200 homes shown in this book with floor plans and complete descriptions, have actually been built and therefore tested for economy, convenience and good design.

This book is a special deluxe edition in a stiff board leatherette binding. It contains besides the 200 plans, many practical articles on materials and planning the home, making up a splendid book of 278 pages.

This edition may now be obtained with Keith's Beautiful Homes monthly magazine for the special price of \$2.00 postpaid.

Beautiful Homes magazine is the same page size as American Builder. In the year it publishes over 100 plans of Beautiful Homes of moderate cost and just the type and style you will find most persons will want to build.

This liberal offer brings you twelve numbers of this well known magazine and a copy of the big plan book, a total of 300 plans, all postpaid, for \$2.00.

----- MAIL TODAY -----

KEITH'S BEAUTIFUL HOMES MAGAZINE
100 North 7th St., Minneapolis, Minn.

Gentlemen:—

Send me a copy of Keith's leatherette bound edition of **Beautiful Homes Plan Book and Keith's Beautiful Homes Magazine** for one year for which \$2.00 is enclosed.

Name _____

Address _____

City _____ State _____

A. B. 4-28



KUHLS

Elastic Glazing Composition UNEQUALLED

for bedding and glazing sash, skylights, conservatories and glass construction work, tile setting, etc. May also be used for pointing stone or terra cotta work. Is ideal for calking window frames on new work as well as old.

Kuhls' composition is elastic, never sets hard, adheres strongly to wood, metal, glass, concrete, etc., and never cracks nor crumbles. Stands heat and cold and is not affected by moisture nor changing weather.

Beds perfectly and makes an absolutely tight joint under all conditions. Keeps out the driving storms.

Kuhl's Elastic Glazing Composition can be economically and efficiently used in all construction work—from a four-room cottage to a 25-story building. It is now used by the best builders, contractors, architects and greenhouse builders in the country.



Write today for your free sample, prices and booklets. Or go to your dealer. See our list of distributors in October, 1927, American Builder for your nearest dealer.

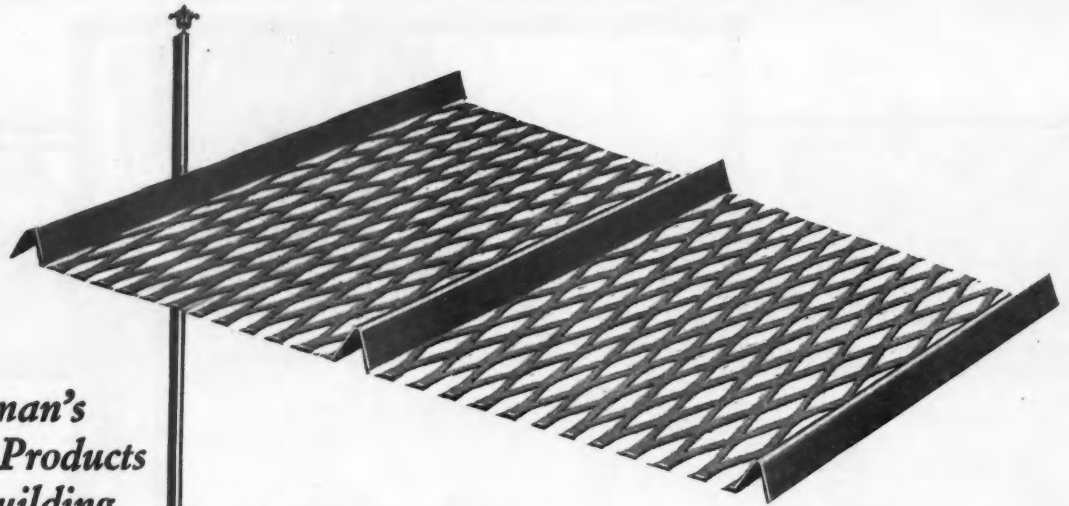
H. B. FRED KUHL'S
6415-21 Third Ave. Brooklyn, N. Y.

FREE SAMPLE

H. B. FRED KUHL'S,
6415 Third Ave., Brooklyn, N. Y.

Please send me free of charge your literature and a sample of KUHL'S Elastic Glazing Composition.

Name.....
Street.....
City.....
State.....



**Kalman's
Line of Products
For Building**

3/8" Rib Kalmanlath
 Diamond Mesh Kalmanlath
 Cup Kalmanlath
 Troff Sheet Kalmanlath
 Flatrib Kalmanlath
 3/4" Stayrib Kalmanlath
 Cold Rolled Channels
 Hot Rolled Channels
 Pencil Channels
 Box Channels
 Expanded Corner Bead
 Perfection Corner Bead
 Wing Bead
 Rail Bead (With Clips)
 One Wing Bead
 Bull Nose Bead
 Curved Point Base Screed
 Base Bead
 Concealed Picture Mould
 Kornerite
 Kalmanlath Strips
 Corner Bead Clips
 Stucco Reinforcement
 Stucco Reinforcement Nails
 Expanded Metal
 Dome Dampers
 Wall Ties and Plugs
 Chimney Thimbles
 Coal Chute Doors
 Ash Dumps
 Ash Pit and Flue Cleanout
 Doors
 Basement Windows
 Structural Steel Angles for
 Lintels
 Crimp Metal Furring
 Hanger Rods
 Tie Wire
 Staples
 Nails
 Hot Rolled Flats
 Hot Rolled Angles
 Metal Trim
 Kalmantrim
 Fabric
 Hanger Inserts
 Adjustable Inserts
 Sleeper Anchor
 Screed Chair
 Forms for Concrete
 Reinforcing Bars and Spirals
 Bar Supports and Spacers
 Road Reinforcement

This New Lath Boosts the Contractor's Profits

This new 3/8" Rib Kalmanlath offers the contractor many new and distinctive money-saving features that can boost profits on every job.

It is the only flat strand mesh lath on the market today.

The lather can handle it faster because there are no ragged edges to snag his hands or clothing. He can erect it faster and far more accurately because the ribs are straight and true, the ends square, and the close perfect nesting "V" shaped ribs eliminate all bulges at the laps.

The plasterer can cover more of this new 3/8" Rib Kalmanlath per day because it is easier to plaster. The flat strand mesh provides a smooth flat face.

He can stroke in any direction and the plaster is never cut off his trowel. This means less plaster waste—a saving in materials.

The full 3/8" ribs stiffen the lath when plastering and provide a crack-resisting reinforcement for years to come.

In your language, these features mean more profit for you on every job.

A post card brings you additional information on this new money saving Kalmanlath. Mail the card today.

KALMAN STEEL COMPANY

Plants or Offices at

Chicago
New York
Buffalo

Detroit
Boston
Baltimore

Pittsburgh
Syracuse
Milwaukee

Philadelphia
St. Paul
Atlanta
Houston

Kansas City
Dayton
Minneapolis

Youngstown
Charlotte
Niles

KALMANLATH



See! how cooking odors and greasy fumes are removed with an
ILGAIR
Electric Ventilator

*I*N the home where there's an ILGAIR Electric Ventilator not a suggestion of cookery passes the kitchen door. All objectionable odors, greasy fumes and excessive heat are whisked away before they have a chance to trail thru the house.

You can't imagine the joys of working in a kitchen that's ventilated with one of these compact, quiet-running ILGAIR exhaust fans. It makes the air pure, fresh and invigorating — adds to the comforts of every room in the house and there's less work for the housewife because walls, ceilings, furniture and hangings stay clean much longer.

Let's tell you about the new and improved built-in ILGAIR Kitchen Ventilator. It's sold complete — cabinet, exhaust fan, automatic shutter and all necessary hardware. And is quick and easy to install.

Write for illustrated literature. Clip, sign and mail the coupon.



Make the kitchen a joy spot

MR. BUILDER:

The day is here when no home or apartment is truly modern without an ILGAIR Electric Ventilator.

Practically every architect you talk to is for it—almost every modern building plan published specifies it, and good housekeeping authorities everywhere recommend it.

Nowadays it's the home where there's an ILGAIR Ventilator installed in the kitchen which sells or rents at the top price.

Install an ILGAIR Electric Ventilator in the next home you build—make it a sales and rental feature. Write for price and data sheets and 48 page illustrated booklet.

Yours very truly,

ILG ELECTRIC VENTILATING CO.

P.S. The ILGAIR is the only electric ventilator made with a fully enclosed self-cooled motor—guaranteed as a complete unit.



for Offices, Stores, Restaurants, Factories, Public Buildings, Homes, Theatres, etc.

ILG ELECTRIC VENTILATING CO.
 2852 N. CRAWFORD AVE., CHICAGO, ILL.

Ventilation
COUPON

Without obligation please send me a copy of your 48 page illustrated booklet. I am particularly interested in the subjects checked.

Name _____
 Full Address _____

Home Public Building Office Store Factory



“Waterproof is Weatherproof”

Moisture is the most active destructive element. Without moisture, steel will not rust, wood decay, nor masonry or stucco crumble. Moisture in some form must always be present to bring about the destruction of building materials. Eliminate moisture and your building materials will last the ages. This is proved by the existence of the pyramids and similar antique structures located in dry climates.

Nowadays we protect your building materials by using waterproof products. A coat of Truscon Waterproof Paint or Varnish not only gives more thorough protection to the wood, steel or concrete over which it is applied—but because it is waterproof, that paint or varnish lasts longer. This is proved by hundreds of examples where Truscon Waterproof Products have been used.

TRUSCON

“Waterproof”

PAINTS—VARNISHES—ENAMELS

TRUSCON WATERPROOFING PASTE

—a compound mixed with the concrete, stucco or cement mortar; prevents absorption of water. The only material for obtaining bone-dry basements, or waterproof stucco which will not spall, crumble or discolor.

TRUSCON ASEPTICOTE

Washable Wall Coating—the only flat coating which will stand repeated washings even with strong washing powders. Used largely in hospitals where absolutely sanitary conditions are required and the waterproof nature of a paint coating is essential. More economical than a flat wall paint.

TRUSCON WATERPROOF ENAMEL

—for interior or exterior use—furniture, woodwork, automobile bodies, machinery, toys. Fourteen attractive enamel shades.

TRUSCON POR-SEAL

—a transparent waterproof coating for exterior brick, stone, concrete, stucco. Keeps out rain and atmospheric dampness, and prevents discoloration.

TRUSCON BAR-OX

Steel Paint—an elastic waterproof coating recommended for steel surfaces. Especially resistant to salt air. Bar-Ox is the only paint that has ever been able to withstand the salt air and dampness of tropical countries for years.

TRUSCON CEMENT FLOOR ENAMEL

—a cement floor enamel with a high gloss and a beautiful satin-like finish. Should not be used in basements, unless the concrete is waterproofed beforehand.

TRUSCON BLUE RIBBON ENAMEL

—a white enamel that covers solid in one coat over jet black.

TRUSCON STONETEX

—the nationally known waterproof paint for exterior concrete, masonry and stucco. Uniforms color of the surface; prevents penetration of dampness; increases life of concrete or stucco. Dries flat and looks like stone.

TRUSCON WATERPROOF HOUSE PAINT

—a sulphate of lead and zinc oxide paint. Twenty-eight attractive colors. Truscon Waterproof Paint withstands far more weathering than most ready mixed paints because of the special heat treatment of the linseed oil producing a film free from pin holes and pores.

TRUSCON WATERPROOF VARNISH

Finest—a steamproof, frostproof, hammerproof varnish. Another remarkable product of Truscon waterproof science and skill.

There is a Truscon Paint, Varnish, Enamel, Stain, Waterproofing, Putty, Caulking Compound, Cement Floor Hardener for every building purpose. Color cards and any other particular information will be gladly sent on request.

THE TRUSCON LABORATORIES

428 Truscon Bldg.,

Branches in Principal Cities.
Foreign Trade Division, New York.

Detroit, Michigan



Leonard & Holt homes in Ingleside Terraces, San Francisco, floored with Oak

“Turning Failure into Success”

Leonard and Holt of San Francisco, builders of 6000 homes in 23 years, and now erecting at the rate of over 200 a year, took Ingleside Terraces and turned it from a losing proposition into one of the finest districts of the Golden Gate City. They did it by “establishing values,” in environment, in tastefully designed homes, in the use of nationally advertised products for construction and furnishing. They created confidence, and the public were quick to respond.

Not the least of the attractions were Oak floors, which at once reflected soundness, harmony, and good taste.

Within the limits of any specification

Everyone knows the appeal of oak floors. The ambition to have oak floors was general before modern economies in manufacture and distribution made oak flooring available to the most modest home. Today, millions of homes enjoy the many advantages of this permanent flooring material. First cost is reasonable; there will be no replacement expense.

Variety—harmony—color

Beauty, harmony, permanence, added value, all are combined. The use of various grades, widths, and thicknesses; the choice of white or red oak, quartered or plain sawn, afford opportunities for expression of individual taste. Harmony is

always preserved, for oak blends with woodwork and furnishings of every type.

Color is important in modern decoration, and oak flooring displays the soft subdued tones that Nature grows in oak. Color finishes may be employed for special effects.

How we help you

We will supply you with free literature to show prospects, containing illustrations of the new color finishes, and suggestions as to how rooms may be floored and finished to suit individual taste. How to figure accurately and quickly the amount of flooring required on a job is contained in the booklet, “How and Where to Use Oak Floors.” Also grading rules; standard measurements, thicknesses, and widths; handling, laying, and nailing Oak Flooring. Put your flooring problems up to our experts, who will assist you without obligation. Mail this coupon for valuable helps.



TEAR OUT AND MAIL

OAK FLOORING BUREAU
1238 Builder's Bldg., Chicago

Please send me “The Story of Oak Floors,”
and “How and Where to Use Oak Floors.”

Name

Address

City State

NATCO SHIELDS FROM RUST'S DESTRUCTIVE SCARS

EXPOSED steel work is always burning
—slowly, steadily—*unless it's protected.*

Natco Beam, Girder, and Column Covering furnishes the protection. Shields the steel—halts the gnawing of corrosion. Does all this with outstanding economy of cost, dead-weight, and labor.

And remember—Natco Beam, Girder, and Column Covering is only one class of

product in the Complete Natco Line of Hollow Building Tile. Natco provides a tile for every building need, that will do the job you want it to do—that will fill the place it is destined to fill—dependably, economically, permanently.

NATIONAL FIRE PROOFING COMPANY

General Offices: Fulton Building, Pittsburgh, Pa.

Branch Offices: New York, Flatiron Bldg.; Chicago, Builders Building; Philadelphia, Land Title Bldg.; Boston, Textile Bldg.; In Canada: National Fire Proofing Co. of Canada, Ltd., Toronto, Ontario.

THE BARRIER



Natco Column Covering in conjunction with a wall of Natco Header Backer (brick faced). Experience has demonstrated that Natco Hollow Tile is the ideal material to stand between steel and destruction, protect it from fire and corrosion. Natco Header Backer is used for backing up brick in load-bearing walls, and in buildings of skeleton construction. It effects large savings in dead load, labor, and mortar.

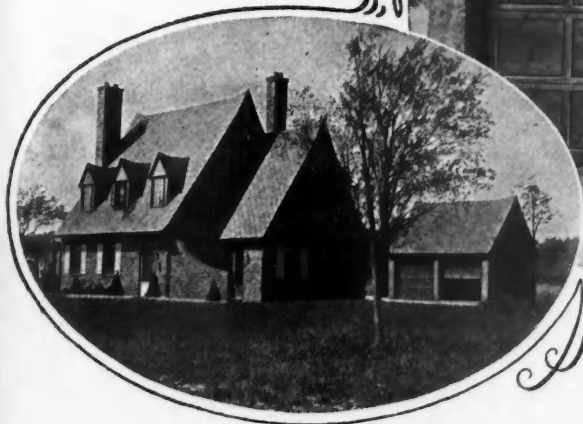
NATCO

NATCO

THE COMPLETE LINE of
HOLLOW BUILDING TILE

HOLLOW BUILDING TILE

**EFFICIENT
DEPENDABLE
ECONOMICAL!**

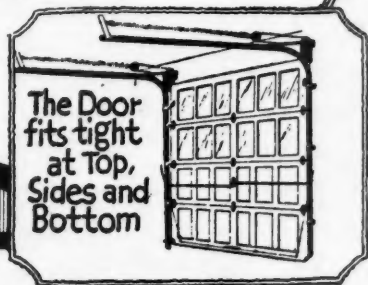


A GARAGE DOOR WHICH MEETS EVERY REQUIREMENT

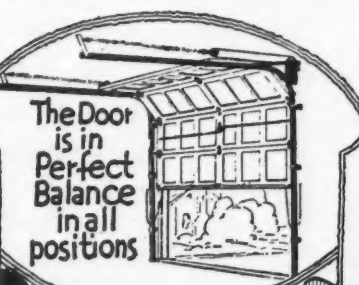
THE "Overhead Door" incorporates all of the desirable features which go toward making a door which meets every requirement for use in Garage, Factory or Warehouse.

It is a space saver and a money saver—easily installed in any kind of an opening and will give years of efficient service. You owe it to yourself to investigate this wonderful door and after you have once seen it—you'll never have anything else.

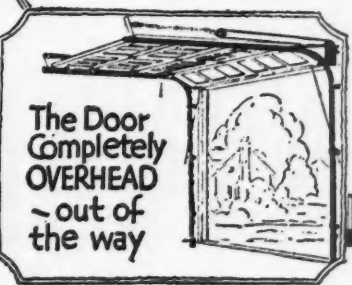
"The OVERHEAD DOOR"



The Door fits tight at Top, Sides and Bottom



The Door is in Perfect Balance in all positions



The Door Completely OVERHEAD - out of the way

**OVERHEAD DOOR CORPORATION
1003 W. Kickapoo St., Hartford City, Indiana**

Gentlemen: I am interested in the "Overhead Door" and will appreciate you sending full information as to the construction and operation.

Signed.....
Street.....
City.....
State.....



A WINNING SALES FEATURE IN HOUSE OR APARTMENT ~STYLISH LUPTON CASEMENTS

HOMES equipped with Lupton Windows are especially attractive in appearance, both inside and out. They have sunny rooms, too; rooms easy to ventilate and comfortable on the warmest or frostiest days. All year 'round, such homes are more enjoyable because of their convenient and beautiful casements.



A famous architect's home completely fitted with Lupton Windows which cost only \$569

Alert home-buyers know the value of Lupton Steel Windows. They read current advertisements, and besides, there are now so many Lupton-equipped homes that people can get

first-hand information on Lupton Windows in any active residence district.

This explains why successful investment builders use Lupton Windows. Installed in house or apartment, these modern casements of steel are a most attractive sales feature.



The builder of this house found Lupton Steel Windows an excellent investment at . . . \$300

When you consider the added sales value that Lupton Windows give a residence, you can see that their cost is remarkably low. Let us send you our Catalogue C-217 which shows all practical details.

DAVID LUPTON'S SONS CO.

2203 E. Allegheny Ave., Philadelphia

Lupton Windows

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Profit with "Pearl" NOW!

Every Unscreened Porch—Every Rusted Porch and Every New Home is an opportunity for you to Make Money Screening Porches

NOW IS THE TIME to show your prospects how simply and economically Porch Screens can be installed. Send for our plan showing portable screen panel construction. It will aid you securing more business.

Home owners prefer PEARL wire cloth because of its beauty and durability. PEARL is highly rust-resisting—made so by a process exclusive with us. The genuine has two copper wires in the selvage and our round tag on every roll.

Clean, Sanitary, Easy on the Eyes, firmly woven so as to make no-bag, no sag screens, requiring no painting, PEARL is the most economical as well as the most handsome, screen wire cloth on the market today.

We have a dealer in your town. See him or write us if you are interested in permanently screening doors, windows, or porches. Samples and literature FREE.

Address Dept. "A"

The Gilbert & Bennett Mfg. Co.

New York Georgetown, Conn. Chicago Kansas City

PEARL is made in Regular Grade [12 x 13 Mesh] and 14, 16, 18, 20, 24 and 30 Mesh; also Extra Heavy Grade [14 Mesh only]
The best hardware dealer in your city sells "PEARL"

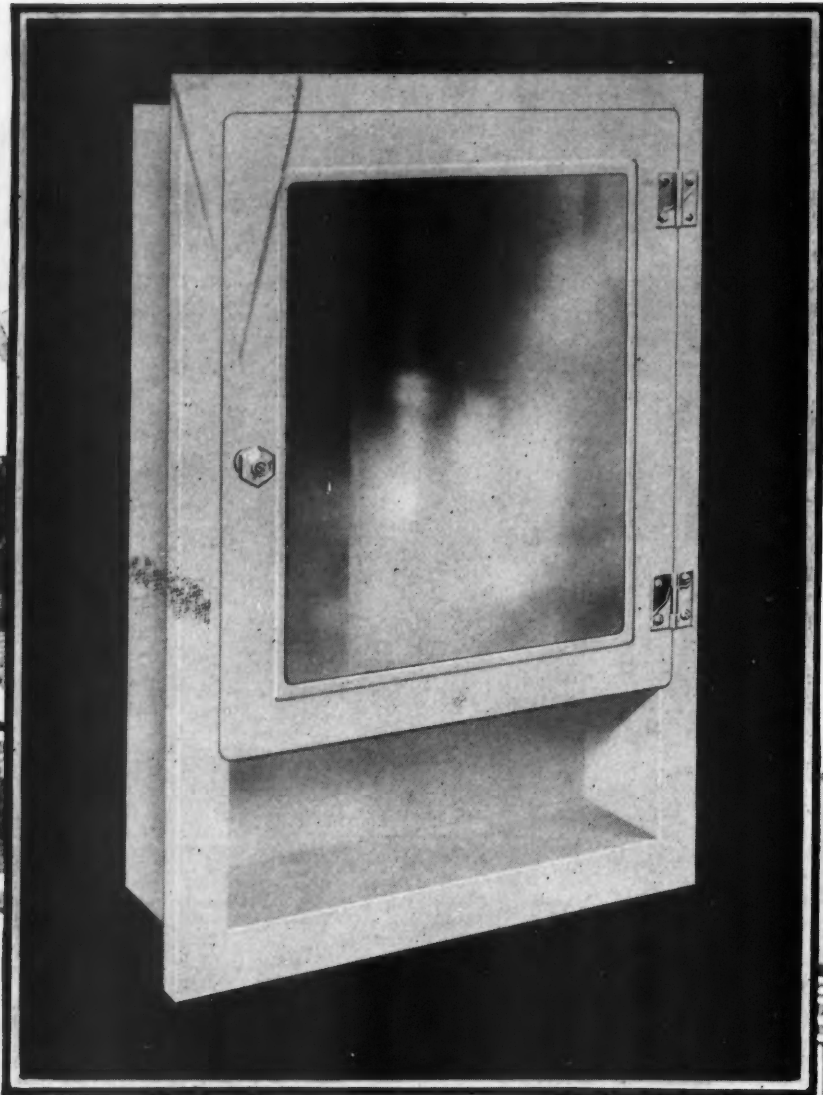
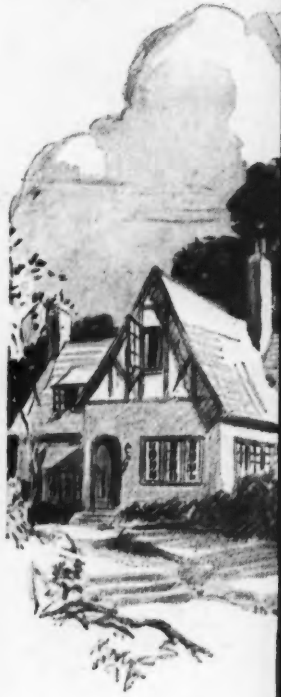
MAIL THIS COUPON

The Gilbert & Bennett Mfg. Co.
Dept. "A"—Box 760
CHICAGO, ILL.

Gentlemen:
Please send complete information on PEARL WIRE CLOTH and PLAN for screening porches to



NAME.....
STREET.....
CITY.....STATE.....



Inbuilt Steel Cabinets

*typify the merit of Sheet Steel
for use throughout the house*

Why do you build steel cabinets into your houses?—and you do if you follow the modern trend. You install them in bathroom, kitchen, laundry and wherever else a cabinet may be needed. Their advantages are manifest. No warping or swelling from heat and moisture; no danger from fire; always open and close accurately and easily; better appearing than the old "hung on" type, and as inexpensive when you figure the cost of high priced labor used to fabricate them on the job.

What Sheet Steel means in the form of cabinets, it means in a host of other building applications. As a roof covering, for gutters and downspouts, for doors and trim, for wall finish (in the form of beautiful porcelain finished tile) in bathroom and kitchen, and in many other ways, Sheet Steel means strength, beauty, safety and economy—a more modern, a more livable, a more salable house. For particulars, write the SHEET STEEL TRADE EXTENSION COMMITTEE, OLIVER BUILDING, PITTSBURGH, PENNSYLVANIA.

SHEET STEEL

for Strength Safety Beauty and Economy

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Opposite is brick home design T104. It is a six-room house with sun parlor and sleeping porch. This home was designed and built by Leland Lyon, Architect, for his own personal use. It is one of many in "Homes of Lasting Charm" offered in the coupon below. Complete plans for this home at very moderate cost.

In no other way can a builder offer so much for so little!

THE builder who concentrates on common brick construction has no bug-a-boo of excessive costs to burden his sales program.

No building material, that offers the permanence and stability of common brick, even approaches it in low first-cost of construction.

As a creator of home values, common brick has no equal. Its complete cost is approximately only 5% more than frame. It contributes an age-proof stability and a time-proof beauty that can be neither matched nor equalled by any sub-

stitute material. It is an open certain road to the popular favor of the buying public.

The builder who studies the cost of his resale values knows the dominating economy of common brick. Not a penny wise and pound foolish economy—but a cost economy that walks hand in hand with the highest forms of architectural artistry.

Haven't you a great deal to gain by looking into the possibilities of this material? Write the Association to learn how our service helps the dealer and the builder.

COMMON BRICK MANUFACTURERS ASSOCIATION OF AMERICA
2131 GUARANTEE TITLE BLDG., CLEVELAND, OHIO

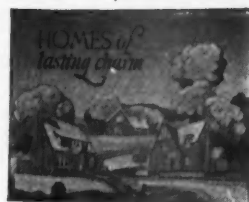
BRICK forever

PREFERRED BY ARCHITECTS

These District Association Offices and Brick Manufacturers Everywhere Are AT YOUR SERVICE

Boston 11 Beacon Street
Chicago 605 Builders Bldg.
Cleveland—Ohio Association
2124 Guarantee Title Bldg.
Denver 1735 Stout Street
Detroit 400 U. S. Mortgage Trust Bldg.
Hartford 226 Pearl Street
New York City 1716 Grand Cent. Term.

New York State District
Post Office, Box 773, Rochester, N. Y.
Norfolk 112 West Plume Street
Philadelphia 1420 Walnut Street
Pittsburgh 702 First National Bank Bldg.
Raleigh, N. C.
508 Commercial National Bank Bldg.
Salt Lake City 301 Atlas Block
Seattle, Wash. 913 Arctic Bldg.



Are you taking advantage of the service behind Brick?

Back of common brick is a trade service of important cooperation. Make use of it. Below we list a group of valuable brick books. These are distributed at cost. Send today for those you are interested in.

CHECK COUPON BELOW —SEND CASH OR STAMPS TO NEAREST OFFICE —

- "Homes of Lasting Charm"—25c
 - "Skintled Brickwork"—15c
 - "Multiple Dwellings of Brick"—10c
 - "Farm Homes of Brick"—5c
 - "Brick, How to Build and Estimate"—25c
 - "The Heart of the Home (Fireplaces)"—25c
- Check above books wanted or send \$1.00 for all of these books.

You Buy Quality at Low Cost



A PRODUCT *for* EVERY CONCEIVABLE NEED *in* PERMANENT BUILDING

Herringbone Doublemesh

Metal Lath

Herringbone Rigid

Metal Lath

Armco Ingot Iron Lath

Diamond Rib Lath

Key Expanded Metal Lath

Sheet Steel Lath

Stucco Steel

Self-Sentering (ribbed
expanded metal)

Trussit Reinforcement

Corner Beads

Cornerites

Cold Rolled, Perforated and
Square Channels

Mortar Boxes

Plasterers' Specialties

Steel Casement Windows

Steel Casement Doors

Steel Basement Windows

Pivoted Steel Windows

Projected Steel Windows

Steel Doors and Frames

in Stock Types

T-Bar Joists

Plate Girder Joists

Duplex Steel Bridging

Standard Steel Lintels

Steel Inserts

Bars for Reinforcing

Expanded Metal

Steel Tile

Waterproofings

Dampproofings

Floor Hardeners

Preservative Products

Genfire Products meet all standard requirements. The commodity line is stocked for immediate delivery by Genfire Dealers and in Genfire Warehouses throughout the country. Ask for illustrated literature and prices.

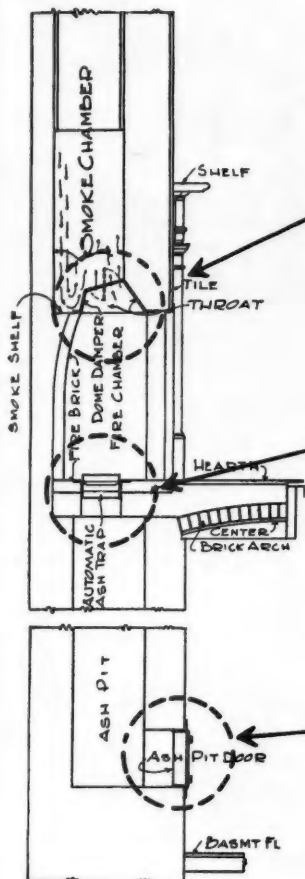
GENFIRE STEEL COMPANY

YOUNGSTOWN, OHIO

A Complete Organization to Serve

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

PEERLESS Home Conveniences



VERTICAL SECTION

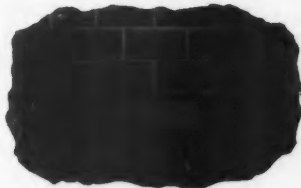


Dome Dampers

The most important part of fireplace construction is the throat, and the Peerless Dome Damper scientifically designed provides the correct throat opening. The easily regulated door at the top of the dome permits perfect draft control and regulates ventilation. It also prevents soot from falling into the room when the fireplace is not in use.

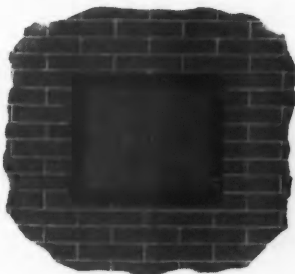
Peerless Dome Dampers are made from stove plate iron and will not rust or warp like those made of sheet iron.

The front flange is made sufficiently strong to support the fireplace arch without the use of angle iron; time and labor is saved in building up a brick throat. The Peerless Damper assures correct throat shape and size; it eliminates chance of a smoky fireplace; the door is removable permitting access to flue for cleaning; and it is furnished in three different styles of controls: Face, Underslung, Ratchet or Chain. A size and style to suit any fireplace need.



Ash Traps

Made of high grade cast iron, and in all standard sizes. They are placed in the bottom of the fireplace and the ashes are dumped through the trap into the pit below. Prevents ash dust from flying all over the room when ashes are being removed. A real convenience.



Ash Pit Doors

Made of cast iron in Black Japan finish. Doors and frames are carefully ground to make them dust tight. Used at the bottom of ash pits through which ashes are removed or at bottom of flues to clean out soot. Made in all standard sizes.



Coal Windows

The Peerless Coal Window replaces the battered looking window through which coal is shoveled into the basement. These windows are of heavy construction and will not break. Made with or without hoppers and with or without glass door panels. Several different styles and sizes.



In-the-Ground Garbage Receiver

The only visible part of this receiver is the cast iron top, the rest of the can is buried entirely under the ground. Garbage is entirely buried and cannot be upset. Made in three sections, a copper steel rust-resisting outer casing, with its attached cast iron lid and a large galvanized iron pail which fits inside. A handy foot trip raises or lowers the lid. Made in four sizes, 8, 12, 15 and 20 gallons.

A Complete Line of Fireplace Furniture—Andirons, Fire Sets, Screens, Baskets, Coal Hods, Grates, Etc.

AND

Peerless Hearth - Fyre Gas Heaters

PEERLESS MFG. CO.,
324 W. Main St., 4-28
Louisville, Ky.

Kindly Check

- Contractor Architect
 Home Owner Dealer

I am interested in Peerless Home Conveniences. Please send me complete information.

Name.....
Address.....
Town....., State.....



Water Over the Dam Never Turned a Turbine

NO more will heat that's lost up the chimney heat radiator coils.

It's easy to get heat enough for any given job, by simply putting in an oversize boiler. But why do that, when a normal size Burnham will put to work what would otherwise be waste heat, or unharnessed water going over the dam.

Because the Burnham's long fire travel puts to work so much of the heat, it saves you the greater cost of an oversize boiler, and a saving on fuel costs for all time. So it is that a Burnham protects both builder and user.

Remember, there's a Burnham big enough for the biggest heating job, and small enough for the smallest.

Catalog 67 gives the full facts.

This burly Burnham Big Twin is heating hospitals, schools and business buildings. Heating them fully on a fuel thrifty basis.



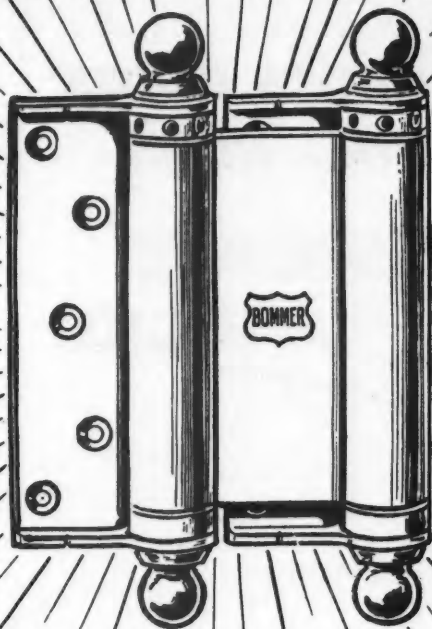
Burnham Boiler Corporation

Irvington, New York

Representatives in all principal cities of the United States and Canada

The Sun never sets on Bommer Spring Hinges

They
are
the best



They
are
the best

**Millions
and Millions
of People are Pushing
BOMMER SPRING HINGES
whenever they open a door**

**Follow the line of
least resistance
Always**

**Request—Bommer—Request
Your Dealer handles them**

Copyright 1927 by Bommer Spring Hinge Co., 251 Classon Avenue, Brooklyn, N. Y. Established 1876

Door locks have changed

-in modern homes, doors lock without keys

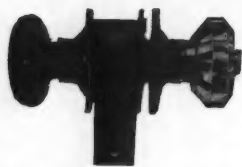


TO LOCK: just press the button in the knob

TO UN-LOCK: just turn the knob



Type AK Schlage Lock: locked by pressing button in inner knob; unlocked by turning knob inside, or key outside. Choice of knobs and finishes.



Type AB Schlage Lock: locked from within only, by pressing button in inner knob; unlocked from within only by turning inner knob. Choice of knobs and finishes.



Type AC Schlage (closet) Lock: knob outside, metal turn inside. Choice of knobs and finishes.

SCHLAGE Button LOCKS


Schlage **BUTTON** Lock is the new type door lock favored by American Contractors and Builders. Saves hunting keys to lock doors—use of keys inside completely eliminated. Saves crossing room to see if door is locked—merely a glance at the button tells. Adds a touch of distinctive charm to surroundings—a beautiful, symmetrical ensemble without visible screws or unsightly key holes. Prevents lock trouble—held permanently in place by 2 steel plates which grip door like jaws of a vise, no wood screws to pull out or come loose. Installed in $\frac{1}{3}$ the time required by old-fashioned mortise locks—factory assembled, self contained, ready to slip into door, no complicated mortising, no adjusting, no screws in spindle, knobs, or escutcheons—simply drill 2 holes and draw up 2 machine screws. Over a million in use. No home completely modern without them. 8 types. All standard finishes. Glass, metal, or opal knobs. Durability and precision fully guaranteed.

SCHLAGE LOCK CO.—Mfrs.
SAN FRANCISCO, CALIF., U. S. A.


NEW YORK CITY—71 Murray St.
CHICAGO—549 W. Randolph St.
PHILADELPHIA—2401 Chestnut St.
DETROIT—439 Penobscot Building

MAIL THIS COUPON NOW—
to SCHLAGE LOCK CO., SAN FRANCISCO, CALIF.,
for prices and complete information on SCHLAGE
Locks for AB-A


Building _____
Name _____
Address _____
City _____
State _____ Business _____



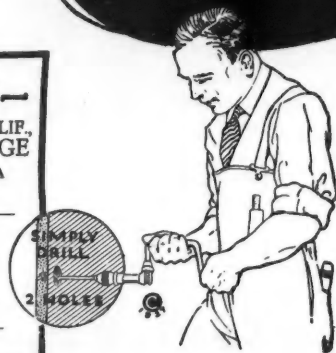
NO
Inside Keys—



NO
Unsightly
Keyholes—
or
Exterior Screws—



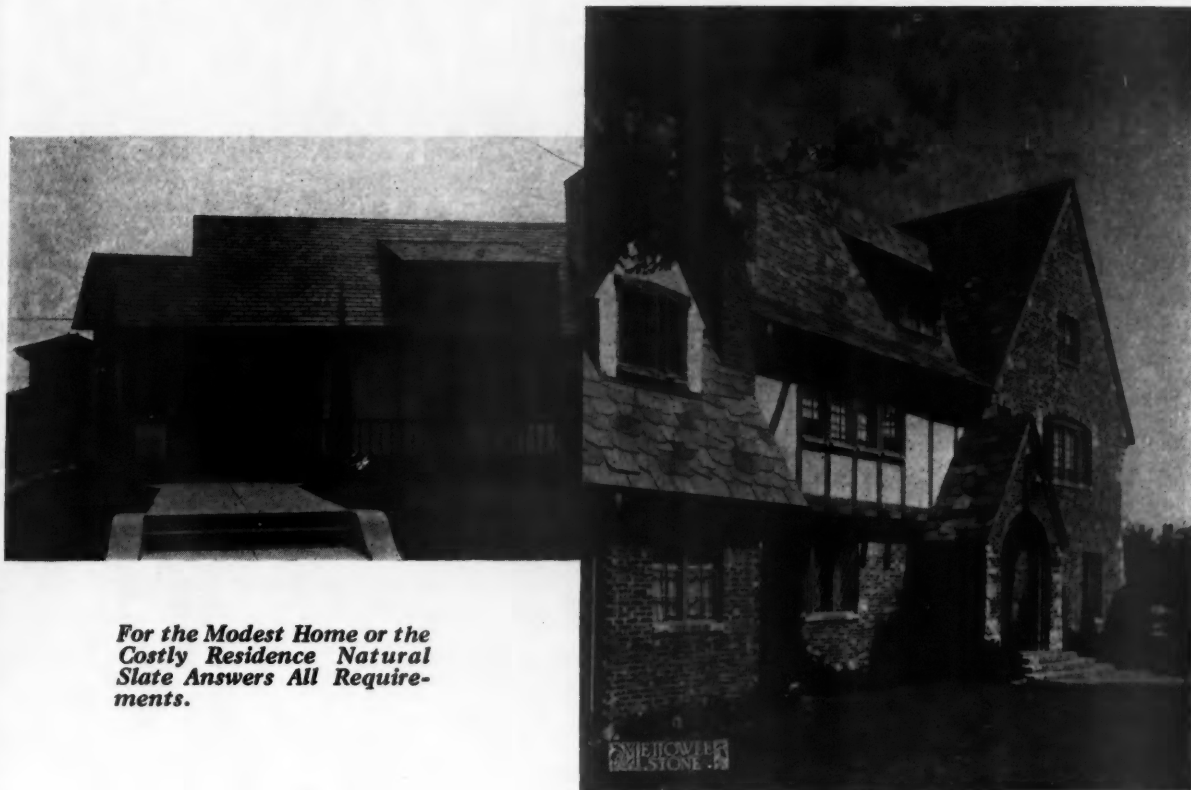
NO
Complicated
Mortising—



The MODERN Lock for MODERN Buildings

Old, Yet Always New,—and Ever Reliable,—
NATURAL SLATE ROOFING

Now Affords An Excellent Example of
 "Survival of the Fittest"



*For the Modest Home or the
 Costly Residence Natural
 Slate Answers All Require-
 ments.*

AFTER a decade of trials and tests with cheaper substitutes, the builder is now face to face with a condition demanding the use of more substantial materials—those with an established reputation in which the public can place absolute faith.

Natural slate, with its rugged beauty, ever suggests the last word in permanent construction—in fact, it carries an air of sturdiness to the entire building. The Architect knows slate and specifies it, the owner wants it—therefore the successful builder must use it.

Most of the finest homes in America are roofed with slate, because nothing better is obtainable. Also, the many varieties and prices available gives the small home owner an opportunity to possess the same permanent protection as his well-to-do neighbor.

Do not let a slight additional cost deter you from obtaining the great investment value of an everlasting slate roof. This difference is more than absorbed by the increased price your home will bring should you ever decide to sell.

Shall we send you our illustrated literature describing the many varieties of natural slate in both plain and variegated colors? The reasonable prices will interest you.



VENDOR SLATE CO.
 I N C O R P O R A T E D
 EASTON, PENNSYLVANIA





CLARK BUILDING, PITTSBURGH

Arch. and Eng., Hoffman-Henon Co. Hig. Cont., Geo. H. Soffel Co. (Aero Radiation)



NATIONAL PROVIDES THE 3 THINGS YOU WANT

- A COMPLETE LINE
- COMPETENT SERVICE
- UNIT RESPONSIBILITY



You want a line comprehensive enough to fill any heating need. National provides it. National offers equipment and demonstrated dependability. National points to performance over a period of many years on heating applications of every character.

You want service in its broadest sense. National renders it, through its tremendous plant capacity—its strategically located district offices—its vast distributing system.

You want a responsibility that does not quibble or compromise. National accepts it. National, today, offers the resources of six long-established boiler and radiator companies—individually and in combination. It is NOW a united responsibility.

The three things you need most are all assured when your heating requirements are left to the National.

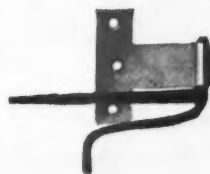
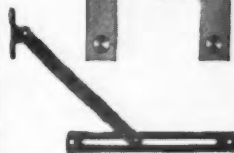
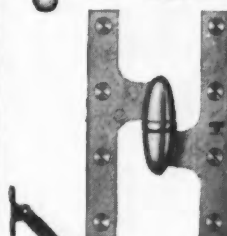
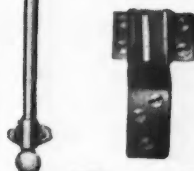
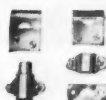
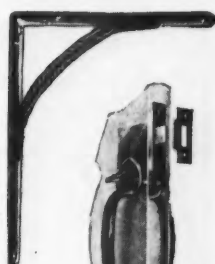
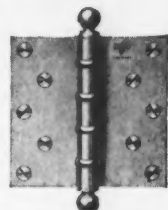
NATIONAL RADIATOR CORPORATION

Ten Plants devoted to National Service through these Branch Offices and Warehouses: Baltimore, Md.—2622 Frisby Street; Boston, Mass.—93-97 Oliver Street; Buffalo, N. Y.—McKinley Building, Delaware Avenue; Chicago, Ill.—2445 N. Keeler Avenue; Cleveland, Ohio—935 E. 63rd Street; Cincinnati, Ohio—Spring Grove and Elmira Avenue; Indianapolis, Ind.—57 S. Bolton Avenue; New York, N. Y.—55 W. 42nd Street; Johnstown, Pa.—221 Central Avenue; Philadelphia, Pa.—121 N. Broad Street; Pittsburgh, Pa.—1509 Arrott Building; Richmond, Va.—3032 Norfolk Street; Washington, D. C.—2205 Fifth Street, N. E.





There are thousands of items in the extensive line of Stanley Hardware. You can find just the style and size you need in the Stanley Hardware catalog No. 41m.



CONVENIENT

Door holders on garage doors are just as important as hinges. You must hold the doors open in some way, and props are too uncertain—too inconvenient.

When it's dark, or you are in a hurry, you don't want to hunt around for a stick to hold the doors open. And if you don't hold them in some way, a smashed fender usually results.

Here is an improvement which makes this holder convenient to operate. Works like a latch—the thumb piece releases the holder and the handle is convenient for closing the door.

Simple to apply. Each set of holders comes complete with screws, and can be applied to any type of door.

Ask your hardware dealer to show you how complete these holders are and how simply they operate. If he does not have them in stock he can easily get them for you.

Send this coupon for a description of the new Stanley Garage Door Holder, No. 1770.

THE STANLEY WORKS . NEW BRITAIN, CONN.

STANLEY HARDWARE

MADE OF STANLEY STEEL



The Stanley Works, New Britain, Conn.
 Send me description of the Stanley Garage Door Holder No. 1770, also a copy of your hardware catalog No. 41m.

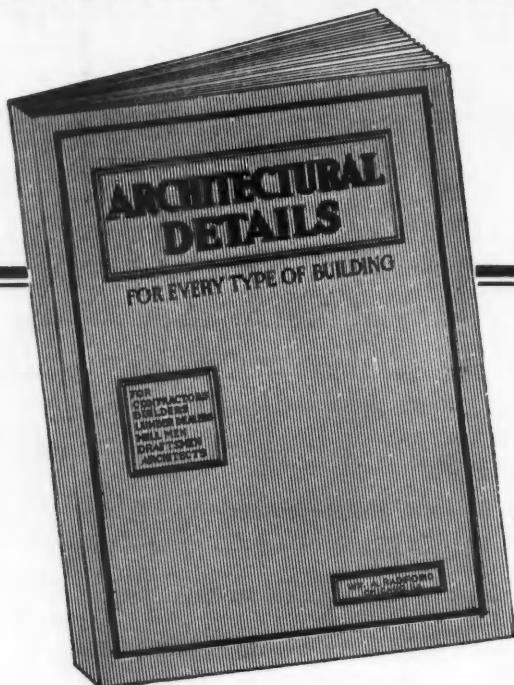
Name _____
 Address _____
 City & State _____
 My hardware dealer is _____



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

This Big Book FREE!

With Your New or Renewal Subscription to AMERICAN BUILDER



**500 Details
of
Building
Construction**

**160 Pages
of
Illustrations**

“ARCHITECTURAL DETAILS” is a complete manual of building practice, as applied to carpentry, construction and the use of millwork. It is a remarkable collection of full-page plates, accurately drawn and reproduced to exact scale, showing clearly every detail of modern building construction and finish. These plates make plain the framing and construction of residences of every type. This volume, 9 x 12 inches in size, has 160 pages of illustrations. All dimensions, angles, measurements and joints are made so plain and are so well illustrated that the man on the job will have no difficulty or trouble doing the work.

How to Get Your Free Copy

Send in your new or renewal subscription for one year at the regular rate of \$2.00 and we will send you “ARCHITECTURAL DETAILS” absolutely FREE, postpaid.

Offer good in U. S. and Canada. Add \$2.00 to Foreign Countries.

USE THIS COUPON FOR YOUR ORDER

THE AMERICAN BUILDER
1827 Prairie Ave., Chicago, Ill.

A. B. 4-28

.....1928

Enclosed find \$2.00 for which

Enter Renew	}	my subscription to the AMERICAN BUILDER for one year and send me free and postpaid, a copy of your book, “Architectural Details.”

NAME.....

STREET OR.....
BOX No.

P. O..... STATE.....

Dealer

Builder

My occupation is (Check Only One)

Architect

Real Estate

Miscellaneous

PLUMBING and HEATING



INSTALL
Your Own



OUR
MILLION
DOLLAR
PLANTS
BEHIND,
OUR
GUARANTEE



BUILDERS SEND PLANS FOR FREE ESTIMATE

Send plan or pencil sketch of your building and our trained Engineers will design a Hot Water, Steam, Vapor, Warm Air or Plumbing Outfit to exactly meet your requirements. This service is FREE.

OUR CUT-TO-FIT NEW EASY METHOD

We are familiar with all local ordinances everywhere and from your sketch or plan, with our Cut-to-Fit New Easy Method, we will build your system to conform with your local sanitary laws. Our products from the smallest fitting to a complete outfit have durability, beauty and ease of installation built in through and through.

We Show You How To Do the Work

With our simplified and correct installing plans and instructions, any handy man can do the work himself with the aid of our free service and planning department. **TOOLS LOANED FREE.**

We keep in touch with you from time to time until your job is finished. Even if you employ a practical plumber or steamfitter the heavy labor and needless material saved will surprise you.

YOU WILL SAVE NEEDLESS MATERIAL and HEAVY LABOR

We carry absolutely everything in Highest Grade New Easy Method Plumbing and Heating—BATHROOM OUTFITS, SINKS, LAUNDRY TUBS, WATER SOFTENERS, WATER HEATERS, SEPTIC TANKS, WATER SUPPLY SYSTEMS, PIPE, FITTINGS, VALVES, ETC. HOT WATER, STEAM, VAPOR, AND WARM AIR HEATING PLANTS with special builders wholesale prices on everything. WRITE FOR BUILDERS FREE CATALOG TODAY!



VISIT OUR
Million Dollar Plant
When in Chicago, we will show you through our Big Modern Plant whether you want to buy anything or not. We want you to know us.

BRANCHES
GARY, INDIANA, 1959 Broadway
MILWAUKEE, WIS., 2201 Fond Du Lac

EST. 1876
Hardin-Lavin Co.
120-30 W. Pershing Road, CHICAGO ILL.



We Are In This Business 52 Years

FREE CATALOG

Hardin-Lavin Co., 120-130 W. Pershing Road, Chicago, Illinois. A.B. 4-28

Please send me your free bargain catalog with special Builders' Prices on everything. I am interested in:

<input type="checkbox"/> Hot Water Heating Plants	<input type="checkbox"/> Water Heaters
<input type="checkbox"/> Steam or Vapor Heating Plants	<input type="checkbox"/> Water Supply Systems
<input type="checkbox"/> Warm Air or Pipeless Heating Plants	<input type="checkbox"/> Bathroom Outfits and Sinks
	<input type="checkbox"/> Septic Tanks
	<input type="checkbox"/> Water Softeners

NAME.....

ADDRESS.....

CITY.....STATE.....

TRUSCON-I-PLATES

PATENT **I** PENDING

INSULATED AND WATERPROOFED

80,000 Sq. Ft. of Roof

The Olympia Arena, Detroit—one of America's largest auditoriums—has a roof deck of Truscon I-Plates.

C. Howard Crane, Architect
Walbridge Aldinger Co., General Contractors

Here is another outstanding example of the economy and efficiency of this most advanced type of roof deck. Truscon Steeldeck Roofs are fire-safe, permanent, and because of their light weight provide decided savings in supporting structural work. They can be insulated to any degree to reduce heat loss and prevent condensation. Can be waterproofed with any standard roofing. This construction provides an economical, permanent roof deck for any type of building.

Write for suggestions, estimates and catalog. Sent without obligation

TRUSCON STEEL COMPANY
YOUNGSTOWN, OHIO, U.S.A.
Truscon Offices in all Principal Cities

STEELDECK ROOFS

NOT OVER 5 LBS PER SQ FOOT

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Portland Cement Construction

Improved

and Made More Permanent
by using

"R.I.W." TOX MIX

(Colorless)

*Concrete Integral Hardener
and Accelerator*

When one quart of "Tox Mix" is added to the bag of cement, or one gallon added to the cubic yard of concrete, the tensile and compressive strength have almost reached their ultimate in seven days, as compared with no addition in 28 days.

The concrete is rendered hard, impermeable and dense by the use of this material.

Cement floors are rendered permanently hard and dust-proof, also the setting action is accelerated permitting quick finishing.

In brick mortar work this material is invaluable. It speeds up the laying of brick and the mortar joint can be finished immediately.

"R.I.W." Tox Mix accelerates the initial and final set of Portland Cement construction and increases the tensile as well as compressive strength.

Specifications on request.

Send the coupon below for full and complete information on your particular waterproofing and damp-proofing requirements. Use the list of special "R.I.W." products at the left for a convenient check.



The International Telephone Building
New York City
Buchman & Kahn, Architects
Louis S. Weeks, Consulting Architects
A. E. Lefcourt, Builders
Toch's R. I. W. Semi-Mastic and Mastic,
Damp-proofing and Plaster Bond used on
the above structure.

"R. I. W."
PRODUCTS
for specific uses

- A—Waterproofing compounds
- B—Damp-proof coatings
- C—Steel preservative paints
- D—Concrete and masonry finishes
- E—Caulking compounds
- F—Miscellaneous products for special uses

State Requirements
**USE COUPON
OPPOSITE!**

TOCH BROTHERS, Dept. A-2
443 Fourth Avenue, N. Y. (or 2600 Federal Street, Chicago)

Gentlemen:—I am particularly interested in further information about Toch Brothers' products for checked uses:
A B C D E F

Please send me complete literature on these subjects.

Name _____

Firm _____

Address _____

OVER 80 YEARS ACHIEVEMENT

TOCH BROTHERS

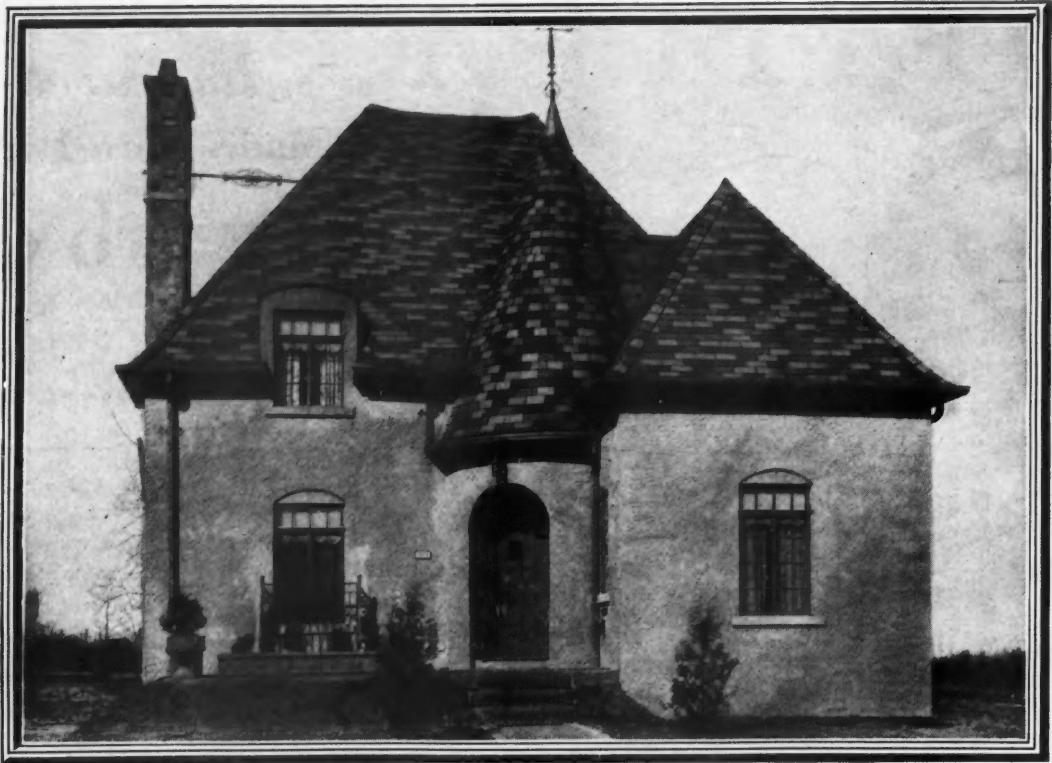
ESTABLISHED SINCE 1848)

DAMP-PROOFING and WATERPROOFING COMPOUNDS

NEW YORK
CHICAGO
LOS ANGELES
LONDON



division of
**STANDARD
VARNISH WORKS**



Again DETROIT'S IDEAL HOME IS roofed with Winthrops

This French Normandy house was designed by J. H. Gustave Steffens, built by Charles J. Probst, and given away at the Detroit Builders, Realtors and Better Homes Exhibition, to stimulate interest in home building.

For the architecturally important roof, the architect, without being solicited, selected the Greenfield Blend of Winthrop Tapered Asphalt Shingles. This is a four toned blend—in natural slate—of sea green, mist green, silverblue and mist blue. Greenfield, blended at the factory, comes ready to lay.

Of the roof, The Detroit News said: "The Winthrop individual-tapered shingle roof with its long sweeping lines is one of the outstanding features of the home."

This could be written of any house roofed with intelligently selected Winthrops. There is no other tapered asphalt shingle, with



thick butt to hug the roof, double the wearing thickness and cast attractive shadow lines.

A score of Winthrop blends and solid colors makes it possible to

select a roof that harmonizes with any exterior and that fits the house into any surroundings. Winthrops reduce insurance costs—they bear the Class C label of Underwriters' Laboratories. Winthrops reduce up-keep—they do not rot, rust, crack, split nor saw through their nails.

Samples—Free

See the Greenfield Blend. Write for free samples of this cool color harmony in blues and greens. We will send you literature also on the other blends and solid colors. Also suggestions on distinctive ways of laying Winthrops. Use them on new or re-roofing jobs. Any good lumber dealer can supply you.

BECKMAN-DAWSON ROOFING COMPANY
1032 Brooks Building, 223 W. Jackson Boulevard, Chicago, Illinois
Factories at Chicago, Detroit and Lockport, N. Y.

-the Big Butt Shingle
Winthrop
Tapered Asphalt Shingles

PROGRESS



The **Paine Miracle** Door

A Miracle of Strength and Beauty

Paine Lumber Company, Ltd.

OSHKOSH, WISCONSIN.

Laid and used the same day!

CROMAR Factory Finished OAK FLOORING—Its Ten Points of Prime Importance

1.—Factory Finished—Like Furniture



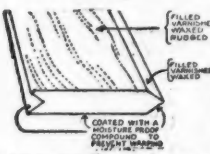
CROMAR, an oak flooring, milled exclusively from Appalachian Oak (a medium-textured oak which better takes and holds the finish), is completely scraped, sanded, filled, varnished and waxed at the CROMAR plant by patented machines. Because CROMAR is completely finished at the factory, like furniture, all there is left to do is to nail it down.

2.—Finish Stands Hardest Wear



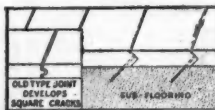
CROMAR patented machines apply filler, varnish and wax at the CROMAR plant. Not only is every pore of the wood filled, but the filler is actually driven into the oak, under pressure. This prevents the oil of the varnish from becoming absorbed by the wood. And thus the varnish retains its elasticity and does not flake or scratch white.

3.—“Warping” and “Drying Out” are Prevented



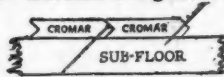
The oak lumber is kiln dried to 4% moisture content. This is practical only because CROMAR receives a moisture-resisting coating on back and edges in addition to its several finishing coats on face. Because CROMAR is 96% dry at the start—and then coated to keep it dry—complaints about “warping” and “drying out” are almost never heard of.

4.—V-Type Tongue and Groove Easy to Lay



The improved V-joint type of tongue and groove fits quickly and snugly without “blocking.” Each nail-hole is punched. The off-centre cut gives a flexible joint and equalizes unevenness in sub-floors. CROMAR lays satisfactorily over a rougher sub-floor than ordinary hardwood flooring.

5.—Beveled Tongue Prevents Damage in Nailing



The flat, beveled edge of the tongue permits rapid nailing with no necessity whatever for “setting” the heads and with no sharp edges to show hammer marks. The different shape of the CROMAR tongue prevents damage from breaking or splitting. Specially trained floor-layers are not needed.

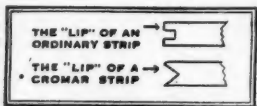
6.—Cleanable Surface Seam

The shallow rounded seam, in conjunction with the CROMAR tongue and groove, prevents the opening up of square cracks between the strips. Square cracks pack with dirt, making unsightly dark streaks that cannot be removed. The CROMAR patented seam is only 1/40” deep, and is easily cleaned with a brush or dry mop.



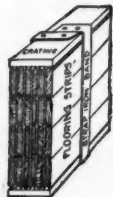
7.—“Lip” on Groove Side of CROMAR Strip Remains Unweakened Even at Time of Refinishing

CROMAR is made 3/8” thick only. The usual objections to thin flooring are entirely overcome in CROMAR by the different shape of the CROMAR “lip” on the groove side. The ordinary “lip” is weakened and often broken during installation by the necessary scraping and sanding of unfinished flooring. Of course, there is no scraping or sanding to be done with CROMAR. But even at the time of refinishing, the different shape of the CROMAR “lip” permits cutting down without weakening. And CROMAR’s superior finish makes early refinishing unnecessary.



8.—Convenient and Damage-Proof Bundle

CROMAR Strips are packed face to face, 18 or 24 pieces to a bundle. Bundles are clamped in a press, edges protected with crating, and bound with strap iron to prevent rubbing. Fastened so tightly together, it is impossible for strips to work loose. Thus they are made light-proof, dirt- and dust-proof. Each bundle is stenciled with grade and quantity, so that the material can be stored, without uncrating, until ready for use. Loss from broken tongues and grooves, split ends and damaged faces is completely eliminated.



9.—Laying Contracts Need Not Be Sub-let

Because the use of CROMAR eliminates the need of any finishing operation whatever, after it is nailed down; and because it is so easily laid that no specially trained floor-layers are needed, the contractor or builder is enabled to handle the complete job of laying a CROMAR floor himself, instead of sub-letting it.



10.—Promotes Extra Sales for Occupied Houses

Because CROMAR is laid right over the old floors, and without the usual two weeks’ mess and confusion, contractors can sell a CROMAR floor where no sale was possible before. And because of the speed with which CROMAR is laid, contractors can handle a greater number of jobs with the same number of men.



THE CROMAR COMPANY, WILLIAMSPORT, PA.



CROMAR

FACTORY FINISHED

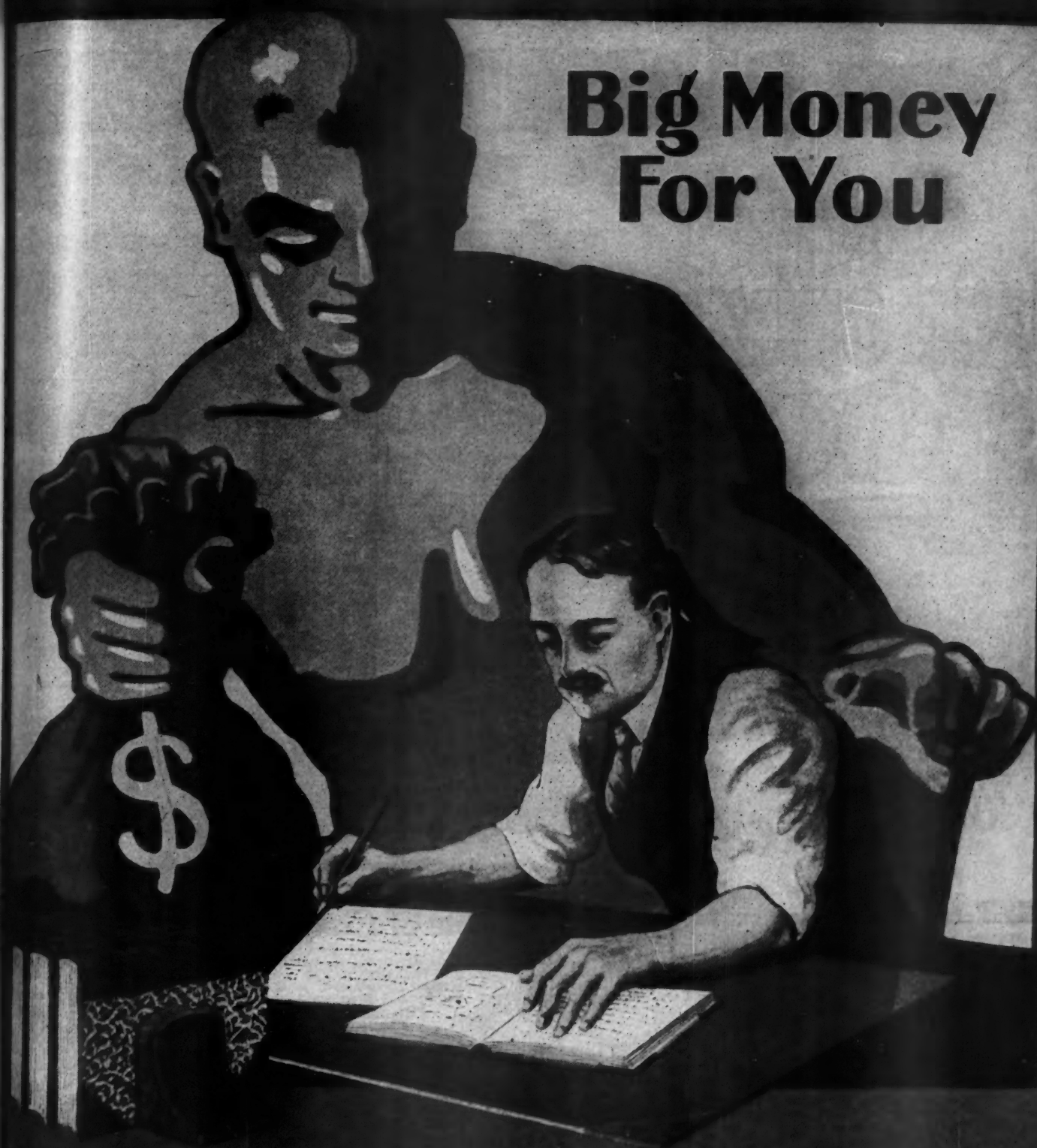
Oak FLOORING

LAI D AND USED THE SAME DAY

FOR ADVERTISERS’ INDEX SEE NEXT TO LAST PAGE

Write for free samples and complete literature concerning the manufacture, the selling and laying of the only factory finished hardwood flooring in the world.

Big Money For You



Knowledge Brings
SUCCESS and PROSPERITY

RADFORD'S CYCLOPEDIA
of Building Construction

**SEE OUR BIG SPECIAL OFFER
ON FOLLOWING PAGES**



RADFORD CYCLOPEDIA Carpentry Building

SENT
FOR ONLY
\$100



We Pay Express

Exact Photographic Reproduction Bound in Red Morocco Grain Fabric

My Personal Guarantee

If you do not find the Radford Cyclopaedia of Construction just as advertised and entirely satisfactory, or if for any reason whatsoever you do not wish to keep it after having had the free use of it for five days, I personally guarantee to refund your deposit immediately upon receipt of such information from you. I guarantee to prepay all carrying charges. I guarantee you will get this low price if ordered now. I guarantee to send you Three Plan Books of 300 Plans. I guarantee to furnish you with a complete set of blue printed working plans and type-written specifications, as per terms of this offer. I further guarantee you will receive one full year's subscription, twelve numbers, to the American Builder, conceded the world's greatest and best known Building Paper.

Don't hesitate a moment to hold me to this guarantee and notify me within the five-day limit, as we want every set of books we put out to remain only in the hands of appreciative and enterprising purchasers, as this price is made with the sole purpose of placing a set in your town to which we may refer later, and with the understanding that you write us your opinion of it to help secure other business at our regular price.

Wm Radford

President and Editor-in-Chief.

Partial Table of Contents—Radford's Cyclopaedia of Construction Brief List—See

PERSPECTIVE DRAWING
Pen and Ink Rendering.
HOUSE FRAMING
Good and Faulty Construction.
Construction of Sills and Joists.
Studding.
Cornice.
Porch Construction.
Window and Door Openings.
How to Attach Woodwork to Masonry Walls.
ROOFS AND ROOF CONSTRUCTION
Lean-to and Saddle Roofs.
Forms of Roof Trusses.
Stresses on Roofs.
Strength of Beams.
Dimensioning, Struts, Tie-Beams, etc.
Roof Braces.
Rafters and Purlins.
Hips and Valleys.
Wall Plates.
Jack Rafters.
Dormers.
Use of Queen Rafter
To Support a Gambrel Roof.
Construction of Circular Porch.
CONSTRUCTION OF STAIRS
Pitchboard.
Treads and Risers.
Housed and Open Strings.
Wall Strings.
Straight and Curved Stairs.
THE ELEVATION
Intersections and Developments.

Lettering.
Blue-Printing.
Working Drawings.
Architectural Drawings.
BUILDING CONSTRUCTION
Foundations.
Girders.
Cellar Windows.
TEMPERATURE REGULATION
Practical House Plumbing.
The Sewer and Connections.
Sizes of House Drains.
THE PIPING SYSTEM
Layout of Plumbing.
HOW TO USE THE HANDBOOKS
Rivets and Riveting.
Factor of Safety.
CLASSES OF STRUCTURAL MEMBERS
Design of Girders.
MANUFACTURE OF STRUCTURAL MEMBERS
Forge Shop.
Painting Structural Steel.
Cost of Steel Structures.
Erection of Steel Buildings.
Bridges and Viaduct Construction.
USES OF THE STEEL SQUARE
Uses of the Figures, Lines and Scales.
Testing the Square.

Diagonal and Octagonal Scales.
Adjustable Fence.
Describing Curves with Square.
To Find Length of Braces and Other Timbers.
Steel Square in Roof Framing.
Pitches.
Rafters Cutting.
Common and Jack Rafters.
Hips and Valleys.
Projecting Cornice.
Finding Bevels.
Framing a Circular Porch.
Framing a Gambrel Roof.
Miter Cutting.
Hip Roof Framing.
Finding Length of Rafters.
Bevels for Cuts.
Hoppers and Hopper Bevels.
THE SQUARE IN STAIR BUILDING
Strings and Finishes at Top and Bottom.
Treads and Risers.
Square of the Newel.
Combination Squares.
Topp's Framing Tool.
KEY TO THE STEEL SQUARE
Rafters Table.
The Revolving Disc.
Side Cuts.
Table of Tangents.

Examine These Books

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

DICTIONARY OF CONSTRUCTION and Architecture



SENT FOR ONLY \$1.00



We Pay Express

in Fabric... Gold-Leaf Letter. Actual size, 6 x 9 inches. 5,000 pages, 3,000 illustrations

's Cyclopedias of Construction—This is a Very See Books Yourself

Miters for Polygons.
 Five-Pointed Star.
 Framing Timbers at Any Pitch.
 Ornamental Figures in Miter Work.
 Laying Off Degrees with Compasses.
 Possibilities of the Steel Square.

HOUSE SANITATION
 Heating and Ventilation.
 Modern Heating Apparatus.

HOT-AIR HEATING
 Size of Furnace Required.
 Location and Size of Flues and Registers.

Heat Pipes.
 Cold-air Supply.
 Air Cleansing.
 Furnace Ventilation.

MANUFACTURE OF CAST IRON

The Blast Furnace.
 Sand and Machine Casting.
 Grades of Cast Iron.
 Wrought Iron.

ELEMENTS OF STEEL CONSTRUCTION
 The Raw Material—Iron Ore.
 Properties of Ore.

COVERING OF ROOFS
 Method of Shingling.
 Covering of Circular Dome.

MASONRY CONSTRUCTION

Kinds of Stone Work.
 Rubble Masonry.
 Cut Stone.
 Bonds and Joints.
 Mortar for Stonework.
 Stone Cutting.
 Stonecutters' and Masons' Tools.
 Dictionary of Masonry Terms.
 Foundations.

BRICK AND BRICKWORK
 Brick Making Machinery.
 Strength of Brick.
 Porosity, Density, etc.
 How to Test Brick.
 Mortar for Brickwork.
 Bricklayers' Tools.

REINFORCED CONCRETE
 Durability.
 Fire-resisting Properties.
 Cost of Reinforced Concrete.

REINFORCED CONCRETE BRIDGES

Piers.
 Abutments.
 Viaducts.
 Reservoirs.
 Water Tanks.
 Irrigation Canals.
 Headgates and Flumes.
 Sea Walls.
 Concrete Telegraph Poles.

Concrete Railroad Ties.
 Electric Light Standards.
 Concrete Garage.
 Concrete Sinks.
 Mausoleums.
 Burial Vaults.
 Useful Tables.
 Useful Rules.

MANUFACTURE OF CONCRETE

Proportion for Mixing.
 Hand Mixing.
 Machine Mixing.
 Continuous Mixing.
 Batch Mixing.
 Wetness of Mixture.
 Mixing Tools.
 Time of Setting.
 How to Regulate Setting.
 Difference Between Setting and Hardening.

PLAIN CONCRETE CONSTRUCTION

Collapsible Metal Forms.
 Construction of Forms.
 Wood Forms.
 Metal Forms.

CONCRETE HOUSES
 Monolithic Construction.
 Concrete Block Houses.
 Plaster Work and Stucco.
 Foundations.

How to Get Them

All you have to do is to write your name and address plainly on the coupon at the bottom of the next page, pin a dollar bill to it and mail it to us. We trust you as a member of the building trade and send you the entire set of books immediately. We prepay all express charges and thus it does not cost you one penny for examination. When you get the books they are yours for five days to examine them just as leisurely and as carefully as you please. You have the privilege of calling in your family, your friends, your associates to look them over and help you to make a decision. After you have had the chance to go through them page by page, if you should decide that you do not want to keep the books, all that you have to do is drop us a postal telling us so. We will immediately send back to you the payment of \$1.00 which you sent us with the order blank. We do this without any argument, without any red tape and without any haggling whatever. Furthermore, we will remove the set of books without cost to you at once. Therefore, you are nothing out on the deal, you have not spent a cent, you have lost nothing whatever.

Don't WASTE OUR EXPENSE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Open to New and Old Subscribers--Renewals Extended for One Year

The MAN Who Stood Still!



THE MAN WHO STOOD STILL. He is one of the tragic figures of life. Day after day he follows in the same groove. In good health and in bad he has to work. Growing older and older he sees ahead no relief from the ceaseless toil that he has known all through life. There is no opportunity for him to cease a single day the everlasting "humdrum" that he has known for so long. When he had the chance there was no Cyclopedic such as this, at so low a cost, and so easy to get. He allowed other men—the men who had studied and knew how—to pass him by. They left him standing on the threshold of success. But they left him behind. He heeded not the beckonings of opportunity. He is **THE MAN WHO STOOD STILL.**

SPECIAL FREE PREMIUMS IF YOU ORDER AT ONCE

If we receive your order at once, we will send with this Cyclopedic one year's subscription (12 numbers) to the American Builder, the world's greatest building paper. We will send free of all extra cost, one complete set of blue printed working plans and typewritten specifications of any of the houses illustrated in three Books of Plans, which we also send to you free of cost, so that you may make your selection. These plans

and specifications are as complete as those charged \$50.00 to \$75.00 for by many architects. These plans will be very valuable to contractors, builders and draughtsmen. The only reason we can offer to do this is because we have the largest architectural establishment of its kind in the world, and are able to produce these complete blue printed working plans and specifications at the very lowest possible price, and to the purchasers of this big Cyclopedic we are willing to give the benefit. Without American Builder \$1.00 less.

We make this liberal offer because we want you to have our Cyclopedic, and we believe by having it in your hands we will have a greater opportunity of disposing of others in your locality, and it is with the distinct understanding that if it is entirely satisfactory, you will write us a letter and assist us in making other sales.

Our special price to you for advertising purposes is only \$37.50, and our liberal terms are only One Dollar down and \$3.00 per month until the amount is paid. We give you five days to look the books over and see if they are entirely satisfactory. If you conclude not to keep them, we will refund your money and pay the express charges both ways. Order today. Fit yourself at once to increase your earning power.

The Radford Architectural Co., 1827 Prairie Avenue, Chicago, Ill., U. S. A.

Pin A Dollar Bill To This Coupon and Mail Today NO-RISK GUARANTEE COUPON

RADFORD ARCHITECTURAL COMPANY,
1827 Prairie Ave., Chicago.

Please send me, express prepaid, your 12-volume Cyclopedic of Construction, for five days' free examination, with privilege of return at your expense. I enclose \$1.00 deposit which you agree to return if I decide not to keep the books after examination. If I keep the books, I will pay \$3.00 a month until the special price, \$37.50, is paid, otherwise I will notify you within five days after receipt of books.

Your offer also includes Three Big Plan Books (over 300 designs) and one full year's subscription to the American Builder. You also agree to furnish set of Blue Prints and Specifications, if ordered within 2 months after acceptance of books.

Name.....
Street.....
Town.....
State.....

West of Rocky Mountains and Canada, \$3.00 with this order.
Full amount must accompany all Foreign orders.

A. B. 4-28



Build Your Biggest Sales Point in the Basement

Outstanding superiority, world-wide acceptance and undisputed sales leadership prove conclusively that the average home buyer wants Holland Vaporaire Heating. It is his positive guarantee of heating comfort, cleanliness, efficiency, economy, permanent service and satisfaction.

Reduce your sales effort and expense. Speed turnover. Avoid responsibility and inconvenience. Give buyers what they want. Put a powerful selling factor in the basement of every home you build—install Holland Heating.

HOLLAND *Vaporaire* HEATING

MAKES WARM FRIENDS

Holland Furnace Co.

Holland, Michigan

Without obligation on my part please Send me your Free Booklet, "How To Heat Your Home" Have a Holland Man Call.

AB1

Name _____

Address _____

City _____ State _____



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

A GOLDEN OPPORTUNITY for the Home Building Contractor



TWENTY-FOUR million dwellings in the United States and comparatively few of them built in the last decade or even the last two decades! Near you are many now obsolete or nearly so. Every one offers a golden opportunity for you—in profitable remodeling!

Lumber best lends itself as a money-making material for remodeling.

Your prospects will be interested in the graphic illustrations of a typical alteration job, on the left. They afford three excellent appeals to the home owner: to the sentimental side—his practical sense—his pride. Point out to him how economically the old house can be modernized, and the grateful rise in value that will result.

Watch this series of advertisements. There will be more illustrations such as the accompanying, each set offering helpful suggestions of how real money-making alterations can be made through the use of lumber.

Use properly seasoned lumber, manufactured to American Lumber Standards; endorsed by the United States Departments of Agriculture and Commerce. Made by America's best mills. Your retailer has it or can get it for you.

MODERN WOOD GARAGE ADDED

DIVIDED LIGHT SASH AND ORNAMENTAL SHUTTERS

ARCHED ENTRY REPLACES UGLY PORCH

ATTRACTIVE LOUVRE VENTILATES ATTIC

SHINGLES FOR INSULATION AND APPEARANCE

OVERHANG GIVEN ARTISTIC SWEEP

NATIONAL

LUMBER

MANUFACTURERS ASSOCIATION

WASHINGTON, D. C.

NEW YORK, N. Y.
CHICAGO, ILL.

SAN FRANCISCO, CAL.
MINNEAPOLIS, MINN.

INDIANAPOLIS, IND.
KANSAS CITY, MO.

DALLAS, TEX.
PORTLAND, ORE.

AMERICAN STANDARD LUMBER FROM AMERICA'S BEST MILLS

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

AMERICAN BUILDER
 Building Age
 BETTER HOMES
 5 CENTS THE COPY \$1 THREE YEARS
 THE SATURDAY EVENING POST
 The Gentry Gentleman
 SATURDAY

Do you plan to build or buy, remodel or re-roof? You may do yourself a grave injustice if you think the word "ruberoid" means all asphalt shingles or roll roofings.

This is why



WHEN, thirty-four years ago, someone discovered the combination of materials that produced a roofing light in weight, fire-resistant, and of surpassing durability, they made it up in roll form and named it Ruberoid—and that was Greater Ruberoid.

This new roofing material so exactly met existing needs that Ruberoid won only two months' success, not in America but throughout the whole world. The first substitutes for roll Ruberoid soon led to the development of a new style of Ruberoid Shingles, with wide range of colors in attractive moulding lines and designs.

The success and popularity of Greater Ruberoid Shingles has inevitably brought about the appearance of Ruberoid and its even traded on its name. But one thing is true—no one can equal its quality or its achievement.

The Ruberoid Co.'s weather-defying formula and its adherence to rigorous manufacturing standards of unrivaled high quality have made it impossible for any imitator to equal the service records of Ruberoid Roof. The fact that there are Ruberoid Shingles and Roofings today is a tribute to the wisdom and foresight of the men who, in the early days of this country, were considering a new roof.

No matter what the form, style or color of roofing material you want, whether it is for a modest bungalow, for a palatial home, for a factory or industrial building, there is a Genuine Ruberoid product that will meet the conditions it must stand and at the price you want to pay.

Do not be misled by the spurious word "ruberoid" when you are discussing roofs. There is a secret key—go directly to the dealer in your community whose reputation depends on supplying Greater Ruberoid. He will see that you not only get the best protection for your buildings but also will safeguard your investment in the roof as described in the paragraph to the right.

THE RUBEROID CO., Boston
 Chicago
 In Canada: RUBEROID Advertisers of Building Products, Ltd., Montreal

The RUBEROID Co., Dept. 19
 95 Madison Avenue, New York, N. Y.
 Please tell me where I can obtain Genuine Ruberoid Shingles and Roofings for my building:

Mason Cement
 Concrete Brick
 Chimney Slate
 Lumber

Name _____
 Address _____

Genuine RUBER-OID SHINGLES - ROOFINGS

BASED on the average number of readers per magazine, 1928 Ruberoid advertising will reach over 31,000,000 persons—not once, but—month after month.

In this vast audience are the future home builders of your community. Here you will also find the biggest property owners—your market for remodeling and re-roofing work.

By cooperating with your local dealer handling Genuine Ruberoid Shingles and Roofings, you can jointly cash in on this publicity.

NO matter what form, style or color of roofing material you want, whether it is for a modest house, or a palatial home, or for farm or industrial buildings, there is a Genuine Ruberoid product that will meet the conditions it must stand and at the price you want to pay.

A Complete Line of
 Genuine Ruberoid Shingles

YOU can obtain Genuine Ruberoid in shingle form in a wide variety of designs and colors. Style is built into these shingles. New methods of application provide increased massiveness, beauty and durability.

In fact, the attractiveness of these shingles and their qualities for service are unsurpassed.

If you haven't seen samples of the entire line, address Department 2, and they will be furnished without obligation.

The RUBEROID Co.

Chicago

New York

Boston

The RUBEROID Co., (Dept. 2),
 95 Madison Avenue
 New York, N. Y.

Please send me samples and descriptive literature of the following Ruberoid products:

- Ruberoid Strip-shingles
 Octagonal Square Hexagonal
- Ruberoid Unit-shingles
 Massive Standard Lock-down
- Ruberoid Roll-roofing
 Slate-surfaced Smooth-surfaced

Name _____
 Address _____



"A New House for the Old," an interesting book on remodeling. Sent free.

"The Story of Brick," a beautifully illustrated booklet for the home buyer and home builder. Sent free.

"A Manual of Face Brick Construction," 116 pages, a text book on all types of Face Brick construction. \$1.00.

"Face Brick Bungalow and Small House Plans"—Four booklets showing designs and floor plans for inexpensive 3 to 4-room, 5-room, 6-room and 7 to 8-room houses. Each 25 cents, the set \$1.00.

"Two Apartment and Double House Plans," 14 attractive designs of duplex and double houses, showing 28 plans of 5 and 6 rooms each. Sent for 25 cents.

AMERICAN FACE BRICK ASSOCIATION
2163 City State Bank Building
Chicago, Illinois

This is Face Brick House No. 631

THE DISTINGUISHED HOUSE . . . IS BUILT OF FACE BRICK

"How do those people sell their houses so easily?" That question is often asked about successful, large-scale builders. In the answer is a profit lesson for even the smallest speculative builder—and all contractors. Study the methods of the big operators and you will see that they are good merchants as well as good builders—that they use materials of known value to home buyers. Their houses are colorful and beautiful, of course. But they are more. Prospects are convinced that here are houses that will endure. And these are the reasons so many successful builders use Face Brick. Face Brick gives the home lasting beauty. It gives it endurance. It saves money in maintenance. It lowers depreciation. And it helps to sell. Send for the Face Brick booklets listed above. They may give you, as they have others, money-making ideas.

F A C E B R I C K

—requires no paint or whitewash

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



The CHILI
from
"Beauty in Brick"

*A single house or a row ~
this distinctive Brick gives
additional value for
selling or leasing*

Forestblend Face Brick will add distinction to any home or group of homes. Its texture is unique (secured by a patented method of manufacture), and its color range is truly remarkable. It makes a house that is good to look at and easy to sell at a profitable figure. Concerns who build homes to sell, find in Forestblends an able ally. Made by people who have made brick making a lifetime study and who have at their command the Sugar creek Clays, world renowned for extraordinary beauty. It is small wonder then that Forestblends have seized the fancy of architect, contractor, dealer and consumer alike.

Investigate this face brick at the earliest opportunity. Why not write now for "Beauty in Brick" the Finzer plan book. It contains 50 model homes and several garages. The cost is only 50 cents and the coupon will bring this 64-page book to you promptly.

**Finzer Bros. Clay Co.
Sugar creek, Ohio**

Gentlemen: I am enclosing 50c for which please send me promptly your new plan book, "Beauty and Brick."

Name.....

Street.....

Town.....

**THE FINZER BROS. CLAY CO.
Sugar creek, Ohio**

forestblend
CLINTON FACE BRICK

Making Model Homes models of Safety with ARCH LATH



One sheet of Arch Lath (27" x 96") grips the plaster at 8064 points; making the wall an integral unit of rigidity and strength, while minimizing possibility of cracking.



Copyright 1928
Wheeling Corrugating
Company

THE introduction of Wheeling Arch Lath has created new interest in metal lath. The reason is that Wheeling Arch Lath insures fire-safe construction at a cost comparable to that of inflammable types of lath.

Wheeling Arch Lath is fabricated from a solid sheet of steel. The arches are so formed as to permit only the correct amount of plaster to squeeze through for perfect "key." There is no waste due to plaster piling up between walls.

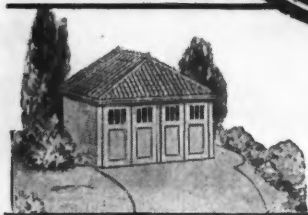
Immediately after application, the first coat of plaster can be scratched and made ready for the second coat—no waiting for plaster to dry. This saves time and labor.

Wheeling Arch Lath combines time, labor and plaster-saving advantages with low cost of erection. The rigidity of the sheet makes it practical for one man to handle; the extra 3" width (27" width instead of the usual 24" width) enables one man to cover more surface in less time.

Wheeling Arch Lath advertising in National Magazines is creating demand for Fire-Safe homes. Arch Lath helps to supply this demand. Let us send you additional information, prices and sample.

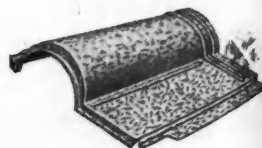
WHEELING CORRUGATING COMPANY
Wheeling, West Virginia

Branches: New York, Philadelphia, Chicago, Minneapolis
St. Louis, Kansas City, Chattanooga, Richmond, Des Moines



Wheeling Spanish Metal Tile

For a roof of enduring beauty at low cost, use Wheeling Spanish Metal Tile. It is proof against rust, leaks and lightning. Permanent and highly practical as well as artistic and attractive. Write for full information.



100 feet of ACCO No. 8 Sash Chain



will hang
7
average windows



It will pay you to use ACCO No. 8 Sash Chain. Your men will like the way it hooks to weights and fastens to windows. And when the job is in, ACCO Sash Chain looks neater—and if desired, it can be painted to harmonize with the interior color schemes.

ACCO Sash Chain is made of Copper-Bearing Steel—a corrosion-resisting alloy—galvanized or coppered. Will last as long as the window.

No change is necessary in the win-

dow casing construction. ACCO No. 8 Sash Chain operates perfectly over ordinary cord pulleys. It is packed 100 feet in a bag, with necessary attachments, which makes it handy for use on the job.

Fill out the coupon below and we will send you a sample length of ACCO No. 8 Sash Chain for testing. If your lumber yard or hardware specialty dealer cannot supply you with ACCO Sash Chain, give us his name and we will see that you have a convenient source of supply.



Attachment for one or two hole sash

Simply drop chain through the bore, slip coil spring into end link, give the coil a turn and insert in sash with thumb.

For two hole sash, insert coil in upper hole



ACCO No. 8 Sash Chain

AMERICAN CHAIN COMPANY, Inc., Dept. A-4, Bridgeport, Connecticut

Gentlemen: Please send me a sample length of ACCO No. 8 Sash Chain for testing.

Name..... Address.....

I would buy sash chain through..... (Name of Dealer)

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Here is winter-warmth... here is summer-comfort... here is weather-protection... here is beauty, too, and quicker salability



—all in one
artistic roof of

Carey
CORKE-INSULATED
SHINGLES

LOOKING for a fresher, more compelling story to tell home-buyers and home-builders?

Carey Cork-Insulated Shingles—there's the answer! Talk thermometer-comfort—and see how quickly those prospects prick up their ears!

They know, of course, that there's *insulation* in cork—show them the season-proofing under-layer of cork in these thicker, more artistic shingles. Explain how it saves fuel in winter, by stopping the leakage of heat through the roof—how it keeps the house cooler in summer, by corking out the heat of the sun. Tell them, too, about that outer-layer of weather-protecting slate, in its range of warm color-tones. When your story is told—the roof is sold.

Carey Cork-Insulated Shingles—a *double roof*, at so little extra cost!

They sell themselves, these uniquely-artistic shingles, and they sell the houses they go on. Think of all the people of moderate means who will be instantly attracted by the extra advantages offered by Carey Cork-Insulated Shingles. Better get your samples at once. Write.

THE PHILIP CAREY COMPANY
Lockland, Cincinnati, Ohio

Also a 420 gal. per hour system at \$100. Both sizes for use where source of water is not more than 22 feet below the pump.

Have you a water pumping problem? Our engineers will advise you free of charge.



only \$70

cash f. o. b. factory, complete with 60 cycle A. C. or direct current motor

Let running water be a sales feature

No longer need any home—new or old—forego the convenience of running water. Here is a complete, automatic water system that is easily within the reach of every pocketbook and the most modest home. A water system built by the builders of equipment for the largest city pumping stations. Builders who have utilized the engineering resources and vast manufacturing and sales facilities to bring running water to the home situated beyond the city mains at a price within the reach of all.

A complete modern home water system that sums up the best features

developed during Fairbanks-Morse's long experience in water plant building. Compact. Clean-cut in design. Automatic. Capacity of 210 gallons per hour—enough water for the whole family's use. Finished in *delft* blue automobile lacquer—reflecting the quality-

building found in every detail. Quickly installed by simply making two pipe connections.

The contractor can easily include this water system in his specifications at slight extra cost—or if your home is already built, you can add this important convenience very economically.

Easy Purchase Plan

Only \$20 down with easy monthly payments if you desire. Any Fairbanks-Morse dealer will be glad to explain these convenient terms. Just use the coupon to secure full description and complete information.



Here are unmatched F-M features

- 1 Completely enclosed. All parts fully protected.
- 2 Compact—19" in diameter, 21" high.
- 3 Big capacity—210 gallons per hour.
- 4 Entirely automatic—starts itself—stops itself.
- 5 Easy to install—only two pipe connections.
- 6 Completely equipped, including electric motor, automatic switch, pump and tank.
- 7 Quickly accessible—simply lift hood. The removal of one stud bolt exposes valves.
- 8 Quiet and exceptionally smooth running.
- 9 Self-oiling.
- 10 Supplies steady, full stream without pulsation.
- 11 Fresh water connection with every pump at no extra charge.
- 12 Can be used with large storage tank when desired.
- 13 Genuine F-M unit throughout. Fully guaranteed—the biggest home water system value ever offered.

MAIL COUPON today

FAIRBANKS-MORSE Home Water Systems

Manufacturers: FAIRBANKS, MORSE & CO., Chicago, U. S. A.
Branches and Service Stations Covering Every State in the Union

Fairbanks-Morse Products



"Every Line a Leader"

FAIRBANKS, MORSE & CO., Dept. H4
900 St. Wabash Avenue, Chicago

Send your FREE Home Water Service Book and Special Circular giving full details about the New F-M Electric Water System.

Name.....
Address.....
County..... R. F. D.....
State.....
My source of water supply is:
 Shallow Well Deep Well
 Spring Leak Cistern

CANNON BALL BEATS 'EM ALL

No Wonder—No building is better than its doors. The door is the only part of a building that works and no door is better than its hangers.

Any closed track protects hangers from weather, dust and birds but from there on Cannon Ball wins in a walk. The track is 13-gauge *hard* steel. Won't bend. Can't twist out of line at joints. Self cleaning—no flat or grooved surface at the bottom of the track to gather condensed moisture, dust and rust to block the wheels or make them run hard. Hangers under-slung. Ball wheels of hollow pressed steel stay at the bottom of the round track. Never have to be guided—never rub the sides of the track.

MAKE HEAVY DOORS RUN LIGHT



ACTUAL SIZE

CANNON BALL HANGERS

Bring doors close up to the bottom of the track.

Three adjustments: One for thickness of doors; one to set doors in or out; and one up or down.

TRACK IN ANY LENGTHS

Holes to oil hangers. All Styles of Brackets for single or parallel tracks fastened to side wall or ceiling. Storm cover if wanted.

Builders who know say it is the easiest to put up. Special hangers and fittings for garage doors. Insist on Cannon Ball for your next door installation.

Hunt-Helm-Ferris & Co., Inc.
Albany, N. Y. Harvard, Ill. San Francisco, Calif.
Manufacturers of

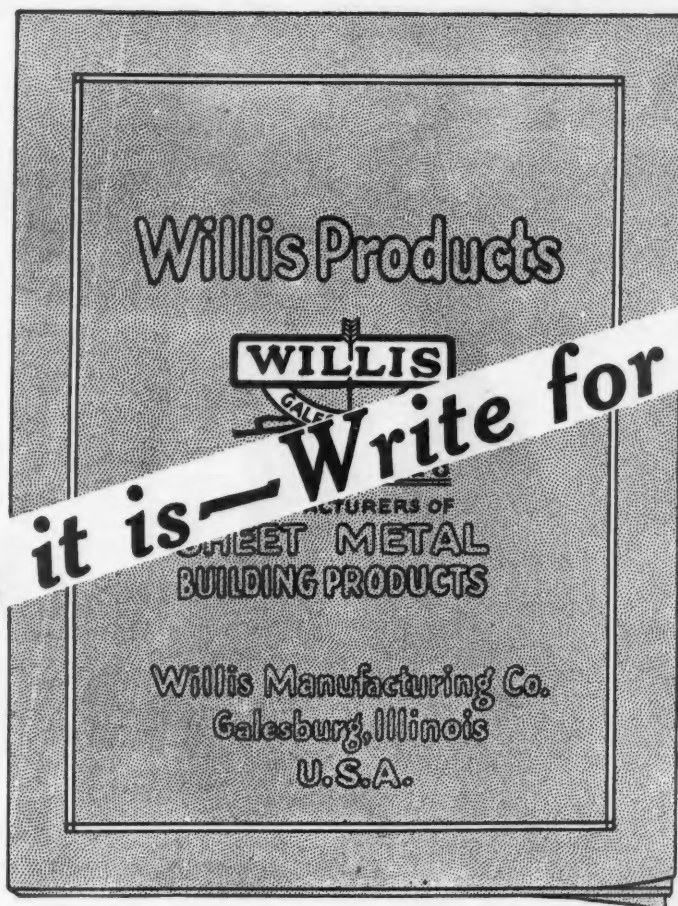
STAR 
Equipment

A ball wheel bears even, wears even, runs even in round track no matter how building sags or settles. Runs on 10 cold rolled steel bearings. 1 1/4" long—too long to pile up, twist or bind. Thousands and thousands used daily for years and not a single complaint.

Send for 228-page catalog with complete description of this and other building equipment.



Here it is—Write for it



New Willis Catalog No. 9

"My boss has been 36 years in getting this catalog ready for you. That's a long time to work on one book, so it must be good. I claim it's the best book anybody ever wrote on sheet metal building products. Crowded full, from cover to cover, with valuable reference data, illustrated with 200 pictures. It's the authoritative reference guide on architectural sheet metal goods and the best part of it is—it's free—absolutely free—but you have to write for it. Too good to mail out promiscuously. Send me a postal and I will mail you one. Then keep it handy. You will use it so often you will wear it out and want another one soon."

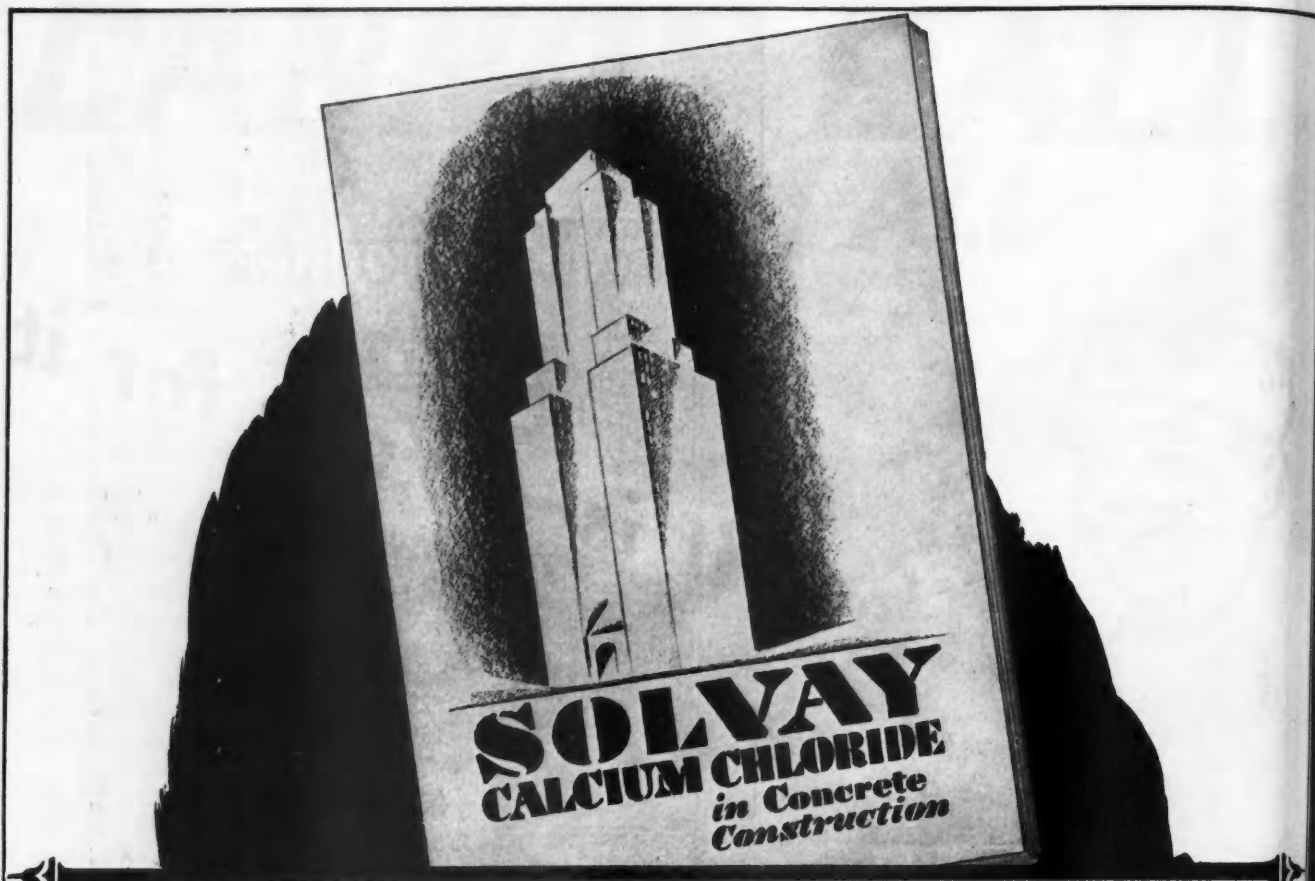
Willie Willis

Your BEST GUIDE for

SHEET METAL SKYLIGHTS, VENTILATORS, CUPOLAS, MARQUISE, GUTTERS *both* PLAIN *and* MOLDED, CONDUCTORS, FITTINGS, METAL

LATH, CORNER BEAD, ROOFINGS, SIDINGS, STEEL BASEMENT WINDOWS, COAL CHUTES, CLEAN OUT DOORS, ASH DUMPS, FIREPLACE DAMPERS AND UNDERGROUND GARBAGE RECEIVERS.

Willis Manufacturing Co., Dept. 128, Galesburg, Ill.



HAVE YOU THIS BOOK?

This new book has proved a revelation to every one interested in concrete construction. They are finding it invaluable as a reference for this type of work. Copies of this book are still available and we would suggest that you write us at once. Sent to Architects, Engineers and Contractors without charge.

Write today for Booklet, 1753

"Solvay Calcium Chloride in Concrete Construction"

SOLVAY

Calcium Chloride

Flake 77%—80%

SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

40 Rector Street



New York City



Get Your Money's Worth

NAPANEE Dutch Kitchenets are tested and approved by Good Housekeeping Institute. They are scientifically designed by people who devote their lives to kitchen procedure. They organize work as no kitchen cupboard can. Yet they cost practically the same as old fashioned cupboards. You are cheating yourself when you don't secure the extra advantages offered by such equipment. Write for catalog on cabinets, broom closets, dish cupboards, divider cupboards as shown above, etc.

MAIL THIS COUPON
 COPPES BROS. & ZOOK, Nappanee, Ind.
 Gentlemen: Please send me further information regarding styles, sizes and arrangements of Napanee Kitchen Equipment.
 I am, () Architect, () Contractor, () Owner.
 [Please check square]. **AB-4**

COPPES BROS. & ZOOK, Nappanee, Ind.
 New York Office: 415 Lexington Ave.
 Detroit Office: General Motors Building
 Chicago Office: 308 N. Michigan Ave., Keehn Bldg.
 Agents in all Principal Cities

NAPANEE
DUTCH KITCHENET
Built Like Fine Furniture

Name _____
 Address _____
 City _____
 State _____

WATERS THAT CORRODE PLUMBING PIPES

Many people do not realize that "corrosive" water may also be excellent drinking water.

The water of New York City, for instance, is excellent to drink and bathe in. But it is such extremely pure water that it is also very corrosive and will rust and ruin any iron pipe that it runs through. For there is such a thing as water being "too pure"—at least from a pipe-maker's point of view.

And as people go on insisting that city water supplies be kept pure, usually by chemicals, more and more places will be found where pure but corrosive water is ruining the plumbing pipes.

That is why plumbing pipes should be installed today that will stand up

under a possible purifying change in a city water supply tomorrow.

That is why pipe may be good enough today and yet not good enough to stand the changed conditions of tomorrow.

This was the problem that confronted the Chase research department some years ago. We knew that all steel, iron and wrought iron water pipes would rust out sooner or later. We believed that "Ordinary Brass Pipe" made with 60% copper and 40% zinc was good, but not good enough. We wanted a brass pipe that was better, and we were prepared to make it even if it cost more to manufacture, because we knew it was needed.

That was the reason Alpha Brass Pipe was made with 10% more copper—a pipe to stand up under present water conditions and those of the future, too.

ALPHA BRASS PIPE

made from a special kind of

CHASE BRASS

CHASE BRASS & COPPER CO.

Incorporated . . . Waterbury, Connecticut

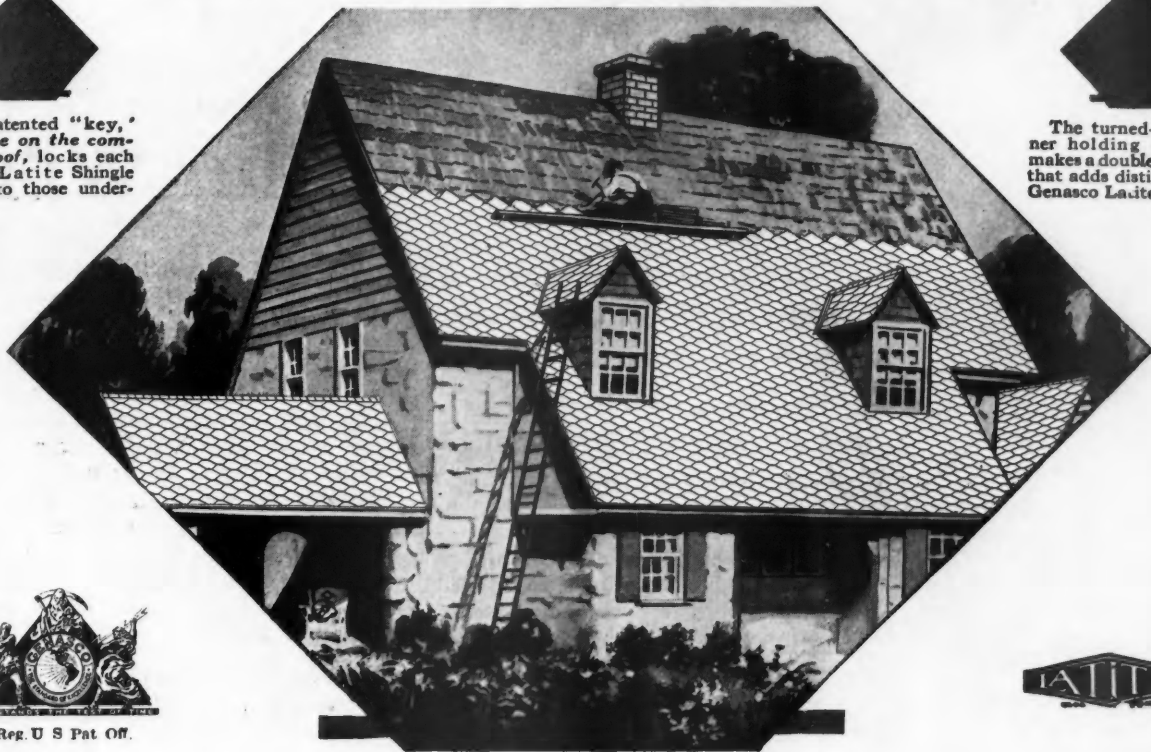
Start a roofing department!

Front view

Back view

The patented "key," invisible on the completed roof, locks each Genasco Latite Shingle tightly to those underneath.

The turned-under corner holding the "key" makes a double-thick butt that adds distinction to a Genasco Latite roof.



Reg. U S Pat. Off.



A profitable addition to your business!

Now that spring is here home-owners are ready to have re-roofing started, and new building construction is also getting under way requiring new shingle roofs—all of which means additional business and profits for every builder and contractor who wants to take advantage of the opportunity. And starting a roofing department with Genasco Latite Shingles enables you to make the most of it.

Genasco Latite Shingles make a roof that is weather-tight, waterproof, and durable. Particularly adapted for laying over old worn-out shingles—put on without the dirt and trouble of ripping off the old shingles—and because of the patented "key" lock each Genasco Latite Shingle is held tightly to those underneath.

Genasco is the only roofing which contains Trinidad Lake Asphalt. The tough, long-fibred asphalt-saturated rag felt used in Genasco Latite Shingles is coated on both sides with Trinidad Lake Asphalt Cement. The undercoating is the famous "Seal-bac" feature—exclusive with Genasco—which protects against the attacks of condensation and tends to make the shingles adhere to each other.

And Genasco Latite Shingles are as attractive as they are durable. Their surfacing in four unfading colors—red, green, blue-black, Mix-Tone—gives them lasting beauty and makes them fire-retardant besides.

Other builders and contractors are now making the double profit on Genasco Latite Shingles that comes from both selling them and laying them—and you can do the same. There's good business all around you, and the inquiries stirred up by our national magazine advertisements—full pages in color appearing in such publications as Better Homes and Gardens, American, and Collier's—are also referred to our dealers.

Why not get the complete information about this roofing and re-roofing business? Send us the coupon today and we will tell you how to lay Genasco Latite Shingles, and get you started toward the extra profits. Fill in the coupon now.

The Barber Asphalt Company

New York
Pittsburgh

Philadelphia

St. Louis
Kansas City

Chicago
San Francisco

THE BARBER ASPHALT COMPANY
Philadelphia

AB-4

Please have your representative call and tell us how we can start a roofing department.

Name.....

Address.....

Genasco

Reg. U. S. Pat. Off.

Latite Shingles

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



A twist of the wrist

... Cylinder Lock and Bolts operate on a single turn of the key with this perfected Garage Door Lock. Quick to open . . . quick to close . . . and installed in a matter of minutes.

The entire mechanism of the Quicklock is operated merely by turning a key in the lock. This instantly releases the upper and lower gripper jaws and the doors open.

Locks automatically and securely—When the key is removed the Quicklock is in locking position — thus when the doors are closed again the garage is automatically locked. The Quicklock is placed on the active door which closes against two steel plates fastened to the inactive door and which acts as an astragal. Quicklock is operated by a five-pin-tumbler cylinder with a paracentric key. The lock can be furnished without the cylinder and is arranged so that any standard cylinder can be used.

With Quicklock the doors can be unlocked from the inside without the use of a key — merely lift the inside handle. The top and bottom gripper pawls are protected

so that the lock cannot be released by any instrument from the outside.

Easy to install—Complete installation of the Quicklock can be made in less time than is needed to install the various pieces of hardware ordinarily required for garage doors — such as top and bottom bolts, handles and locks. The rods are readily adjustable for various heights of doors and the top and bottom strikes for the gripper jaws can be adjusted to take care of all conditions. Due to the plates furnished it is not necessary to rabbet doors or apply an astragal.

No springs. Nothing to get out of order—The construction is strong and rugged. There is no weak spot.

No service door necessary—The opening and closing of the main door is as easy as the operation of a service door. For this reason the expense of a service door can be saved.

Send for literature on the Quicklock. It is the solution to the complete locking of a garage—all in one compact unit. Write

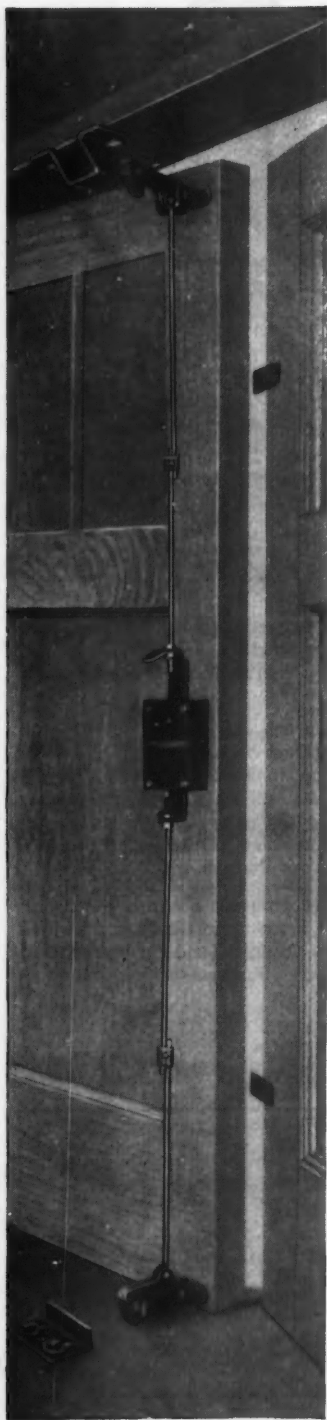
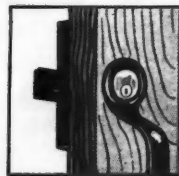
McKINNEY MFG. COMPANY
Pittsburgh, Pa. Offices in Principal Cities

Makers of McKinney Hinges and Forged Iron Hardware

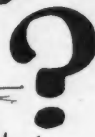
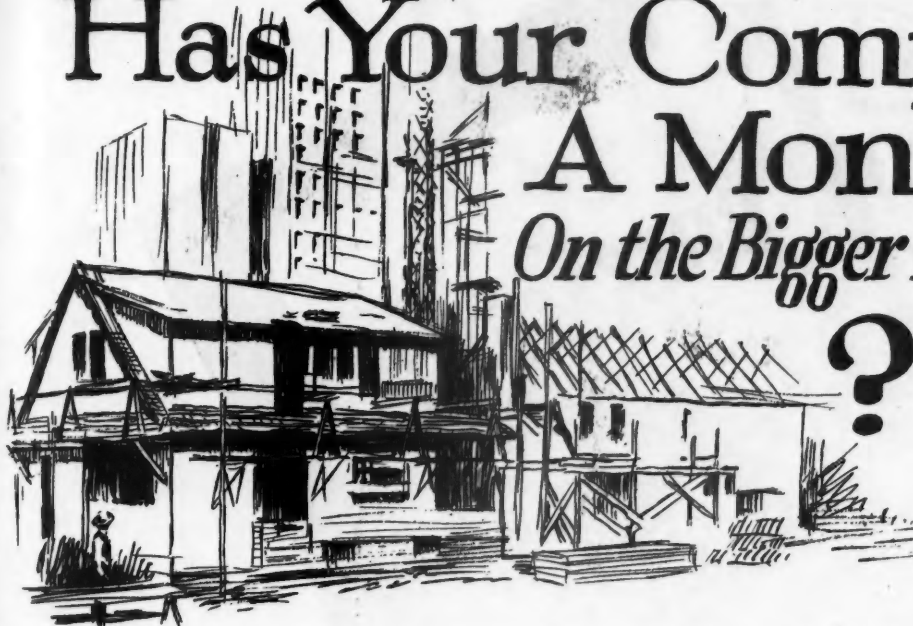
McKINNEY QUICKLOCK

... and the QUICKLATCH

Primarily for service doors. It combines the convenience of a key-operated cylinder lock with the security and flexibility of a large latch bar. The latch bar will still engage the strike even if the door warps or sags. A sturdy door pull makes other hardware unnecessary.



Has Your Competitor A Monopoly On the Bigger Profit Work



PERHAPS he is better informed on the latest improvements in equipment and materials for the building field. He reads **AMERICAN BUILDER** advertisements carefully. Every new development in his line comes under his critical inspection. The same source of information is open to you.

Read American Builder Advertisements

By merely turning the pages of **AMERICAN BUILDER** the same liberal education is yours. Listed here you'll find the reliable products, the new ideas, materials, etc., which lessen labor and increase your profits.

Will Your Profits Increase This Year?

Expanded business requires new and improved production methods. One or more new machines or an improved method of estimating may solve your problem. If you are interested in any kind of building materials, contractors' equipment and machinery, power shop equipment, heating systems, plumbing supplies, water supply systems, lighting systems, elevators, school, church or theatre equipment, farm building equipment, building hardware, home conveniences or anything that is used in constructing or equipping any kind of building—we will help you get all information.

Obtain Valuable Reference Data

Every advertiser represented in the **AMERICAN BUILDER** will gladly send you catalogs and circulars covering his entire line. If there is some product which you are unable to find or if there are other questions concerning the Building Field, write to us and we will co-operate in supplying information.

Free Service to American Builder Readers

If there is some article which you want and lack the proper information regarding it, fill in the coupon below and we will gladly get it for you and co-operate in every way possible. Print or write your name plainly in the coupon below, list the articles and check your occupation.



AMERICAN BUILDER, 1827 Prairie Ave., Chicago, Ill.

Gentlemen: Please put me in touch with manufacturers whom you know to be reliable and can furnish goods promptly. I am in the market for the following items:

.....

Name.....

Address.....

Please check your occupation:

Building Contractor Dealer in Building Materials Prospective Home Builder Architect

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



BRIXMENT for Stucco

CONTRACTORS know by experience that the only stuccos that have successfully withstood the test of time are true-cement stuccos—that is, stuccos made with either portland cement or BRIXMENT.

It has been definitely proved, however, that the same characteristics that make BRIXMENT preferable to portland cement and lime for masonry make it equally preferable to these two materials when used for stucco.

Unusual Advantages Described in This New Handbook

All the unusual advantages of BRIXMENT for stucco have been clearly presented in this new, compact, conveniently-arranged book—strength, permanence, economy, water-resistance, uniformity, color, estimating data, specifications etc. "BRIXMENT for Stucco" will make a valuable and helpful addition to your data file.

BRIXMENT *for Perfect Mortar*

for Stucco

Send for Your Copy Today

Size, 8½ by 11 inches with A. I. A. file number for ready reference. Your copy will be promptly mailed you on request. The coupon below is for your convenience.

LOUISVILLE CEMENT CO., Incorporated
General Offices: Louisville, Ky.
Mills: Brixment, N. Y. and Speed, Ind.

District Sales Offices
1610 Builders Exchange Bldg., Chicago
301 Rose Bldg., Cleveland 602 Murphy Bldg., Detroit
1015 Chestnut St., Philadelphia

LOUISVILLE CEMENT CO., Incorporated
Louisville, Kentucky

Send, without obligating me, copy of the new handbook, "BRIXMENT for Stucco".

Name

Address

City..... State.....

(Please check whether Architect or Contractor)

AROUND *the* FAMILY TABLE



BUILDING MAGIC

OUT of the Treasure Chest of Expert Knowledge and Skill the Good Fairy of the Building Industry produces the wealth of Modern Homes, Schools, Office Buildings and other Modern Structures which dot our broad land.

This Annual Reference Number of the American Builder, if rightly used, is and will continue to be such a Treasure Chest for our readers—just as Mr. Quigley, our famous Front Cover artist, has pictured and suggested so strikingly in four colors and gold on the Special Front Cover of this magazine.

This Annual Issue with its useful and unique GREEN PAPER DIRECTORY of all building materials, specialties, equipment, tools and supplies is indeed a Treasure Chest of valuable information.

Building has become very complex. The old information is out of date. The old methods will no longer serve. The old styles and ideas are dead—they will not sell today.

The successful man today in the building industry—whether journeyman, foreman, contractor or architect; whether dealer, realtor or manufacturer—is the man who keeps his eyes open and his ear to the ground, receptive to the New Things. He is the man who keeps posted, who has the latest information; in fact, the man **who knows his stuff**.

American Builder readers are of the up and coming sort. They are full of enterprise. They have a keenness to know and to find out. They keep abreast of the times by studying the advertising announcements and by writing for catalogs and samples. They know that profits and success come from keeping up with the times.

Great strides have been made by the manufacturers, serving the building industry. We are all indebted to the manufacturers for the perfected materials and equipment that they have produced and put into our hands through convenient local stocks. No industry is served any more efficiently as far as the manufacture and distribution of its commodities is concerned. Large production for a ready market has brought down costs, while rigid standards and official tests guarantee the quality.

A good workman must have good tools—frequently replenished.

A good contractor must have plenty of labor-saving equipment—and the list is growing.

A good architect knows materials and fittings, and plans his buildings in harmony with what is commercially available.

A good dealer not only stocks and handles the standard lines but also is receptive to new things, and is willing to help build up a local market for them.

All of the above considerations point to one thing—the value to **every one** of our readers of studying every page, both editorial and advertising, in this great Reference Number.

You will find this book a true Treasure Chest for you if you will use it now and all through the year.

EDITOR AMERICAN BUILDER.

"SELLERS" means *the Best* to millions of women



Sellers Sectional Installations Offer Builders Many Advantages

WOMEN today are asking for colorful beauty throughout their homes and *particularly in their kitchens*. In Sellers Sectional Kitchen Equipment they find a *choice of four lovely colors*. With these are still the distinction of line, fine workmanship, and specialized time- and labor-saving conveniences that first established Sellers as the preference of women.

That is why Sellers Kitchen Cabinets are known and used by millions of women—why the name "Sellers" helps to sell the homes you build. Forty different units are available in the Sellers "Sectional" line. From these the most simple or the most elaborate kitchen may be "built in," simply and without extra millwork.

Installing Sellers equipment takes very little time—just enough to set a few bolts in the holes provided. Only a quarter round is necessary for the finishing. Completes a sound, durable construction that insures permanent, troubleless service to home owners.

And the cost is not high, *often less*, than the "average" built in equipment.

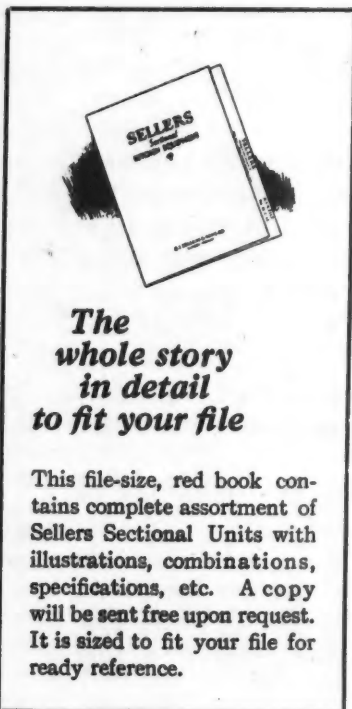
Send for our special book described to the left.

G. I. SELLERS & SONS CO., Dept. 804, Elwood, Ind.

SELLERS

Sectional

Kitchen Equipment



The whole story in detail to fit your file

This file-size, red book contains complete assortment of Sellers Sectional Units with illustrations, combinations, specifications, etc. A copy will be sent free upon request. It is sized to fit your file for ready reference.

AMERICAN BUILDER



Formerly AMERICAN CARPENTER AND BUILDER

1827 Prairie Ave., Chicago—250 Park Ave., New York City

Grounds Increase Rental Value of Apartments

THAT the increase in the rental value of the building will more than offset any additional cost incurred in leaving more land for garden and recreation space around the apartment house is the opinion of John Taylor Boyd, Jr., who is consulting architect to the New York State Board of Housing and also to the New York Commission for the Revision of the Tenement House Law. Comparative figures of land costs per room and per family prove that the apartment house on low-value land is so economical of land that it can support, with but very slight extra financial charge as compared with the existing custom of high acreage, a larger proportion of unbuilt-on area of site than can either the single family or row house, Mr. Boyd holds.



Merchandising Short Lengths

"MERCHANDISING of short lengths of lumber as 'shorts' is more than a theory. It is a practical sales practice, developed from day to day, successful experience," says Big Trees, the official publication of the West Coast Lumber Trade Extension Bureau. Many retail dealers are now paying particular attention to these less preferred items and are working up a profitable business in them.

"One firm in the Middle West has made a specialty of short lengths. A record of its purchases shows that it has ordered and sold as many if not more feet of lumber in short lengths, in some items, as in long lengths. Recent purchasers run about as follows:

"Douglas fir ceiling, 4 to 8 feet, 30,000 feet; longer lengths, 15,000 feet.

"West Coast hemlock siding, 4 to 9 feet, 30,000 feet; longer lengths, 30,000.

"Douglas fir drop siding, assorted short lengths, 60,000; longer lengths, 60,000.

"Western red cedar siding, 3 to 7 feet, 50,000; longer lengths, 65,000.

"Douglas fir flooring, 1 by 3, 4 to 9 feet, 40,000; longer lengths, 15,000.

"Seventy-five per cent of the mouldings the firm sells are short lengths.

"From its experience with short lengths, this firm is convinced that too much importance has been attached to the so-called increased carpenter cost of using short length material.

"This firm did not find the builders in its community ready to use the short lengths in quantity as soon as they were offered in large lots. It was necessary for them to do considerable educational work. They had to prove to carpenters that there were distinct advantages in handling short lengths, not only as a matter of economy in cost, but also because the short lengths are lighter and easier to handle. They succeeded, though, and notably. Con-

tractors and carpenters in the community they serve are glad now to make use of short lengths. The large per cent of short lengths the firm handles is indicative of the builders' attitude."



City Planning Pays

MODERN city planning pays, it makes better living conditions, better business and a more attractive and agreeable city in which to live and do business, according to a committee of nine nationally known business and professional men who have made a study of the subject in cooperation with the United States Department of Commerce. Their conclusions are based on personal observation and analysis of the experiences of hundreds of American communities with the object of finding out how city planning actually works out in practice.

A city or town, the committee points out, in a recently published special report, is a place in which to live, to work and to play and should be planned systematically with these ends in mind, just as the location of buildings on a factory site is carefully determined. One of the objects of the report is to show how wise city planning can make home surroundings more attractive and improved dwellings available to more families. Adequate parks and playgrounds are two of the main objectives of planning.

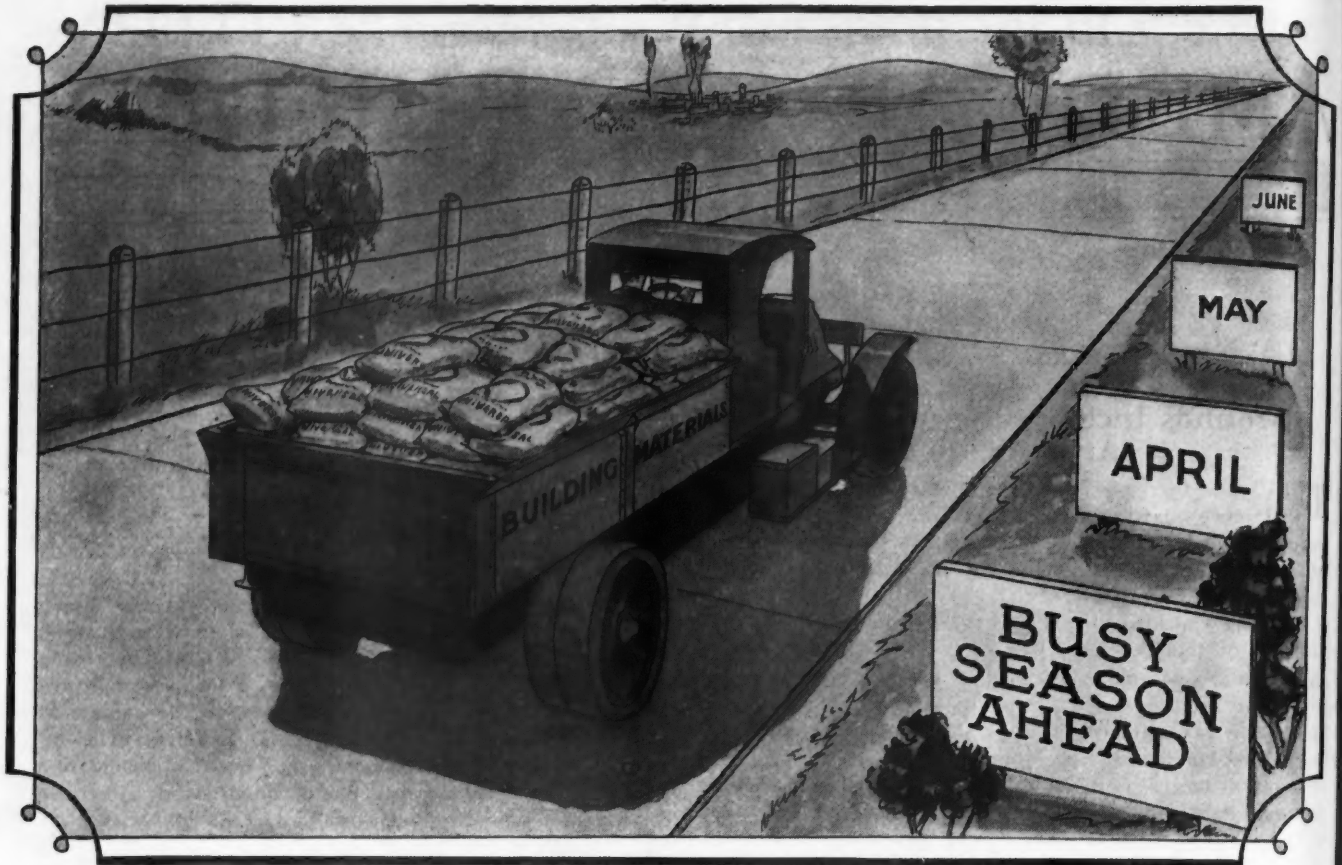
"In any community," says the report, "the local government, which means the organized citizenship, controls so much land in streets and public places, usually from 25 to 40 per cent of the total area, that it holds the key to the situation. Many communities double their population every 20 or 30 years and the local authorities, through their control or lack of control of new developments, can largely determine for good or bad the conditions that affect not only the present but coming generations."



To Make Wood Utilization Survey

APPOINTMENT of 10 representatives of the principal forest products industries, to comprise a special committee, to undertake a survey, in North Carolina, of available, non-utilized wood which is suitable for manufacture of by-products, has been announced by the National Committee on Wood Utilization. The survey will be undertaken in cooperation with the Department of Conservation and Development of North Carolina and will be started immediately.

The survey will be the second of a series designed to ascertain the quantity and quality of usable wood, now often wasted but which may be diverted to by-product manufacture instead of to the waste pile or waste burner as at present. A similar survey, undertaken in Virginia and now almost completed, has produced very satisfactory results and the resultant data are expected to promote the establishment of by-products plants at strategic points, thus utilizing the greater portion of the felled tree.

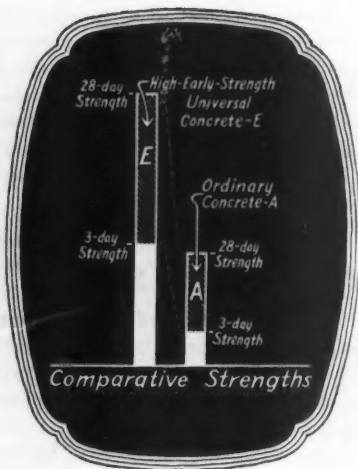


... 1 Minute Spent in Reading this Now
May Save 25 Days in the Height of Your Busy Season

It will take you sixty seconds to read this and fill in the accompanying coupon. You will receive in return information on a method of saving days and even *weeks* on your next rush concrete job.

High-Early-Strength Universal Concrete is being used on hundreds of jobs of all sizes and types. It is not only as strong at 3 days as ordinary concrete at 28 days but it is *permanently* stronger than ordinary concrete, as shown by the diagram. *Strong* concrete in 3 days, *better* concrete forever after!

High-Early-Strength Universal Concrete is made by approved methods with the *usual* materials, *usual* equipment, *usual* labor and *usual* Universal cement. By having full details at hand you will be prepared for emergencies as they arise. These details will be sent promptly on receipt of the coupon.



Universal Portland Cement Co.

Chicago Pittsburgh Minneapolis Duluth Cleveland Columbus New York

Concrete for Permanence

Universal Portland Cement Co., 208 South La Salle Street, Chicago

Without obligation, send me detailed information on methods of securing strong concrete in 3 days with the *usual* materials, *usual* equipment, *usual* labor and *usual* Universal cement.

Name

Address

A.B. 4-28

EVERYBODY'S BUSINESS



Unexpected Discoveries Remold Industries

By FLOYD W. PARSONS

LIFE has become so complex that one must be very wise in order to draw a correct balance between the many opposing forces. It was the aim of our forefathers to make machines that would do the required work in satisfactory fashion. They did not consider it necessary to make their devices pleasing to the eye. As a result art was something for museums. Serviceability was the only goal.

The first Ford car was built on these specifications. Art was kept alive largely by charity, and the genius having the ability to create beauty was expected to exist half fed in an attic with none of the security of livelihood enjoyed by members of the more practical professions.

This has all changed. Machine methods quickly created an excess of productive capacity. Consumption was outrun. Super-salesmanship became necessary, and the more alert leaders of industry immediately grasped the opportunity to draft the artist and capitalize beauty.

As a result the world is being painted with color and everyone has joined in the assault on drab and ugly things. Goods and packages have been re-designed. Chain restaurants that resembled hospitals have added gay tints to their furnishings. A railroad has gone so far as to have its locomotives decorated in green and gold. Plumbing fixtures are produced in every hue, and manufacturers generally have joined the procession headed toward style and beauty.

The old-fashioned store has given way to the smart shop where tables take the place of counters, walls are tinted and the furnishings throughout suggest the atmosphere of an artistic home. Mere utility is not enough. We insist

on living and working in a more pleasant environment. In the meantime the artist who loathed the idea of commercialism is not only eating more regularly, but finding that he is exercising his talent in a worthy cause.

But there is a limit to the number of colors we can employ.

We are proceeding at a pace that will soon exhaust the larger possibilities of the element of style and the appeal of beauty. In hundreds of directions we are coming close to the peak of consumption. Folks can eat, wear and use only so much. High-intensity advertising and salesmanship are not sufficient. The problem is rapidly resolving itself into a matter of cost.

The same science that made our new life possible now becomes more vital than ever in the struggle to maintain commercial supremacy. Still greater changes are coming, especially in the field of new materials. Perhaps the best way to get a good line on approaching developments is to give a hasty glance at what is going on around us.

A few years ago it would have appeared to be a far cry from house insulation to the manufacture of sugar. But not so



Ewing Galloway

Ditching Machines Reclaim the Everglades.



House Insulation Starts Sugar Growing in Florida.

today. It seems only yesterday when a little company was formed for the purpose of making our buildings more nearly heat-proof and sound-proof. After an expenditure of considerable time, money and effort, this concern employing one hundred and fifty men, started in producing thirty thousand feet of insulation a day. Now the same corporation employs six thousand people and its output totals nearly 1,500,000 feet daily.

But the source of supply for this insulation was outside our own country, so it was only natural that the management of the company should try to get its raw material nearer home.

An investigation disclosed that Florida is particularly well suited to grow sugar cane, and this discovery disclosed a great opportunity which the insulation folks hastened to grasp. Already they have nine thousand acres of cane in the Florida Everglades ready for grinding. It cost them one million dollars to drain a fifty-thousand acre tract of rich soil, but they are harvesting fifty tons to the acre, which is three times the average yield of cane in Cuba. Therefore, as a result of the development of an insulation industry, we have unexpectedly opened the way for the building of a big sugar business of our own.

The outcome will be cheaper insulation. This and other insulating materials are making it no longer common to build homes that represent hardly more than over-sized radiators engaged in melting tons of snow on their roofs, and in dissipating high-priced energy to the outside atmosphere. Insulation makes it possible for the householder to heat with gas at a cost very little greater than is entailed in warming a leaky house with coal. It is developments of this kind that plainly indicate the difficulty of visualizing the ultimate end of any industrial innovation.

Less than four years ago a chemist finally succeeded in producing a glass that would transmit a considerable part of the vital rays of the sun. Soon put into commercial production, this glass has proved of such biological value that it has created a stir throughout the world. Seeds under the new glass germinate 24 hours in advance of those under ordinary glass. Lettuce has a deeper green

and shows sturdier growth. Getting the ultra-violet rays to cattle and poultry that are kept under shelter in the winter months is producing material benefits in many places. Patients in hospitals and children in homes and schools also continue to show positive evidence of benefit from exposure under the new health glass.

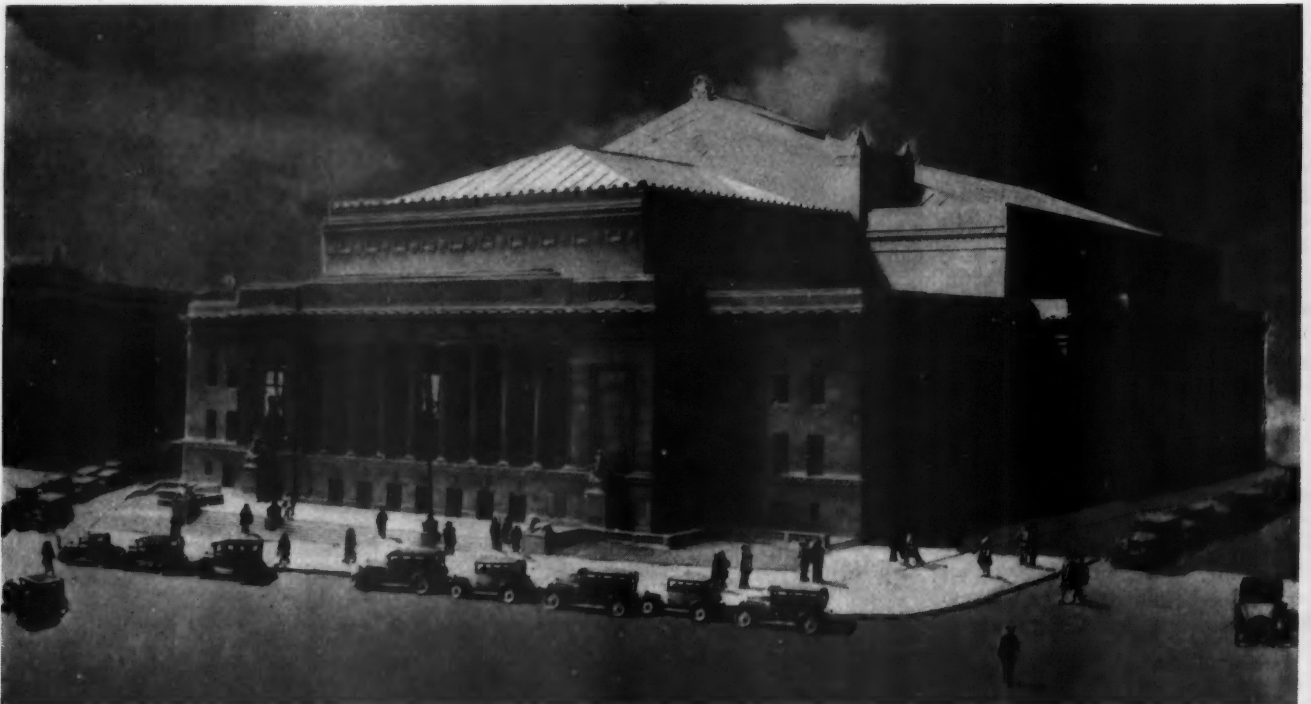
The public has come to understand what it means to live in sun-starved bodies as a result of spending ninety per cent of its daylight hours behind glass that shuts out the life rays of the sun. The outcome will be a revolution in glass making and a clearing up of moot questions respecting the utilization of unskimmed sunlight. The sun sends us three octaves of ultra-violet rays, and it now appears that we need only the first half of the first octave. These are the essential waves we must get into our homes and working places, and they are the very ones that ordinary glass shuts out.

Careful tests of the U. S. Bureau of Standards show that some of the so-called health glasses are practically worthless. But that the idea is sound and practicable is evidenced by the fact that at least one type of glass produced under careful supervision continues to transmit from thirty to forty per cent of the ultra-violet rays of the sun after the photochemical action, called solarization, has finished.

Who would have believed a short time ago that a radical departure in glass manufacture would do more than all else to bring about a nation-wide movement to eliminate the evils of smoke? Health glass is of no value if the ultra-violet rays cannot get through the outside atmosphere to reach the window. It is the short vital rays that are cut off first by solid matter in the air.

That we are not slowing up in the great fields of invention and discovery is shown by current developments on every side. The Krupps in Germany are demonstrating a steel that will wear off the edges of hard files. This alloy is six times as hard as any steel of American manufacture. Another metal, "neonaleum," probably represents the most important discovery since duralumin. A piano made of

(Continued to page 166)



A Model of the \$5,000,000 St. Louis Municipal Auditorium Which Will Be One of a Group of Buildings in the Municipal Plaza and on Which Work Will Start Soon. It will occupy an entire city block in one direction and nearly two blocks in the other direction and will contain a large arena seating 13,500 persons, while a smaller theater will seat 3,500. These will be on opposite sides of a large stage. There will also be smaller auditoriums, each seating 600 to 1,200 persons, committee rooms, storage rooms and an exhibition room. No columns will be used in supporting the roof of the arena or theater.

Many Old Homes in Decatur, Ill. Modernized During General Remodeling Campaign

OUT of an idea of Jay M. Allen, president of the Peoples Savings & Loan Company of Decatur, Illinois, a new light has been thrown on the whole problem of the old home. Mr. Allen asked W. F. Hardy, editor of the Decatur Herald to drive through the old section of the city with him, early in the spring of 1927. He pointed out the homes that had been, a few years ago, the show places of the city and that had depreciated in value to a point where they were no longer suitable quarters for the original owners. The owners, if they had large incomes, had moved to the new sections of the city and had rented their old homes for rooming houses. They could not sell the old properties to advantage so they were holding on till such time as the development of the city would make the locations suitable for business buildings or downtown apartments.

"There is a piece of money that is tied up for years," Mr. Allen remarked pointing to one of the old houses. "If that owner has other income he can hold on and still build a new home in the suburbs—if not, and few people are able to own two homes, he will be forced to raise his children in that house in a neighborhood of the same kind of old houses."

Most of the older homes were found to be clear of indebtedness. "We are willing to make loans on these houses that will enable the owners to make modern and beautiful homes out of old run-down houses," Mr. Allen continued. "There are literally hundreds of thousands of dollars of depreciated value that can be built back into the old homes of Decatur."

With this sound economic background established, remodeling became a topic of interest among the material dealers of Decatur. All were quick to see that old homes that were made profitably rentable, or profitably salable, would release capital for the new homes in the new sections of the city. Loan companies taking an interest in the financing of jobs of this sort meant that two investments could be started at once for the benefit of the material dealers—the old house job and the new house job that could be reasonably expected to follow rehabilitation of the old investment.

The Decatur Herald prepared a series of display advertisements showing the possibilities of the new idea of modernizing old houses. Lumber dealers, furniture dealers, department stores, building supply dealers, contractors, plumbers, painters, wall paper dealers, oil burner dealers, and others paid their proportionate share of the space cost.

A few weeks later the Decatur Review followed the lead with a similar plan that

was met with the same interest by the building people of the city and the two campaigns started into the big task of selling the new idea to the city.

After the advertising had run a few months photographs of before and after views of modernized homes were used in the advertisements in the Herald. Families began to visit the jobs in progress—to talk about doing something about their own homes. Calls came into offices of the lumber companies that offered free planning service on remodeling. The idea began taking hold.

In the old days, remodeling was accomplished by calling in a carpenter, giving him instructions about the addition of a new room, a sleeping porch, moving partitions or whatever was wanted. The carpenter worked along, one thing led to another until finally, after dozens of unconsidered things



Photo by Lane Lumber Company. This is the old house that is being shown. The idea of which this is a lumber in Decatur. Home of this type show many opportunities for modernizing.



Photo by Lane Lumber Company. This is the same house after remodeling. The outside walls were a new roof, dormer windows and a new porch. The upstairs was made lighter and well ventilated.



Photo by Lane Lumber Company. With the front porch removed, the exterior was covered with a new roof, dormer windows and a new porch. The upstairs was made lighter and well ventilated.



Photo by Lane Lumber Company. Another view showing the light and airy interior with a new roof, dormer windows and a new porch. The upstairs was made lighter and well ventilated.

These members of the Home Modernizing Bureau will gladly discuss plans and estimate costs for you.

MEMBER OF THE

HOME MODERNIZING BUREAU

ALL OF OUR DECORATIONS

Copyright 1927 Decatur Herald Co.

Six Ways To Modernize This STORY and a HALF HOUSE

Hundreds of old homes like one pictured at left in Decatur offer endless opportunity to enhance beauty, convenience, comfort.



Photo by Lane Lumber Company. The picture illustrates several best changes. A dormer window, dropping of the chimney on the first floor and a very attractive home.



Photo by Lane Lumber Company. Showing again the use of shingles for covering the walls. A modern and attractive plan shows a new exterior, exterior, a new porch, a dormer and a new addition of a fire for a fireplace in the living room.



Photo by Lane Lumber Company. Another suggested plan shows a new exterior, exterior, a new porch, a dormer and a new addition of a fire for a fireplace in the living room.

Many people living in story and a half houses dream of the day when they can build a new home. Little realizing that story and a half houses present almost endless opportunities for modernizing. There is hardly anything that can be built into a new house that cannot be incorporated into a modernizing job. Take a good look at the old house pictured at the upper left, pretty plain looking in its old style. Now look at the other six pictures, all of which suggest a different way that the old house can be made to look through the art of modernizing. Two of these houses have actually been modernized as indicated by the photos.

Starting on the outside, various plans present themselves. The outside walls can be covered with shingles in any color of the many colorful tones so popular nowadays. They are laid over the old walls thus adding insulation to the beauty achieved. A new roof of cypress or asbestos shingles in a color to harmonize with the walls can be laid right on top of the old roof. Front porches can be removed entirely and a new entrance can be added. If the porch is large it can be made into a sunporch, or by removing a section of the front wall the living room can be greatly enlarged. The modern home must have more light and ventilation. Old style windows can be made modern, more can be added where necessary. Shutters at the windows add much to the appearance of any home. Fireplaces are almost a necessity in this variable climate and floor for them can be included in the exterior modernizing plan.

The interior presents so many so many possibilities to the exterior. Old flooring can be laid right over the old flooring. The old woodwork can be refinished to look as good as new. Before the walls are refinished and the floors laid, it might be well to have several floor plans added so that floor lamps and other electrical appliances can be arranged to balance with other furniture. By paper or stenciling, the walls can be made new, in keeping with the new floors and refinished woodwork.

The upstairs of the story and half house presents unlimited opportunities for modernizing. In many houses it is waste space, not desirable because of inefficient light and ventilation. It can be easily developed into highly desirable sleeping rooms or play rooms for children. Dormers can be added to give more light and ventilation, and also to make more room. If unfinished the walls and ceiling can be covered with wall board or finished in any other comparatively inexpensive. The saving in price paid by installing the attic will often pay for the job within a few seasons.

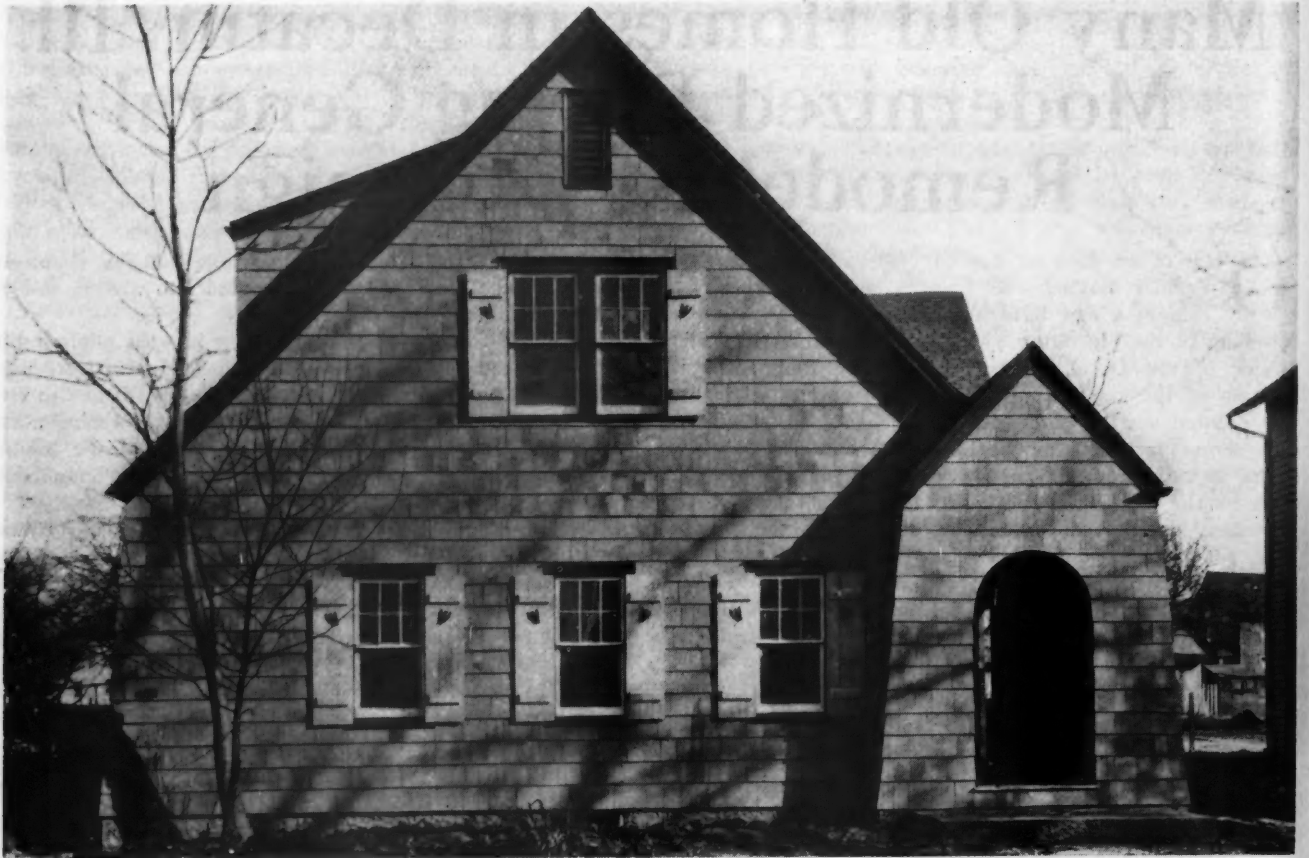
The bathroom can, perhaps need modernizing. Reformed walls and new floor covering receive first consideration. The obsolete plumbing fixtures are removed and in their place, a built-in or roll top porcelain tub, other modern fixtures and a built-in cabinet are installed. Cabs in the bathroom is one of the new demands of the day and new even plumbing fixtures may be laid in place.

Many of the kitchens in story and a half houses are of good proportions but not enough to permit the addition of a cozy breakfast nook without crowding. Built-in cabinets, jutting boards and broom closets are essential in the modern kitchen and can be designed to fit the available space.

There are just a few of the possibilities of modernizing story and a half houses. And if you are the owner of such a house, don't dream, in despair, of building a new home; consult the members of "The Modernizing Bureau." They will show you just how your story and a half house can be made into a home of beauty, convenience and comfort. And for about one-third the money that a new house would cost.

- | | | |
|---|---|---|
| <p>LUMBER COMPANIES
Woodwork Lumber</p> <p>LYON LUMBER CO.
114 E. Third St.
DECATUR LUMBER CO.
202 N. Third St.
BUILDERS LUMBER CO.
712 N. Main St.</p> <p>ROOFS AND SHEET METAL</p> <p>B. M. DENNIS & SON
114 E. Third St.
KING-CLAR ASBESTOS & ROOFING CO.
102 E. Third St.
INDUSTRIAL ROOFING CONTRACTORS
222 E. 2nd St.</p> <p>ELECTRICAL FIXTURES</p> <p>R. W. FROTTER ELEC. CO.
KUGELBAUM ELECTRIC CO.
114 E. Third St.
BRICK, BUILDING SUPPLIES
TRAVER FARRISCH CO.
117 W. Main St.</p> | <p>LOAN COMPANIES
Financial Institutions</p> <p>PEOPLES SAVING AND LOAN
114 E. Third St.
MUTUAL HOME AND SAVINGS
114 E. Third St.
CHARACTER LOAN CO.
114 E. Third St.</p> <p>OIL BURNERS, REFRIGERATORS</p> <p>WALTER D. GLENN
114 E. Third St.
C. H. WATKINS
114 E. Third St.</p> <p>BUILDER'S HARDWARE</p> <p>MOREHOUSE & WELLS CO.
114 E. Third St.
FRED W. SCHLIE
114 E. Third St.</p> <p>FURNITURE, DRAPERIES
Home and Commercial Furniture</p> <p>PEOPLES FURNITURE CO.
BACHMAN'S FURNITURE CO.
LINN & SCRUGGS FURNITURE DEPT.
114 E. Third St.</p> | <p>PLUMBING FIXTURES</p> <p>THE FIELD & SHORS CO.
114 E. Third St.
SMITH & MC DANIEL
114 E. Third St.
FRED W. SCHLIE
114 E. Third St.</p> <p>CONTRACTORS</p> <p>J. J. SWARTZ
114 E. Third St.
J. T. KRACKER
114 E. Third St.</p> <p>PAINTERS AND WALL PAPER</p> <p>MYER & SON
114 E. Third St.</p> <p>METAL WEATHER STRIPS</p> <p>ELMER O. GOOD
114 E. Third St.</p> <p>FURNACES AND SHEET METAL</p> <p>W. F. SEYER & SON
114 E. Third St.</p> |
|---|---|---|

Co-operative Advertising by Contractors and Dealers in Lumber and Building Materials, Roofing, Electrical Fixtures, Oil Burners and Refrigerators, Plumbing Fixtures, Paint, Hardware, Furniture and Draperies, Furnaces, and Other Interested Lines, in the Local Papers, Was Effective in Putting Over at Decatur, Ill., Remodeling Campaign.



A Very Attractive and Valuable Home, Produced from the Old House Shown Below, as a Result of the Remarkable Remodeling Campaign Which Is Being Conducted in Decatur, Ill., to the Profit of Every Branch of the Building Industry and Allied Businesses as Well as the Owners of the Homes.



One of the Old Homes Toward Which the Modernizing Campaign at Decatur, Ill., Was Directed with the Happy Result Shown in the "After Taking" View Above.

had been done, the owner was presented with a bill that made his head swim. The result in most cases was an old home still.

These experiences have been much talked about, of course, and are one of the big obstacles to be overcome in the selling of the new kind of remodeling jobs.

Now the owners are urged to consider several plans for the complete beautifying of the old house. They are urged to get complete costs and to discuss the value of the improvements from the standpoint of the finance organizations, all this before a cent is actually spent.

In making this satisfactory method of handling jobs possible the Lyon Lumber Company has made a splendid contribution to the modernizing campaign in Decatur by offering all who ask for the service a detailed perspective drawing showing the proposed beautification from the same

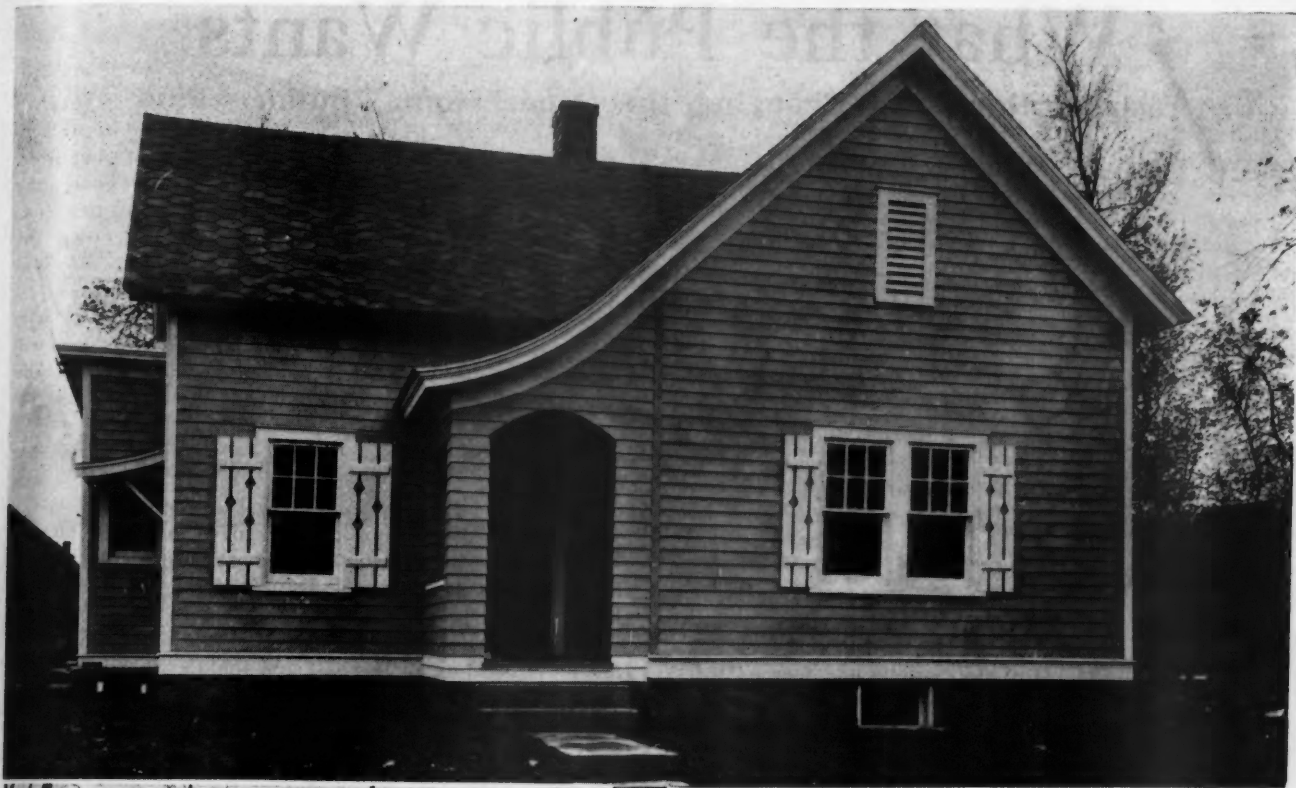
elevation from which they have made a photograph of the old house. This in addition to floor plans and elevation drawings which are made by the plan men. This wealth of service enables the owner to see just what he will get for his contemplated investment. Every one of the families who have remodeled on this basis has become an enthusiastic supporter of the remodeling idea. It is significant that houses that have been beautified from complete and well considered plans have brought other jobs in the immediate neighborhood. The greatest single virtue of the "new" remodeling idea is that it is work definitely planned and carried out to a predetermined cost.

The Lyon Lumber Company has kept an accurate record of the source of its business. A study of the past two years will enable other lumber dealers to place the remodeling in its right place in the picture of the year's business.

Figures for the actual jobs sold as a result of the remodeling propaganda in Decatur understate the interest and potential business that has been developed. At the present time each of the lumber company plan departments in Decatur has dozens of jobs in prospect that have not yet become sales. The plan men are making ready as many remodel plans as new home plans now, so the proportion of business on remodeling for 1928 will undoubtedly be far ahead of 1927. A study of remodeling by months shows a steady build up from the early months of the campaign through the fall and winter season.

The Lyon Lumber Company reports a 74 per cent increase in sales for remodeling in 1927 over 1926. Remodeling represented 8 per cent of the total sales of 1927 against 4.6 per cent of the total sales in 1926. Remodeling has become an increasingly important part of the total business of this company. The year 1928 will see an even greater increase if the activity of the plan department can be regarded as a fair yard stick.

EDWARD LINDSAY.



Two Examples of the Sort of Modernizing That Has Been Going on in Detcatur, Ill. The old house at the left center was rehabilitated with the splendid result shown at the top of the page, while that at the right center was made into the attractive cottage shown at the bottom of the page.

What the Public Wants

Tastes in Homes Are Changing, the "Model Home" Builders Find

FEWER shell pink bungalows of Spanish design are being built on our snow swept prairies, along the eastern seaboard and in the New England states. There is an increased demand for homes of combination stucco and brick construction, and of all brick construction, either solid masonry walls or brick veneer on frame, everywhere. The seven room house is becoming more popular among builders because husbands and wives, on the best of terms, now want separate bedrooms. The demand for the house with two bathrooms, even though it may have only six primary rooms, likewise is on the increase among the home buying public. Two car garages of the built-in or attached type are coming increasingly into favor in connection with new homes. These findings are reported by L. Porter Moore, president of the Home Owners' Institute, in its survey of the institute's national work for 1926-1927, written especially for *AMERICAN BUILDER*.

The institute, as described in previous articles, is engaged in a national demonstration Model Homes campaign, with the active support of many associations and manufacturers in the building materials and equipment field and newspapers in various cities—a campaign far more comprehensive and elaborate than anything ever before attempted co-operatively. This survey of what the home building and home buying public wants in its new houses, is based on the experience of institute representatives who have actively conducted this campaign during the past year in twenty-eight metropolitan key cities throughout the United States, and who have talked with more than a million and a half people, visitors at the seventy-four demonstration Model Homes built in these cities in connection with the co-operative campaign.

All but four of the seventy-four Institute Model Homes were sold at a time when the real estate market was at rather low ebb throughout the country, but two houses that were not sold immediately were unfurnished, demonstrating, points out Mr. Moore, the fact that furniture does

not detract from the value of good construction, but is an aid to the realtor or builder in selling it. Moreover, the success of the institute enterprises in every center conclusively answers the question asked up and down the country recently: "Is the Model Home worth while; is it a sales promotion, or is it worn out?"

"In our work of providing Model Homes in every part of the country, so attractive that thousands of people will be led to home ownership through an inspection of them, it is essential that we know what the public wants in the way of homes," states Mr. Moore, in the survey. "It is possible, and has been demonstrated to be possible to influence the public to a certain extent as to what kind of homes they should have, and what kind of materials and equipment should go into these homes, but other factors, over which advertising and education have no control, also affect and change the public mind on this important question.

"While it cannot be said that the flair for Spanish and Italian architecture in the east and middle west has totally died out under the snowstorms of the past few winters, it is true that the home building public now largely feels that tile roofs, patios, and semi-tropical architecture are not quite suitable for harsh climates. About three years ago, hard on the heels of a leaning toward California bungalows, the ramifications of the Florida real estate and building boom spread through the country. Many people who could not live south, or on the southern Pacific coast, but who took pleasure jaunts there, and enjoyed the charming prevalent architecture, began building Spanish and Italian types of dwellings against the gray skies of Chicago—homes that properly belong under the palm trees. Now we find expressions in stucco construction tending decidedly toward the English and various French schools of architecture in all parts of the east, and middle west particularly. There appears to be a somewhat decreased demand for stucco construction, except in combinations with other materials,



Attached Two-Car Garage Is Very Much in Evidence in This Seven-Room and Two-Bath New York Herald-Tribune Demonstration Model Home with Crowds Waiting to Enter at Freeport, Long Island, N. Y.



This Brick and Half-Timber Model Home Sponsored by the Portland Oregonian Contained Seven Rooms, Two Baths and an Attached Two-Car Garage.

particularly brick.

"The average family of the middle class is calling for more and more bedrooms, which means that the size of the average home may not much longer be of six, but seven rooms instead. This is a fact for the builder to consider. The extra bedroom may be the result of the automobile. People travel more, visit more, with easy transportation. The added guest room, therefore, has come back. Better times have made it possible for more people to have a servant, and even though home builders do not contemplate a servant at once, many of them are including the extra bedroom with an eye to the day when the servant can be annexed. And all these plans are entirely aside from the usual plans for bedroom and nursery space for children.

"But the reason for the extra bedroom in the minds of most of the home buying and building public, and I do not say this in any spirit of levity, is in order to provide husband and wife with separate bedrooms. First came the double bed, then twin beds, and now, with the pressure of modern life, with husband and wife occupied with many more outside interests than the old fashionable couple, with the coming and going of each more matters of individual concern, the separate bedroom appears to have come to stay in many families.

"The desire for more conveniences, and what possibly can be termed semi-luxury, plus the more frequent housing of guests, may largely account for the demand for homes with two bathrooms. Of course, the plumbing industry has been back of a campaign to make the home seeking public conscious of the need for two bathrooms in new homes, and this has also had its effect.

"The majority of home owning families today drive at least one automobile, and thousands who are becoming home owners have owned cars before they invested in a house. As real estate developments and new homes move further and further out into the suburbs, many more families find that not only the husband needs an automobile for his business use, but the wife and

family now need the use of a second car. This has created the demand for the two car garage. It also provides a place to house a guest's car, or the space can be rented at a profit before the family comes to the point of owning two cars.

"Answering the question, 'Is the Modern Home Worth While?' all but four of our Model Homes were sold either during, or shortly after the close of the four week demonstration period. One of our realtor-builders, Charles S. Reis, Inc., of New York City, sold the Model House and ten others during the first day of the demonstration and, during the five weeks' period following, sold 137 homes as a result of the Model Home. He is now building two hundred more.

"In this connection, it is interesting to note that the furnished home is more effective than the unfurnished Model Home. The question as to whether or not furniture detracts from the possible sales value of a Model Home has been



Interesting Use of Common Brick Work Is Shown Here in the Interior of the Seattle Times Model Home Where Good Construction Plus Proper Furnishings During the Public Demonstration Also Helped the Builder to Sell This Home and Others.



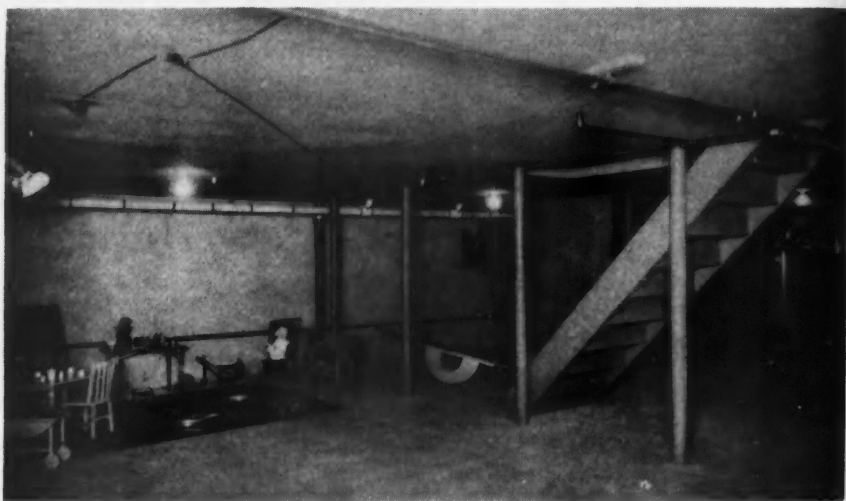
At Louisville, Ky., Local Stone, Stucco and Brick Were Combined in Pleasing English Adaptation to Produce the Louisville Courier-Journal Model Home Which Had a Built-In Garage at the Rear of Two Bathrooms.

hotly debated pro and con by hundreds of builders and real estate men. Many of these men have stated that furnishings make the Model Home look like a furniture display and take away from the value of careful construction and the use of trade marked materials and equipment.

"It was much more difficult to sell two of our Model Homes that were not furnished than to sell the others that were fully furnished, decorated and equipped. Even if the family furniture does not resemble the furniture used in the Model Home, even if the visitors do not approve of the furnishings in the Model Home and would rearrange it, if they could, the presence of furniture in the home gives their imaginations something to work on. Furniture, as such, is about the same size, whether it is of one period style or another, and the relation of certain pieces to the wall space in a house assists the prospective home buyer or builder—the



Typical of the Trend Toward the French Influence in Architecture Is This Model Home Built Under the Auspices of the Rochester Democrat and Chronicle.



Fitting Up a Corner of the Basement as a Rainy Day Playroom in the New York Herald-Tribune Model Home at Summit, N. J., Convinced Thousands of Visitors That the House Was Well Built with a Damp-Proof, Livable, Model Cellar.

and encounter bad weather, to put in time inspecting Model Houses. It is interesting to note that the largest weekly attendance in 1926 at the New York Herald-Tribune houses was the week between Xmas and New Years, under regular Xmas weather, at a time when everyone was occupied with holiday activities.

"The failure of so many homes bought or built by relatives or friends is in part responsible for the great increase in advertising and circulation of building trade publications and magazines, such as AMERICAN BUILDER, 'House and Garden,' 'House Beautiful,' etc. The public is buying these magazines, not only to secure ideas along home owning lines, but in order to study the advertising of national organizations engaged in manufacturing materials and equipment used in home building. Thousands of people have heard their friends acknowledge the fact that they did not study the relative merits of certain materials and equipment before letting the contracts for their homes that turned out badly, or before buying houses already built, and these people, resolving that they will not be caught in similar predicaments, are looking into magazines before they leap."

The Home Owners' Institute, organized in 1921, primarily to publish expert small house plans, became an authority on publicizing good construction, and at the invitation of the New York Herald-Tribune, began its work in the model demonstration house field by editing the now famous Herald-

(Continued to page 230)

woman in particular—in visualizing her furniture, or the kind of furniture she would buy, as she would arrange it in the house were it her own.

"Another proof of the fact that the Model Home is worth while, is the survey of the attendance records over the past three years at the New York Herald-Tribune Model Homes, which show that entire families have been following these demonstration homes, regularly going from one to another until they found the house they wanted, then buying. Nor can anyone suggest that such people are curiosity seekers with nothing else to do. With the Sunday moving pictures, resorts, and other amusements, families are not going to travel twenty, fifty, seventy miles on their one day off, take trains

West Coast Woods Prize Home is Completed

House Built from Plans Awarded First Prize in Architectural Competition Features the Use of West Coast Woods

THE first of the West Coast Lumber Bureau's demonstration prize homes has just been completed in Portland, Oregon. It was erected in Mock Crest residential addition by Henderson-Bankus Co., Inc., local realtors and builders, in co-operation with the Portland lumber and woodworking industries and The Oregonian, Portland's leading newspaper. Ormand R. Bean, Portland architect, supervised the building. Others, in a national program of education in the better use of Douglas fir, West Coast hemlock, Sitka spruce and Western red cedar, are to follow in various cities.

Local architects and builders who viewed the house a few days before it was thrown open to the public pronounced it a high achievement in home architecture. New use of the four West Coast woods, unique and arresting methods of ornamentation, coupled with novel adaptations in treatment, brought expressions of surprise and approval.

The West Coast woods prize home is after the design of Otho McCrackin, architect of Hutchinson, Kansas. Mr. McCrackin won first prize, \$2,000, for his plan, in a nationwide competition sponsored by the West Coast Lumber Bureau of Longview, Washington, and the Washington chapter of the American Institute of Architects. Nationally prominent architects sat on the jury of awards. Several hundred designs were submitted and \$3,500 altogether was given in prizes for the twelve best. The contest was held primarily to bring out original and beautiful uses of Douglas fir, West Coast hemlock, Sitka spruce and Western red cedar.

The jury was unanimous in awarding Mr. McCrackin's design first prize. It was outstanding in its attractive combinations of West Coast woods for exterior covering and its many expressive and delightful innovations for

interior finishing. His plan was followed to the smallest detail in the erection of the prize home, the first dwelling to be built from it.

Most of the appealing and interesting effects the architect achieved are by grace of properties inherent in these West Coast woods alone and could have been obtained by the use of no other materials. They are based on research information provided the builder by technical wood experts and rest on characteristics brought out by proper selection, treatment and use of lumber. The durability of the prize house has a like foundation. It is testimony to the fact that a wood home can be built to last as long as a home of any other building material commonly employed.

In the main, Douglas fir was used for all framing purposes; for sheathing, sub-floors and lath. This, because of its excellent qualities—strength, stiffness and durability—insuring the prize home a life of several generations. It was also used for finishing in several rooms and for window sash and trim.

West Coast hemlock was the medium in main hall and stairway, and as flooring in bedrooms. Hard, vertical grain hemlock wears extremely well, takes a wonderful polish and is of dense, uniform texture. It was also used for finish in one of the bedrooms.

Sitka spruce, a clean, odorless and pitchfree wood, light and easy to work, was utilized for exterior siding and for cabinet, shelving, drawers and other built-in work in the kitchen. It likewise came in for finish, doors, and window trim in both kitchen and bathrooms, because it takes enamel perfectly and so well withstands extremes of temperature.

The visitor's first view from the street—Fowler, near Willamette Boulevard—is striking. The style is English Country Cottage. The handsomely paneled door has a



This Charming Home Was Built in Portland, Ore., from the Plans of Otho McCrackin, Hutchinson, Kansas, Which Were Awarded the First Prize of \$2,000 in the West Coast Woods Architectural Competition. Four of the major commercial woods of the West Coast were used in its construction; Douglas fir, West Coast hemlock, Western red cedar and Sitka spruce.



The Living Room of the West Coast Woods Prize Home Has a Floor and Ceiling of Wide, Random Width, Douglas Fir Boards. The ceiling beams are sand etched all over. The end wall of the room, where the fireplace and bookcase are built in, is also paneled.

setting of wide vertical grain Western red cedar boards running up and down, V-grooved in genuine old country effect, with battens to match. Vertical grain Sitka spruce siding, harmonizing with the door setting and gable above it, covers the rest of the front. The ornamented cornice above the windows is Douglas fir, while the water-table is Western red cedar.

The dignified roof lends grace to the whole. It is of Western red cedar also, Royal Grade shingles surmounted by Grade A shakes, secured by galvanized nails. This roof is an inch thick as to butts and half an inch thick as to tips, and still will be sound and weather-proof two generations or more hence. The framing was planned to prevent all possible sag. The usual practice is 2 by 4 rafters on 24-inch centers; the prize house has 2 by 6 rafters on 16-inch centers. Wherever possible, bracing took the form of



This Balustrade Is of Vertical Grain, West Coast Hemlock with Sand Etched Decorations. Port Orford cedar was used for the carved posts and the floor is of Douglas fir made from finished boards rounded on the edge.

trusses, all loads being transferred to points most capable of carrying them.

From the standpoint of livableness and comfort the prize home is ideal. A line drawn through the left hand side of the front hallway as one enters will divide the working part of the house from the living part, and all moving about is made most simple. Space everywhere is used intelligently and to the utmost advantage of future occupants.

The hallway itself, wide and roomy, is handsomely finished in West Coast hemlock, a dense, uniform wood, taking a high polish. The stairway is also hemlock; baluster, risers and treads splendidly carved and sand-etched by a new process of wood ornamentation.

Entering the living room one is impressed by the plentiful light, in the absence of windows as we moderns know them. There is only one window, very small and deeply recessed, to the right

above the spacious sandstone fireplace. Light enters through two pairs of wide French doors, many-glassed and level with the floor. Opening on the grounds to the rear, these doors assure the occupants that quiet seclusion so prized by the home-owner of a generation or two ago in the old country.

The cheerful light displays the beauty of the living room floor in full. Of odd width vertical grain Douglas fir, it is V-grooved and wood-pegged in true English style. Scarcely a single visitor to the house fails to render it due praise, since it resembles so strikingly the floors of olden times, made and laid laboriously by hand and intended to last indefinitely. It harmonizes restfully with the wide, odd-width Douglas fir paneling surmounting the fireplace, sand-etched and ornamented, and with the odd-width Douglas fir ceiling, V-grooved like the floor and borne up by great Douglas fir beams sand-etched to a weathered effect and stained a driftwood gray.

The stone of the fireplace, the mellow brown of floor and ceiling, the tone of the walls, the charm of the filtered light, blend into a cozy, homelike atmosphere that brings a pleased smile to the visitor's face. Furnishings and draperies are in keeping, early American, chosen with taste. An up-to-date radio set gives out subdued music. The soft rug on the floor deadens footfalls. Modern comfort, with the English country cottage still maintained, is observed throughout the well-furnished house. Though there is installed every time-saving device to gladden the heart of a housekeeper, these do not obtrude to mar the air of repose and beauty that characterize so attractively this prize home.

Through glassed, disappearing, sliding doors the visitor passes into the library. Here is inviting restfulness. Recessed windows afford ample window-seats. On the built-in bookshelves are beckoning volumes; easy chairs with softly shaded lamps at the elbow inviting to browse and muse. The entire wall is paneled in Douglas fir to surpassing loveliness of grain, sand-etched to bring out its charm. The walls are further enhanced by four, appropriately placed, sand-etched, artistically tinted landscapes, depicting the four eras of Oregon's development: the Indian, the pioneer, the lumberman and the modern industrial. The floor is hemlock, with a dark, mirror-like polish. The overhead of the recessed windows is paneled like the walls.

The dining room, like the living room, has French doors. It is wainscoted to a man's height in Douglas fir panels. The entrance is from the main hall and the door leading to it has two finishes, one to match the hemlock of the outside, the other the fir of the room. This prevails in many doors in the prize home; they are the built-up, made-to-order kind, finished to match the room they face. The door leading from the hall to the library, for example, is six paneled, Colonial style, sand-etched to harmonize with the room, while the outside is V-grooved vertical running hemlock planks, to match the finish of the hall.

An appealing feature of the prize home is the generous closet space in both hallways and bedrooms, of which the



The Vertical Siding in the West Coast Woods Prize Home Is of Western Red Cedar, the Horizontal Siding of Sitka Spruce, the Door of Western Red Cedar Outside and Douglas Fir Inside.

outstanding example is a magnificent linen closet, seven feet long and as wide, and eight feet high, with many shelves; in effect, a huge cedar chest, moth and insect-proof through cedar's well-known preserving quality.

The novelty in interior finish that makes the visitor to the prize home exclaim in greatest admiration is the sand-etched designs. The process by which these are arrived at has been brought to great perfection. A power propelled stream of sand is used, through perforated stencils, allowing it to etch out the lines that form the design. Remarkably fascinating hand-carved and antique effects are secured. Sand-etching without stencils brings out the natural beauty of Douglas fir grain and gives to the wood a mellow, time-softened appearance of rare distinction. Wood so treated lends character and individuality to any

interior where it may be used appropriately.

Since the prize home is a pioneer undertaking there was much virgin ground to be broken that will not have to be covered with other prize homes to be erected. The way is now clear also for individuals to build homes like it. Full sets of working drawings, made by J. Lister Holmes, Seattle architect, from the prize-winning design, may be had from the West Coast Lumber Bureau, Longview, Washington. Many have already been ordered and no doubt building along this line will be extensive, marking an educational era in the use of West Coast woods.

In preparing and offering these plans to the building public, the bureau is not attempting to set up competition with architects, but is supplying detailed plans of the prize designs with the recommendation that builders use the services of a local architect in the construction. This, the bureau believes, is necessary because of the size of the structures and for the further reason that each plan carries detailed specifications covering novel uses of lumber that will necessitate careful supervision if the builder is to get complete satisfaction from the project. Competent architectural supervision will, the bureau believes, assure this.

CHARLES OLUF OLSEN.



Appoint New Committeemen

THE appointment of four new members to the National Committee on Wood Utilization of the Department of Commerce by Secretary Hoover, the committee's chairman, was recently announced. The new members are: Ned G. Begle, President, Berst-Forster-Dixfield Company, New York City; J. C. Carlin, Chief Chemist, Tennessee Products Company, Nashville, Tenn.; Henry A. Gardner, Director, Institute of Paint and Varnish Research, Washington, D. C.; F. E. Schmitt, Managing Editor, Engineering News-Record, New York City.

The work of the National Committee on Wood Utilization is steadily expanding, according to Axel H. Oxholm, the Committee's Director, and new members were needed to keep in step with this growth.

COLORKEED HOMES

FOR STYLE AND VALUE



*With Many These Homes Are Best Sellers—
How is it with You?*

—Wm. A. Radford

Styles change and tastes change.

Designs that sold freely ten years ago—even five years ago—now go begging. The home builder, developing properties for sale, has to watch his step, or he will find that his money and labor have gone into homes of a style that few today will buy.

Of course different states and sections of the country favor certain styles more than others; and what is most popular right now in California may not go at all in New England. Every builder must study his own locality and know his own market.

In selecting the home designs presented in our ColorKeed Homes section which follows, we have

been guided by actual sales records. These homes sell. They are popular. They are the wanted styles in many localities we have investigated.

How is it with your community? Are these designs right for you and your needs? We would like to know.

Here are nine home designs in colors—with the Front Cover home, ten. That's quite an assortment; gives you a good choice each month.

Which of these ten designs do you like best? Which will be the most salable in your town?

May we hear from you on this? We would like to be guided by your ideas and your needs.

FREE INFORMATION SERVICE

for

Home Planners

and

Home Builders

THE ColorKeed Home Plans presented in this magazine have many special points of excellence which are of particular importance and timeliness to those of our readers who right now are facing the home building question—with its joys and its problems.

We illustrate these home designs and show the room arrangements, but our space for description is so limited that we are not able to cover all points. We know there is much additional information desired by subscribers about to build, which would be very valuable to them. Since, we have all data pertaining to these ColorKeed Homes, both in this current issue and in previous issues of the AMERICAN BUILDER, we are glad to offer our readers a free service of information, whether questions pertain to the estimated cost, the method of construction, suitable materials to use, special equipment or features, or any other information whatsoever.

Limited space in the magazine prevents publishing all this information; but if you will write American Builder Home Planning Service, 1827 Prairie Ave., Chicago, we will be very glad to give you direct by mail any information desired.

ford
ords.
ular.
many

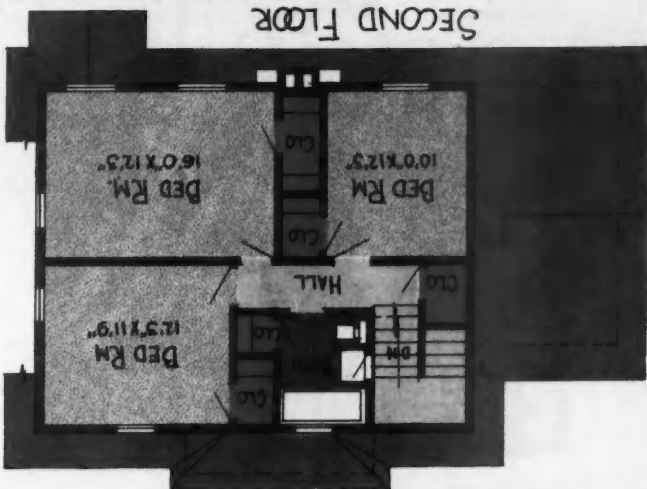
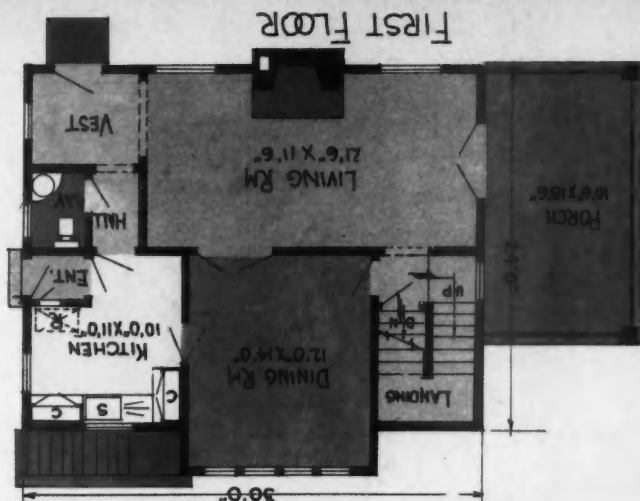
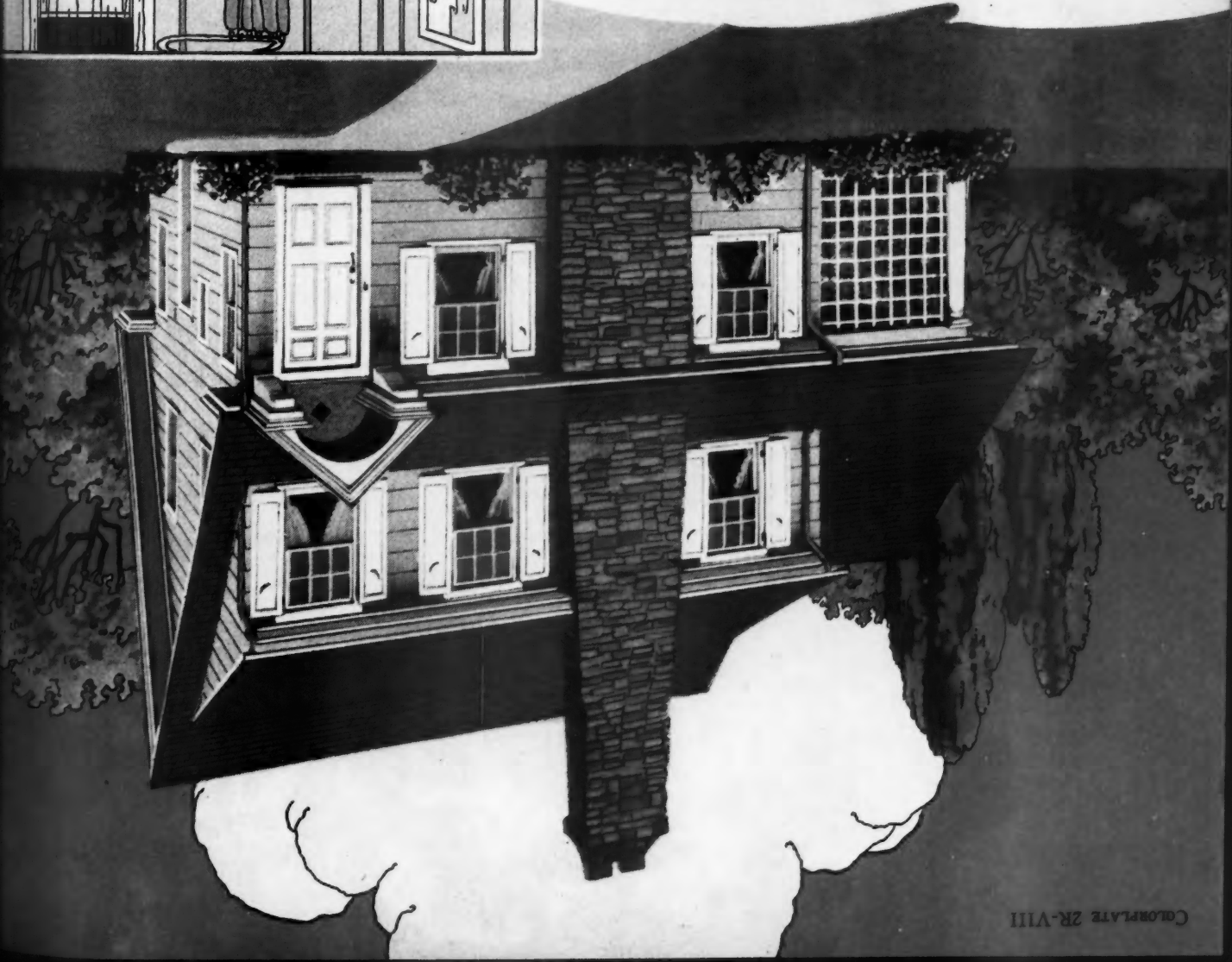
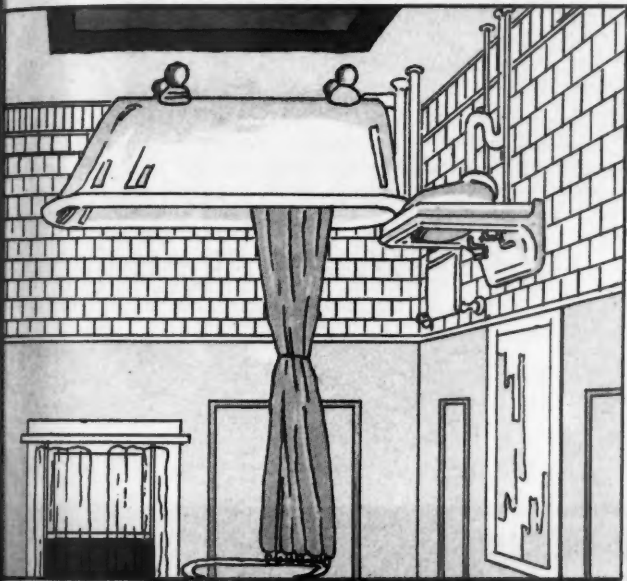
with
m u-
hese
t for
our
We
e to

nine
gns
with
Cover
en.
e an
nt;
good
ach

of
de-
you
st?
ll be
lable
wn?
hear
a on
ould
guid-
ideas
eeds.

A N English type home of charm and distinction containing several rooms. Notice the unusual stairway opening off the big living room with a semi-enclosure or balustrade grille separating the living room from the stairs. The size on the ground is 28x36 feet, with the big open porch at the end opening out of the living room adding 10½x18½ feet more to the first floor plan. The color sketch above illustrates the bathroom in this design with combined tub and curtain shower.

The RIDGEWAY



The

LV
DD
KI
PA
HA

Ventil
Packag
Kitch
Full
Boord
Mecha
centor
Gas
Range
Therm
Wall
Firepla
and D
Bath-in
Medici
Linen
Shower



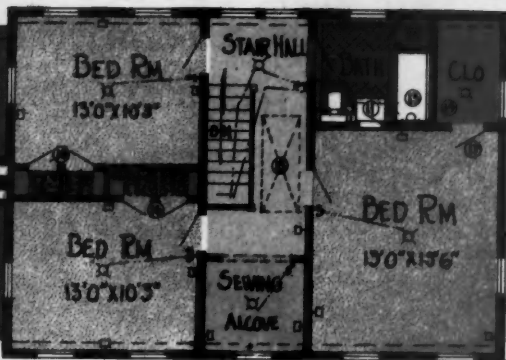
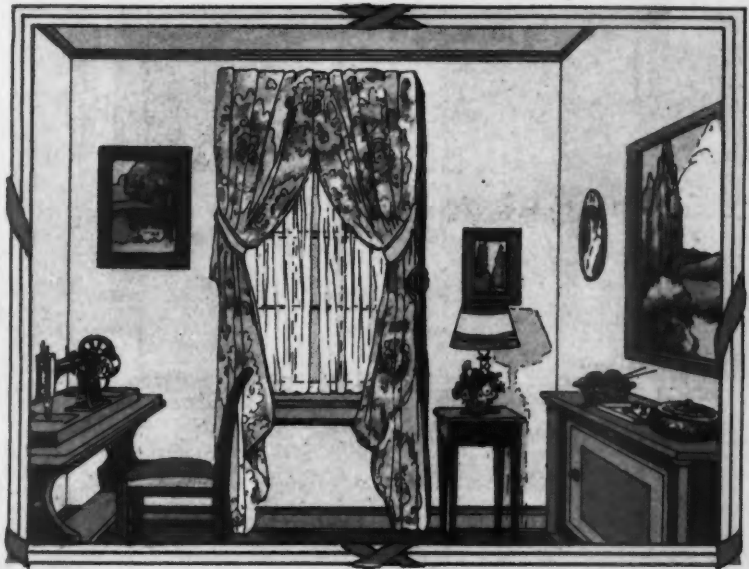
COLORKEED HOME PLANS

TRADE MARK

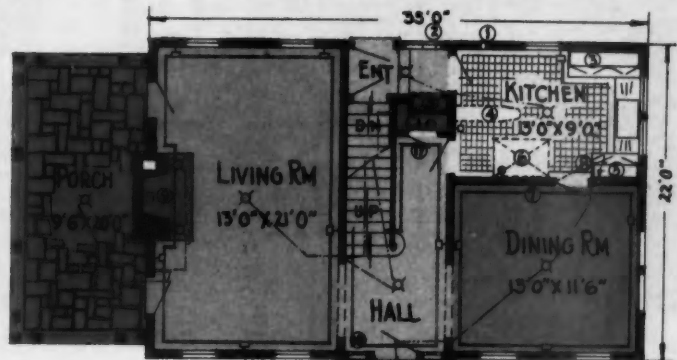
- LIVING ROOM
- DINING ROOM
- KITCHEN
- PANTRY
- HALLS
- CLOSET
- BED ROOM
- BATH AND LAV.
- PORCH
- ROOF

Key to Equipment

- Ventilating Fan
- Package Receivers
- Kitchen Cabinets
- Built-in Ironing Board
- Mechanical Refrigerator
- Gas or Electric Range
- Thermostat
- Wall Safe
- Fireplace Throat and Damper
- Built-in Mail Box
- Medicine Case
- Linen Closet
- Shower Bath
- Moth-proof Closet
- Disappearing Stairs to Attic
- Efficiency Ward-ropes
- Mirrored Door
- Weatherstrips
- Storm Sash
- Screens
- Lighting Fixtures
- Convenience Outlets
- Electric Panel
- Washing Machine
- Ironing Machine
- Clothes Dryer
- Coal Chute
- Radiator Covers or Furniture
- Heating Plant
- Oil Burner
- Water Supply System
- Hot Water Supply
- Water Softener
- Radiant Gas Heaters
- Electric Wall Type Heaters
- Casement Windows
- Dishwashing Sink
- Automatic Cellar Drainer
- Garbage Incinerator



SECOND FLOOR

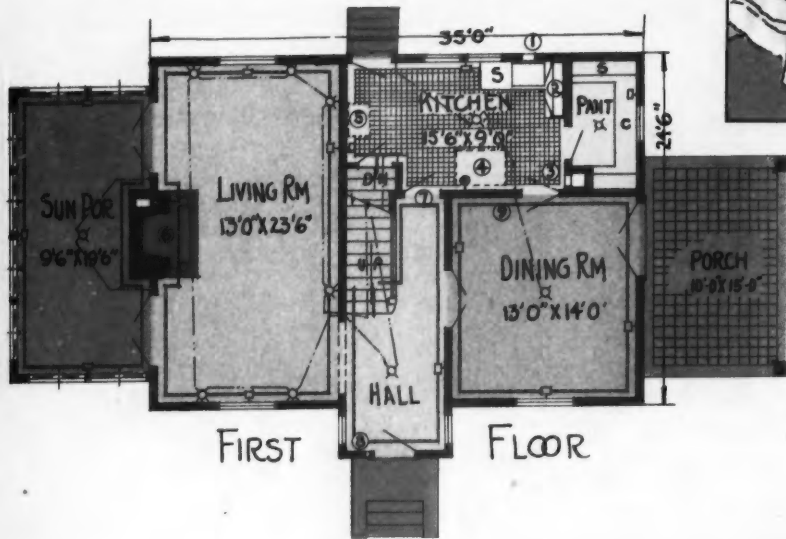
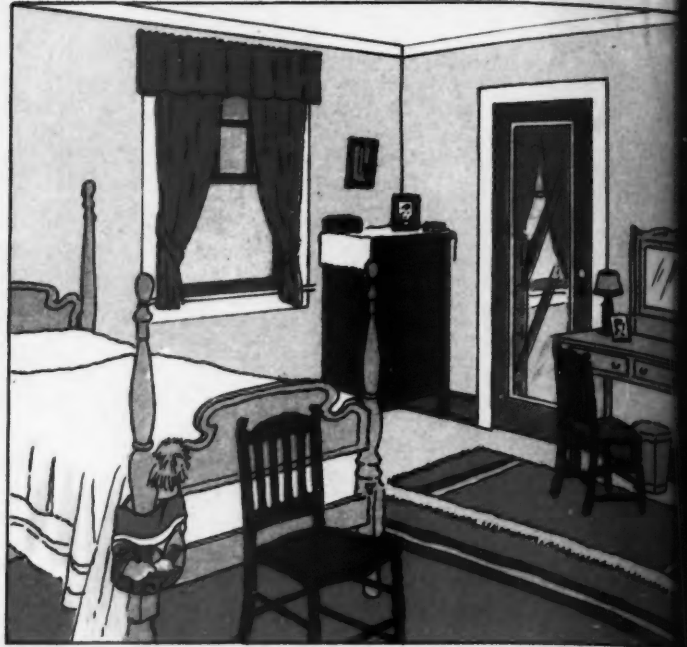
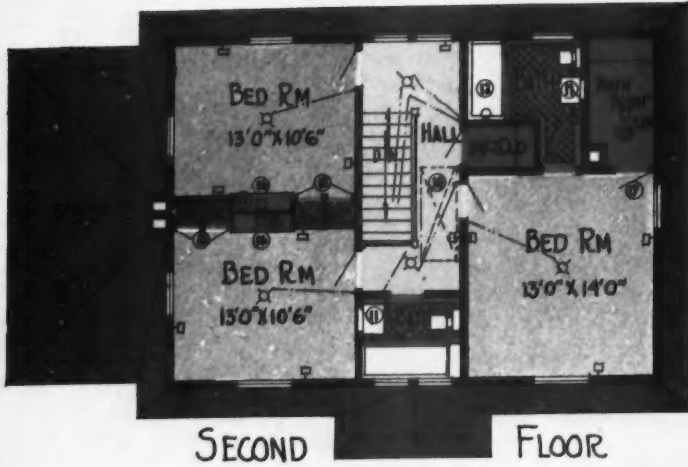


FIRST FLOOR

A PERFECT example of the straight gable Colonial with open porch. Size is 22x35 feet. Six rooms, bath, sewing alcove and reception stair hall are arranged in the approved manner.

Copyright, 1928, by William A. Radford, New York and Chicago.
Pat. March 15, 1921, and Sept. 30, 1924.
ColorKeeD Plan Patented April 19, 1927.



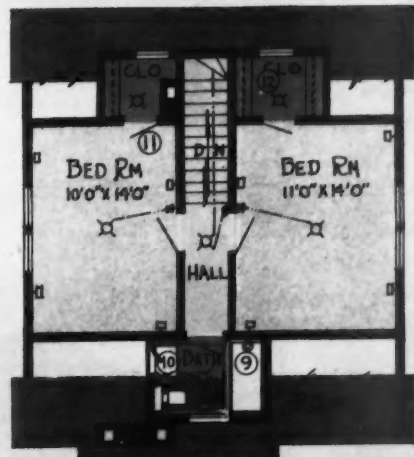
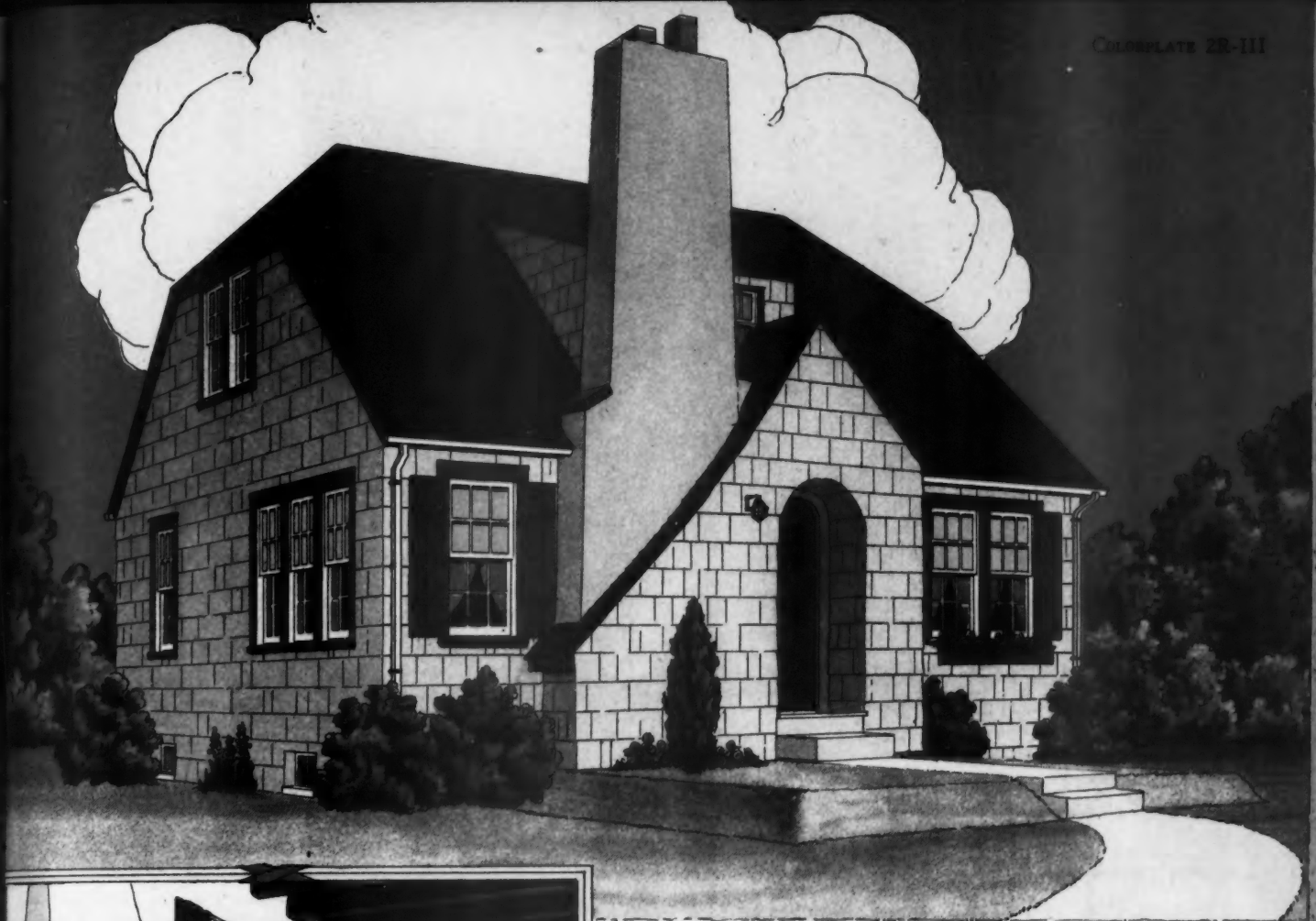


The RICHWOOD
 A MODERNIZED Colonial with sun parlor and shingled belt course. House is 24½x35, feet containing six rooms and two baths.

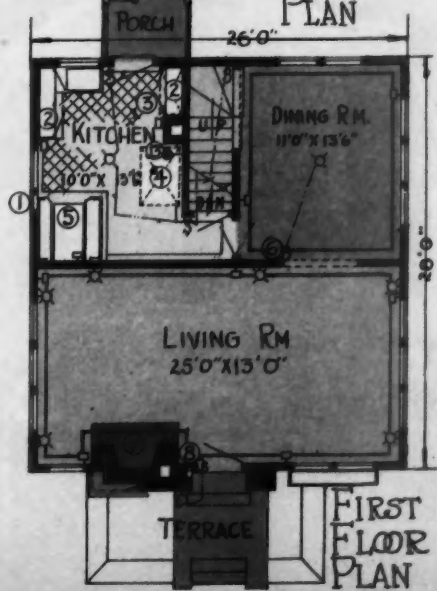
Key to Equipment

- | | | |
|--------------------------------|--------------------------------|------------------------------|
| ① Ventilating Fan | ⑭ Tub Shower | ⑳ Ironing Machine |
| ② Kitchen Cabinets | ⑮ Moth-proof Closet | ㉑ Clothes Dryer |
| ③ Built-in Garbage Incinerator | ⑯ Linen Closet | ㉒ Coal Chute |
| ④ Gas or Electric Range | ⑰ Efficiency Ward-robres | ㉓ Heating Plant |
| ⑤ Mechanical Refrigerator | ⑱ Built-in Dressing Tables | ㉔ Oil Burner |
| ⑥ Fireplace Throat and Damper | ⑲ Mirrored Door | ㉕ Water Supply System |
| ⑦ Mirrored Door | ㉚ Weatherstrips | ㉖ Hot Water Supply |
| ⑧ Built-in Mail Box | ㉛ Storm Sash | ㉗ Water Softener |
| ⑨ Disappearing Stairs | ㉜ Screens | ㉘ Radiant Gas Heater |
| ⑩ Medicine Case | ㉝ Lighting Fixtures | ㉙ Electric Wall Type Heaters |
| | ㉞ Convenience Outlets | ㉚ Casement Windows |
| | ㉟ Electric Panel | ㉛ Dishwashing Sink |
| | ㊱ Washing Machine | ㉜ Automatic Cella Drainer |
| | ㊲ Radiator Covers or Furniture | |





SECOND FLOOR PLAN



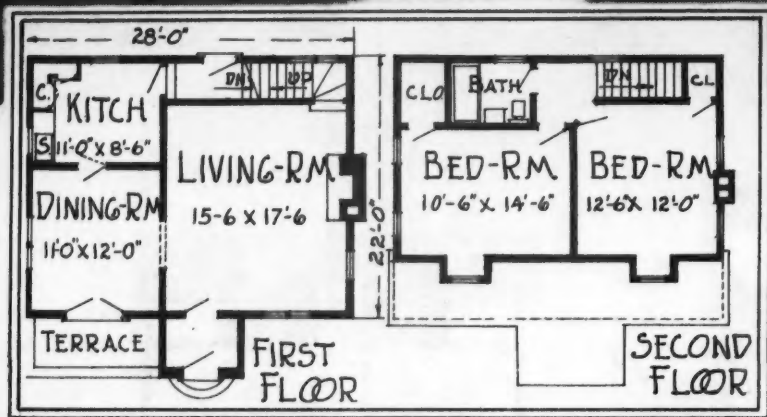
FIRST FLOOR PLAN

The RANGER

A CLEVER shingled home in the popular English style, size 26x28 feet containing five rooms and bath.

Key to Equipment

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> ① Ventilating Fan ② Kitchen Cases ③ Mechanical Refrigerator ④ Gas or Electric Range ⑤ Breakfast Nook ⑥ Thermostat ⑦ Replace Throat and ⑧ Staircase ⑨ Mail-in Mail Box ⑩ Shower ⑪ Medicine Case ⑫ Storm Door ⑬ Wash-proof Closet | <ul style="list-style-type: none"> ⑭ Built-in Garbage Incinerator ⑮ Weatherstrips ⑯ Storm Sash ⑰ Screens ⑱ Lighting Fixtures ⑲ Convenience Outlets ⑳ Electric Panel ㉑ Washing Machine ㉒ Ironing Machine ㉓ Clothes Dryer ㉔ Coal Chute ㉕ Heating Plant | <ul style="list-style-type: none"> ⑶ Oil Burner ⑷ Water Supply System ⑸ Hot Water Supply ⑹ Water Softener ⑺ Radiant Gas Heaters ⑻ Electric Wall Type Heaters ⑽ Casement Windows ⑾ Dishwashing Sink ⑿ Automatic Cellar Drainer ⓫ Disappearing Stairs ⓬ Radiator Covers or Furniture |
|---|--|---|



The PROSPERITY

Above is illustrated a clever little English design 22 by 28 feet; five rooms and bath.

The PRINCETON

Below and to the right are perspective view and floor plan of this artistic four-room cottage.

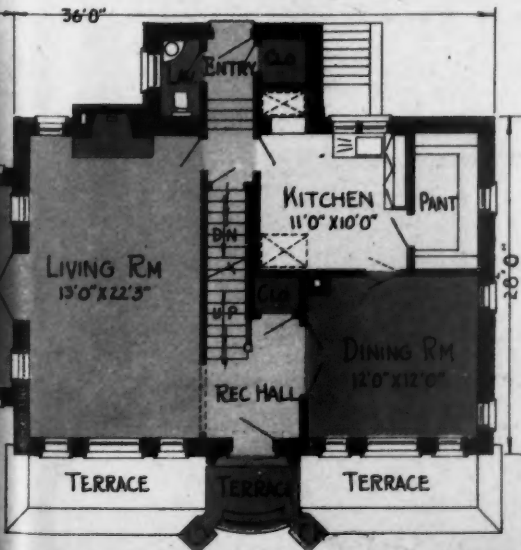
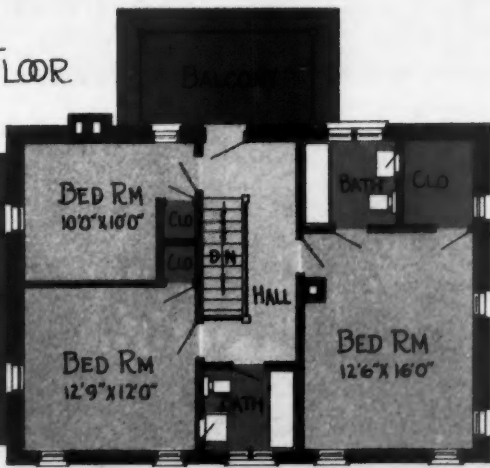


FLOOR-PLAN



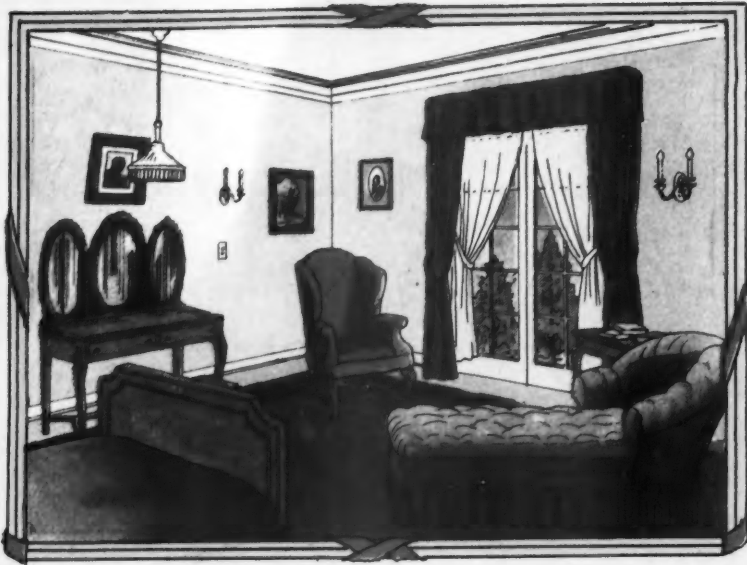


SECOND FLOOR



The RICHARDS

A SUBSTANTIAL home of brick construction containing six rooms and two baths besides the big octagonal sun porch. The main structure is 25x36 feet with a projection at the back for the service entry; and this gives opportunity for a second floor balcony. The room arrangement works out very successfully, as a study of the ColorKeeD floor plans to left will show. Color sketch above suggests a paneled wall treatment and suitable furnishings for the dining room.



The Ramona makes room for the following very desirable and important items of present-day home equipment. Most of these will be provided in the original building contract and paid for in the original financing. Other items may be added later.

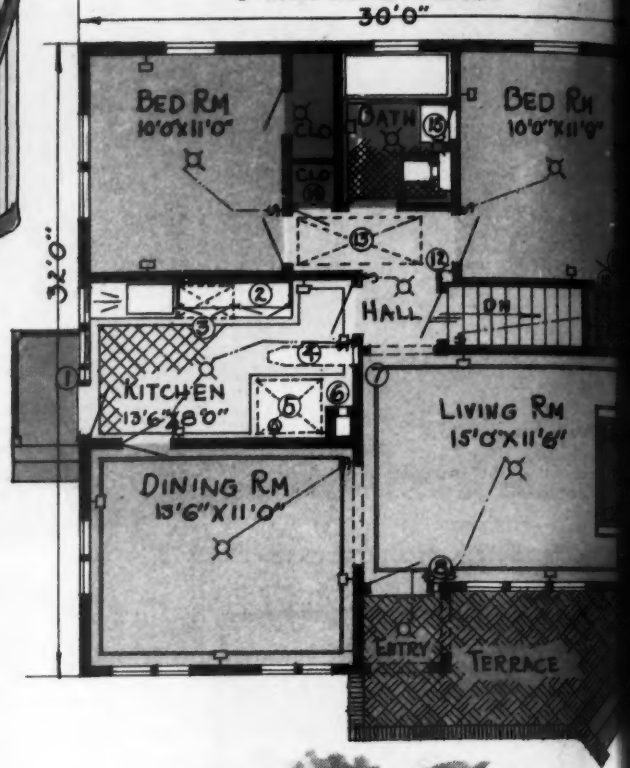
Key to Equipment

- | | | |
|--------------------------------|--------------------------------|------------------------------|
| ① Ventilating Fan | ⑩ Mirrored Door | Clothes Dryer |
| ② Kitchen Cabinet | ⑪ Clothes Chute | Coal Chute |
| ③ Mechanical Refrigerator | ⑫ Disappearing Stairs to Attic | Heating Plant |
| ④ Built-in Ironing Board | ⑬ Linen Closet | Oil Burner |
| ⑤ Gas or Electric Range | ⑭ Medicine Case | Water Supply System |
| ⑥ Built-in Garbage Incinerator | ⑮ Weatherstrips | Hot Water Supply |
| ⑦ Thermostat | ⑯ Storm Sash | Water Softener |
| ⑧ Built-in Mail Box | ⑰ Lighting Fixtures | Radiant Gas Heaters |
| ⑨ Fireplace Throat and Damper | ⑱ Convenience Outlets | Electric Wall Type Heaters |
| ⑩ Efficiency Wardrobe | ⑲ Electric Panel | Casement Windows |
| | ⑳ Washing Machine | Dishwashing Sink |
| | ㉑ Ironing Machine | Automatic Cellar Drainer |
| | | Radiator Covers or Furniture |

The RAMONA

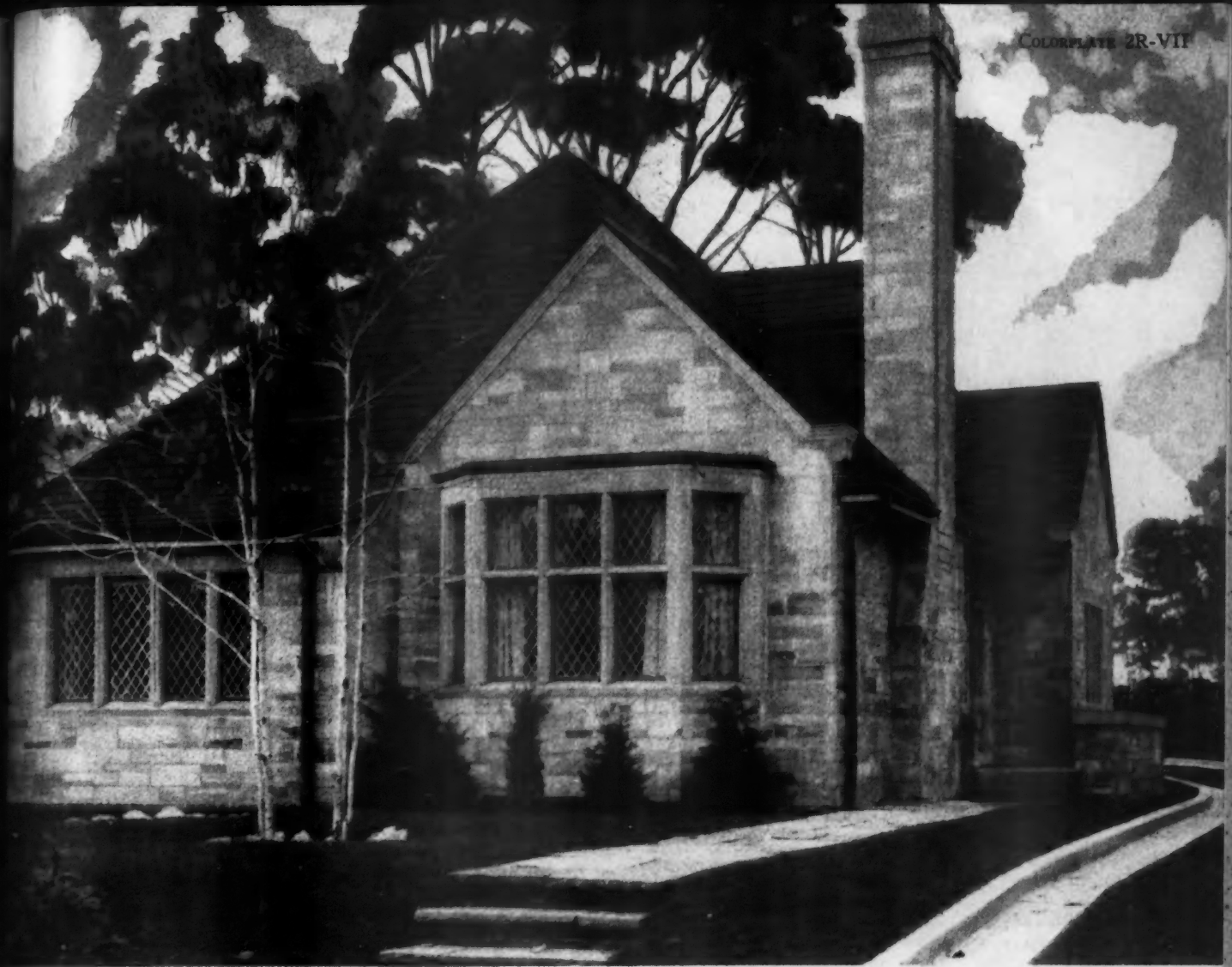
A STRONG French influence is seen in this delightful stucco home with its rough walls and interesting groups of casement windows. Five rooms and bath are contained in the very practical interior illustrated below. Size on the ground is 30x32

FLOOR PLAN



HERE
I lim
ertland
ning f
an to
the com
This o
one, la
nd blue
laid a
rick, ba
carry t
color
rial fo
This
akes q
Archit
oston
the effe
an for

this de
and int
rooms
interi
00x32



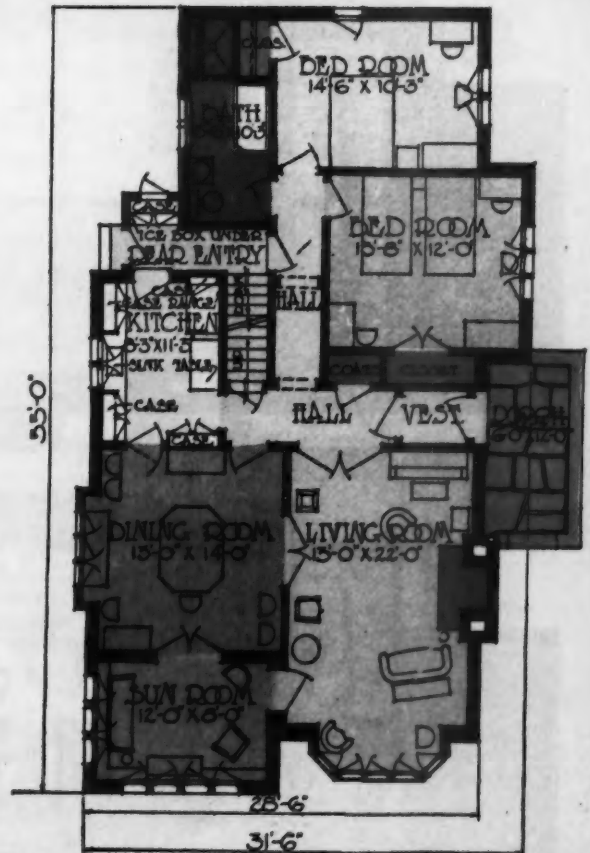
The RAVINIA

HERE we have a very distinctive and charming home of Indiana limestone as built for Mr. J. J. Skelley, Toronto, Ontario; D. E. Hartland, architect. It is a house 31½ feet wide by 55 feet deep, containing five rooms besides the bathroom, hall and sunroom. The floor plan to right shows how conveniently and with what delightful home-like comfort this house is arranged.

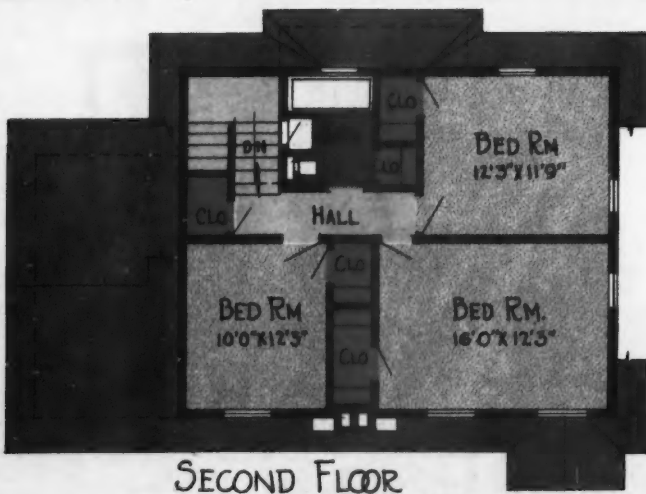
This dwelling is an example of the use of quarry-run Indiana limestone, laid random ashler. The colors run in charming shades of buff and blue, high lighted here and there with iron oxide red. The stone is laid as a veneer four inches thick over the backing of common brick, backup clay tile, or concrete tile. The blocks are sawed at the quarry to the four inch thickness and come to the job quarry-run as color and texture, making a comparatively inexpensive building material for homes of medium cost.

This material calls for mason-work, not cut-stone work,—which makes quite a difference in the cost of lay.

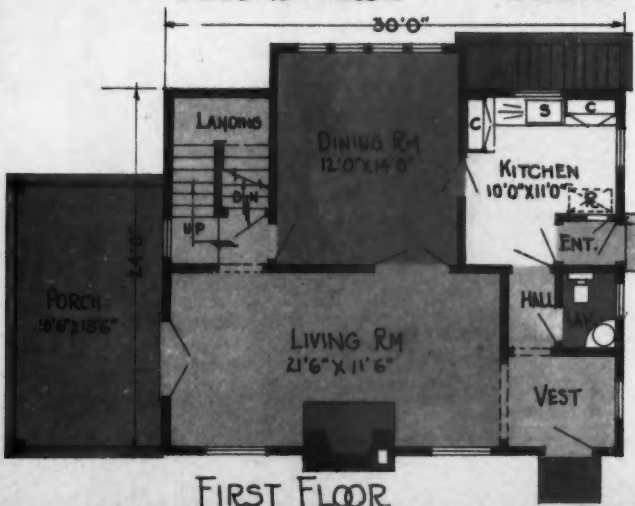
Architects and builders are realizing the possibilities of quarry-run limestone for residential work and the infinite variety of beautiful and effective effects that can be created, also that the cost is very little more than for homes of less distinguished materials.



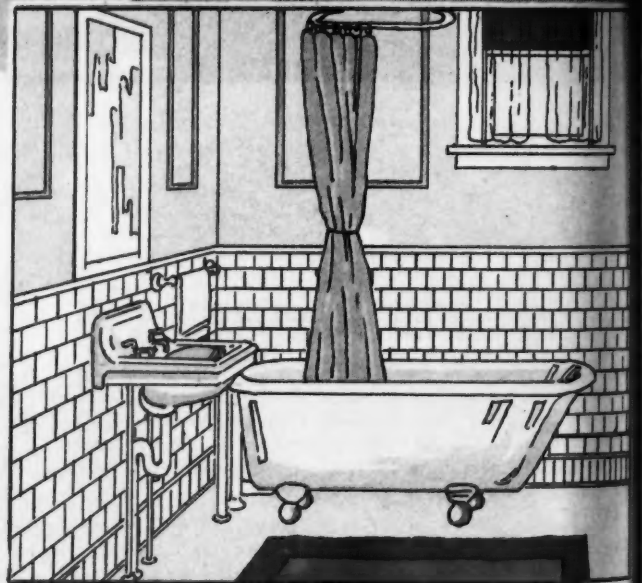
FLOOR PLAN



SECOND FLOOR



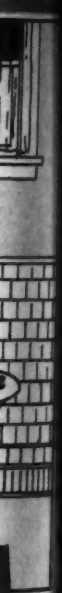
FIRST FLOOR



The RIDGEWAY

AN English type home of charm and distinction containing six rooms. Notice the unusual stairway opening off the big living room with a semi-enclosure or balustrade grille separating the living room from the stairs. The size on the ground is 24x30 feet, with the big open porch at the end opening out of the living room adding 10½x18½ feet more to the first floor plan.

The color sketch above illustrates the bathroom in this design with combined tub and curtain shower.



ning si
g living
ting the
s 24x30
of the
plan.
design

u
p
u
er
h
s
ne
to
e
r
or
ese
-u-
th
ny
lar.
ds.
ord

Q

OUR FRONT COVER HOME



The Modern American Home in Norman Style is a Favorite Among Those Who Demand Both Beauty and Distinction

BACK in the days when Norman architecture had its origin the feudal castle was, in reality, a fortress in which the lord of the manor, with his stout retainers, defended himself against the raids of his enemies, the gentlemen from the neighboring manors. Under such conditions there naturally developed a simple and sturdy type of building, with solid walls whose very appearance spoke of their strength and permanence, and with towers and turrets for purposes of defense.

Today the feudal castle has passed, along with the armored knight and the battleax. The small home is the present order of things and the need for defensive towers and turrets is gone. We find, however, that the simple Norman style lends itself most pleasingly to the smaller dwelling and that the tower adds much to its exterior charm besides

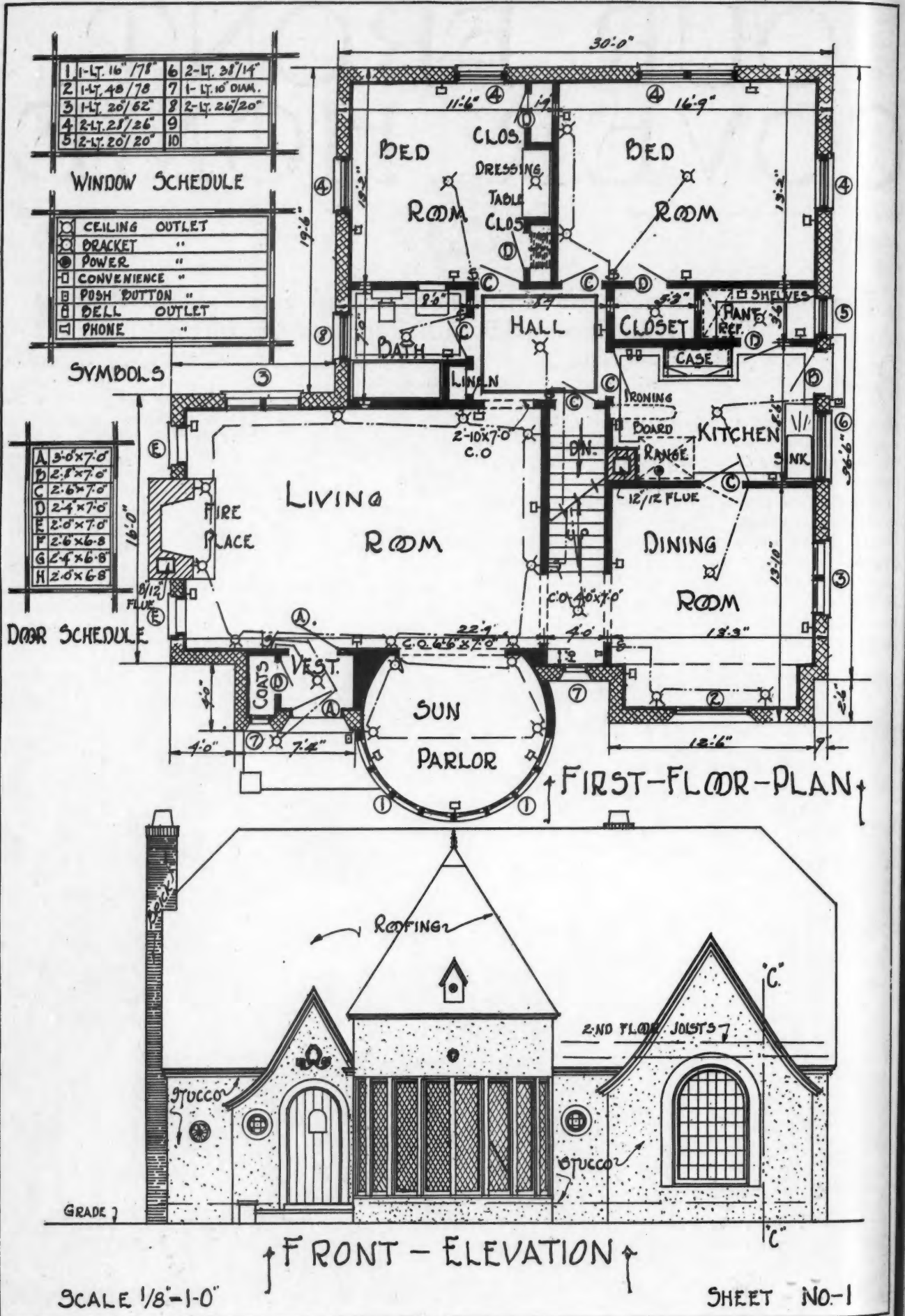
serving admirably as a housing for stairway, entrance or sun room.

It is the Norman style of house that we have taken for Our Front Cover Home this month and the tower, which here serves as a sun parlor, is the outstanding feature in the design. Throughout this house, however, in roof lines, plain stuccoed walls, windows and doorways, at every turn, we find the characteristics of the Norman style. Nor is the idea carried out in appearance only, for the stucco is applied over sturdy walls of masonry, and the construction throughout is of the most permanent sort.

Here, then, is a home of which the owner might well be proud and as for assurance as to its commodious and convenient interior arrangement one need only turn to the plans, reproduced to scale on the four pages following this, to see that here is an ideal home.

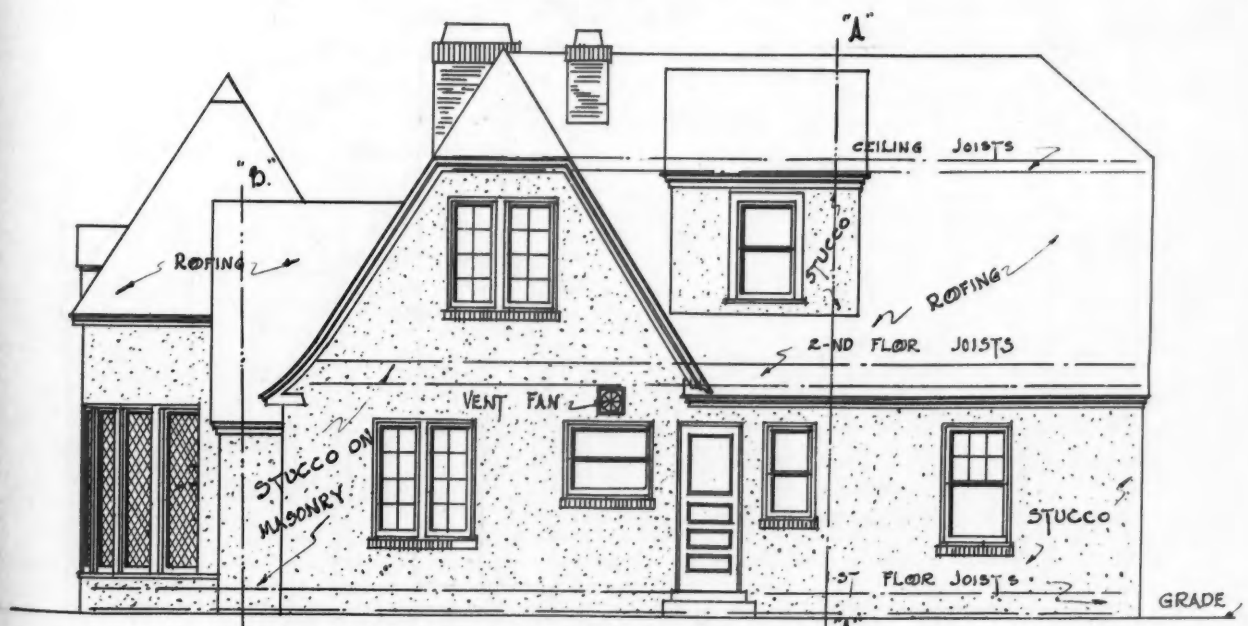
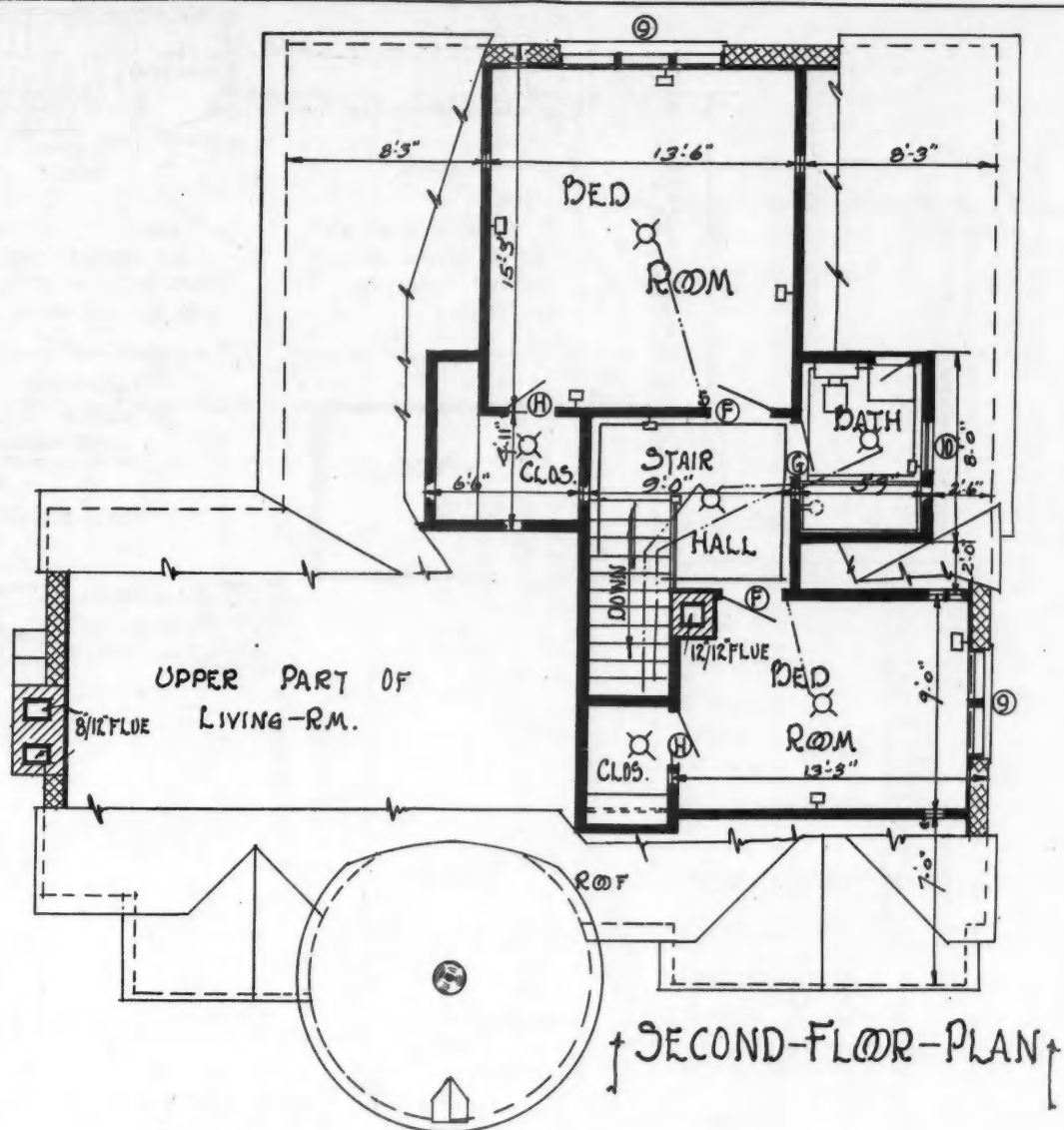


The Distinctive Characteristics of Norman Architecture Have Been Faithfully Observed in the Design of Our Front Cover Home and Adapted to the Modern Plans Which are Reproduced on the Pages Which Follow.



The First Floor of Our Front Cover Home Is Almost a Complete Dwelling by Itself, but the Other Space, as Shown on Other Pages, Is Not Wasted.

Above S

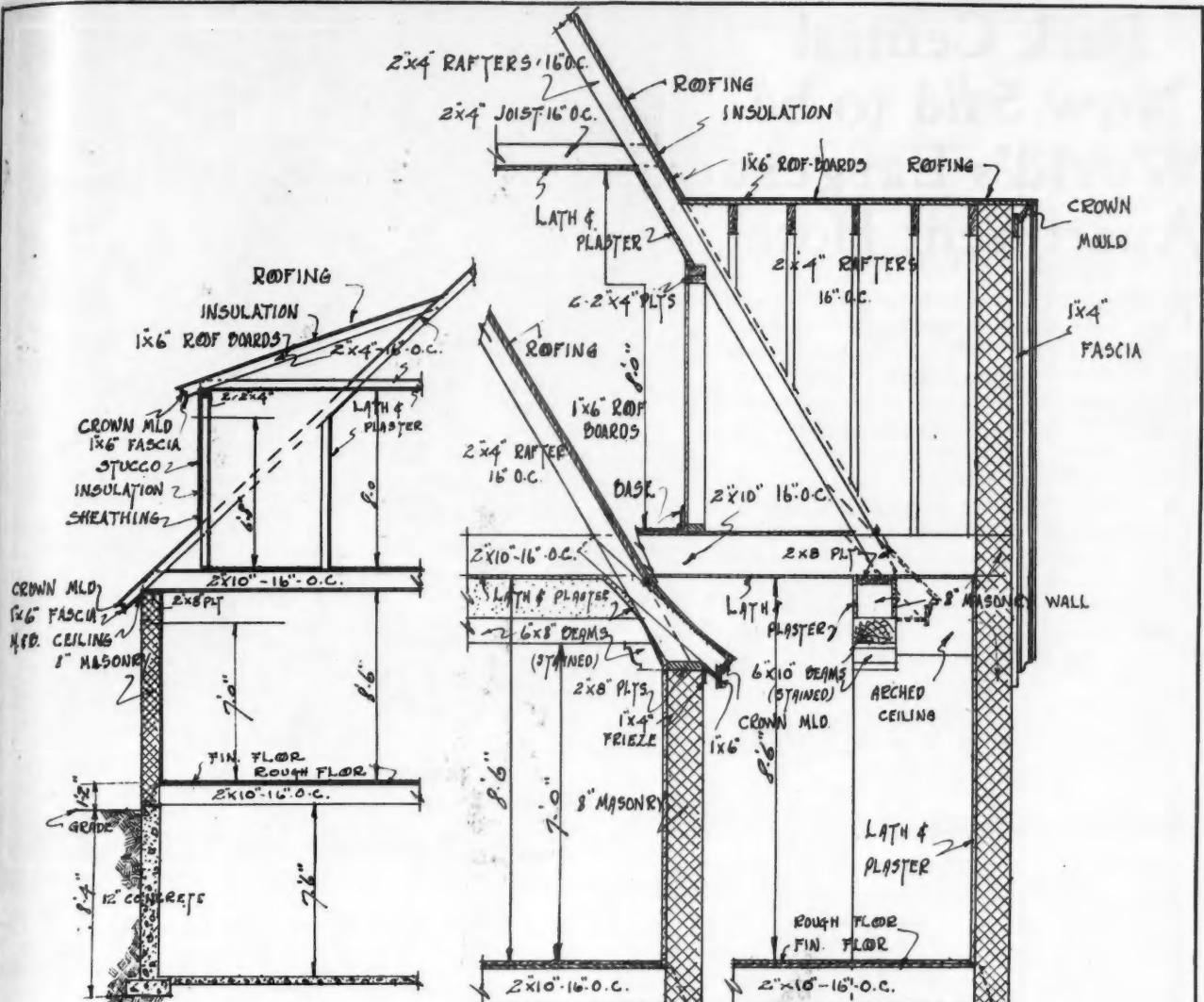


RIGHT - SIDE - ELEVATION

SCALE 1/8" = 1'-0"

SHEET NO.-2.

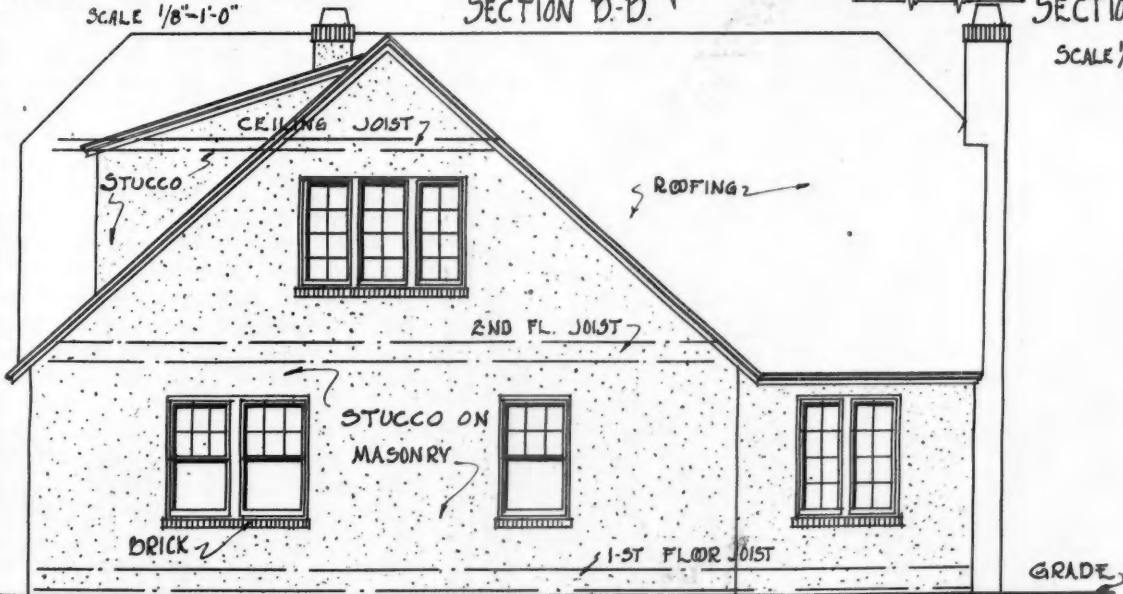
Above Stairs There Are Two Additional Bedrooms and Another Bathroom. On the following page will be found a plan of the basement space.



WALL - SECTION A-A
SCALE 1/8"=1'-0"

SECTION B-B

SECTION C.C.
SCALE 1/4"=1'-0"



↑ REAR - ELEVATION ↓

SCALE 1/8"=1'-0"

SHEET NO.-4.

The Sections Shown Here Give a Clear and Definite Idea of the Substantial Construction Which Makes Our Front Cover Home Truly Norman in Its Style.

Park Central Now Said to be World's Largest Apartment Hotel

TOWERING 31 stories above the street level and occupying the entire block frontage between 55th and 56th streets on Seventh Avenue, New York City, the New Park Central Hotel is said to be the world's largest apartment hotel. With its two wings and light court, it has a frontage of 200 feet and extends three stories below street level.

The first half of the building had scarcely been completed before the demand for apartments and dining space made it necessary to add the Annex, which has just been completed. This important building project has been successfully financed by a bond issue of the American Bond & Mortgage Company.

Rooms of period design, enriched by mural paintings, decorations and furnishings are features of the hotel, as shown by the accompanying illustrations.



Exterior View of the New Park Central Hotel, New York City. This is said to be the world's largest apartment hotel. Groenenberg and Leuchtag, architects.

Beautiful Mural Paintings, Hardwood Paneling and Luxurious Furnishings Add to the Attractiveness of the New Park Central Hotel Lobbies.

Among the attractive features of the Park Central are a swimming pool, one of the city's largest indoor pools, fed by artesian water piped from a depth of 550 feet; a roof garden which, since its opening, has been doing a capacity business nightly for dinner and supper; a grill room; a main restaurant, individual period rooms for private social functions; a large ball room, lounges, writing rooms, etc.

Noted artists have executed the paintings in the public rooms, lobbies and period salons, and they have been declared by experts to be among the finest of their type assembled under one roof. Nothing has been omitted to make the beauty of the hotel the equal of its massive size.

The bond issue which the American Bond & Mortgage Company floated on the first section was for \$4,000,000 and the bond issue on the second section is for \$4,500,000, while the American Appraisal Company has appraised the value of the entire property at \$13,830,950.



The American Concrete Institute, 2970 West Grand Boulevard, Detroit, Mich., offers the following booklets: Specifications for Concrete Stone and Concrete Roads and Payments—Report of Committee S-6, price 10 cents each; Experience with a Strength Specification Contact, Cracking in Concrete and the Growth of Hair Cracks Into Structural Cracks; A Method for Predicting Concrete Strengths with Increased Precision, price 25 cents each.

New
**Park Central
 Hotel**
**Features Rooms
 of
 Period Design**



Above—Louis XV room in the New Park Central Hotel Annex; At Right—Mural Paintings and Millwork of Colonial Design Are Features of This Colonial Room.



Picture at Left Center Shows the Gothic Room and, Immediately Above, the Renaissance Room Is Shown.



The Beautiful Design, Decorations and Furnishings of the Arabian Room Are Shown at Lower Left.

Every Detail of the Design, Decorations, Mural Paintings and Furnishings in These Park Central Hotel Rooms Is Correct for the Period Represented. These period salons are used for social functions.

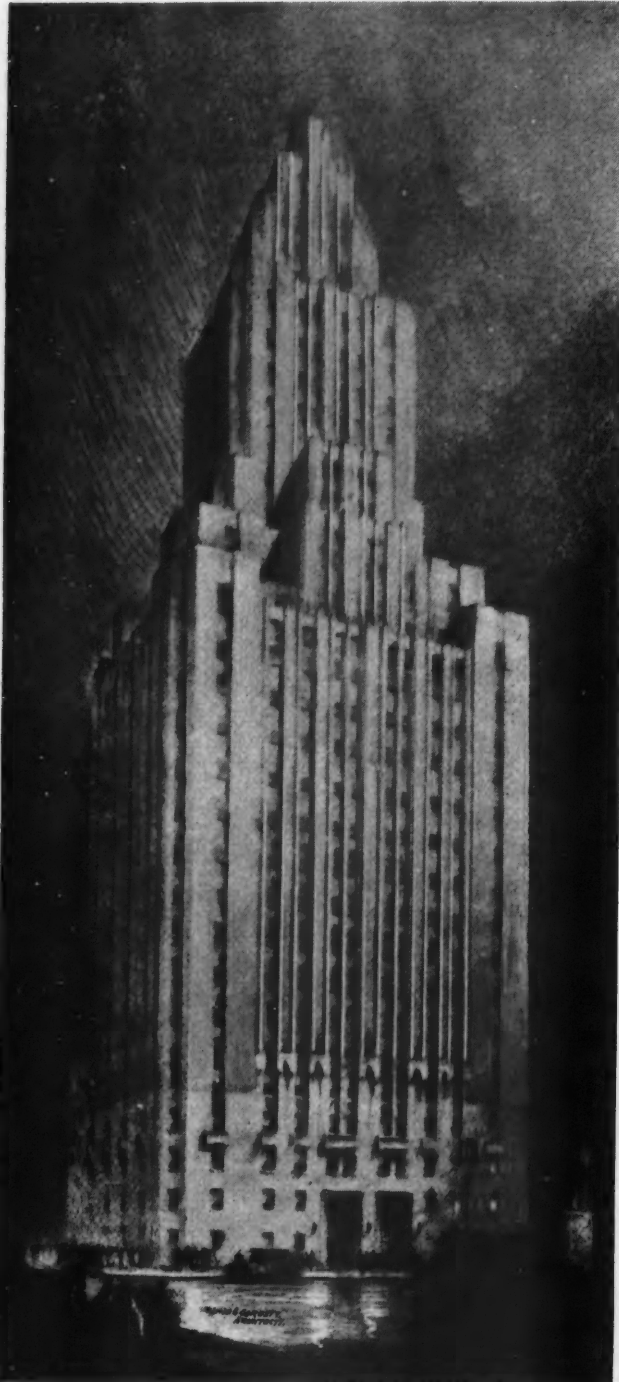
Set-Backs Used for Terraces Surrounding Apartment Suites

HELMLE & CORBETT—SUGARMAN & BERGER, Architects

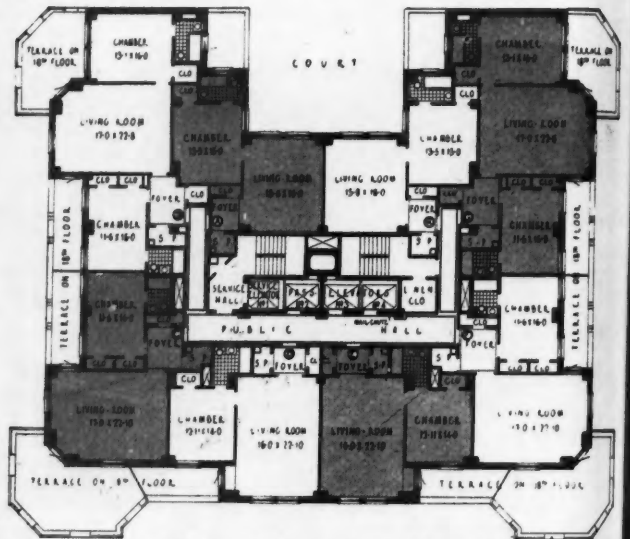
DESIGNERS are taking advantage of the set-back requirements of the New York building ordinance to provide gardened terraces or roof gardens surrounding the upper floors of apartment hotels. As apartment hotels are being built in increasing number throughout other American cities and set-back architecture is also

becoming prevalent, the accompanying perspective and floor plans will have interest for many readers.

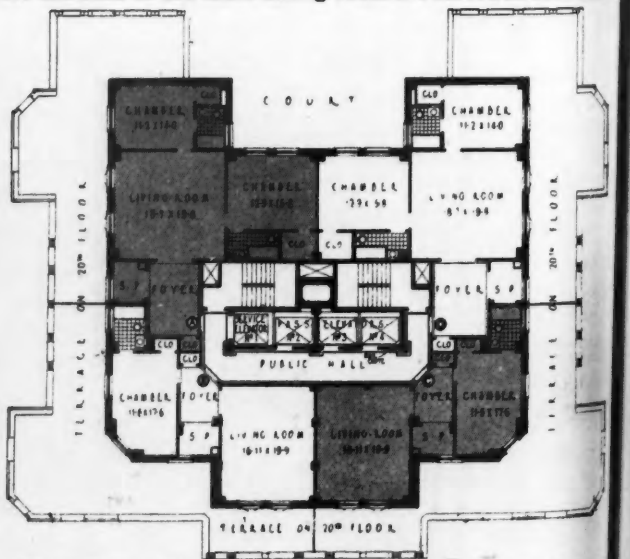
Number One Fifth Avenue, as this building is to be known, will rise to a height of 27 stories and there will be terraces at the 16th, 18th, 20th and 23rd floors. This is probably the most extensive use yet made of the terrace feature and will add to these apartments a delightfully cool, pleasant place in which to spend warm summer evenings. Here, in the cooler, purer air some 200 feet above the city pavements, guests may look over the myriad lights of Manhattan with a view which extends, in the day time, out over the Atlantic Ocean. Suites are of two, three or more rooms. Living rooms—some of them 18 by 26 feet—have casement windows and French doors opening out onto the terraces.



Architects' Perspective Drawing of Apartment Hotel at No. 1 Fifth Avenue, New York City, Now Being Built on the Former Site of Martin's Cafe, an Old-Time Favorite Eating Place on Washington Square. The architects have taken advantage of the set-back design to provide gardened terraces around four of the upper floors.



Floor Plan Showing Terrace at the 20th Floor and Room Arrangement on the 20th, 21st and 22nd Floors. The terrace allows an extensive promenade or roof garden for each of the floor suites of apartments on this floor. Meals from the kitchens of the main dining room are served in each suite.



Floor Plan of 18th and 19th Floors, Showing the Terrace at the 18th Floor. There are also terraces at three other floors. Most of the suites in this building consist of foyer, serving pantry, bedroom and bath. Meals are served in the apartments from the serving pantries.

H
have
ter"
of an
ough
struc
ing
Hom
lower
tion a
of di
The
a sub
in Fl
lected
build
Spe
Lost Ti
way, as

REAL ESTATE *and* SUBDIVISION WORK



How Good Homes Are Built in Ninety Days

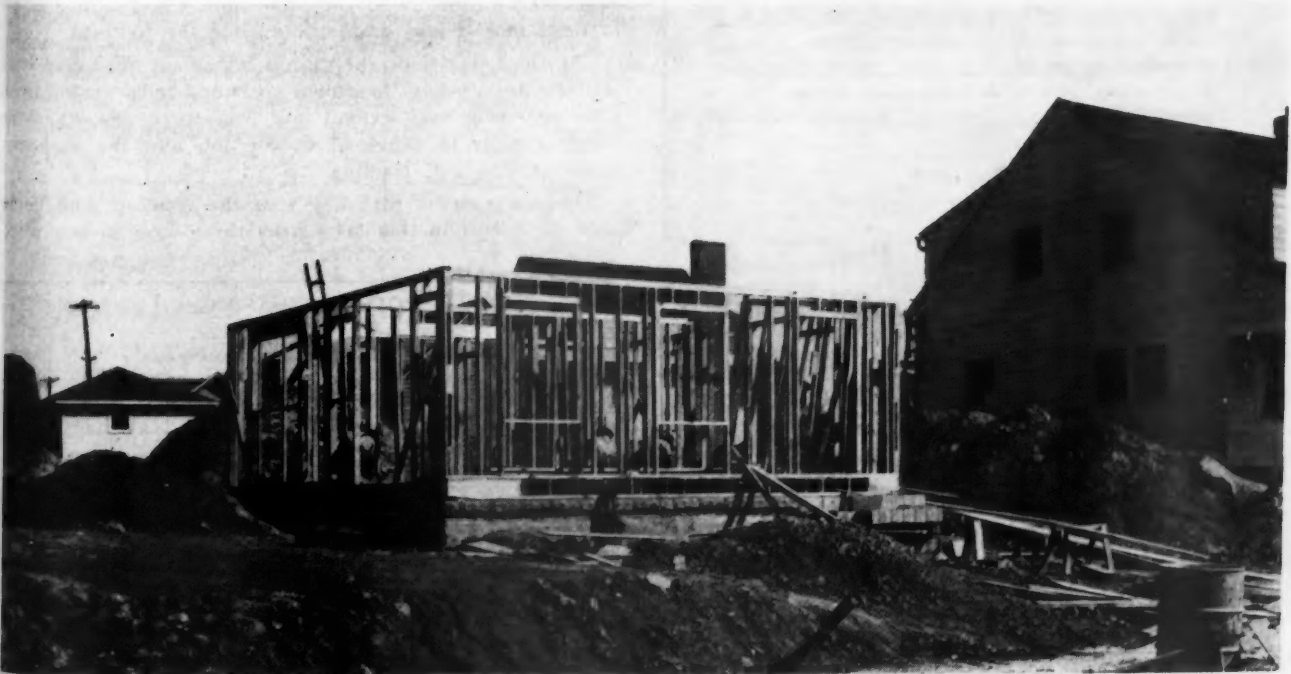
Michigan Builders Erect Distinctive Homes That Pass Rigid Tests as to Quality of Materials, Grade of Workmanship, Speedy Construction and Low Cost

HOW Roth Brothers, Inc., realtors and builders of Detroit, Pontiac and Flint, Michigan, have built their "Homes of Character" on a production basis, is a story of an efficient organization and a thorough planning of the details of construction. Builders will enjoy studying the progress chart of a Roth Home and learning how this firm has lowered its costs, speeded construction and maintained its high standards of distinctive designs.

The Modern Housing Corporation, a subsidiary of the General Motors, in Flint and Pontiac, Michigan, selected Roth Bros., Inc., as one of its builders because of their ability to



Three Executives Who Direct the Building Operations of Roth Brothers, Inc. They are, from left to right, William F. Roth, Jr., president; John E. Roth, treasurer; P. C. Thompson, in charge of production.



Speedy Construction by Roth Brothers, Inc., Is Based on Organization, Preliminary Planning and Avoidance of Lost Time at the Start. With this system the fifth day after the contract is closed on a house sees the framing well under way, as in the job illustrated here.



The Tenth Day of Construction with the House Fully Enclosed and the Work Progressing According to Schedule Laid Down by Roth Brothers, Inc.

furnish attractive designs and quality construction at low cost. That these builders have made good is evidenced by contracts signed for over 225 homes in Flint and Pontiac in the 1927 season.

"Our ability to offer the Modern Housing Corporation our 'Homes of Character' for an extremely low price and on a ninety-day basis," says Wm. F. Roth, Jr., president of Roth Bros., Inc., "is due to a capable and loyal staff of executives and to a lot of preliminary work in planning every

VENDOR OFFICE SUPT. COST.

DESIGN #2700

DATE: Nov. 1st, 1927.

JOB NO. 617 LOT NO. 15 Blk. 5 OUR ORDER NO. 1966

TO: Benson Lumber and Supply Co., Pontiac, Mich.

SHIP TO: ROTH BROTHERS, INC. ORDERED BY: Dessert

JOB ADDRESS: 614 Perry Ave. Ave. Pontiac Mich.

BUSINESS ADDRESS: 18706 Woodward Avenue, Detroit, Michigan.

WHEN: as agreed TERMS: To be charged and delivered by Job.

ROUGH LUMBER

0 - Pk. 2 x 6 - 14 ft.	Y. P.	Bond Timbers.
25 - " 2 x 8 - 12 "	"	First Floor Joists.
28 - " 2 x 8 - 14 ft.	"	"
180 Lin. ft. 1 x 2	"	Bridging first floor.
600 ft. #2 Ship-lap	"	Sub Floor "
48 - Pk. 2 x 4 - 14 ft.	"	Plates and Sills 1st. Floor.
206 - " 2 x 4 - 8 "	"	Studs
24 - " 2 x 4 - 12 "	"	2nd. Floor Joists.
25 - " 2 x 4 - 14 "	"	"
4 - " 2 x 4 - 10 "	"	9" Partition Studs.
2 - " 2 x 6 - 8 "	"	"
120 Lin. feet 1 x 2	"	Bridging 2nd. Floor.
2 - Pk. 2 x 6 - 9 ft.	"	Header over Triple Window.
3 - " 2 x 6 - 12 "	"	" 1st. Fl. Mullions.
32 - " 2 x 4 - 18 "	"	Rafters.
13 - " 2 x 4 - 14 "	"	Studs and Gable ends.
580 ft. #2 Ship-lap	"	Sub Floor 2nd. Floor.
12 - Pk. 2 x 4 - 14 ft.	"	Plates & Sills 2nd. Floor.
29 - " 2 x 4 - 12 "	"	Studs
26 - " 2 x 4 - 8 "	"	"
11 - " 2 x 4 - 14 "	"	Ceiling Joists "
6 - " 2 x 4 - 10 "	"	Rafters Rear Dormer.
23 - " 2 x 4 - 8 "	"	Frame entrance and Gable.
1600 ft. #2 Ship-lap	W. P.	Sheathing.
1160 " #3 Roof Boards	Y. P.	Roof Boards.
9750 " 5/8 Extra clear Red Cedar Shingles - Stained	W. P.	Roof. Cornice.
1 - Pk. 1 x 10 - 10 ft.	"	"
1 - " 1 x 10 - 14 "	"	"
1 - " 1 x 10 - 16 "	"	"
1 - " 1 x 10 - 8 "	"	"
1 - " 1 x 8 - 10 "	"	"

Fig. 1—A Mimeographed Sheet, Prepared in Advance for Each Style of House, Takes Care of the Rough Lumber Order, Only the Heading Need Be Filled in.

detail of construction in advance.

"When building a home in ninety days' time," he continues, "time lost at the start inevitably means confusion, conflict of operation, hasty work and unsatisfactory results when the home nears completion. We have developed a plan of work that licks the job in the first few days of construction and the rest is easy."

Mr. Roth offers his experience to other builders with the following description of procedure and illustrations of the simple records that are used to guard against delay. When a contract for a new home is received at the Roth office, fifteen things are done immediately. These are the fifteen:

1. Give the home a job number.
2. Take out building permit and get house number.
3. Make out inspection card and location sheet.
4. Give order to excavator.
5. Give order to sewer man.
6. Give order to masonry department.
7. Order delivery of steel I-beams.
8. Order out steel cellar sash from stock.
9. Order rough lumber.
10. Order frames, doors and sash (mark "Hold").
11. Order out rough hardware from stock.
12. Order gas service line run.
13. Order water tap and line to house.
14. Make out cards for Cardex file.
15. Make out specification card from contract.

With these fifteen items taken care of immediately on receipt of the contract, the way is cleared for actual work. On the first day, a power shovel makes the excavation following stakes and grades set out by the inspector. The shovel digs the sewer trench at the same time.

On the second day, the sewer man and the mason hold the center of the stage. The sewer man lays his sewer line and after his work receives the inspector's O. K. he backfills the trench. At the same time, the mason gets his footings in and lays drain tile outside the footings.

The third day finds the mason laying up his cellar wall, setting steel I-beams, basement posts and cellar sash frames. This operation may extend into the fourth day when the rough lumber is delivered to the job and the carpenter starts cutting and framing.

The start of the fifth day sees the framing well under way, an operation that lasts from three days to one week.

ROTH BROTHERS, INC. No. 1701 A
 "Builders of Character Homes"
 DETROIT FLINT PONTIAC

REQUISITION FOR LABOR OR MATERIAL

TO: Carrier Sash and Door Co. Date: Oct. 28th, 1927.

DELIVER TO: Job # 617 Lot # 15 Block # 6 Street Perry City Pontiac

QUANTITY	DESCRIPTION	PRICE	AMOUNT
1	24 x 24 2 lt Window Frame - White Pine		
1	14 x 24 2 lt " " " " " "		
1	Pr. 24 x 24 Sash Closed - Top cut 3 W - 2 H		
1	Pr. 14 x 24 Sash Closed - Plain		

In addition to frame order mailed Oct. 25th, ship the following extra frames to above job.

Fig. 2—Here Is the Requisition Form for Ordering Labor and Material. Like all forms, it carries the job number, lot and block number and street address.



This View Shows a Group of Roth Homes Under Construction. It is a part of the construction undertaken for the Modern Housing Corporation and must measure up to the standards of that organization as well as to the high standards set by Roth Brothers, Inc.

set up for operation. When the sash is set, storm doors are hung and the job is completely enclosed and heated.

When the framing is done, the lather begins his work, but he is not allowed to cover any wiring or plumbing until this work has received the inspector's approval. At this time, the shingler is at work on roof and sides and the sheet metal man is working along with the shingler. As soon as possible, the outside painter gets on a prime coat for protection against inclement weather.

The plasterer follows the lather naturally enough and a full week is allowed for the finish plaster work to dry out. No one is allowed in or about the house at this time. The trim is now ordered out and delivery made. In the installation of the trim, the floors are left until last in order to keep them clean. Coincident with the trim work, the electrician and the plumber do their finishing work.

The decorator and the electrician will usually be found working together. The floor sander comes in at this time and when he is done, the floor is filled and one coat of varnish applied. The final coat of varnish is left for the last inside

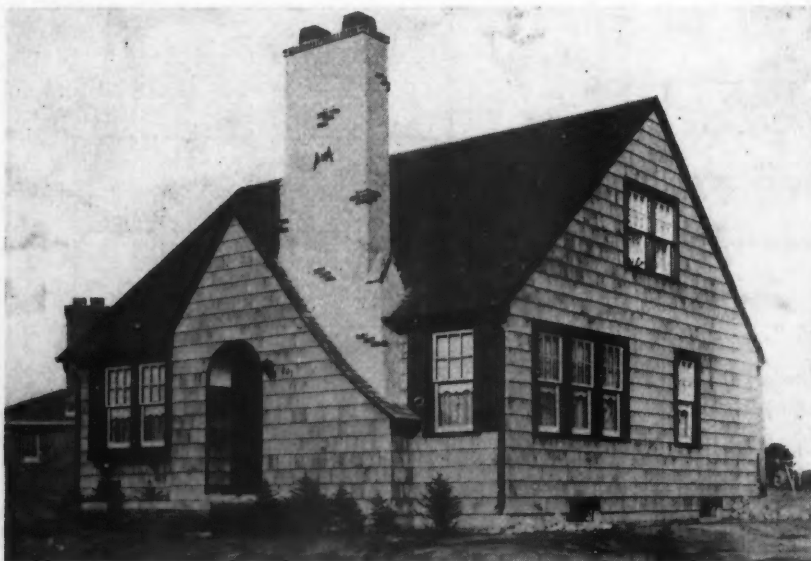


Here Is One of the Small House Series of Designs Which Roth Brothers, Inc., Is Prepared to Build on Short Notice. It is listed as design No. 2804.

operation when "Keep Out" signs are posted.

Every Roth home is under daily supervision by the inspector. Should the inspector find work not up to the Roth standards, he places a red ticket on the work and this ticket cannot be removed or other work proceed until the faulty work has been remedied. This red ticket is a form such as illustrated in Fig. 4, which is furnished in triplicate—one copy held by the inspector, one sent to the office and one put on the job. This system of inspection not only insures the high grade of work that Roth Bros. demand in all their construction, but it saves that trouble and added cost which results when defects are not reported until the home is near completion.

The illustrations which have so far been given describe the control which is provided to keep construction moving smoothly and swiftly. A simple but complete system of costs is also maintained which allows this firm to know exactly where they stand at any time in relation to activities that affect profit and loss. Cost sheets are kept posted to the minute and are a part of the regular bookkeeping system. These sheets tell at a glance the actual costs on every job and show at a glance any variations from the original estimates.



Design No. 2700, One of the Most Popular Roth Designs, Is Built with Varying Exterior Finishes. Material lists for these designs are all figured in advance and can be ordered immediately.

(Continued to page 166)

Insulation's Part in Modern Construction

An Interview with D. Knickerbacker Boyd, F. A. I. A.

By LEICESTER K. DAVIS

INSULATION is one of the latest and most important of the newer structural adjuncts, and it is still new enough to provoke a lot of really desirable inquiry on the part of men who are called upon to specify and apply it.

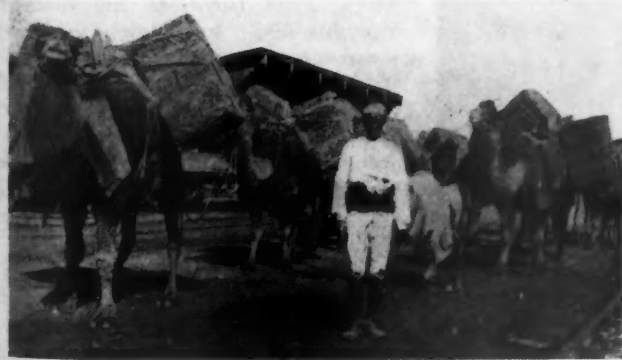
The theory of insulation is probably as old as the hills. The basic necessity for a material that should heat-seal structures designed and erected for a wide variety of uses and occupancy has long been appreciated by architects and builders. But the difficulties of adaptation to economical structural requirements have been, as they are today, somewhat of a retardant to universal acceptance—a drawback that apparently is being overcome by the efforts of manufacturers to produce an insulating material that shall be architecturally correct and structurally sound.

Insulation needs no brief to support its use. The properly insulated building, with relative factors of doors and windows cared for as regards weather-tightness, has, to my mind, become a positive essential. The value of its effectiveness in preventing the passage of heat units, both winter and summer, is an obvious fact that needs no elaboration to men whose business is the practical side of building construction. Insulation is here, and it has come to stay.

What puzzles the architect, builder, owner, real estate developer, and even those organizations which lend financial support to building enterprises, is how to secure the benefits of good insulation and yet keep its first costs out of what might be construed by some to be the "luxury columns." And that, also, is the problem of the maker of insulating material—to produce a heat barrier that can go on and up with the job, without adding an unjustifiable additional item to material and labor costs.

With true American resourcefulness, the makers of insulating products have gone at their problem. Their quest has led them to utilization of varied sources of raw supply. In the quilts, fills and boards, seaweed, wood pulp, wheat straw, sugar cane fibre, corn stalks, cork, gypsum, flax, asbestos, mineral wool, cattle hair and other animal, vegetable, and mineral materials have been incorporated in various ways to form flexible, rigid, semi-rigid, and granular types. Some of these materials also serve as sheathing on outside studs and rafters, and as plaster base for interior walls and ceilings. These in general are sturdy structural insulating boards, pressed from the fibers of vegetable growths possessing the all-important cellular structure that forms the dead-air cells which so effectively check the entrance and exit of the elusive B.t.u.

Structurally, of course, an insulating board must provide much more than insulating value. Eliminating as it does the use of sheathing and lathing, it must approximate their



Caravan Transportation of Bales of Licorice Root Ready for Shipment Overseas, at a Rail-Head in Asia Minor.



A Donkey Train Loaded with Licorice Roots Used for Insulating Boards, Passing Through the Picturesque Streets of Toledo, Spain, on the Way to a Baling Station.

strength, endurance, and resistance to construction strains and effects of moisture, climatic changes and time.

The material used in the insulating board, as well as the method of its manufacture, must be developed with these structural requirements borne in mind. The search for it has brought to light the surprising values of by-products never before dreamed of.

One of the latest effective additions to the insulation field is licorice root. Licorice grows in a state of semi-cultivation in a geographical belt that traverses wide and easily accessible areas of Spain, Italy, Turkey, Syria and other parts of southern Europe, Asia Minor, and the Far East. The roots are dug in an enormous supply by picturesque armies of native labor, working under carefully systematized control that insures an unbroken flow of tonnage from the digging fields to stations where the seasoned root is cured and baled for shipment to this country.

The roots of this hardy perennial plant—toughened and with dense, wiry, resilient, cellular structure given by four or more years' undersoil growth—seem to be remarkably endowed by nature with those inherent properties essential to material for boards that must perform structurally for insulation purposes.



Subdividers Prepare Code

A RIGOROUS code of proper business practice in the development and sale of subdivisions has been adopted by the Subdividers Division of the National Association of Real Estate Boards. This code will be brought before the board of directors of the Association for its endorsement at the coming quarterly meeting, to be held in Chicago in April. If approved by the board of directors it will come for approval before the full membership of the association at the annual convention to be held in Louisville, Ky., the week of June 18.

A Fire Resistant Residence

Toledo Contractor Uses Metal Lumber, Concrete and Hollow Concrete Tile in Economical Home Construction

FIRE insurance is a wonderful thing. It has saved many a man from financial loss and even from financial ruin. It has saved many a family from disaster and poverty. But the money it supplies can never buy back lives or personal treasures which have been lost in the destruction of a home. The only sure protection for those is a house that cannot burn. In Toledo, Ohio, there has recently been built a house which shows some really practical progress along this line.

C. H. Dexheimer, a well-known contractor there, erected this house to demonstrate that fire-resistant construction need cost no more than any other. Other builders have dreamed of fire-resistant homes and thousands of people have desired them, but the high cost has always been a stumbling block. Mr. Dexheimer believed that by using the right materials he could overcome that obstacle and set out to prove his beliefs.

The home he built would meet the requirements of the most rigid fire-preventionist, yet it cost no more than it would have cost had it been built of less fire-resistant materials. It may be considered a real achievement in modern home construction. Ever since it was completed it has attracted the attention of contractors, architects and home builders.

The general approval of all these people is indicated by the fact that Mr. Dexheimer is now busy taking care of new orders which it has brought him and is also planning an extensive program of similar buildings. This promises to be a popular type of construction because its fire safety, simplicity and economy have an almost universal appeal.

Absolutely no wood was used for structural purposes.

The so-called metal lumber replaced it with all joists, studs, and rafters of steel. These were purchased cut to length and punched on the job with a small hand punch. Connections were securely bolted, assuring strength and rigidity.

The steelwork is supported by exterior walls of duntile hollow concrete masonry units. These units, which have a single horizontal opening and so afford a full mortar contact face, extend up to the ridge of the building. There is nothing in them that can burn or deteriorate, so they form a permanent

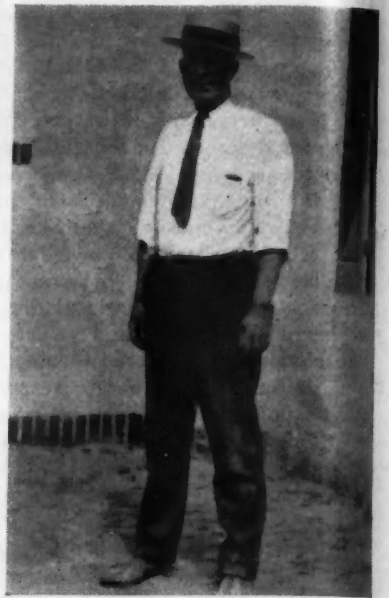
base for the steel joists and rafters. The partitions are of steel studs covered with metal lath and plastered, making a simple and effective inside wall.

One of the most important protective features of this house is the floor and roof construction. Solid concrete on both the first and second floor and a concrete sub-roof eliminate the possibility of fire spreading from one level to another. These were easily put in.

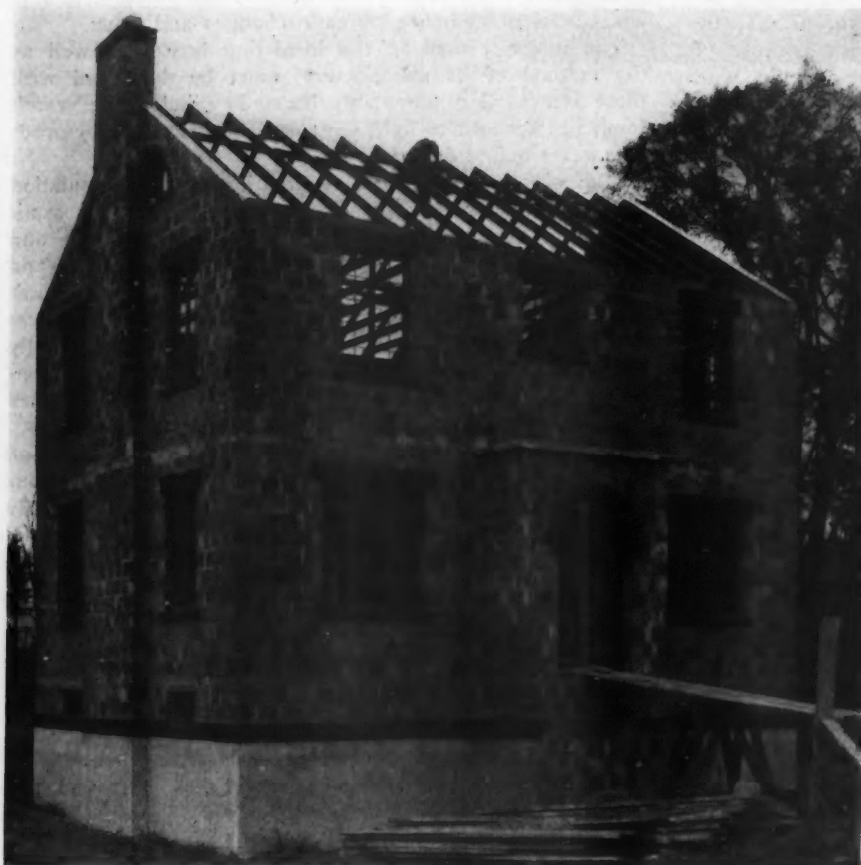
Metal lath was laid over the steel joists and semi-wet concrete spread over it and tamped to a thickness of two inches. Sleepers were imbedded at intervals as a nailing base for oak floors. The sub-roof was installed in much the same manner. It not only seals and makes the top of the house firesafe, but acts effectively as insulation. The multi-colored clay tiles are laid directly on top of this roof.

Thus the main parts of the house, floors, walls, partitions and roof are incombustible. In addition the stairs are of concrete and even the baseboards and mouldings are attractively worked out in metal lath and plaster. The steel casement windows fit into special grooves in the wall of concrete duntile and are sealed in with mortar, avoiding any use of wood and making a weather tight joint.

Although the use of steel and concrete in this manner is not as expensive as is generally believed, Mr. Dexheimer says he could not have offered this house at the low price which he did had it not been for the saving he was able to make in the wall construc-



C. H. Dexheimer, of Toledo, Ohio, Well-Known Contractor and Builder of the Fire-Resistant House Illustrated on These Pages.



The Fire-Resistant House Under Construction. This view was taken just before the concrete sub-roof was put on over the steel rafters, completely enclosing the house in incombustible material.



Looking Up at the Steel Construction of the Second Floor. Note how the steel beams are fitted into the bearing walls of hollow concrete tile.

a simple design, but this fire-resistant form of construction is in no way limited to simple designs. It is perfectly flexible and may be used for any type of residence. In the long run it should prove inexpensive. Insurance premiums are reduced to a minimum, as are also the bills for depreciation and upkeep. There is nothing about the construction to wear out or deteriorate. The rigid walls, floors and partitions permit no warping or cracking of stucco and plaster. The occupants of the house have unusual assurance of their safety from fire.

✦ E. H. HUNTING

The American Airports Corporation, 527 Fifth Ave., New York City, has published a booklet announcing its organization for the purpose of the "Location of Sites, Planning and Designing, Supervision and Management of Airports."



The Steel Casement Windows Were Fitted Into Grooved Tile and Sealed with Mortar.



Here May Be Seen the Steel Construction of the Second Floor Ceiling and the Roof. A two-inch sub-roof of concrete was placed on the steel rafters.

tion. The hollow concrete units which he used have full mortar beds, making laying easier and reducing the amount and cost of labor.

Plaster and waterproofed stucco were applied directly to the wall, eliminating furring and lathing. Insulating material was considered unnecessary because of the dead air spaces in the concrete blocks. These features, Mr. Dexheimer, says, saved approximately \$1,000. The walls of this house have been reported as being perfectly satisfactory. They are strong and rigid to the very top and have always been dry and warm. The house is said to be unusually easy to heat.

For this first trial Mr. Dexheimer used



This Shows How the Concrete Floors Were Laid Over the Metal Lath with Sleepers Imbedded for Nailing Down the Hardwood Floors.

Most Efficient Garage Design

LESTER MERRITT DAVIS, Architect

DISTINGUISHED architects who have traveled abroad are credited with the statement that the Casey Garage, at Scranton, Pennsylvania, is the finest, most modern and best equipped they have seen anywhere.

The building is of the reinforced concrete beam and girder type of construction, with rectangular columns going down 58 feet to bedrock. It is of the patented ramp type and its dimensions are 120 feet front by 157 feet in depth. It is four stories and basement in height, or, altogether, nine levels. All of the building except a 50-foot depth in the front is used for garage purposes. The 50-foot space is divided into commercial stores, and rented. The building is faced with architectural terra cotta and textured face brick. It is designed for the addition of future stories, the present roof being constructed on a dead level. When future stories are added, the present roof will become a floor, as it is finished ready for that use. It is now insulated with three plies of insulating lumber, over which is applied a 20-year-bond built-up roof.

When the building is finally completed it will have a capacity of 1,000 cars. At no time is any car parked in front of another car, which allows immediate access to any one of the 1,000 cars.

There is only one entrance and one exit to the building, making it necessary for all cars to pass a given point. The entrance is 22 feet wide, and permits cars to pass each other going in and out. The ramp leading up is directly in front of the entrance. The entrance is divided by traffic mounds, which are always lighted, and is equipped with In and Out signs which are also lighted. The doors are heavy

and are electrically operated. They contain as much glass as is possible consistent with strength.

All cars are checked in and out by electric time clocks. There is a button at the desk, and when a car is assigned to a certain floor a bell is rung on that floor to notify the attendant there that a car is coming.

Telephone communication is provided all over the building.

A hydraulic gasoline and oil system provides gas and oil on every floor. A pneumatic tube cash carrying system connects all stations with the main office, thus exchanging slips and money without the necessity of walking.

There is a passenger elevator of push button type to take passengers up and down, also a stair tower, and facilities for ladies as well as men. There is a large waiting room which is furnished and equipped as a living room, where people may wait for their friends or their cars.

The building is patrolled by 20 watchmen's stations, all of which register on a central tape in the main office. The gasoline system is underneath the basement floor, and the meters giving the number of gallons in the tanks and what is drawn off are at the manager's desk in his office. The electric master clock, also, is in this office.

A modern fire alarm system is installed. When the first alarm is given, it rings in the building. If it is discovered that the blaze is beyond control, a second alarm on the same system brings out the fire department.

A large ventilating fan is placed on the roof, and a central shaft with ventilating louvers takes out the smoke and gases from all floors. An auxiliary fan ventilates the stores, offices, and toilet rooms independently of the large

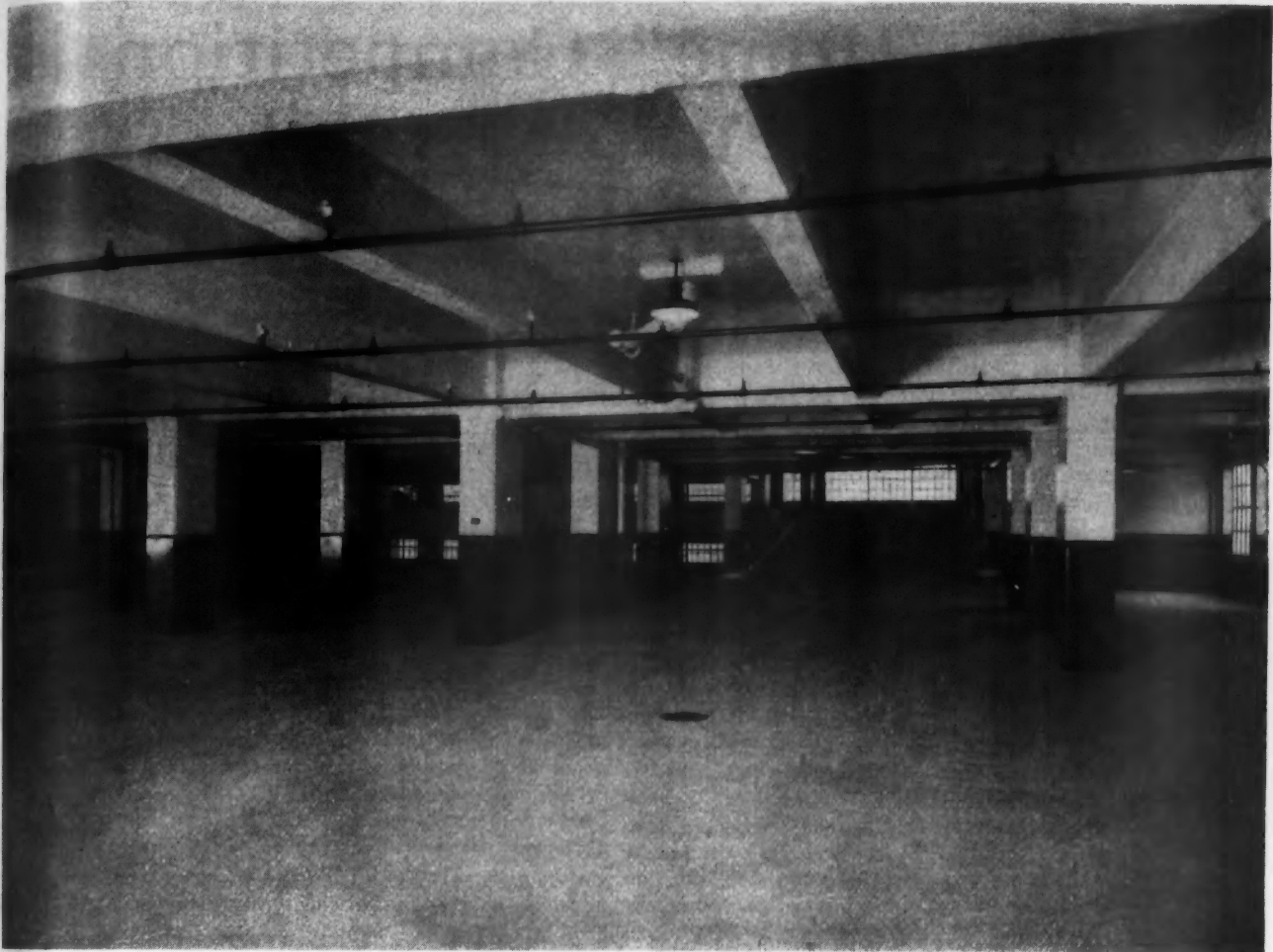


Built for Extension by Additional Floors. This Most Completely Equipped Garage at Scranton, Pennsylvania, Will Ultimately Have Capacity for 1,000 Cars. Columns go down 58 feet to bed rock and considerable coal was taken out of the excavations.

There

fan. T
heat n
require
provid
Ther
where
first c
then tu
the cha
ing out
water t
an alar
automa
of it.

Ground



There Is Room for the Parking of Over 100 Cars on Each of the Upper Floors of This Carefully Planned Garage. While the building is fireproof, elaborate precautions are provided against destruction of stored cars by fire.

fan. The heat is vapor, and the system is arranged so that heat may be supplied the stores and offices when it is not required in the garage proper. Thermostatic regulation is provided for all radiators.

There is a steam-equipped washrack on the fourth floor where 15 cars can be washed at one time. The chassis is first cleaned by a steam-and-oil process, and the car is then turned over to the finishers, who sponge the body and the chassis again. This makes the finest automobile cleaning outfit that is known. The boiler supplying steam and water for this purpose is automatic and is equipped with an alarm so that when the low-water mark is reached it automatically sounds a gong and the attendant takes care of it. This gong is placed on the fire alarm system, so

that when the electricity is off, it does not interfere with the gong operating.

The only woodwork that is used in the building is the door and window framing in connection with the store fronts. Everything else is either steel, concrete, brick, or some other non-combustible material. All the glass partition work surrounding the offices and all glass in the main driveway and throughout the building, is of wire-glass construction, thus minimizing the spreading of flames in the event of fire. The building is equipped throughout with an automatic sprinkler; and there are eight 2½-inch hose connections, making two pipe standards to each floor. Each floor is equipped with a fire cabinet which contains chemical, axe, bars, hose, etc. There are approximately 150 fire-foam chemical tanks provided at convenient places.

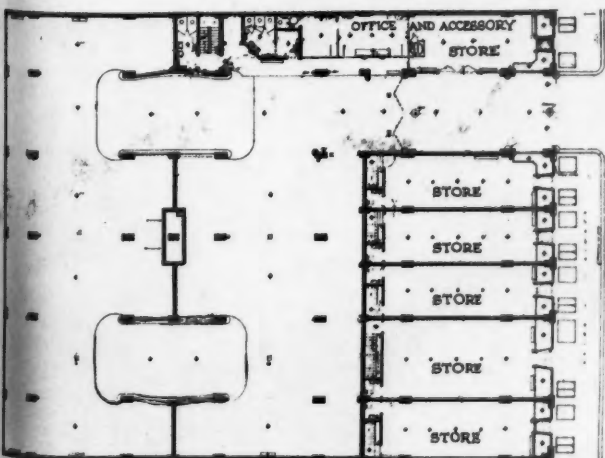
The ramps in the garage are scored so as to afford a grip to the wheels as they climb the inclines.

All columns are so situated that they do not interfere with the placing of cars, and are protected with sheet iron casings about 4 feet high.

The water for washing cars is provided by a steam-heated boiler in the basement with an auxiliary gas heater in connection with same. If the steam fails to keep the water at the desired temperature, the gas will automatically bring it to that temperature and shut off, leaving the steam to keep it at that point. Water is supplied throughout the building by copper pipes and air for pumping tires on every floor.

The entire building is electrically lighted, and emergency lighting equipment is installed.

There is also an auto-call system in the office for the calling of employes if they are wanted on the telephone or in the office. This system has proved to be one of the most valuable mechanical features of the building.



Ground Floor Plan of Casey Garage Showing Stores, Parking Space, Office and Ramps.

“Future Home” Competition is Training Future Architects and Builders

DURING the past two months the 19,780 pupils taking drafting in the twenty-four senior high schools of Chicago, have been engaged in a competition under the intriguing slogan, “Plan Your Future Home.” The eighty-nine teachers of mechanical drawing and the principals in the various high schools, under the leadership of Albert G. Bauersfeld, director, have taken hold of this project with a great deal of enthusiasm. The weekly school papers in the high schools have carried announcements of the progress of this competitive architectural drawing exhibit. Each high school will have its preliminary exhibition either the last week of March or the first week in April. Prominent architects, living in the community of each high school, are serving as judges for making the awards of first, second and third places in each of the four distinct classes of the competition. The final exhibition will be held in the Board of Education School Administration Building, 460 South State Street, during the first week of April, where the winning drawings of each high school will be judged by prominent architects for the final competition.

All of the pupils taking architectural drawing in the Chicago high schools will all not necessarily become architects or builders. Some of them, however, do, and the foundation work laid in the high schools can be continued

with four years of advanced study in colleges offering training for architects. However, most students in the high schools are potential home owners, therefore, an elementary training in house planning is a valuable experience which the boys and girls taking architectural drawing in the Chicago high schools are receiving.

It is assumed that all high school pupils are potential home owners, and that they should know how to read and be able to make working drawings of house plans.

It often happens that adults set out to build homes without any knowledge of the preliminary steps required to plan a home intelligently. These adults consult architects and contractors, and have plans and specifications prepared according to rather hazy verbal descriptions of what they require. They are unable to read plans of houses drawn to scale, and consequently when building operations are under way, many changes are requested, which pile up extras on the original building cost estimate. When architects and contractors have customers that can read the working drawings, and are able to visualize sizes and proportions of the rooms, halls and so forth, much more satisfactory business dealings can be carried on.

The picture in the mind's eye of a customer, who has no training in reading architectural plans, is often entirely

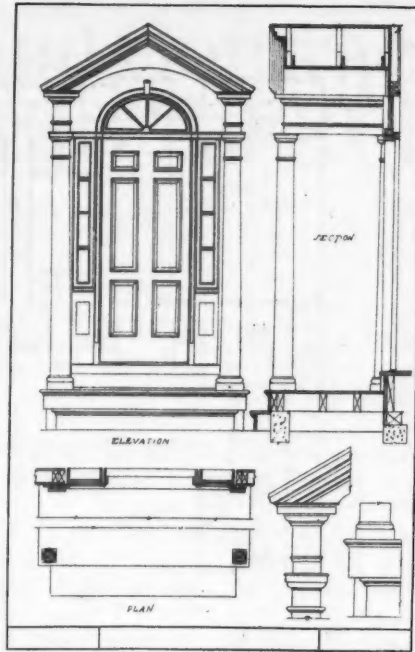


Architectural Drawing Class at Crane Technical High School, Chicago.

different from that which he is able to describe in words to a designer of a building. When the foundations of a building are laid, the customer feels that he is going to have a tremendously large home. Just as soon as the frame work has been raised, and the partitions placed, this building seems to shrink in size, and he begins to want to make changes in shifting partitions, doors and windows. The work of the architect and contractor now becomes difficult because all such changes require additional material and labor, which must be paid for as extras. If a home builder knows exactly what he wants, most architects and contractors are anxious to give satisfaction.

The idea of planning a future home, and working through all the details necessary to make a complete working picture is making a strong appeal to the boys and girls who are taking architectural drawing in the senior high schools of Chicago. Here is a project problem which is real, and which stirs the imagination of these young draftsmen to attempt something that is worth while. Fathers and mothers at home are being drawn into conferences, and much discussion is being developed in the family council around the dinner table.

This city-wide program for the Chicago Senior High Schools is being offered in four groups or classifications: Class A—A complete set of competitive drawings for a



Detail Plate Prepared by a Chicago High School Lad.

six-room house, to be prepared by senior students taking architectural drawing. Class B—Complete set of competitive drawings for a five-room bungalow, to be prepared by junior students taking architectural drawing. Class C—Competitive drawings of building details to be prepared by sophomore and freshmen students taking architectural drawing. Class D—Competitive drawings on the rendering of the Classical Architectural Orders by junior students who are specializing in this particular field.

A central committee of teachers has written up specifications for each of these four classes of architectural drawings. Copies of these specifications have been placed in the hands of all drawing teachers, requesting them to invite their pupils to enter this competition, which will be in the nature of a project problem, carried on in the classes in addition to the regular course of study.

In order that each high school may receive the benefit of increasing emphasis on architectural drawing, a preliminary competitive exhibition will be developed, which will be mounted in the corridors of the school, and given publicity through the school paper. Prominent architects of the city will be asked to judge the relative merits of these drawings, and awards will be given for first, second and third places by appropriate

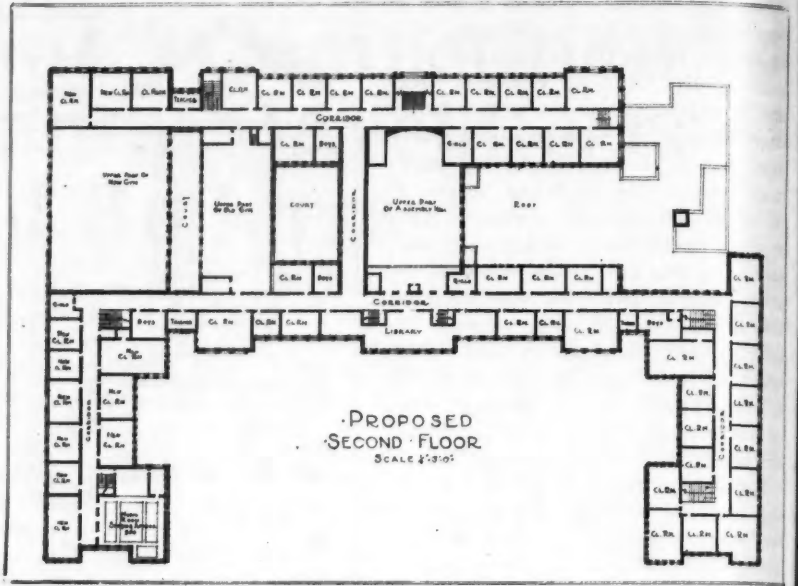


SIX ROOM ENGLISH HOME

Beautifully Colored Perspective Sketch Prepared as a Regular Class Exercise by One of the Pupils of Arthur A. Woerner, Instructor in Architectural Drawing, Nicholas Senn High School, Chicago.

ribbons of various colors.

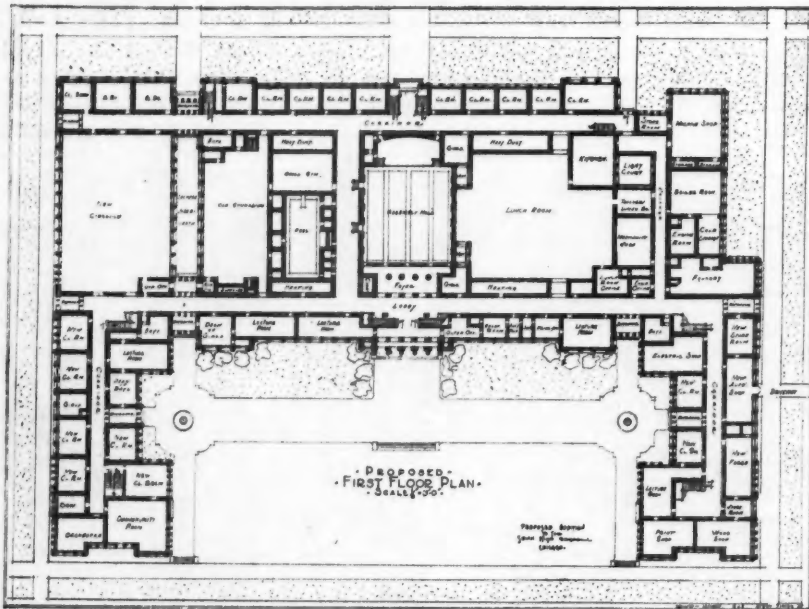
A great deal of interest and enthusiasm is being developed in the Chicago Senior High Schools as a result of this program of planning future homes. In order to simplify the problem for these neophyte architects, suggestive sketches have been sent out for a typical six-room Colonial residence. These sketches need not be followed in toto. The doors, windows, and so forth, of these sketches have been purposely omitted in order that each pupil may have the problem of placing these details according to the way they propose to arrange the furniture in each room. In order to plan a room intelligently, each designer must visualize where the bed in a bedroom should be placed; where the gas range and cupboards in the kitchen should be placed. If such details are neglected, one cannot intelligently plan the openings of a building. It often occurs that an adult will plan an attractive living room on paper, but when the building is finished, the doors and windows have been so poorly located that there is no proper location for the piano or the davenport. The instructors of architectural drawing are requiring their students to think



Colonial residence as suggested in the accompanying sketches. However, many combinations may be made by changing the location of the rooms, the hall, the vestibule, the stairs, the doors and the windows.

All pupils entering this competition will be required to make a complete set of plans using a scale of 1/4 inch to the foot. They will be required to make one side and one rear elevation, and also a section of the building, showing all ceiling and roof heights. Large size details of the entrance to the building, or some other particular exterior feature, will be required; also the fireplace, and other important interior details may be shown. To make the plan complete, a plot of the building lot will be drawn showing the location of the house and the garage on the lot, and suggesting other developments of the property, such as trees, shrubs, lawn, garden, walks, and driveway, which will add to the completeness and attractiveness of the residence, and which will be in accord with the requirement of a person of modest circumstances.

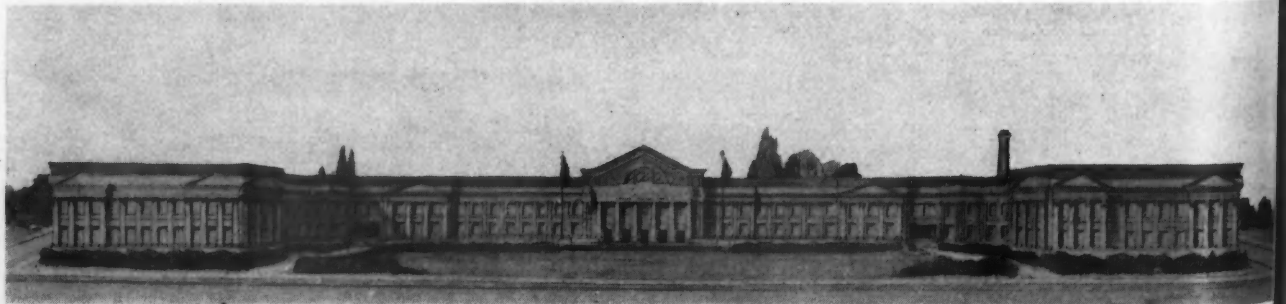
Members of the American Institute of Architecture are co-operating in this program of planning future homes by high school students. They are looking fifteen years ahead to the time when these inter-



of these important details in planning their future homes.

A suggestive sketch of a five-room bungalow has also been prepared, which may be accommodated on a standard city lot. This problem is somewhat easier than the two-story

ested boys and girls will become intelligent customers, who will wish to build homes that are carefully thought out, and which will adequately serve the needs of a typical American family.



One of the Problems Tackled by the Architectural Drawing Class at Senn High School Was the Making of Drawings to Show How to Relieve the Present Over-crowded Conditions at That School. The three floor plans were drawn at a small scale, and the perspective of the elevations rendered in color. The students also made a clay model of the old as well as the new building. These were submitted to the Board of Education's Architect as suggestions

Engineers and Contractors to Bring Ocean Traffic 2,000 Miles Inland

AS one of the great construction projects of the century now actually in prospect, the St. Lawrence Deep Waterway improvement is of vital interest to the building industry, although much of the work will fall outside the scope usually covered by this publication.

The negotiations between the governments of United States and Canada have reached the stage where the actual starting of this great enterprise can be seen for the near future. The newspapers are full of references to the engineering problems to be solved and to the economic benefits to be derived from this proposed bringing of ocean traffic into the heart of the continent.

Believing that AMERICAN BUILDER readers will want to have before them a clear analysis of what this great engineering enterprise really involves we present below a general and index map of the Great Lakes-St. Lawrence River system divided into sections, as prepared by the Great Lakes-St. Lawrence Tidewater Association.

This map gives a general history: (a) Of the Great Lakes-St. Lawrence River navigation system. (b) The portions that have rather automatically been developed and financed by two countries. Also there is attached brief, but historically correct information concerning each section.

Section 1—Head of Great Lakes—Duluth, Superior and Chicago—to Lake Erie entrance of Welland Canal—about 1,000 miles.

In this section are found the rivers—St. Marys, St. Clair and Detroit—connecting the several lakes.

The improved channels in these rivers cross and recross the International Boundary Line at several points.

In the improvement of these connecting channels, irrespective of the International Boundary Line, and the construction of four parallel locks at Sault Ste. Marie, the United States has spent approximately \$45,000,000.

Canada's investment in this section—\$5,560,000—is represented by one lock at Sault Ste. Marie.

Should the United States continue its policy of progressive deepening in these channels, the cost to deepen to 27 feet, including a new lock at Sault Ste. Marie and compensating works in the St. Clair and Niagara Rivers, is estimated to be \$65,100,000.

Section 2—Welland Canal—25¾ miles long—connecting

Lake Erie and Ontario, being constructed entirely by Canada, with 7 lift locks and 27 feet deep, when completed in 1930, Canada will have expended \$115,600,000 in its construction.

The Welland Ship Canal represents the fourth construction of the link across the Niagara peninsula. All of which have been built with solely Canadian money.

Section 3—Eastern end of Lake Ontario to Ogdensburg, New York, and Prescott, Ontario—64 miles.

In this section, which is designated as the Thousand Islands Section, the United States has recently requested Canada's permission to make navigation improvements.

The contemplated improvements will, when the Welland Ship Canal is completed in 1930, permit the highly economical lake carrier to proceed to within 120 miles of the ocean before unloading.

If deepened to 27 feet, which it is estimated will cost \$1,500,000, this section becomes an integral part of the St. Lawrence Seaway.

Section 4—International Rapids Section—Ogdensburg to Cornwall—51 miles.

At present navigation is carried around a series of rapids in this section by four canals, 14 feet deep—Galops, Rapide Plat, Farrans Point and Cornwall Canals.

The plans of the Joint Board of Engineers on the St. Lawrence Waterway, recommend the construction of a dam or dams, from shore to shore, with locks, flooding out the rapids and forming deep, slack water navigation.

The cost of this method of improvement, providing channels 27 feet deep, is about \$125,000,000.

Section 5—From the end of the International Boundary Line to Montreal harbor—68 miles.

This section lies entirely within Canada.

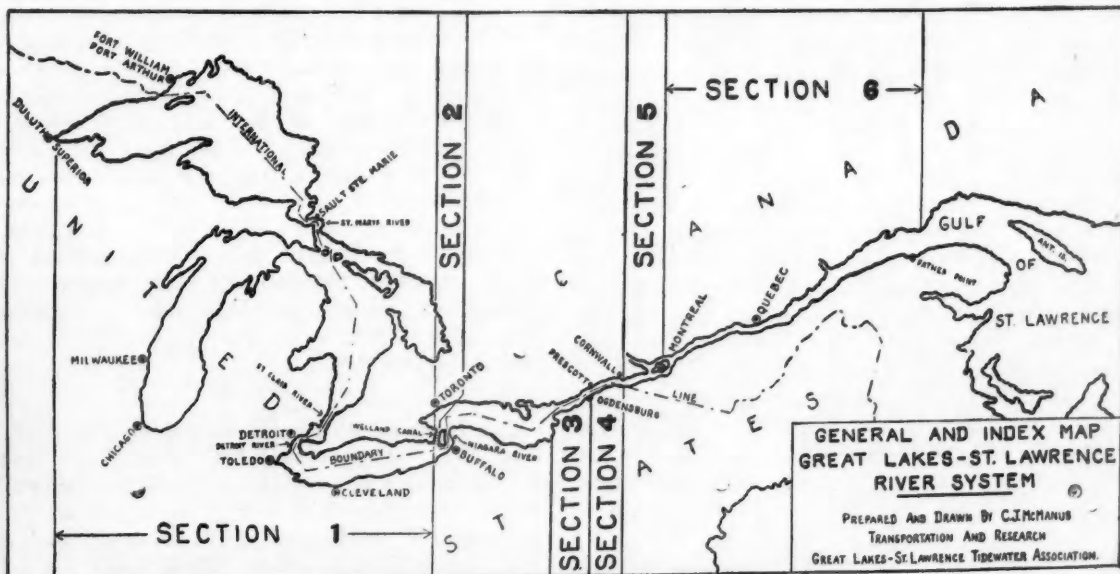
A series of rapids are now overcome by two 14-foot lateral canals—Soulanges and Lachine Canals.

In the report of the joint board of engineers, three plans for improvements are presented.

The cost to provide navigation, 27 feet deep, ranges between \$92,000,000 and \$125,000,000 according to plan.

Section 6—Montreal Harbor to Father Point—340 miles.

In providing a ship channel with a minimum depth of 30 feet throughout this section, Canada has spent approximately \$30,000,000.



DETAILS *f* HOME BUILDING



Modified Bungalow Types

By V. L. SHERMAN,
Lewis Institute of Technology

IF the western bungalow appeared too rugged for town adoption in the eyes of many people, its extensive use and gradual adaption to surroundings has finally led to a freer use of American ideas than would have been at all possible through more expensive types. It would be needless to point to each of the developments to show that the bungalow as a purely one-story house has led the way to the greatest development of the American type of home.

Being a modest home, generally the owner or builder has felt no great inclination to turn the entire responsibility of design to an expert. He is probably putting in more capital proportionately than a very wealthy owner would put into a much larger place. Unlike the rich man, he is more inclined to suit his personal taste and less inclined to value that of the outside world. And, too, he is taking less risk in pretensions. We find then that the moderate owner prepares for a comfortable home, avoiding any meanesses and superfluities, and arrives at a house that is one of a thousand in variety, but consistent and pleasing. The wealthier owner is less likely to leave the paths of the old-world.

If you go back 35 years it is very easy to note, by the contrast to modern design, just what effect the bungalow has had. First, it will be noted that height was a great point with the old-timer's of the "Queen Anne" period. Then the number of corners, undercuts, cupolas, turrets, was astonishing. There was a great distinction between the "house" and the "cottage," before the bungalow and the automobile.

The bungalow seems to have cleared the air so far as American homes are concerned. They are not cottages, they are not houses of story-and-a-half or two-story height. They are single-story, comfortable, tasteful homes of people who like to live as individuals, in comfort, but independent of help to run the house, and with enough available first-floor space to prevent congestion. It is a fact that of two homes of equal floor area, one a bungalow and the other a two-story house, the former is far more comfortable in point of individual privacy. Bed rooms are not so remote and are very often used much as was the old-fashioned sitting room. They are often more pleasant, opening into the yard or garden, and being more inhabited are more habitable.

In Fig. 1 is shown a bungalow based on the Georgian designs, but while fairly evenly divided it relaxes enough to accommodate any reasonable plan. The roof is low with small dormers for ventilation of attic storage space. The sketch, Fig. 1, shows quite a contrast to that in Fig. 2. The latter is not so elastic in arrangement, has a steeper pitched roof and a heavy chimney. The chimney

and the snubbed gables are two particulars which over-emphasize the symmetrical entrance side of the house. In the New England cottage of olden times five or six flues from the two sides of the entrance hall might be led through an arch to one large chimney which was almost invariably placed at the center of the house. And snubbed gables emphasize perspective enough apparently to increase the roof size. This is not especially desirable.

Figure 4 shows a type which is not only popular but possibly the best of all in bungalows. The outline is very simple but graceful. The height comes much nearer the standard of the Greek than would a two-story house, hence the small porch, pillars and porch roof have no need of extra wall embellishments. The windows rise from the floor level which greatly increases the charm of the room within if that is reasonably large. Compare the appearance of porch depth in this to the one in Fig. 3.

In Fig. 5 is shown what is to me the best of all the bungalow's virtues. Surely no one could accuse the architect in this case of leaning toward any particular style or mode. The place is primarily for certain features of accommodation. The roof is nothing in particular. The chimney goes to the fireplace. But withal it is a bungalow type with character and soundness, and so much better than its two-story cousin. Of stucco or brick and with a slate or tile roof this bungalow would present a far more natural appearance in an American town than would some homes of foreign models of equal cost.

Figures 5 and 6 may show what is meant by liberality of design. Fig. 6 has really nothing in common with Fig. 5. While less expensive to build, the ideas presented are much less conservative. Still there are many who prefer this type in their desire to get away from bungalows of the stock type with the hip roof. Perhaps the style shown is a trifle exaggerated, but not so very much. It is, however, something of a relief from the monotonous. It is hoped that these summaries of the cottage-type, western, and modified bungalows will serve to show that domestic architecture in America has its own gait to go and is going it to better purpose than many suppose. Comparing these types with the European home of comparative cost there is small doubt but what this country is far ahead in real and apparent values.



The Norman W. Henley Publishing Co., 2 W. 45th St. New York City, has published "Ship Model Making, Vol. III, How to Make a Model of the U. S. Frigate Constitution." This is the third of a series by Captain E. Armitage McCann, all published by this company and containing complete working drawings. Price \$2.50.

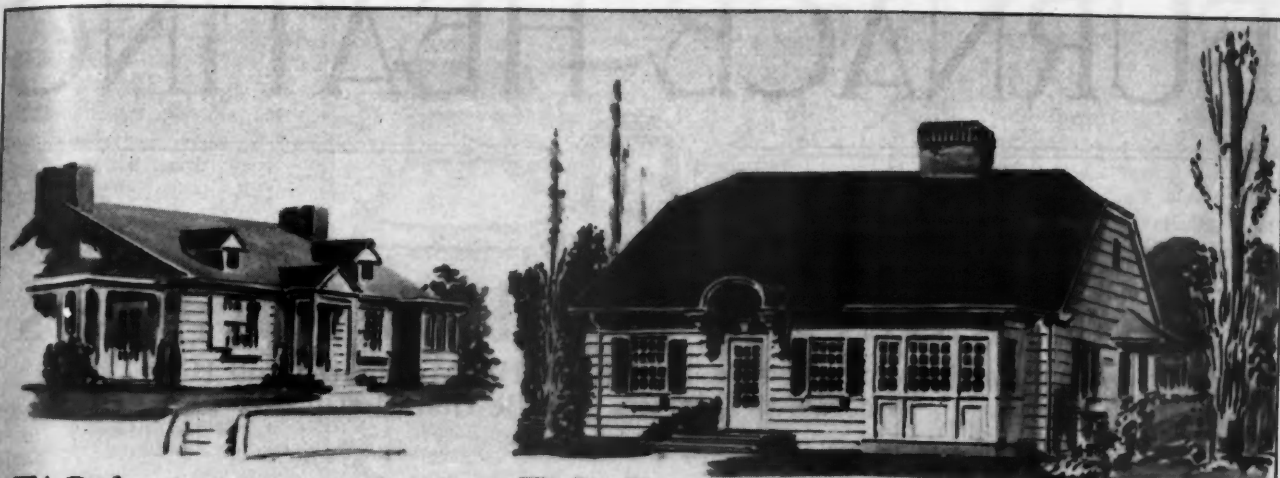


FIG. 1. A BUNGALOW OF THE MORE FORMAL GEORGIAN LINES. COMPARE THIS PLAIN WHITE TO THOSE SHOW IN FIGS. 2 AND 4.

FIG. 2. IN THIS CASE THERE IS ENOUGH SYMMETRY TO MAKE SNUBBED GABLES AND OFF-SET CHIMNEY VERY NOTICEABLE



FIG. 3. THE ARCHED PORCH ROOF IS LESS SURE OF FAVOR ON A BUNGALOW.



FIG. 4. EVEN THE FINEST OF HOMES MAY BE OF THE BUNGALOW TYPE.



FIG. 5. ALTHOUGH QUITE IRREGULAR IN GROUND-PLAN THE BUNGALOW MAY HAVE CONSIDERABLE FORMALITY. DIGNITY MIGHT BE A BETTER WORD

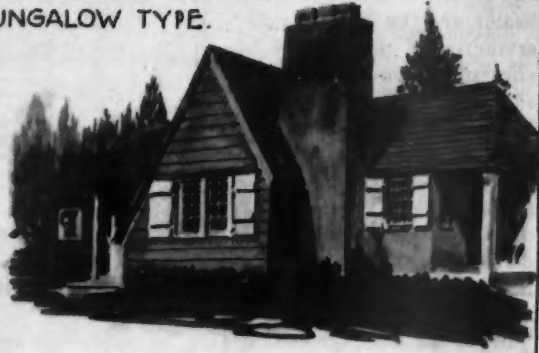


FIG. 6. OF ALL HOMES A BUNGALOW IS MOST LIKELY TO DEVELOP CHARACTER. THE OBVIOUS DIFFERENCE BETWEEN THIS HOME AND THE ONE IN FIG. 1 OR THE ONE IN FIG. 4 MAY POINT TO THE FACT THAT CARELESS DESIGN OF BUNGALOWS MAY EASILY LEAD TO MORE SERIOUS RESULTS THAN IN THE DESIGN OF A TWO-STORY HOUSE

U. R. Sherman 2-12-22

Some of the Modified Bungalow Types Which Are to Be Seen Today Show a Freer Use of American Ideas Than Would Have Been Possible with More Expensive Types.

FURNACE HEATING



Comments on Pipeless Furnaces

Cardinal Features of this Type of Warm-Air Heater and How Successful Systems Can Be Installed

This Department by R. C. Nason, Heating Expert, appears every month in American Builder.

FEW phases of warm-air heating have occasioned more widely varying opinions than that relating to piped and pipeless heaters. Followers of both camps are enthusiastic in their praise or denunciation. Among conservative installers, however, it is held that both types have their field of usefulness. Many manufacturers make both and most installers will put in either which the problem at hand appears to require.

True, the pipeless furnace has come in for criticism but, like any other piece of equipment, this has arisen in cases where it has failed. In its defense, it might be said that this kind of heater is one of the most efficient heating plants in use today, but is often installed incorrectly and in buildings where it is poorly adapted.

As in a piped plant, circulation of heat to the rooms and return of cool air to the heater are the basic considerations. If this cannot be effected, warm air heaters of any design are bound to be inefficient as a heating method.

When we say that the pipeless heater is an efficient plant it is meant that it will deliver the most heat energy per pound of fuel consumed and at the lowest cost. The flow of air through the furnace is rapid, due to the fact that the cold-air supply drops vertically and with almost no friction loss. The insulated, inner casing maintains the air supply at a comparatively low temperature, so that it retains its velocity. Thus, the warm air is forced up through the center of the register rapidly.

The expansion of the heated air gives high discharge velocity, as compared with the return-air flow, so that in a good installation, when the furnace is of ample size and properly located, there is no perceptible draft over the floor. The heat rises at once to the ceiling where it is quickly diffused to all parts of the room.

Another feature of the pipeless plant is that as the cold air descends on all sides to the bottom of the furnace casing there are no dead, or unfilled, spaces within the casing. Every inch of the circumferential area performs actual duty. In a piped heater, by contrast, the air supply is introduced at one, two or three points and passes over the warming surfaces in the same manner.

As the top of the inner casing is reached tests probably would reveal that complete diffusion had been completed. Yet it is not improbable that certain parts of the warming surfaces perform greater duty than others. It must be admitted that in the absence of test data the foregoing is theoretical. Although not of major importance, each point in design contributes to the high efficiency of the pipeless plant as a heating unit.

A substantial portion of the heat generated by any style of heater is lost before performing the duty intended. In steam and hot-water plants, for example, this is dissipated along the pipes by radiation and it is for this reason that wise owners have them insulated.

In a piped warm-air plant, especially where there are sheet metal stacks to upper floors, considerable heat is lost through radiation, as is proven by the drop in temperature from the heater to the registers. Some of this lost heat, and this is likewise true of steam and hot-water systems, performs actual warming, hence cannot be considered in the same light as steam or heat exhausted into the atmosphere.

Basically, the efficiency of a heating plant depends on the amount of heat which reaches the spaces to be warmed, in relation to that generated. The greater the loss in transmission the less efficient the system. The radiation loss in a pipeless heater is said to be approximately six per cent of the total heat developed and this is divided about as follows: 50 per cent from the front, 25 per cent from the casing and 25 per cent through the floor. As the heater and warm air register are integral much of the lost heat finds its way to the area it is desired to make comfortable. No other heater can show as low radiation loss.

One of the great fields of usefulness of the pipeless furnace is in old buildings. In about 75 per cent of such installations they replace stoves. A good pipeless plant costs only about as much as two good stoves and will do the work of six at lower operating cost. In old houses, too, were a boiler or piped furnace plant to be installed much cutting through floors and walls would be needed. Often there is insufficient room for warm-air stacks within partitions, in which case they would have to extend through the

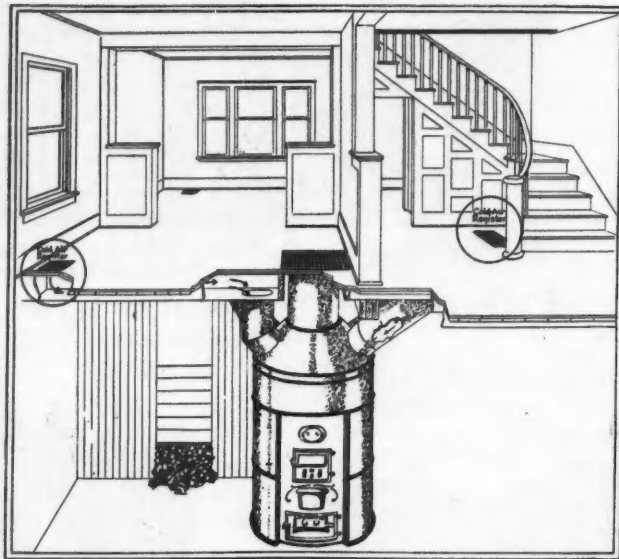


Fig. 1. A Pipeless Heater Installation Employing Separate Return Air Ducts to Prevent Floor Draft.

rooms themselves there to remain an eyesore.

The general appearance of a pipeless warm-air heater and its average method of installation are familiar to most readers. They are often installed with variations, however, which are not so well known. One of these is the use of two separate return air ducts and a single heat register without a return section, as shown in Fig. 1. Strictly speaking, this is not a true pipeless system, but what might be termed a semi-piped installation.

An installation of this kind usually is made to correct excessive cold air currents along the floors to the return division of the duplex register. The return-air ducts may be rectangular or round. In Fig. 1 the space between the cellar joists has been boxed in with the advantage of unobstructed head room. Joist spaces would best be lined with sheet metal to prevent leakage and reduce friction loss.

It is noted that the cold-air ducts terminate at the top of the furnace casing. Heating efficiency would be improved if the return ducts were extended to the bottom of the casing, because the cold air thus would drop more readily. This might be accomplished somewhat as shown in Fig. 2. Still another popular arrangement of piping is that shown in Fig. 3, wherein a duct has been led to the second floor and there a duplex register of the same kind as that on the first floor installed. This arrangement should be used with caution, however, because usually where such an installation is deemed necessary a piped plant with separate warm and return-air ducts will afford better results.

Second floor Register

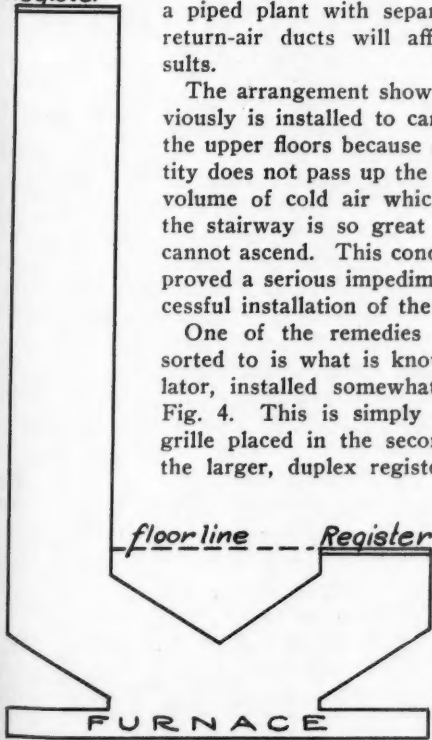


Fig. 3. Explaining the Use of Two Registers in a Pipeless Furnace Installation. When a separate duct to the second floor is necessary a piped plant usually is preferable.

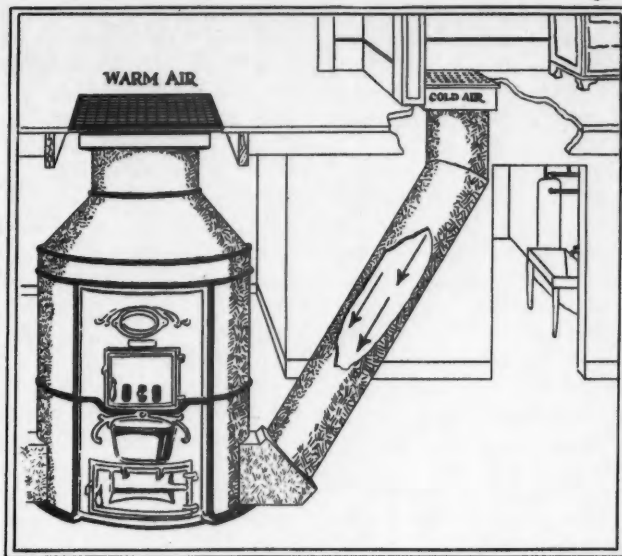


Fig. 2. How Heating with a Pipeless Furnace Can Be Improved by Extending the Cold Air Duct to the Bottom of the Casing.

from the stairway, closing off the spindle railing will have no effect. It is here that the circulator comes to the rescue. But precaution must be used in its location or it may act as a cold-air return instead of delivering warm air to the second floor. This is not likely to occur if the circulator is placed directly over the first floor register. Circulators also are used to relieve the cold air pressure at the outside walls and to cut down the length of cold air travel. Sizes smaller than 14 by 20 inches seldom are effective.

Another artifice used to get warmth upstairs when the volume of cold air coming down the stairway proves excessive is the installation of a grille near the first floor ceiling not far from the warm-air register line and in the side of the stairway. It is suggested that for a two-story residence the duplex, or warm air, register be located near the bottom of the stairway.

For single story homes the register customarily is located between the living and dining rooms. Rather than

difficulty in securing circulation of heat to the second floor, however, often is caused by the construction of the stairway.

As the air at the floor level of the second floor is cooler and heavier than the air at the ceiling line of the first floor the velocity may be spent by the time it reaches the stairway so that it will not penetrate the blanket of cold air coming down. This may be overcome by closing off the spindle railing at the head of the open, or half-open, stairway so that a channel is formed for the descent of the cold air. This accomplished, the warm air will ascend above it.

The arrangement shown in Fig. 3 obviously is installed to carry the heat to the upper floors because sufficient quantity does not pass up the stairway. The volume of cold air which comes down the stairway is so great that warm air cannot ascend. This condition has often proved a serious impediment to the successful installation of the pipeless plant.

One of the remedies commonly resorted to is what is known as a circulator, installed somewhat as shown in Fig. 4. This is simply a plain lattice grille placed in the second floor above the larger, duplex register on the first floor. The circulator should be provided with louvres so that during the daytime, when the sleeping rooms are unoccupied, the circulator may be closed. Dif-

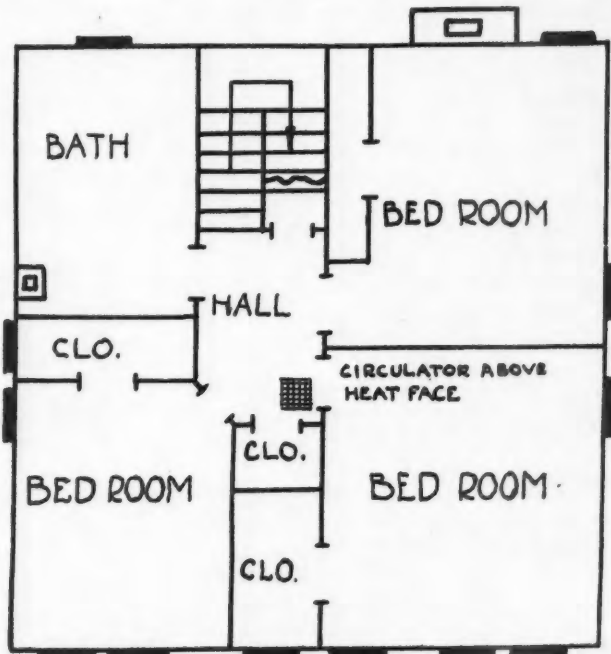


Fig. 4. Second Floor Plan to Show the Proper Location of a Second Floor Register, or Circulator, in a Pipeless Heating System.

have to walk across the register when placed in this location many owners prefer to place the heater beneath the partition between the two major rooms and install what is known as a deflector. This consists of a pair of combined baseboard and floor registers. A baseboard and floor register are installed in each room as a single unit.

These are directly connected to the heater. The warm-air is delivered in desired quantities to both rooms at the same time through the baseboard registers and the cold air exhausted from each room through floor registers. The baseboard registers are off the floor and thus out of the way of travel and the floor registers, placed as they are adjacent to the partition, remove the objection referred to.

In attempting to decide on whether a piped or pipeless plant is preferable, it might be recalled that the pipeless plant belongs in compact, small structures of not over two floors, whereas almost any moderate sized building may be satisfactorily warmed with a piped plant.

Avoid buildings having lengths greater than 40 feet and those over 8 rooms. To these might be added duplex, or two-family houses, stores with residence above, school rooms and public halls where occupancy is likely to be crowded. The last two often present ventilation problems and heating is a secondary consideration.

It is likely that the originator of the pipeless furnace, back in 1914, intended it as a room heater, rather than a central plant to heat an entire house. As an improved stove, out of the way, near the coal bin, so that it eliminated carrying fuel through the house, is was not entirely satisfactory because no means were provided for the removal of the cold air.

It was not until furnace casings came to be insulated that they proved successful as central systems. Engineering tests at the University of Illinois and other experiments have encouraged great improvement in proportioning casings and other features of design which have brought pipeless heaters to the high standard of excellence they enjoy today if installed in buildings within their capacity.



Everybody's Business

(Continued from page 122)

this alloy would be so light that it could be picked up and carried away by a small boy.

A rust-proof steel is being produced in England in a "rotary furnace" that subjects the ore to a treatment with gases at a low temperature. Since the indicated cost of production even in the early stages is only \$17 per ton, some British metallurgists think it possible that present blast-furnace methods of production may be rendered obsolete. World rust destroys forty million tons of iron each year. What a boon it would be to humanity if we could produce a rustless steel at low cost.

There is a new metal called "kuprox" which has the property of conducting electricity in one direction only. This permits charging batteries at twice the rate of the ordinary method. In fact, the field of new alloys is practically endless, for it would take a chemist a lifetime to exhaust the possibilities that lie in the mixing of even three or four metals. A few years ago the metal beryllium seemed to have no value whatever. Now we find that alloys made with it are far more resistive to corrosion than carbon steel.

A German priest has produced a powerful explosive by saturating finely divided organic bodies with liquid air. A Finnish inventor has produced a liquid that makes wood fireproof. A new protective paint has been designed for use in sealing joints against oil leakage. A clever German found that by treating pine needles in such a way as to get rid of their resin content, he had remaining a strong "pine wool" made up of strong fibers resembling hemp. The resin can be made into fuel briquets, while the wool may be woven into heavy fabrics.

Few things have interested folks more in recent months than the new varieties of so-called "dry ice" that are merchandised under different trade names. One of these is made by mechanically freezing carbon dioxide, the same gas which imparts "fizz" to soda water. By means of this heat-absorbing solid gas, it becomes possible to transport ice cream from New York to the Tropics, or ship frozen fish across the continent in perfect condition.

What a really amazing thing it is to think that the ordinary flue gas from our chimneys may one day be caught and reduced to a product that will become immediately a direct competitor of ordinary ice. Even in the present early stages of this remarkable process, it has been found that one pound of solid carbon dioxide will do the refrigerating work of 15 pounds of water ice. The user of the "dry ice" does not have to take care of any disagreeable liquid, for the new refrigerant gives off only a harmless gas that preserves rather than injures foodstuffs.

The temperature of this strange substance is about 110 degrees below zero. It is so cold that if grasped too firmly it will destroy cell tissue just like a burn. In several instances ice cream shipped hundreds of miles under the preservation of dry ice reached its destination in such a cold condition that it had to be warmed before being eaten. If this had not been done, the lips would have been burned when the cream touched the mouth. Who can say what the ultimate effect of this development will be on the future of our present ice industry?

Nor is all of our attention being given to things purely mechanical. Health preservation is coming in for increasing attention. Dr. Ernst Unruh, of Berlin, has given us a new anaesthetic known as "107." It permits operations on the face, nose and throat because no inhalation mask is required. Under its influence the pulse and blood pressure of the patient are said to remain practically normal, thus doing away to some extent with the disagreeable after-effects and danger to heart, lungs and nerves.

I might go on for pages talking of new materials, any one of which may suddenly necessitate radical changes in current practices. Suffice it to say there is no safety in business today for any executive who does not recognize the potential importance of unexpected discoveries.



Good Homes in 90 Days

(Continued from page 152)

Results tell the story. Roth Bros. have not only lived up to the specific and rigid requirements of Modern Housing specifications in building their distinctive homes on a production basis, but they have done this work with satisfaction to the buyer and profit to themselves. "Our plans are laid for 400 homes in 1928," says Wm. F. Roth, Jr., and that answers the question as to whether the present experience of this firm has been profitable.

This story has covered a single phase of the activities of this energetic organization. The bulk of their business still remains in the field of distinctive homes for individual buyers. A complete building and financing service with the use of escrow for the protection and satisfaction of the buyer is the keynote of their work. Their entrance into the field of industrial housing has opened up another department of their business which bids fair to bring even more credit to this concern. This is a service which Roth Bros. give to realtors who are opening new sub-divisions.

Realtors are realizing more and more that there is no more effective way of establishing the tone of their new developments than to adopt a building program of their own. Roth Bros. have recently been selected to build from 10 to 50 homes in new developments for just that purpose. Their experience in large production allows them to give to realtors the type of distinctive home that they wish at a price that makes the selling of such houses a simple matter.

H. L. RUSSELL.

CHIPS & QUIPS



Trouble Both Ways

A Georgia lawyer tells of a darky charged in a town in that state with theft. His lawyer decided to put him in the box in his own behalf. The magistrate, being doubtful if the darky understood the nature of an oath, undertook to examine him on the point.

"Henry," he said, "you know what will happen to you if you tell a lie?"

"Yes, suh," said Henry. "I'll go to hell and burn a long time."

"Quite right," replied the judge. "And now you know what will happen if you tell the truth?"

"Yes, suh," said Henry. "We lose the case."—*Oklahoma Whirlwind.*

Break the Bottle

An old countryman, who had been to London for the first time on business, returned in a bad temper.

"At the hotel," he complained, "they kept the light in my bedroom burning all night. I couldn't get a wink of sleep."

"Why didn't you blow it out?" asked his wife.

"Blow it out?" said the old man. "I couldn't. It was in a bottle!"—*Pearson's.*

Crippled Industry

"Jedge," a very large and determined colored woman announced as she ushered a frightened ex-husband into His Honor's chamber, "dis nigger ain't paid me one cent ob alimony for sebven months."

"What's the matter, Sam?" sternly inquired the judge.

"No, suh," was the response. "Ah ain't bin able to find mah dice."—*Country Gentleman.*

Can't Kid Him

While Firestone, Edison, Ford and Burroughs were touring, a light and tire on the car went bad. Mr. Ford went into a store and said to the merchant:

"What kind of lights do you have?"

"Edison," replied the merchant.

"And tires?"

"Firestone."

"You may be interested to know that Mr. Edison and Mr. Firestone are out in my car, and I am Henry Ford."

As the merchant was putting on the tire, Mr. Burroughs, who had a large crop of white whiskers, leaned out of the car; and the merchant, looking up at him with a grin, said:

"If you tell me you're Santa Claus I'll crown you with this wrench."



Yes, Certainly

Newly—What is this lump in the pudding?

Wed—Dearest, it's cottage pudding, and that must be part of the concrete foundation.—*Exchange.*



The Customer's Advice

"I see you have a sign in your store, 'We aim to please,'" remarked the irritated customer.

"Certainly, sir, that is our motto," replied the dealer.

"Well, you ought to take a little time off for target practice."



Demonstrated

Employer—Yes, I advertised for a strong boy. Do you think you would suit?

Applicant—Well, I've just finished licking 19 other applicants out in the hall.



A Different Tune

"We 'ave Vespers at our church," says Bill to Jim, according to the Stanford Chaparral, of Leland University.

"That's nothing. We have linoleum up the aisle at ours!"



Definitions

The Pessimist spends all his time worrying about how he can keep the wolf from the door.

The Optimist refuses to see the wolf until he seizes the seat of his pants.

The Opportunist invites the wolf in and appears next day in a fur coat.—M. S. GOODING, Rutland, Vt., in *Yellow Strand.*



(Reprinted by permission of the Chicago "Tribune.")

HOW DAN DOES IT



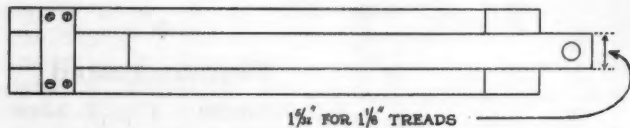
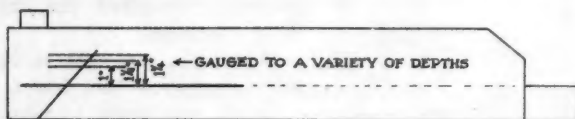
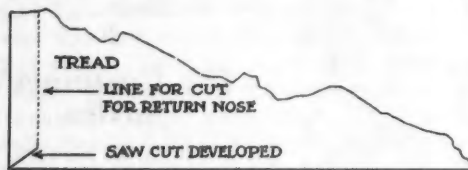
A Department for Passing "Life Savers" along to other Builders

\$2 for an Idea

Dan is an ingenious cuss. Nothing ever stumps him. He always knows the way out when he runs into a tough problem out on the job or in the office. Dan is editor of this Department and will pay \$2.00 each for every good idea he can use here to show and tell other builders "how to do it." Send him a rough sketch and a short description of what the tough job was and how you handled it. Address Dan-Do-It, care of American Builder, 1827 Prairie Avenue, Chicago, Ill.

Mitering Stair Treads

THE sketch shows a very convenient and effective way of mitering the tread of a staircase where return nosings are used. It is of much greater precision than laying them off by the square, if the box is properly laid off, and



Where Return Nosing Is Used This Method of Mitering Stair Treads Will Be Found Convenient.

It is also quicker. It gives a true miter and makes it perfectly square, which is one of the greatest difficulties in laying it off with the square and sawing it.

CHAS. H. WERT, Port Royal, Pa.



Removing Old Putty

WHEN necessary to reglaze old sash it is often difficult to remove the old putty. This can be done easily, however, by drawing a hot iron along the putty, pressing down well on the iron. When the putty is heated in this way it will come off easily.

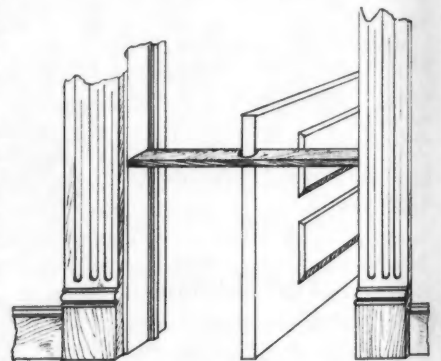
LESTER A. GIBSON, Granton, Wis.



Another Door Jack

IN reading the October issue of AMERICAN BUILDER I noticed the sketch of a door jack, sent in by Joseph McGrath, and it occurred to me that readers of this department might be interested in a jack which I use and which I consider handier and easier to take from place to place.

Cut a piece of soft pine about $\frac{3}{8}$ of an inch longer than the width of the opening. Cut a notch in this at a point about 8 inches from one end. Place this between the door jambs and press down. This will wedge the jack into the opening and the notch cut into the board receives the door.



Once More We Have a Simple and Effective Door Jack Suggested.

On finished work, where the finish would be marred if the jack was used this way, a piece of leather or card board may be placed on the ends of the jack to prevent marring.

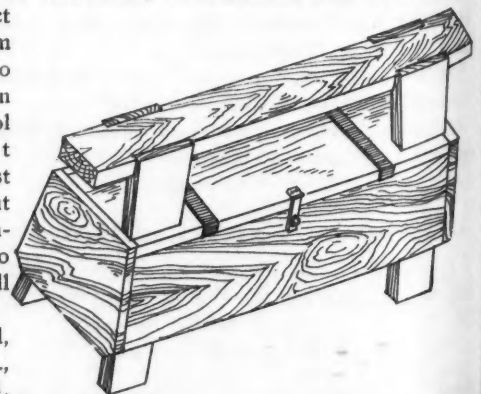
ERNEST WILSON, R. D. 1, Sussex, N. J.



Handy Saw Horse and Tool Box

THE accompanying sketch shows my combination saw horse and tool box and is plain enough that it does not really need much explanation. I simply build a box around the legs of the saw horse, hinge a lid onto it and provide it with a latch so that I can lock it up if I care to. I have found this a very handy arrangement, for the tools are always at hand when they are wanted and one is not likely to neglect putting them away, which so often results in loss, if the tool box is right there. It is just as easy to put them away immediately as to let it go till later.

A. McDonald,
7 First Ave.,
Toronto 8,
Ontario, Canada.

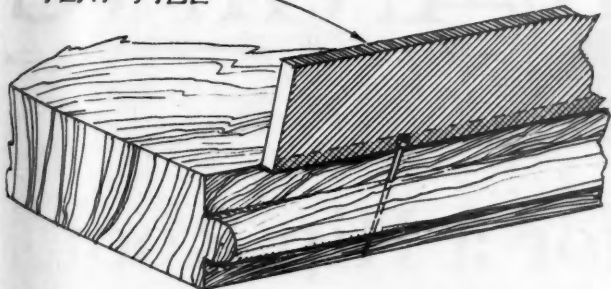


A Tool Box Built Onto a Horse as Shown Here Will Be Found Very Handy.

Setting Floor Nails

I HAVE read the recent article relative to setting floor nails with a piece of steel rod. I have a method for doing the same thing which I like much better so am passing it along. I save an old 10-inch flat file with mill cut edge and break it into pieces of a length convenient to handle. I place one of these pieces with the edge against

MILL CUT
FLAT FILE



Using a Piece of Milled Edge File for Setting Floor Nails Keeps the Set from Slipping Off the Nail.

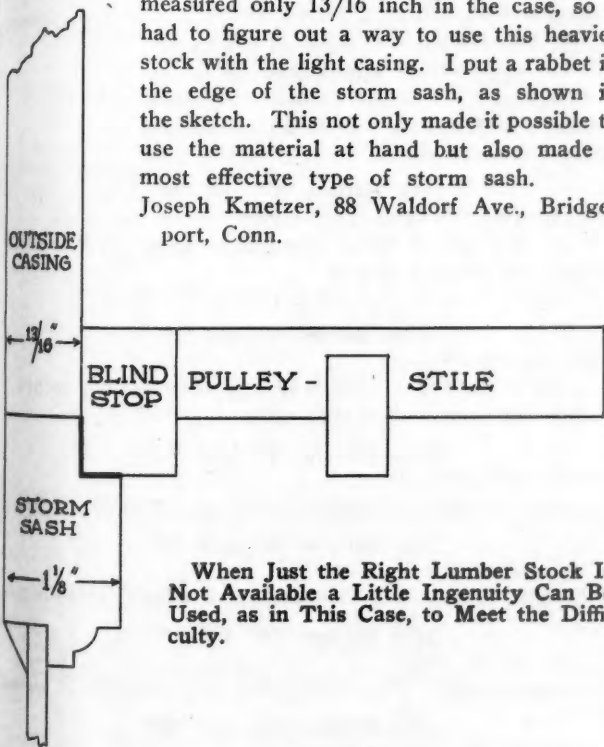
the head of the nail and parallel with the groove in the board and hammer against the other edge of the file. This allows me to leave the head of the nail well up when driving, as the milling prevents the file from slipping, and so eliminate any danger of injuring the edges of the flooring. It works surprisingly well on hardened steel nails.

A. P. NORRIS, Tewksbury, Mass.

When Making Storm Sash

I WANTED to make some storm sash recently and the only sash stock I could get was 1 1/8-inch stock. My windows measured only 13/16 inch in the case, so I had to figure out a way to use this heavier stock with the light casing. I put a rabbet in the edge of the storm sash, as shown in the sketch. This not only made it possible to use the material at hand but also made a most effective type of storm sash.

Joseph Kmetzer, 88 Waldorf Ave., Bridgeport, Conn.



When Just the Right Lumber Stock Is Not Available a Little Ingenuity Can Be Used, as in This Case, to Meet the Difficulty.

Matching Floor Finish

A NEIGHBOR of mine was recently stumped by a floor finishing job but finally hit upon the following idea which worked out with complete success. In a large hall,

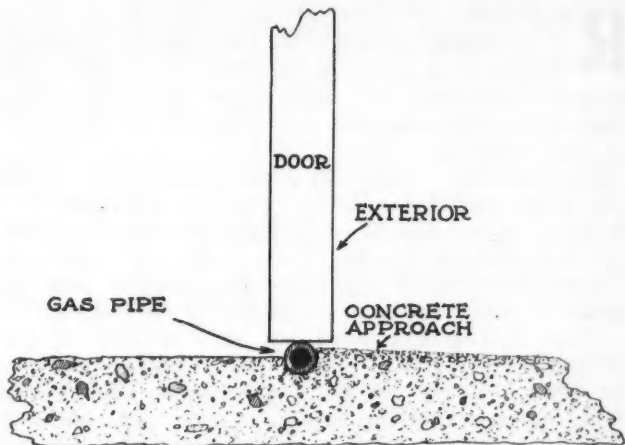
about 200 square feet of the floor had been painted with what seemed to be a combination of walnut stain and varnish. A bare spot in the center of this hall of about 130 feet was newly stained and varnished. The old floor finish was quite worn in spots and had been painted for at least two years so did not match up at all with the new.

My neighbor finally poured some stain in a can, added about twice the amount of turpentine and quickly went over the old floor paint. This application of a little stain and turpentine restored the old color and gloss and, where the old finish bordered the newly painted section lengthwise of the floor boards, no line of demarcation could be seen. Crosswise of the boards there was only a slight evidence of where the newly painted area stopped and the old began.

MARION E. LOVE, 1505 Race St., Philadelphia, Pa.

For Garage Doors

THE average garage door does not fit well enough to keep rain and snow from blowing in beneath it but there is a simple means of preventing their entrance which



A Piece of Gas Pipe Set Into the Garage Door Threshold Keeps Out Rain, Snow and Wind.

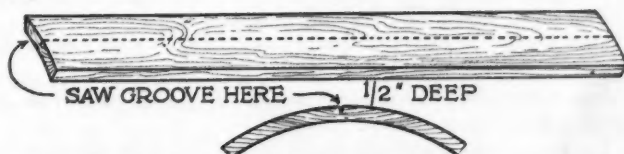
will also exclude much unwanted cold air during the winter season. A piece of 2-inch iron pipe can be set into the concrete floor at the door line. It should be allowed to project about 1/2 to 3/4 of an inch above the surface of the concrete. It should not project more than half its diameter. The door is fitted to just touch this pipe when closed.

FRANK REZABEK, 5525 W. 24th Place, Cicero, Ill.

To Straighten a Warped Board

HERE is an idea which sometimes saves a valuable piece of board which has become warped and is needed for such a job as the face of a drawer. To nail it down forcing it straight might split the face, but if you will mark the center line of the back of the board then take a rip saw and saw a groove about half an inch deep along this line you will be able to nail it in place without splitting.

E. H. KITZEROW, Box 41, Northrup, Minn.



A Warped Board Can Be Nailed Flat Without Splitting if a Groove Is First Sawed as Shown.

INSTRUCTIONS *in* ROOF FRAMING



Rafter Details for a Hip Roof

By JOHN T. NEUFELD

RECENTLY I received a letter from a reader asking for an explanation of a hip roof. The building was L-shaped, as shown in the drawing. Evidently the greatest trouble was in connecting the two parts of the roof. The writer stated that he had wasted enough lumber to frame six roofs.

For a building of this kind where the space in the roof is not needed it is best to build the main part first as though it was a plain roof without the addition. Then nail the sheathing over the rafters, and in place of using a blind valley nail a board over the sheathing as indicated. (Note sheathing is not shown on the drawing.)

When framing a roof of this kind a table of roof framing details is very helpful. As a table would take too much room, we will give only a portion of one—that is, we will give only the figures for a $\frac{1}{4}$ pitch roof.

Data for $\frac{1}{4}$ Pitch Roof

Rise per foot run, 6 inches.
Pitch in degrees, 26 degrees 34 seconds.
Length per foot run, 13.42 inches.
Deduct for $1\frac{5}{8}$ ridge, $\frac{5}{8}$ inch.
Cut by square, 12-6.
Length first jack, 16 inches on centers, $17\frac{7}{8}$ inches.
Length first jack, 24 inches on centers, $26\frac{7}{8}$ inches.
Side cut for jack 12, $13\frac{1}{2}$.
Side cut by degrees, 41 degrees 50 seconds.
Length per foot run for hip, 18 inches.
Subtract for $1\frac{5}{8}$ ridge or other rafter, $1\frac{3}{16}$ inches.
Top and bottom cut by square, 17-6.
Top and bottom cut by degrees, 70 degrees 34 seconds, bottom, 19 degrees 26 seconds, top.
Side cut by square, 18-17.
Side cut by degrees, 43 degrees 22 seconds.
With the above information we may figure the length and cuts for each rafter.

Common Rafter "A"

Length per foot run, 13.42 inches.
Run, 7 feet 0 inch.
Length, $13.42 \times 7 = 73.94$ inches = 7 feet $9\frac{15}{16}$ inches.
Top and bottom cuts, 12 and 6 on square.

Common Rafter "B"

Same as above, but deduct $\frac{7}{8}$ inch for thickness of rafter to which it frames.

Length, 7 feet $9\frac{15}{16}$ inches less $\frac{7}{8}$ inch = 7 feet $9\frac{1}{16}$ inches.

Cuts same as above.

Common Rafter "C"

Length per foot run, 13.42 inches.
Run, 6 feet 0 inch.
Length, $13.42 \text{ inches} \times 6 = 80.52$ inches or 6 feet $10\frac{1}{2}$ inches.
Cuts same as above.

Common Rafter "D"

Same as above less $\frac{7}{8}$ inch.
Length, 6 feet $10\frac{1}{2}$ inches less $\frac{7}{8}$ inch = 6 feet $9\frac{5}{8}$ inches.
Cuts same as above.

Hip Rafter "E"

Length per foot run, 18 inches.
Length, $18 \times 7 = 126$ inches, or 10 feet 6 inches.
Less $1\frac{3}{16}$ (see table) = 10 feet $4\frac{13}{16}$ inches.
Top and bottom cuts, 17 and 6.
Side cut, 18-17.

Hip Rafter "F"

Length, $18 \times 6 = 108$ inches, or 9 feet 0 inch.
Less $1\frac{3}{16}$ inch = 8 feet $10\frac{13}{16}$ inches.
Cuts same as above.

Jack Rafters "G" and "H"

Length per foot run, 13.42 inches.
Run is 5 feet 0 inch. Length is $13.42 \times 5 = 67.10$ inches = 5 feet $7\frac{7}{8}$ inches.
Side cut at upper end, $13\frac{1}{2}$ and 12.

Jack Rafters "I" and "J"

Run, 3 feet 0 inch.
Length, $13.42 \times 3 = 40.26$ inches, or 3 feet $6\frac{1}{4}$ inches.
Side cut same for all jack rafters.

Jack Rafters "K" and "L"

Run, 1 foot 0 inch.
Length, $13.42 \times 1 = 13.42$ inches, or 1 foot $1\frac{5}{8}$ inches.

Jack Rafters "M" and "N"

Run, 4 feet 0 inch.
Length, $13.42 \times 4 = 53.68$ inches, or 4 feet $5\frac{11}{16}$ inches.

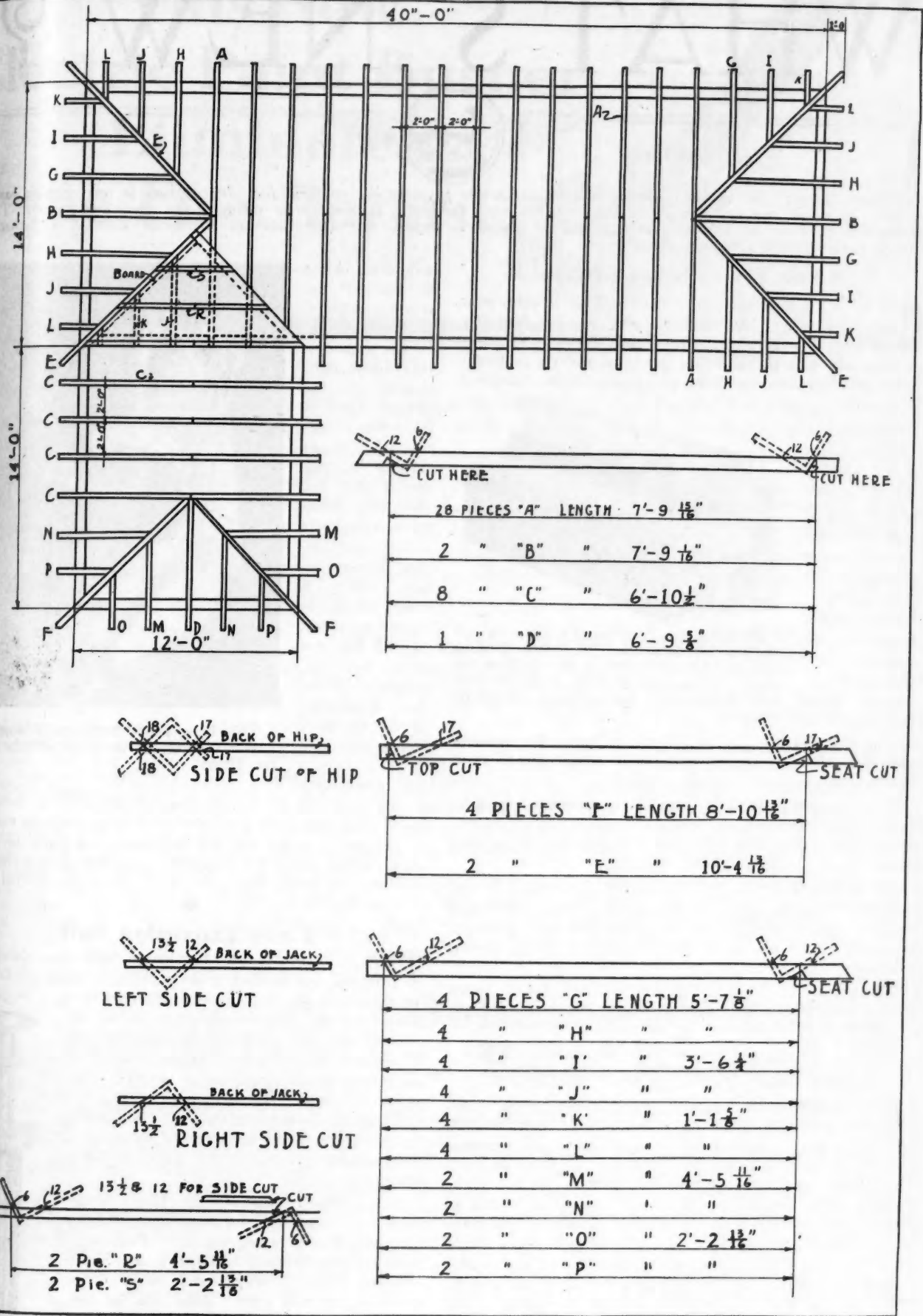
Jack Rafters "O" and "P"

Run, 2 feet 0 inch.
Length, $13.42 \times 2 = 26.84$ inches, or 2 feet $2\frac{13}{16}$ inches.

Jack Rafters "R" and "S"

Run for "R" is 4 feet 0 inch.
Length is $13.42 \times 4 = 53.68$ inches, or 4 feet $5\frac{11}{16}$ inches.

Run for "S" is 2 feet 0 inch.
Length is $13.42 \times 2 = 26.84$ inches, or 2 feet $2\frac{13}{16}$ inches.
Side or bevel cut at lower end is $13\frac{1}{2}$ and 12.
Top and bottom cut same as for common rafter.



Details of Framing of a 1/4 Pitch Hip Roof, Data for Which Are Shown on the Opposite Page.

WHAT'S NEW ?

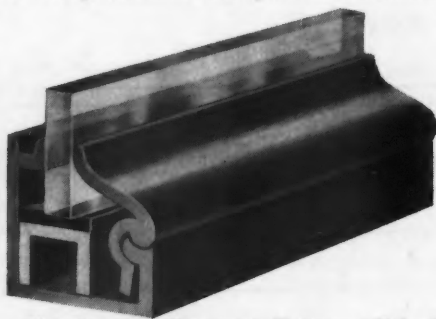


EDITOR'S NOTE: *The AMERICAN BUILDER does not accept payment in any form for what appears in our reading pages. In order to avoid any appearance of doing so, we omit the name of the maker or seller of any article we describe. This information is, however, kept on file and will be mailed to anyone interested; address AMERICAN BUILDER Information Exchange, 1827 Prairie Ave., Chicago, Ill.*

A New Era in Store Fronts

HERE is an architectural refinement long sought, now brought within the range of any modern business, hotel and apartment building, department store or finer shop. In harmony with the towering grace of today's buildings has come a new need for permanent beauty in the treatment of its store windows.

There is no more fitting touch to the grandeur of modern architecture than the framing of its store windows in magnificent bronze—for no material can match the enduring richness and charm of



Showing the Patented Fulcrum Principle for Holding the Plate with Utmost Safety. This principle is also used in the bars. All glazing is done from the outside, without the use of putty or plastic cement.

solid bronze for holding the glistening plate. Its richness adds immeasurably to the distinction of the entire store frontage and the merchandise on display.

There is now offered a complete construction of solid architectural bronze sash, bars, sills, jambs and transoms, of uniform design and with patented features of unusual value.

All architects and contractors will be interested in this distinctive method of holding the plate firmly, uniformly and safely. The heavy solid bronze assures unusual strength. All glass is set from the outside—no putty or plastic cement necessary.

These features, of interest to everyone, are clearly shown in full-sized details and samples, freely available.

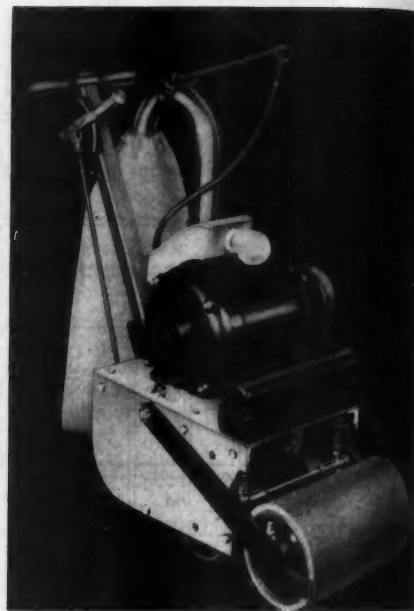


Light Heavy-Duty Floor Surfacer

THIS machine is described as an exceptionally light, heavy-duty floor surfacer. Despite the light weight, great pressure is applied to the drum to insure intensive cutting. This is accomplished in two ways. First the arms that support the drum are very long and are pivoted at the extreme ends and not at the center. Thus the weight of the drum is added to the pressure. Secondly, the three degree forward tilt given to the machine throws the weight of the motor, the 36-pound added weight and the outside frame upon the drum. The ordinary pressure is 82 pounds. However, an extra 60-pound pressure can be applied at the handle. Over 100 pounds of weight has been eliminated and yet there is as much or more pressure on the drum than most machines, it is claimed.

By using a smaller drum at high speed there is less abrasive cost as the friction surface between drum and floor

is reduced. After its first cut the abrasive material is filled and is of no use as a cutting agent until expelled on the upward turn of the drum. Tension or shock absorbing springs directly behind the drum eliminate chatter marks and insure an even cutting surface. A wavy surface is caused by vibration of the machine and unevenness of the floor. If the drum of this machine hits a high spot on one side it will merely give on that side and will not lift the rest of the drum from the floor. Also due to the high speed and extra pressure exerted by the spring it will cut the high spot and level the floor at this point. This "floating drum" principle gives a chatterless, smooth finish that will please the most critical eye.



This New Floor Surfacer, Though of Light Weight, Gives High Pressure on the Drum.



A New Expansion Nail

THIS new, patented, expansion nail was developed primarily for holding wooden strips in place for fastening carpets in the new Stevens Hotel, Chicago. A hole is drilled through the wooden carpet strip and into the concrete base, in one operation, in 30 seconds, by an electric hammer drill. The assembled unit, consisting of a lead alloy sleeve and hardened nail, is inserted and the nail is driven, expanding the sleeve into every crevice of the hole, securing the wood strip permanently. No vibration can loosen this fastening.

In addition to the Stevens Hotel, these nails have been used in the Palmer House, Chicago; Davis Hotel, Chicago; Edgewater Gulf Hotel, Gulfport, Miss.; Lake Shore Athletic Club, Chicago, and many other buildings of this type. They can be furnished with a drive screw instead of a nail where more holding power is required. The regular size is $\frac{3}{4}$ by $1\frac{1}{2}$ inches, but other lengths and diameters are supplied when required.



For Fastening Wooden Carpet Nailing Strips Into Concrete Floors.

This New Electric Paint Burner Eliminates the Fire Hazard



THE new Johnson Electric Paint Burner enables you to remove twice as much paint in a day—easily, safely and economically.

Electric current applied through a patented heating element softens the paint so it may be removed in strips with a scraper, leaving the surface clean, free from burns and charred spots. It is impossible to start a fire on wood with this new burner in ordinary usage, yet the paint leaves the surface instantly.

You Can Get One FREE

The Johnson Paint Burner was developed solely for users of Johnson's Finishes, and can be obtained **WITHOUT CHARGE**.

Master craftsmen the world over recognize Johnson Finishes as the finest money can buy. To your customers no further endorsement than the Johnson label is needed. Johnson's Finishes are sold to the contractor through convenient factory branches at Wholesale Prices.

Take advantage of this opportunity to secure a New Johnson Electric Paint Burner Free with your Spring supply of materials. Mail the coupon with your letterhead or business card today.

Johnson's Electric Paint Burner

CLIP TO YOUR LETTERHEAD OR BUSINESS CARD

S. C. JOHNSON & SON, DEPT. A. B. 4 RACINE, WISCONSIN
"The Wood Finishing Authorities"

Please tell me how I can get a Johnson Paint Burner Free. Also mail me your wholesale price list.

Name.....

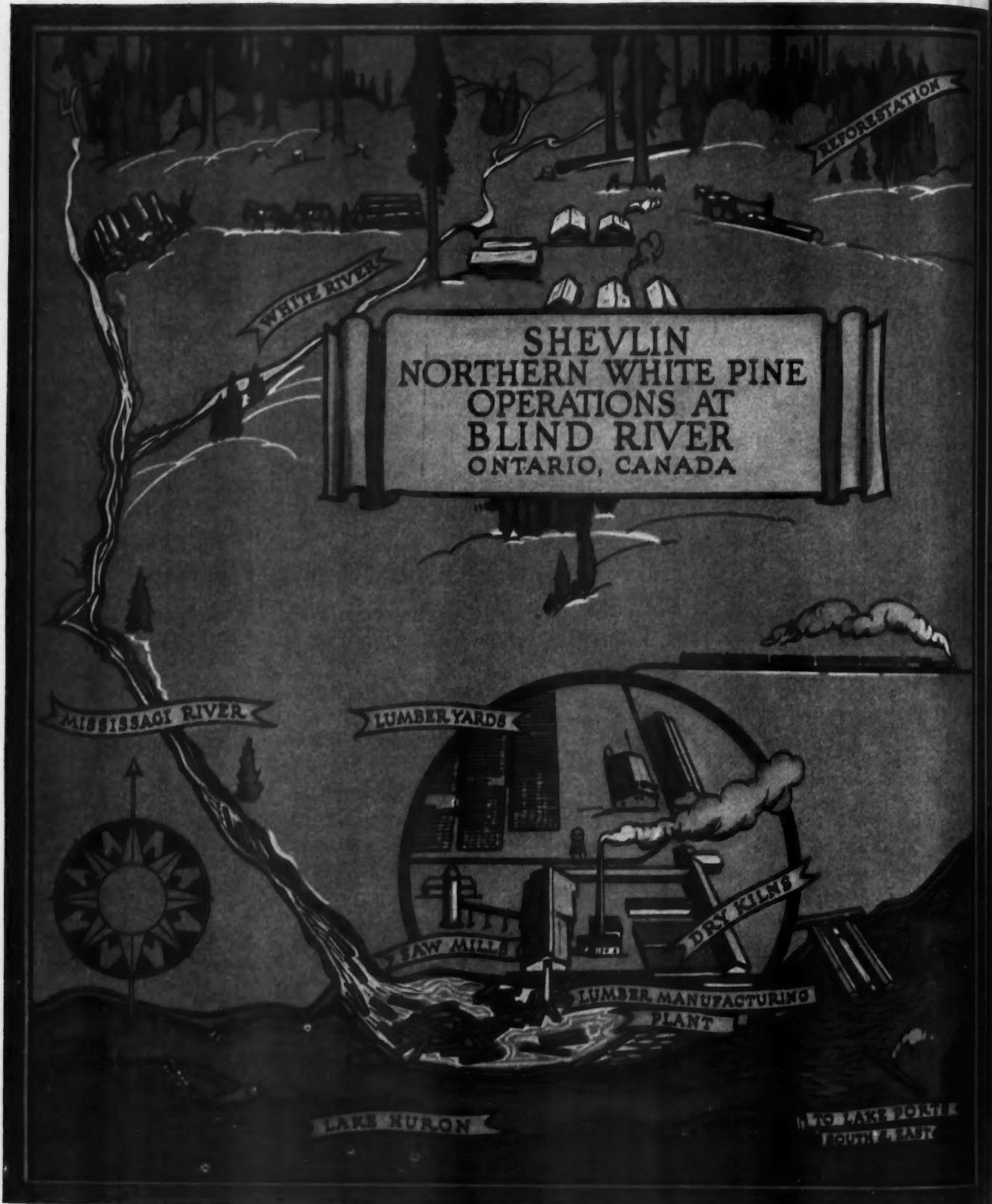
Address.....

City.....State.....



This wholesale price book is the key to greater profits for every contractor. Mail the coupon now.

A New Supply of the P



SHEVLIN PINE

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

the Pine of Grandfather's Day

THE new Shevlin Northern White Pine mill at Blind River, Ontario, starts full production this month. It gives you a new source of Genuine White Pine.

Each year this plant will produce 100,000,000 feet of lumber to serve the nation and approximately 90% will be Northern White Pine. This is identically the same species used for the nation's oldest homes, the real "old fashioned" White Pine.

Largest Virgin White Pine Stand

The stand is said to be the largest virgin tract of Northern White Pine on the continent. It will last for decades, probably forever. Only the mature trees ready to serve mankind will be cut. And scientific reforestation promises an indefinite supply.

Efficient modern manufacturing methods will retain and improve the natural qualities of the carefully selected

timber. Proper seasoning is assured by a battery of the newest type of dry kilns.

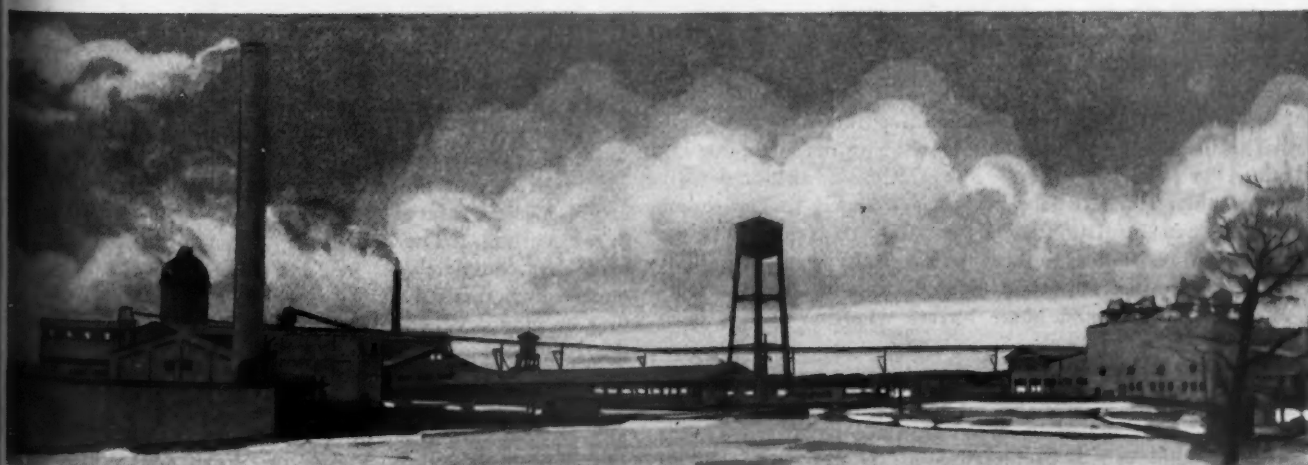
The Ideal Building Material

This news is of particular significance to architects and builders of eastern United States where Northern White Pine is regarded as the ideal building material and where numerous examples of its workability and almost unbelievable endurance are close at hand.

You can secure Shevlin Pine at leading lumber dealers. You will find it smoothly milled, thoroughly seasoned and rigidly graded. There are five varieties: Shevlin Northern White Pine, Shevlin Pondsosa Pine, Shevlin California White Pine, Shevlin Norway Pine and Shevlin California Sugar Pine.

Shevlin, Carpenter & Clarke Company
903 First National-Soo Line Bldg., Minneapolis, Minn.
Chicago Sales Office: 1866 Continental & Commercial Bank Bldg.

San Francisco Sales Office: 1028 Monadnock Building.
Toronto, Ontario Sales Office: 606 Royal Bank Building
Sold in New York by N. H. Morgan, 1205 Graybar Bldg.



A view of the lumber manufacturing plant at Blind River, Ontario

SHEVLIN PINE

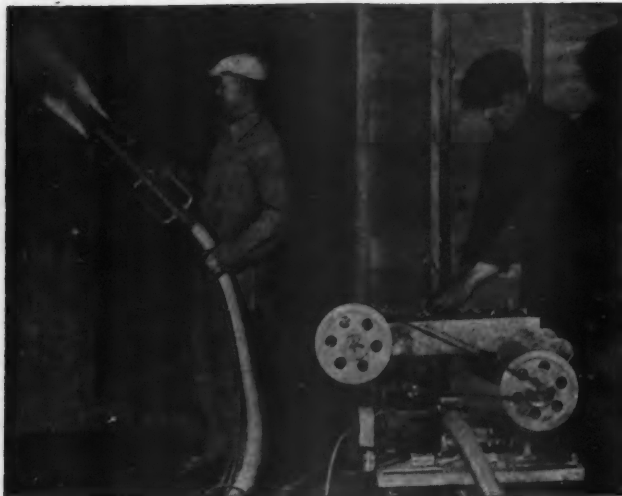
Insulation Applied By Air

A NEW and more efficient type of building insulation, together with a unique and revolutionary method of application, is rapidly being introduced to the building trade in many sections of the country. The illustration shows the simple and effective method by which this new insulation is applied. The picture affords a striking example, as well, of the effectiveness with which the novel application process eliminates costly labor charges on the job.

This new insulation is applied by the speedy, efficient, "air gun" process. This method not only increases the effectiveness of the material itself, but greatly lowers the cost and time of application.

Applied under steady air pressure, the flakes effectually penetrate all nooks and crevices of the building being insulated, making a tight-sealing blanket that is impervious to drafts. Corners, crevices and angles around pipes, window jambs, joists and under eaves are thus thoroughly covered as perfectly as open and easily accessible surfaces.

The material itself, made through a patented formula that combines various high quality ingredients and manufactured on the job, is totally unlike most insulation. Manu-



This Simple Air Gun Equipment Shoots the Insulation Into Place.

facture and application of this new insulation take place as one operation. It is sound deadening, fire resistant and vermin proof. An example of its appearance after being installed is given in the small illustration on this page.

The insulating value of this blow-on insulation as determined in laboratory tests by recognized authorities, is remarkably high. In fact, comparison shows that no other well known insulation is lower in heat conductivity or higher in resistance to heat flow. Its marvelously light weight is another important factor in its widespread acceptance by builders and home buyers wherever it has been introduced.

This new blown-on insulation may be applied in any thickness, from ½ inch up. There is no restriction as to surfaces where it can be installed, since nails, strips, etc., are not employed in its installation. It can be applied as easily to metal surfaces as to wood. On a large factory job, the following comment was received in a letter after the completion of the insulation:

"It was necessary to convert 13,000 square feet of warehouse into factory use. The building was steel, with sheet metal sides and roof. Our problem of insulating not only seemed expensive, but left a doubt as to whether results

would warrant a large expenditure. Then insulation applied by the gun method solved everything. It was installed direct to the metal without interrupting factory work. We now easily heat the space with one-third the coal previously consumed."

The cost of this insulation is unusually low, including both material and labor. When it is realized that two men can apply around 2,000 square feet per day per machine, the possibilities of this unique insulation are readily apparent.

The company responsible for this new insulating material and method seeks representatives in principal cities, and contractors or building supply dealers in smaller communities to handle on an exclusive franchise basis. Although territory rights are being snapped up quickly since the first announcement, many choice localities are still available. Responsible parties, who are established in or affiliated with the building industry and are in a position to take advantage of the unusual opportunity offered, should write for full particulars.



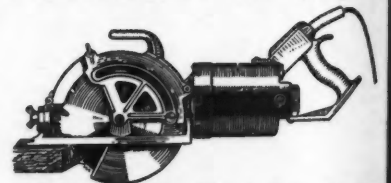
All-Purpose Electric Hand Saw

EXPERIENCE of many years in the design and manufacture of portable sawing machinery has convinced the manufacturers of this electric hand saw that one model of saw, properly designed and built, is all that is necessary to cover the portable electric hand saw field and they, therefore, are marketing this saw as a machine capable of handling all work for which any such saw is adapted.

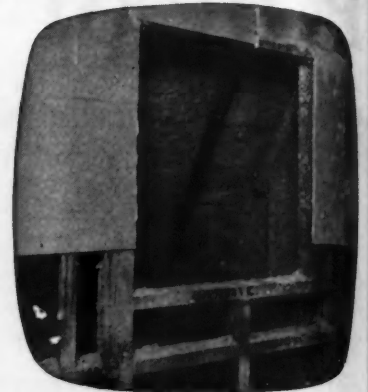
With this saw a beveling device is provided which permits bevel cuts from zero to 50 degrees and a depth gauge with a range from zero to 3½ inches square cut. The front handle is of the new swivel floating type conforming to the natural position of the operator's hand. A top safety guard affords complete coverage with any style of blade used, while a fan mounted on the shaft in front of the motor develops air pressure which is piped ahead of the saw blade and permits clear vision of the line when cutting.

The ball bearings used throughout are seated in hardened and ground tool steel rings cast integral with the aluminum housing, assuring a perfect alignment at all times and a minimum loss of power in transmission. The new guard insures perfect safety in all cutting. The blade is completely enclosed whether cutting or idling. When the blade enters the materials to be cut, the guard automatically recedes into the top guard and when the cut is completed the guard automatically returns to its original position.

The universal motor, operating on D.C. or A.C. current, 60 cycles or less, from any light socket is furnished in either 110, 220 or 250 volts, with special voltages to order. It has plenty of power for difficult cuts in lumber, brick, tile, concrete, marble, stone, slate, and other materials.



This Electric Hand Saw Is Designed to Meet All Requirements, in a Single Tool, for the Entire Range of Work for Which Such a Tool Is Suitable.



Above Illustration Shows How Thoroughly This Blown-On Insulation Gets Into Even the Remotest Corners.

New

The Reid-Way Vacuum Convertible **SANDER**



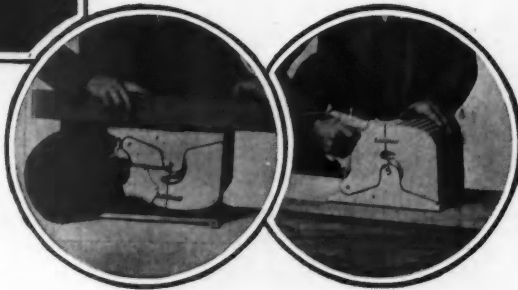
The revolving field motor, exclusive Reid-Way feature, has one moving part! No belts, chains, gears. No friction. No lost power!



As a floor surfacer, the Reid-Way has many distinct advantages. Strong and sturdy, it is built for continuous, hard service—dependable

THE popular Reid-Way Convertible Sander, now made *DUSTLESS* by exclusive new vacuum principle, is meeting with tremendous enthusiasm everywhere. Contractors acclaim it as the ideal light sanding machine. Light in weight—easily transported from job to job. Plugs in any light socket—needs no special wiring. Convertible—used as bench sander, jointer, or floor surfacer. Economical—low first cost and negligible operating expense. The Reid-Way is a time and money-saving machine at a price everyone can afford. Write for new circular.

The Reid-Way is precision-built of the finest materials throughout. Its low price is due entirely to its remarkable **SIMPLICITY**



The REID-WAY Co.

708 North 16th Street
Cedar Rapids, Iowa

REID-WAY CO.,
708 No. 16th St.,
CEDAR RAPIDS, IOWA

With no obligation on my part you may send circular describing the new Reid-Way Vacuum Sander.

Name.....

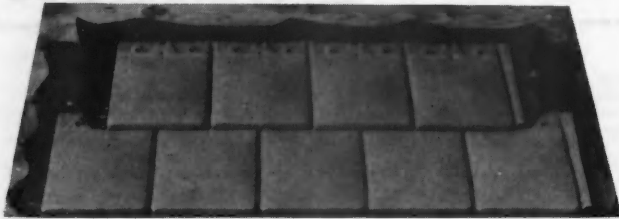
Address.....

Just clip this to your letterhead if more convenient.

Now Comes the Roof of Glass and Iron

A GLASS coated iron shingle is the invention of a Detroit roofing expert and has been used for several years on homes and other buildings in that city.

The base is Armco Ingot Iron, 22-gauge, and the surface is two coats of glass enamel fused on separately at a temperature of 1,600 degrees F. Thus the surface becomes an actual part of the iron. Even the blow of a hammer will not damage it.



Close Up View of Glass Coated Iron Shingles, Showing Recommended Method of Overlapping the Roofing Felt Onto the Shingles.

The tile is made in three finishes, glazed, dull and sand, and in an unlimited variety of colors, thus making it possible to produce practically any decorative effect demanded by design or environment.

The glazed finish affords unusual brilliancy of color, while the dull, or matt finish is more subdued and delicate in its tones approximating the effect of fine slate, but with a much wider range of color. The sand finish gives the roof a very unusual and unique effect and like the others unlimited opportunity for color variation. In fact each of the three finishes can be supplied in practically any color or combination of colors that may be desired.

The permanency of the coloring makes it possible for the architect to produce exactly the effect desired as it is not necessary to allow for the ravages of sun or weather. Experience has proved that neither time, nor heat, nor cold can dim the color.

One of the strong claims that is made for this new roofing



Home on Balfour Road, Detroit, Three Years Old, Showing the Adaptability of Glass Coated Armco Iron Shingles to the Various Angles of Hips, Ridges and Valleys.

is that it will retain all its original beauty and freshness as long as the building stands.

Iron gives it great strength and lightness. The glass surface gives it its imperviousness to time and weather.

One of the important installations of this new roofing tile was accomplished something over three years ago

on a fine home on Balfour Road, Detroit; illustration herewith.

The tile on this particular house is a delicate shade of blue. Its appearance today after three years of summer sun and winter storm is that of a newly applied roof. The color is as fresh and bright as the day it was put on.

Many other homes and apartment houses in and about Detroit have since been roofed and at present a number of important jobs are under way in Cincinnati and one or two other cities.

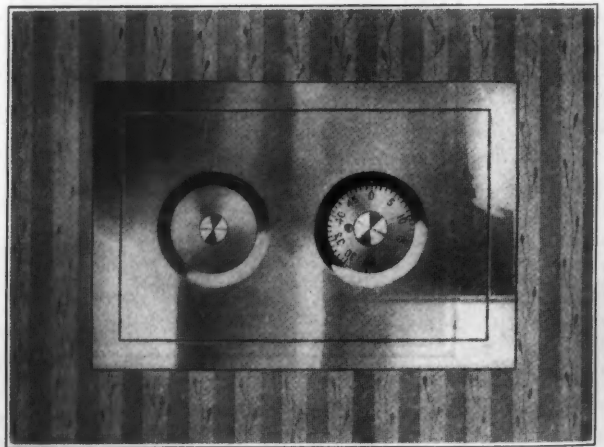
The producing company, whose offices are in Detroit, is planning a wide extension of its business this year and hopes to make its product quickly available to builders in any part of the country.



Wall Safe Protection

THE design and construction of this wall safe insure an unusually high degree of protection for a safe of this type, not only protection against burglary and theft but also protection against fire. The double walls are of 16-gauge steel, electrically welded. Between these walls, on all sides, is a thick shield of asbestos insulation. The door is snugly fitted and strongly hinged.

The special, four tumbler, combination lock is counter-sunk, flush with the surface of the door. The dial and knob are heavily nicked and brightly polished. The outside dimensions are 12 by 8 by 5 inches, the inside dimensions 9¼ by 5¼ by 4 inches. The net weight is approximately 14 pounds. Each safe comes equipped with steel bar arms for use as anchors behind studding in frame construction and behind brick or block in masonry walls or imbedded in solid concrete construction.



This Wall Safe Insures a High Degree of Protection, Both Against Burglary and Theft and Against Fire.

The steel arms extend four inches on both sides of the safe so as to reach the studs regardless of their spacing. This makes it impossible for anyone to remove the safe without knowing the combination. In new buildings the steel bars are fastened to the backs of the studs. In old buildings the arms should be removed and bent at right angles so that they may be bolted to the inside of the studs instead of the backs of the studs, as in new buildings. The arms are secured to the safe by bolts from the rear so that the bolting is on the inside of the safe.

Special combination locks, said to be impossible to pick or "jimmy," are used. Over 100,000 different combinations are possible. These safes have been tested in fire without harm to their contents. A plate signifying the protection of the William J. Burns' International Detective Agency, Inc., is permanently fastened to the front of each safe, and this protection is provided without extra cost to the buyer.

It Pays Other Builders..and it will pay YOU

This advertisement is written for the conscientious builder who is seeking to gain a reputation with every job.

If you want to build confidence and make satisfied customers we have a story for you—the Andersen Window Frame* story. After you have read the following statement from a brother builder and have studied Andersen points of superiority, we would like to hear from you. At least, fill out and mail the coupon on this page.

"Andersen Lumber Company
Bayport, Minnesota.

"With the accuracy of manufacture, the genuine white pine, the noiseless pulley and the many other features, you have a frame to be proud of. . . . I could not make as good a frame as you do, and if I could the cost would be prohibitive. In building homes I have always tried to handle material of the highest quality and best workmanship, and feel the Andersen Frame answers every requirement of what a frame should be.

C. C. Cotter
Swissvale, Penn."

*Look for the Andersen Trade Mark on every frame.

SUPERIORITY
GUARANTEED
by this trade mark



**Genuine
White Pine
Sills and Casings**

(White Pine for PERMANENCE *Styles and Sizes for BEAUTY*
Weather-tight for HOME COMFORT *Available at dealers for CONVENIENCE*
Standardized Quantity Production for ECONOMY



A Frame for Every
Kind of Building

Andersen Distinctive Features **FRAMES**

- 1 Patented, noiseless, long wearing Andersen pulleys used exclusively.
- 2 Genuine soft White Pine sills and casings—last a lifetime.
- 3 Patented, exclusive weather-tight features including groove for wide blind stop.
- 4 Absolute accuracy of milling.
- 5 A Frame up in 10 minutes.
- 6 Standardized styles and sizes, convertible for all architectural needs.
- 7 Nationally known and distributed.
- 8 Dependable because guaranteed by a reliable manufacturer.

Sold by Leading Building Material Dealers

ANDERSEN LUMBER COMPANY
Box 2104, Bayport, Minnesota.

Please send me without cost or obligation the material checked in squares on this coupon.

Set of folders describing construction and uses of Andersen Frames.

"How to Make Your New Home More Comfortable"—an illustrated booklet of interest to all home builders.

Name _____

Business _____

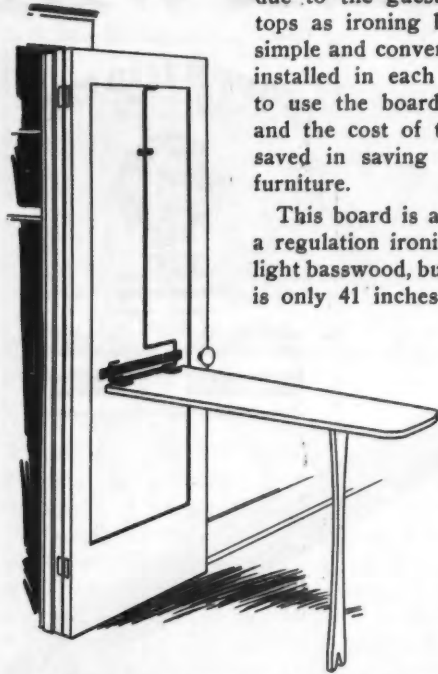
Street Address _____

City _____ State _____

Name Lumber Dealer _____

Simple, Efficient Ironing Board

THE ironing board shown here is a piece of equipment which was originally designed for installation in hotels and apartment hotels, but which is finding favor in all type of apartments and homes as well. It was devised to do away with the spoiling of furniture in hotel rooms due to the guests using fine table tops as ironing boards. With this simple and convenient ironing board installed in each room it is easier to use the board than a table top and the cost of the boards is soon saved in saving the refinishing of furniture.



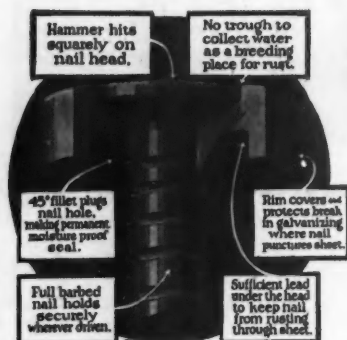
A Simple Ironing Board Which Can Be Installed Either on a Door or on the Springs of a Disappearing Bed.

which is released at a touch and automatically fastens the board in place when it is raised after using. When lowered the leg drops naturally into position. It may also be attached to the springs of a disappearing bed by means of two metal strips.



Effective Lead Headed Nails

HERE is a lead headed nail of new design which possesses a number of features recommending it for various roofing purposes. It was originally designed for laying corrugating sheet steel roofing, but is also being used successfully for flat sheets, slate, crushed slate roll roofing and shingles. It is made in three sizes, 1½ inch, 1¾ inches and 2 inch, No. 10 gauge, either bright wire or galvanized or pure copper.



A Nail for Use with Sheet Steel and Other Types of Roofing, with a Lead Head That Will Not Come Off.

This board is a simple one. It is a regulation ironing board, made of light basswood, but, for convenience, is only 41 inches long, 11¾ inches wide at the end and 8¾ inches at the narrow end. A hinged leg is provided at the narrow end and the wide end is attached to the inside of a closet door by means of a single metal strip, only six screws being required to keep it in place. It is held up against the door by a latch at the top

As can be seen from the illustration, in driving this nail the hammer hits squarely on the nail head, not on the lead, and there is no chance of knocking the lead off the top of the nail or of knocking it loose or out of shape.

Also it is possible to drive

this nail through sheet steel roofing without first punching a hole. The lead is pressed on under the nail head and just enough is used to make a perfect seal without any waste.

The seal effected by this nail is a double one. The fillet plug underneath the nail head plugs up the hole and the harder the nail is driven the tighter the hole is plugged. The rim on the under side of the head conforms to the shape of the roofing and seals the break in the galvanizing or enamel of the roofing. This forms an absolute and permanent assurance against leakage or rust.

On the upper side of the nail head there is no trough to collect water and start rusting of the nail head. The shank of the nail is full barbed and will hold securely wherever driven. The manufacturers estimate that 100 nails will be required for a square of sheet steel roofing, 100 square feet, and that a 100 pound keg will lay 80 squares.



Clamps for Concrete Forms

THE illustration shows a concrete construction job which is going forward rapidly and economically because of the use of a line of form clamps that greatly simplify the tying and hanging of forms and that can be used under any conditions, being adaptable to any design of form for walls and columns. They are stocked in five sizes to take



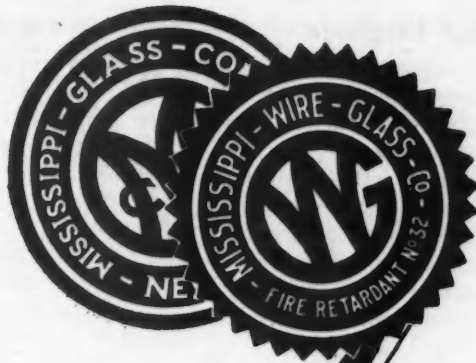
Reinforced Concrete Construction Work of All Kinds Is Greatly Simplified by the Use of Form Clamps Such as Are Being Employed on This Job.

rods of ¼ inch to ¾ inch in size. Their use assures accurate forms on all types of work and prevents all spreading of forms.

With these clamps, plain, round, mild steel rods take the place of threaded rods with nuts and washers, or of twisted wire. To apply, the clamp is slipped over the rod, brought to bear against the form and the set screw tightened. The form is moved into line with a special tightening wrench which is furnished. All of the material and equipment for the installation of the forms is furnished by this company which also manufactures a line of simple and efficient, adjustable shores of the "T" head and "L" head types, sleeper anchors, reinforcing steel and similar products.



The Alpha Portland Cement Company, Easton, Pa., has published a new edition of its handbook under the title, "Alpha Cement—How to Use It—A Practical Handbook on Cement Buildings and Improvements."



Quality

THE trade marks shown above identify products that have won universal recognition as the standard for uniformity of quality and protection. Years of experience in the manufacture of building glass and constant laboratory tests are the reason for Mississippi supremacy.

In 1899 the underwriters based their standard for wire glass on the product of the Mississippi Glass Company. Since then Mississippi has perfected many processes for the manufacture of polished and figured wire-glass and figured sheet glass.

By a new process of manufacture, Mississippi products have a plate-glass finish and a uniformity of quality not found in any sub-standard product on the market.

For strength and beauty—for quality and efficiency—specify "MISSISSIPPI".

MISSISSIPPI GLASS COMPANY
MISSISSIPPI WIRE GLASS COMPANY

220 Fifth Avenue New York

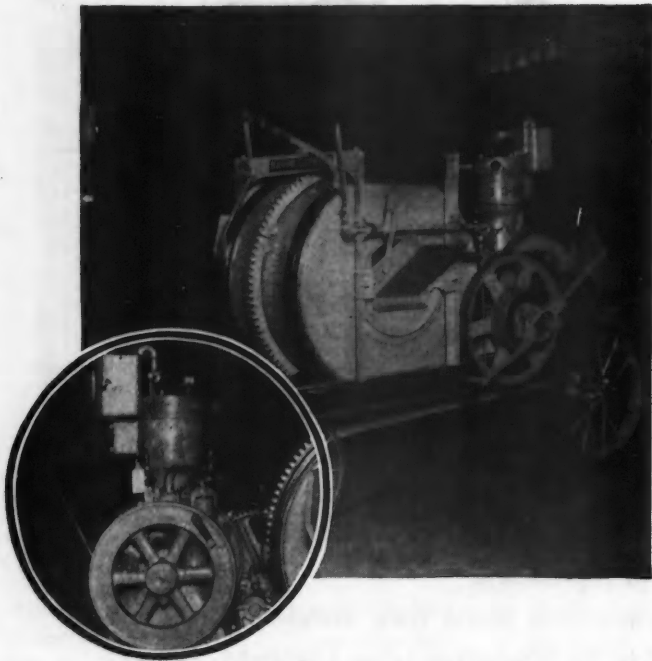
Chicago St. Louis

*The Standard
is based on*

MISSISSIPPI

Mixers With Diesel Engines

HOW to prevent employees and others from filling the gas tanks of their private automobiles from the company fuel supply and the gas tank of the concrete mixer is a problem that has puzzled many contractors. An unexpected solution of the difficulty was recently obtained by engineers of the City of Chicago during some experimental work in which Diesel engine power was tried out on small mixers. Since the Diesel engine operates on fuel oil or kerosene the problem of stolen gasoline does not exist. In addition, what appears to be decided advantages of simplicity of operation have been obtained.



This Concrete Mixer Was Equipped with a Diesel Engine, Preventing Gasoline Thefts and Gaining in Efficiency.

About 18 months ago the idea of using Diesel engines on small mixers was tried on a test job. A well known type of 7-S mixer was purchased without power plant and fitted in the city shops with a six horsepower, one cylinder, Diesel engine. During the past year and a half this piece of equipment has been in continuous use on sidewalk, foundation and other general work and has given such satisfactory results that similar engines are being installed on several pieces of equipment including a 10-S mixer.

Outside of the economy from stopping gasoline thefts, the engineers have become converted that, due to its reliability, simplicity and ease of operation, the one cylinder Diesel engine is a preferable power plant. It has run without repairs or adjustments of any consequence during the entire period and there has been no ignition trouble and no carburetion trouble since this type of engine has neither carburetor or spark plugs. No difficulty in starting has been experienced even in cold weather. The engine has been handled in the usual way without any special attention.

A New Insulating Board

A NEW insulating material was placed on the market recently which is interesting not only because of the raw material from which it is made and the process of manufacture, but also because of its high insulating qualities and its possibilities for economical insulation. This new material is made from straw, a farm waste which has for many years been used in buildings, chiefly in the form of thatch for roofs, but which never before has been fabricated for building purposes.

The process by which straw is now fabricated converts it into a form that is easily handled and is free from the disadvantages of unfabricated straw from the standpoint of fire hazard and deterioration. In addition the new product possesses the structural strength needed for walls and roofs and provides an excellent plaster base. It also can be used for sound deadening in buildings and for structural and decorative purposes.

The process of manufacture consists of first softening the straw by digestion in rotary, globe shaped vessels, under steam pressure, with a solution of suitable chemical. This loosens the bonds between the individual fibres and cells and converts the glutinous and siliceous compounds into an excellent adhesive which later in the process serves to bind the fibers together and renders the finished board waterproof.

The cooked straw is dumped into the rotaries and shredded and beaten by suitable machinery to separate it into elementary fibres and cells. In this operation it is partly washed and thoroughly sterilized, but care is taken to preserve the binding and waterproofing material in the mass. This material is then set upon the fibers by the use of a reagent and the mass is run over a special board machine in which it is formed into a continuous board and the excess of water is squeezed out. The board is then passed through a tunnel drier 1,000 feet long, by means of live rolls, and is subjected to a heat of 500 degrees Fahrenheit. It emerges at the other end a continuous board 12 feet wide and 7/16 inch thick, which is then cut to four-foot widths and any desired length, ready for shipment.

Tests of this board, made at Armour Institute of Technology, show that it possesses very high plaster bonding qualities and nail holding strength and that its heat conductivity is unusually low. Because of the practically unlimited supply of raw material for its manufacture, and comparatively simple process of manufacture, it can be produced at a low price which will make it widely available for insulation of all kinds.



Here Are Some of the Machines Used in Producing the New Insulation Board Which Is Manufactured from Wheat Straw.

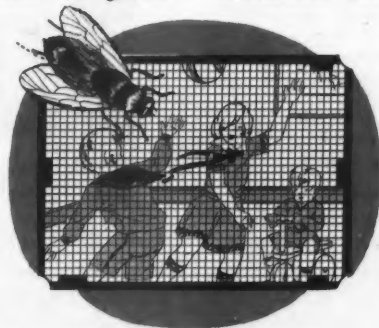


There Is Money In It— For You

YES there IS money for you in recommending and installing **Sun-Red Edge** Wire Cloth for screening doors, windows and porches.

Sun-Red Edge Alumina answers your demand for "something different—and better in screen wire cloth." It is perfectly woven of heaviest standard wire, with square mesh insuring 100% insect protection. It gives double service because it will last twice as long as ordinary galvanized screen cloth. It lays perfectly flat, and will stretch on your frames like a sheet of paper. It is flexible and handles better than other wire cloth.

When you use **Sun-Red Edge** Screen Cloth you have the *only* Self-Measured and trademarked



screening made (measure marks every six inches), bearing the manufacturer's guarantee of quality—the **Sun-Red Edge**. This **Red** enamel **Edge** gives double protection against moisture which collects under nailing strips.

Sun-Red Edge is made up to a standard and not down to a price—furnished in Alumina, Black Painted and Copper-Bronze.

There is money for you in recommending the kind of screen cloth that makes satisfied customers and saves time and labor costs in installation. **Sun-Red Edge** will do this for you.

Look for the **Sun-Red** ends on every roll.

Distributed by Leading Hardware Jobbers.

REYNOLDS WIRE CO., Dixon, Ill.
SUN RED EDGE
Screen Wire Cloth

Enameled Heating Plants

THE day of the dirty-dingy cellar, which was largely waste space, seems to be very rapidly passing. Today the basement is being cleaned up, well lighted, attractively decorated, equipped with basement equipment that appeals



In View of the Present Interest in Usable Basements, This Enameled Heating Plant Should Be Popular.

to the eye and used for many purposes ranging all the way from billiard rooms, children's play rooms and radio rooms to music rooms, libraries and living rooms. The warm air furnace shown here is one of the pieces of equipment which have been adapted to this new idea.

This new furnace is not an experiment, but is based on time tested, proven heating principles worked out by one of the leading manufacturers in this field. It has been dressed up, however, with the

square casing finished in blue enamel which is easily kept clean by wiping with a damp cloth. This enamel is really a porcelain finish fused on the iron at a very high heat so that it becomes part of the casting itself and will not chip or break under hard usage.

Aside from this feature this new warm air heater incorporates all of the features of design and quality for which this high grade line of heating equipment is known and on which its reputation has been built. It is built in three sizes, 20-inch, 22-inch and 24-inch firepot.



A Handy Scraper



This Little Tool Is Useful for Removing Paint and Plaster Spots.

THIS illustrates a little tool which will be found very convenient for many uses and which utilizes old safety razor blades, of the Gillette type. It consists of an aluminum handle with an arrangement for securely holding the razor blade either at right angles to the handle or with the edge parallel with the handle.

Among the many uses for this tool are the removal of paint and plaster spots from windows, tiling, cement, etc., and the contractor should find it very handy when it comes to cleaning up the new house after the construction and decoration is finished. There is a safety guard provided so that it may be carried in the pocket or tool box without cutting oneself or damaging the blade.

There are, of course, innumerable household uses for such a tool, and one might well find its place in every home.



Porcelain Enameled Steel Tile

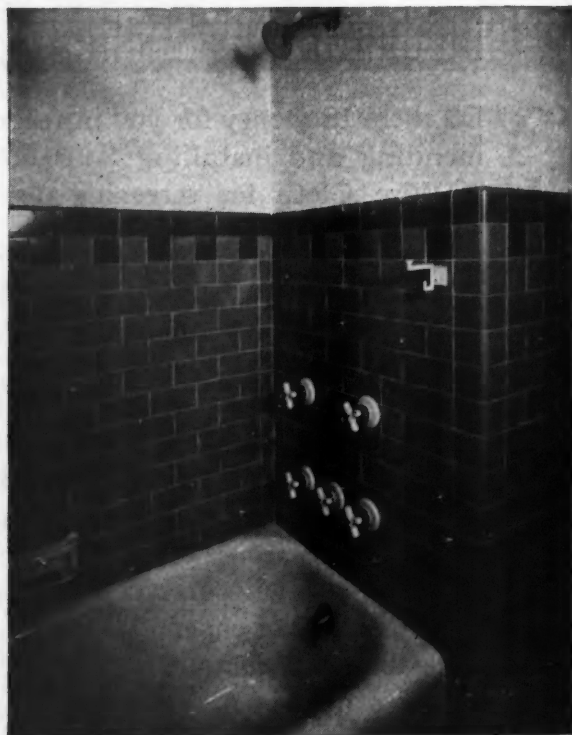
THE accompanying illustration shows a tile walled bath room in which, strictly speaking, no tile has been used. That is, no tile of the ceramic type has been used, for the walls are covered with a new product, a tile of porcelain finished, sheet steel. This sort of tile is available for use

anywhere regardless of climate and conditions and, according to the manufacturers, costs only a little more than half as much as ceramic tile.

This tile is pressed from sheet steel to form oblong, pan-like units of the same frontal dimensions as the conventional ceramic tile. The flange of each tile is about 3/16 of an inch wide so that, viewed from the back side, the tile is three inches wide, six inches long and 3/16 of an inch deep. There are other frontal sizes to conform to standard requirements, such as half tiles, and there are also such units as cove base and cap moulding. All units, however, are based on the same principle of manufacture.

Each tile is a separate unit and is set individually in a cement covered insulating slab of composition material, grooved out in three-inch squares to receive the flanges of the tile. Thus, the tile are self-locating and when pressed into the grooves, squeeze up enough cement that, when it is rubbed smooth in the joints, serves to give all the pointing-up necessary for the completed wall.

It is stated that this tile does not require the service of a skilled tile setter for installation, but can be applied by any contractor. For this reason it brings tile wall for bath rooms, kitchens, laundries, hospitals, bakeries, meat markets, filling stations and many other types of building, within the possibilities of the communities located away

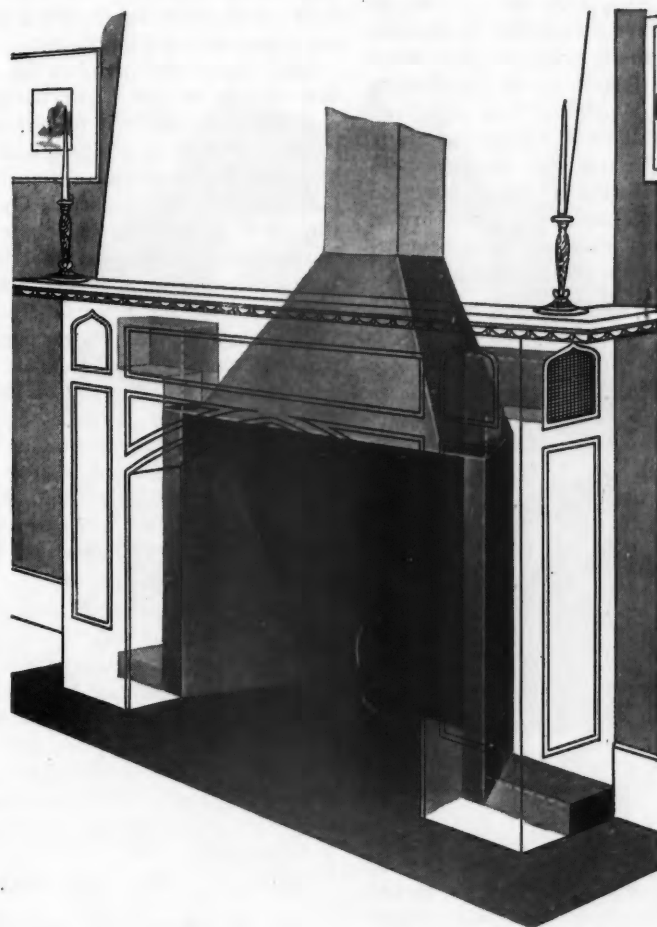


A Tile Which Is Not a Tile, Made of Sheet Steel, Porcelain Enameled, Makes Tile Work Available at Low Cost.

from the larger centers, where skilled tile setters are not available. Its low cost also makes it available for many installations where ceramic tile would be too expensive.

This tile is available in a variety of colors to satisfy the present desire for color in bath rooms, kitchen, and other rooms. The colors available include green, ivory, gray, black, white and many other popular shades. Another interesting feature of this product is that it may be applied directly over existing walls. This makes it available not only for new construction but also for the rehabilitation of old bath rooms and kitchens and it should find a ready market in the remodeling and rehabilitation work which is at present attracting so much attention throughout the country.

FIREPLACE CHARM WITH FURNACE-LIKE HEAT

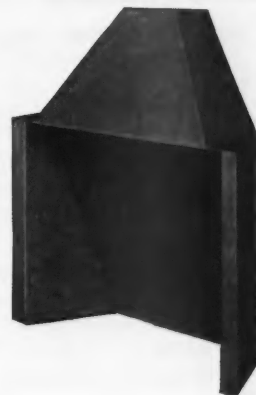


NATIONAL ADVERTISING

Full page or full column advertising of the Heatilator appears in all principal publications that are especially edited for home builders and home buyers. People are looking for Heatilators as assurance of successful fireplace operation.

Illustration at left shows the Heatilator as installed. The warm-air outlets and cold-air intakes may become an interesting part of the design of the mantel or breast, or may be concealed in the sides. Openings may be covered with grilles or with open-work masonry. The scope for architectural variation is unlimited.

Below: Heatilator ready to install. It is a complete unit up to chimney flue, including damper and smoke chamber. No assembling is necessary.



FIREPLACE SUCCESS *with* double heat GUARANTEED

FIREPLACES built or remodeled with a HEATILATOR are guaranteed to give perfect, smokeless operation—and double heat from the same fuel. The Heatilator is a scientifically designed metal form with double walls, forming a heating chamber over and around the fire. Cold air comes into this chamber, is heated and delivered into the room. . . Thus heat that is ordinarily wasted in brick or chimney—equal to that of a furnace register—floods the room with cheer and comfort.

At the new low price the Heatilator virtually costs nothing because it saves enough in material, labor and fuel to cover all expense.

We guarantee complete satisfaction or the purchase price back with an extra allowance to cover the cost of removal and return in case of dissatisfaction.

Write for new Plan Book giving full particulars with many illustrations and plans for Modern Fireplaces.

HEATILATOR COMPANY
631 GLEN AVENUE, SYRACUSE, NEW YORK

Heatilator
Fireplace Unit

DEALERS & AGENTS
We have a most attractive proposition open in many territories. Write us for it!

Heatilator Co., 631 Glen Avenue,
Colvin Station, Syracuse, N. Y.
 Please send a free copy of the
new Heatilator "Plan Book of
Modern Fireplaces."

Name
Address
Architect, Builder, Dealer?

Malleable Asphalt

A REAL opportunity for dealers and installing agents is offered by a firm long recognized as a leader in asphalts and roofings. They have developed a fibrated or reinforced asphalt of special merit both for new work and for repairing old roofs; and their plan of distributing and merchandising this product is worthy of close attention.

In roofing, for example, this malleable asphalt in mastic form is shipped to the job in barrels and easily spread over either an old or new roof with a handy patented spreader—a trowel or in thinner consistency with a brush. It hardens in the air to a one-piece rubbery sheet, cementing itself tight over the whole roof without a seam or nail head exposed.



Malleable Asphalt Being Applied on Roof and as Side Wall Flashing on Union Station, Joliet, Ill., Fall of 1925.

For a built-up flat roof, a heavy layer of mastic floated over a light roofing felt foundation, is equivalent to four or five alternate layers of felt and asphalt—with the danger of leaks from laps, wrinkles and buckles eliminated, as well as the dirt and labor connected with the hot tar kettle, and old-fashioned mopping and graveling operations. In addition to the improved method of construction, such a roof is more easily repaired—and maintenance costs are reduced.

The surface may be sprinkled before it hardens, with granulated particles of colored slate or gravel—producing many attractive finishes, if desired.



Treated Lumber With Qualities of Untreated Wood

LUMBER manufacturers and lumber yards are now joining in practical steps to make readily available for use in general construction a type of treated lumber which possesses outstanding qualities not ordinarily associated with treated lumber. Some of the retail yards already have



The New Plant of the Seaboard Refrigerating Co., Jersey City, N. J., in Which Treated Lumber Was Used.

stocks of this material on hand in the dimensions ordinarily required for porch construction, fencing, sidewalks, sign boards, roof planking especially for mill buildings, for sub-floors, and other applications where lumber is exposed to early destruction from decay.

This treatment involves an impregnation with certain salts which remain permanently in the wood but do not discolor it or affect it in any other way which will limit its use. This is specially selected material and is subjected in vacuum and pressure retorts to treatment with either of two forms of chemical. One of these is the basic salt the other a variation which is used in districts where it is necessary to guard against the danger of insect attacks, such as termites or so-called white ants, as well as from the fungus infection that causes rotting of lumber.

The lumber is absolutely clean, free from odor, can be painted, varnished or dressed, exactly as untreated; does not under any circumstances have any exudation or cause discoloration even of delicate shades of white paint, it is stated. It adds only 21 pounds to the weight of dry lumber per 1,000 board feet and, instead of increasing the fire hazard, contributes at least a slight fire retardation, while maintaining undisturbed and preserving for a long time the original valuable characteristics of wood, resilience, elasticity and grip on fastenings.

Because of these qualities this treated lumber is taking an important place in engineering and architectural design, it is stated. Certain specifications as to heart content and density, that in the past have been insisted upon in an effort to secure some degree of permanence, can for many purposes be discontinued and types of lumber be called for that supply the required strength with maximum facility for impregnation. The resulting saving in cost of lumber should, to some degree, offset the cost of the preservative treatment.



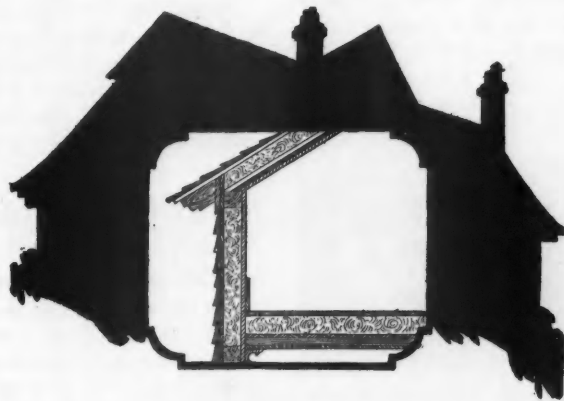
A New Electric Refrigerator

ONE of the leading manufacturers of oil burners has recently brought out an electric refrigeration unit which is being marketed as a high grade machine and not in competition with the large production, low price, units. This unit is the result of experiments running back over a period of several years. The company has not gone into the manufacture of boxes, but is jobbing standard make cabinets carefully selected to be used with its unit.

The compressor is placed in a box base, in the basement or any other convenient place and connected with the cooling unit in the ice compartment of the refrigerator. The installation can be made very quickly. When completed and the current is switched on the action is then completely automatic, controlled by a thermostat. The refrigerating effect is equivalent to 10 pounds of melting ice per hour continuous operation.



A New Electric Refrigerating Unit Placed on the Market by a Leading Maker of Oil Burners.



MINERAL WOOL

The Perfect Insulator

REDUCES UPKEEP

The proper insulation of any building is a real economy and an added comfort. Mineral Wool has conclusively proven to builders and home owners that its effective insulating qualities are exceptional and the cost insignificant for the advantages it supplies.

It keeps out both summer heat and winter cold and the saving it effects in winter fuel will pay for installation cost within a short period.

It is indestructible, vermin-proof and sound-proof and reduces the hazard of fire.

Sample and illustrated booklet on request

U.S. Mineral Wool Company

280 Madison Avenue, New York

Western Connection:

INSULATING PRODUCTS COMPANY

1553 West Madison Street, - Chicago, Illinois

**SEND
THIS
COUPON**

**U. S. Mineral Wool Co.
280 Madison Avenue, New York**

Gentlemen:

You may forward sample of
MINERAL WOOL and illustrated
booklet to

Name

Street

City..... State.....

Business

Automatic Paver Control

ONE of the outstanding developments on pavers this year is a simple device which performs the whole cycle of mixing operations automatically by one lever control. The company manufacturing these pavers has spent thousands of dollars and three years in experimental work in supplying this automatic, high speed principle to its paver.

As stated, the mechanism is simple. Three cams and



This Paver Is Now Equipped with an Automatic Control Which Relieves the Operator of Over 2,000 Hand Operations Daily.

three levers connected to the skip hoist, the water valve and the discharge chute, perform all operations with sureness and accuracy. It works on the simple principle used in all automatic machinery which performs thousands of operations daily without attention and without delay. In a day's run this mechanism relieves the operator of over 2,000 manual operations but, if desired, any or all of the present operations can be performed independently of the mechanism. This means that, if for any reason the entire mechanism failed, the operator could go ahead without a stop and operate the paver manually. By the simple adjustment of three cams the automatic timing of all operations can be varied.

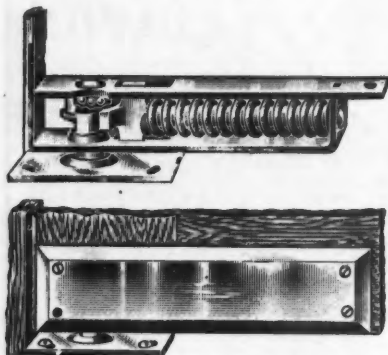
Although perfected and ready for the market in 1926, another year was taken to try the new mechanism under actual working conditions before placing it on the market. As a result, the advantages of this new development can be definitely stated in seconds saved on every batch, in increased yardage per hour and in dollars and cents per day.



Inexpensive Spring Pivot Hinge

THIS spring pivot hinge has been developed to meet the demand for a less expensive hinge than was previously included in this line of pivot hinges. It is of substantial construction with features built into it which should make it of special interest.

The ball bearings, which are located at the top of the hinge away from moisture and dust, carry the weight of the door and also protect the bearings in the frame from the thrust of the spring. The compression spring is made



A New Spring Pivot Hinge Developed to Meet the Demand for a High Grade but Inexpensive Hinge.

of the best, tempered steel wire. An alignment feature is provided by means of slotted screw holes in the floor plate, so that the position of the door may be adjusted to align with the door casing.

The top pivot and socket supplied with this hinge are made of iron which has proven the most satisfactory material for the conditions. Re-

versible beveled side plates are supplied and may be applied to either side of the door. This is convenient when different finishes are required to match other hardware in the rooms on either side of the door. In many instances this feature permits using stock goods where a combination finish is required.

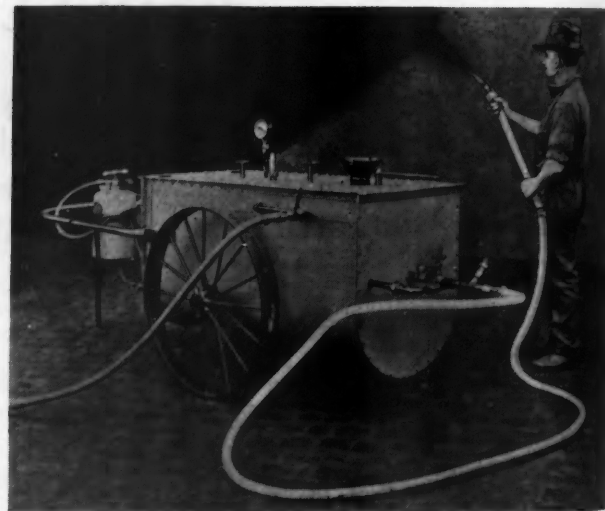
When the door is opened to 90 degrees this hinge holds it in that position. At an open position of approximately 95 degrees the hold-open feature is most rigid. It is furnished in the following finishes: dead black, bright brass, dull brass, bright bronze, bright oxidized copper, bright nickel and sanded oxidized brass.



Spray Gun for Asphalt and Other Heavy Fluids

THE mop-and-pail method of applying hot tar, asphalt, pitches, enamels, heavy fluids, waxes, paraffines and similar materials, as a protective coating, has always been slow, expensive and unsatisfactory. The work required a large number of men to carry the heated material, by the slow and dangerous pail method, from the melting pot to the job, where it was smeared on with mops or brushes or poured. Complete and uniform coverage was impossible, the application, penetration and coverage depending on the rapidity and skill of the operator and the temperature of the material.

Now there has been perfected a gun, as shown in the illustration, which sprays these liquids of practically any consistency or temperature, through special insulated,



This Gun, Which Has Recently Been Perfected, Will Apply Asphalt and Other Heavy Fluids in an Economical and Satisfactory Manner.

metallic hose, any distance up to several hundred feet from the gun. The volume and pressure are under control, assuring uniform coverage regardless of atmospheric conditions. Compressed air is never in contact with the material in the gun nor is it used to form the spray. Atomization is obtained by a purely mechanical process. Air is not entrapped in the material, which retains all its original and valuable properties, required for penetration and adhesion to the surface.

Fifteen cubic feet of air at 60 pounds pressure is sufficient to operate this gun. A small, portable, garage compressor, operated either by gasoline or electricity, will answer where no air supply is available. This gun is an adaptation of the patented refractory gun made by this company which has been highly successful in other fields. It consists of a cast iron cylinder from which the material is forced by a piston capable of high pressure. It is enclosed in a steel housing, mounted on wheels. Its capacity is 15 gallons enough to cover approximately 400 square feet of surface.

Side and end matched
to perfection—Maple
makes a one-piece floor
of lasting beauty.



A delight to the eye—this Maple
floor in Pastel Green!



Picture an Orchid floor in one
of your rooms!

Standard finishes shown, made
only by the Marietta Paint &
Color Co., Marietta, Ohio.

Choose any color

IN the newest homes
you see them . . . Northern Hard Maple
floors in cool green—warm, mellow brown
—restful blue—rich, rare ebony. It is the
new vogue in flooring.

Choose any colors you wish. With fade-
less, transparent penetrating stains recently
developed, which you or anyone can easily
apply, it is now possible to produce perma-
nent colors of your choice in Northern Hard
Maple Flooring.

By this staining process, Maple, long
known to be the smoothest, most resilient
and most enduring of all the better flooring
materials, develops a distinctive type of
beauty never before seen in any floors. And
completes color harmony.

Our book, "The New Color Enchant-
ment in Hard Maple Floors," shows page
after page of interiors pictured in full colors.
Let us send you a complimentary copy.

MAPLE FLOORING MANUFACTURERS ASSN.
1798 McCormick Building
Chicago

Guaranteed Floorings

The letters **MFMA** on Maple, Beech or Birch
flooring signify that the flooring is standardized and
guaranteed by the Maple Flooring Manufacturers
Association, whose members must attain and main-
tain the highest standards of manufacture and adhere
to manufacturing and grading rules which economi-
cally conserve these remarkable woods. This trade-
mark is for your protection. Look
for it on the flooring you use. **MFMA**

MFMA No. 103
Autumn Brown

MFMA No. 102
Spanish Brown

MFMA No. 105
Dove Gray

MFMA No. 106
Royal Blue

MFMA No. 101
Early American

MFMA No. 104
Silver Gray

MFMA No. 107
Pastel Green

MFMA No. 108
Orchid

Floor with Maple

Bru-CELL-ized flooring is insect proof. It is easier to lay, scrape and sand. It will not change in size, is more durable; and takes a superior finish.



You can now furnish

real plank floors of Solid Oak at a cost no longer Prohibitive for Average Homes

EXTRA sales—extra profits are yours, in this opportunity to supply distinctive Colonial floors, at reasonable cost. People want plank floors, because they are different, but the expense has been too great for any but the most pretentious homes. This is due to costly methods of manufacture, such as laminating or veneering, and other precautions needed to prevent shrinking or swelling.

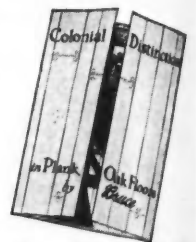
Bru-CELL-izing, a remarkable chemical process perfected in the Bruce laboratories, now makes possible the use of solid oak planks, because it stabilizes the wood and absolutely prevents cupping, buckling, or shrinking. Laminating or veneering is unnecessary.

As a result, Bru-CELL-ized planks may be laid without extra precautions. They may be blind-nailed like

strip flooring, and need no screws, plugs, or butterfly keys to hold them in place.

Solid oak planks are the most profitable flooring item a dealer can handle. Write today for full details and illustrated literature.

E. L. Bruce Co.
MEMPHIS, TENNESSEE
Largest manufacturers of oak flooring in the world



Write for this book How Bru-CELL-izing solves the plank floor problem is fully explained in this book: "Colonial Distinction in Plank Floors." It is free.

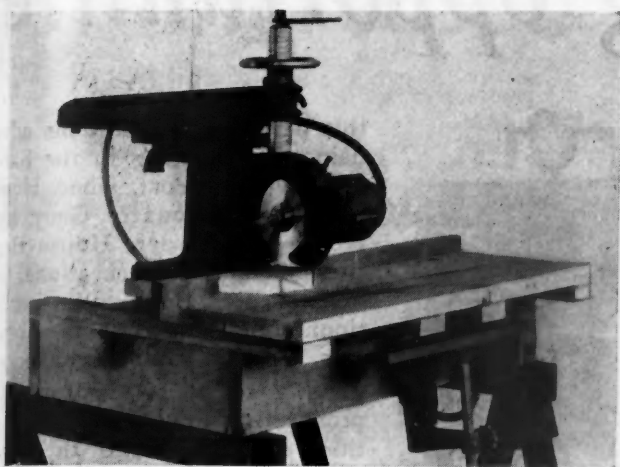
Bru CELL ized Oak Flooring

PLANK • FABRICATED BLOCK • DESIGN • STRIP

Portable Universal Saw

HERE is an exceptionally handy, universal cut-off saw which is particularly adapted to the uses of the contractor. The machine is compact, self-contained convenient to operate and readily portable. Two men can move it anywhere and one man may dismantle and move it with no more exertion than is required to handle his tool chest. It is adapted to cutting rafters, jack rafters, ceiling, siding, flooring, paneling and does the work more quickly, accurately and economically than it can be done by hand.

This machine will do straight cutting off, cut right and left hand miters, cut right and left hand bevels, straight



This Portable, Universal, Cut-Off Saw Has Been so Designed as to Be Particularly Adapted to the Requirements of the Contractor.

ripping, bevel ripping, dadoing, tenoning, stair routing and will make mouldings. An instantaneously operated locking device makes it possible to make adjustments quickly from straight cutting to miter cutting, insuring constant rigidity and reliable accuracy at all times, while conveniently located, graduated scales facilitate the rapid cutting of any intermediate angles.

Such a machine will aid the contractor in meeting the demand for lower building costs and at the same time turn out better work with greater satisfaction to his customers, and at a greater profit to the contractor.

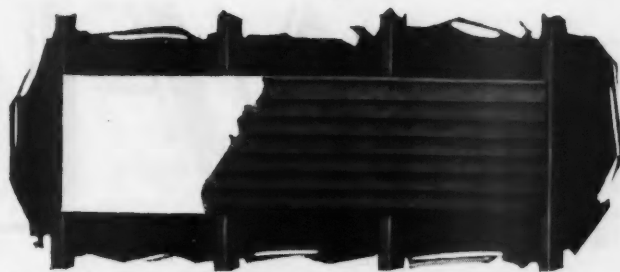
The machine is practically universal in its application to the work of the building contractor. It is sturdily built, simple to operate and thoroughly efficient on all work for which it is adapted. It has ample capacity and abundant power for doing the work for which it is intended. It will cut off, rip, miter and rip miter lumber up to two inches thick. A board 18 inches wide may be cut off straight and a 45 degree angle may be cut on a piece 12 inches wide. Dado heads up to 1½ inches may be used.



Mineral Wool in a New Form

MINERAL wool is familiar to most of those associated with building and its qualities as a fireproof insulation are well known. This material is now being made in a form which is particularly adapted to simple and economical application. The material used is a light weight, fleecy, pure white fibrous material which consists entirely of fiberized free silica formed by the melting and blowing of a calcium silicate rock in which the silica is free and readily separated from its other elements.

This material is never affected by disintegration, corrosion and calcining or by most chemicals and the ordinary solvents. It is physically stable and so not affected to any noticeable extent by expansion or shrinkage. In the new form it is prepared in sheets about 2 inches thick with any combination of wire and metal lath, screen and metal lath, or metal lath on both sides. A practical form con-



Here Is a Mineral Wool Insulation in an Entirely New Form Which Makes for Easy and Economical Application.

sists of metal lath on one side and small meshed woven wire on the other with the sheet held together by wires passing through.

The sheets are spaced in size for standard studding but other sizes and spacing are available on special order. The metal lath is placed with an overhang along the edges for nailing to the studs and there is sufficient yielding of the mineral wool beneath so that plaster applied to the lath will key effectively.

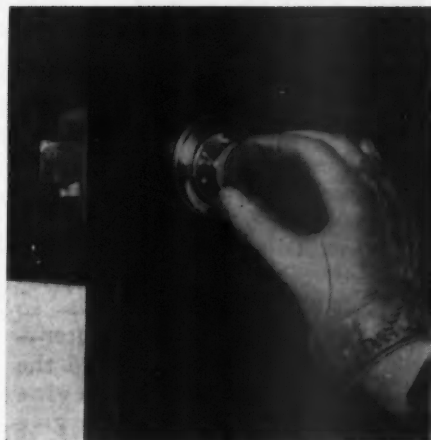
This material has proved to be not only an effective temperature and fireproofing but also of a sound proofing value. It is shipped in wooden crates and all sizes and kinds of lath are carried in stock to facilitate prompt shipment.



New Combination Door Lock

SINCE there were no radical changes in the design and principle of door lock construction for years, a recent development in this field has attracted particular interest. It is the application of the tumbler type combination lock, as used on bank vault doors and safes, to all kinds of doors. It has been developed by a company which has for seven years been making keyless padlocks and has placed about four million in use.

Heretofore the chief obstacle to this use of the combination lock has been that it operated by sight, a pointer or dial indicating the numbers. Therefore, while the added convenience and security of combination locks have long been appreciated, they have not been used for purposes that require operation in the dark. This



A Tumbler Type, Combination Door Lock Which Can Be Operated in the Dark by Sound or Touch as Well as by Sight.

new lock permits a combination to be worked by sight, sound or touch. It does away with the necessity of carrying a different key for every door as one household may have the same combination throughout, and it does away with the necessity of carrying any key whatever.

This new lock can be opened in four seconds by anyone knowing the combination, but there is no case on record, it is stated, of the picking of the lock under conditions of actual use by a burglar or unauthorized person. The simple numerals are easily remembered. Thousands of combinations are possible so there is no chance of duplication, and any number of locks with the same combination can be had or varied according to requirements.

The locks are supplied in three colors, antique bronze, sanded green and Colonial black.

THESE **NEW** AMERICAN

... afford big opportunities

HERE is the newest and finest line of heating equipment in the world.

These perfected products of the American Radiator Company are the results of forty years of designing and manufacturing experience in the largest heating laboratories in the world. Built to meet the new demands of our day, they embody every refinement and improvement in efficiency, beauty and economy known to modern heating engineers. Yet they cost no more than ordinary equipment.

Heating Products That Help Sell the House

When you install these products in the houses you build you are endowing your property with a greater permanent asset value than it otherwise would possess. For due to the universal recognition and acceptance by the public of American Radiator Products your clients will react more favorably to the house that is so equipped. Sales will be greater—and they will be easier. And the lifelong satisfactory service which these products will give the buyer will win greater good will for you.

Advertising That is Reaching Over 27,000,000 Readers!

An extensive national advertising campaign is acquainting prospective home owners everywhere with the outstanding features of



Tapped for Excelso Heater.

1. Perfected design—long double flue gallery—highly efficient.
2. Thoroughly and indestructibly insulated.
3. Equipped with mechanical regulation and all accessories.
4. Clean and permanently beautiful—all doors porcelain enamel finish.

Ratings:	Steam	350 to 17,900
	Water	600 to 29,400
Fuel:	Hard or Soft Coal, Coke, Oil or Gas.	

this new equipment. This advertising is appearing in the Saturday Evening Post, Good Housekeeping, Country Gentleman, House and Garden, House Beautiful, Arts and Decorations, Delineator, Red Book and other national magazines of big circulation. Also in local newspapers.

As a result of this publicity, prospective buyers will look for these new products in the houses they inspect. When you can show them an American Radiator Heating Plant you are assured of their confidence—not only as regards the heating system, but as regards the construction of the house throughout.

The New Ideal Redflash Boiler

This new Boiler is made in sectional design with long double flue gallery which retains the hot gases of combustion within the boiler for the longest period of time to insure the extraction and utilization of their heat in the highest degree. Its quick pick-up capacity insures ready heat on cold mornings. Inside the beautiful and indestructible metal jacket is a one-inch, corrugated air-cell asbestos lining to prevent radiation heat loss. The Boiler is completely equipped with mechanical regulation and all accessories—and it is so clean and permanently beautiful that it allows the cellar to be converted into a more useful, livable place.

AMERICAN RADIATOR

RADIATOR PRODUCTS

AT POPULAR PRICES

for increased sales in 1928

The NEW Ideal "Hotcoil" Gas Water Heater with Porcelain Enamel Top and Base

THE new Ideal "Hotcoil" Gas Water Heater unites the advantages of all other types of water heaters on the market.

It gives abundant hot water, day or night, on the turn of a faucet, and operates with the highest degree of economy attainable for practical service. The Heater is completely equipped with automatic regulation and all accessories.

And it is as beautiful as it is efficient. Top and base are finished in deep green porcelain enamel—the jacket in French grey baked enamel.

The beauty of the Heater is virtually everlasting.

Yet with all its efficiency and with all its beauty, this is the lowest priced completely equipped automatic storage heater on the market.

Send for Literature

You will find it profitable to tie up with our advertising by equipping buildings with these new products—products which your clients will recognize at once as the finest heating equipment in the world. Full descriptive literature sent free upon request.



THE AMERICAN CORTO *The Radiator Classic*

with American "Precision" Accessories

The "American" Corto, the first slender tube radiator manufactured in this country, is well established as the standard for heating efficiency and beauty.

With "American" Corto Radiators (equipped with Arco Packless Valves and Arid Air Valves) upstairs, and an Ideal Redflash Boiler in the cellar—the house owner is assured of a lifetime of perfect heating comfort at lowest fuel cost.

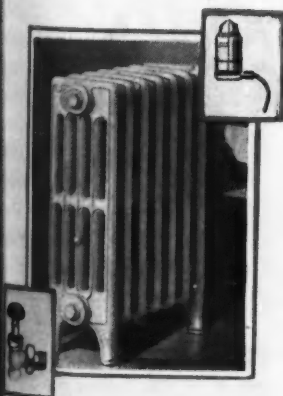
THREE SIZES
20-30-40 gal.

\$55

and up according to size as advertised

F.O.B. Buffalo N.Y.

* Approved by Good Housekeeping Institute and American Gas Association.



RADIATOR COMPANY

MAIL THIS COUPON TODAY
AMERICAN RADIATOR COMPANY
Advertising Dept., 40 West 40th St., N. Y. City
Amer. Bldr. 4-23.
Please send me literature describing your new Ideal Boiler and Water Heater.
Name
Address
City
State

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Two New Lighting Units

TWO new lighting units have been added to one well known line. One of these is a wall unit with porcelain bracket and receptacle. The hexagonal shape of the base is a feature which makes it possible to install this bracket in places where brackets with circular bases would be awkward. For example, the flat side of the base can be set flush with the edge of a medicine cabinet in the bathroom, whereas the round edge on a bracket with a circular base would prevent a close fit. This unit assures plenty of light at the place where it is really needed.

The bracket fits all types of outlet boxes, flush or otherwise. It is simple to wire, requiring only two wires to complete the installation. Its mechanism as well as its chain, is undisturbed



Above—The Wall Fixture with Convenient Hexagonal Base. Right—The All Porcelain Ceiling Unit.

while the wiring is being done. An inconspicuous, high quality convenience outlet is another advantage. Color combinations consisting of stripes and all-over shades, together with the smooth lines of the screwless shade holder, combine to make it a most pleasing and attractive bracket with a wide range of uses.

The other new unit is a ceiling unit which is expected to prove popular for kitchens, hospitals, clubs, stores, restaurants, beauty parlors and, in fact, wherever an attractive porcelain fixture is required. It, too, is made in a variety of striped and all-over shades and can be supplied with 2¼, 3¼ or 4 inch fitter for glassware or a porcelain ring when the lamp itself is exposed. It is neat and durable and is weatherproof. The wiring is also simple.

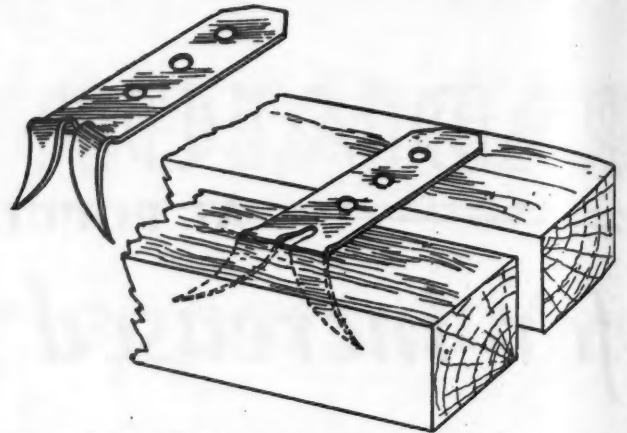
This unit can be had with suitable provision for a three-conductor cord for use with a combined pendant switch and convenience outlet which is very useful in kitchens to control the light above and at the same time allow independent operation of the appliance below. It is very handy for use in office buildings to control the light and operate adding machines and other electrical office devices, and in beauty parlors for operating separately controlled machines at the same time. These units are also furnished plain to be decorated to meet the needs of any situation.



Handy Jamb Fastener

EVERY builder should find the little device shown in the accompanying illustration an aid to better, quicker and more economical work, hence more profitable work. The device is clearly shown at the left, while at the right is a phantom view showing how, when it is driven into wood, it spreads in such a manner that it cannot work loose.

This device is used for jambs in doors and windows and also for fastening shelving and in similar tight places. According to the manufacturers, it sets the frame squarely and accurately, drives in without cracking the wood, requires less fitting on doors, saves putting up of nail holes by



A Special Jamb Nail Which Is Highly Effective In Setting Jambs Firmly and Permanently in Place.

painters, holds better than nails and is more quickly put in and enables the carpenter to do more work in a day and do it faster and more easily.

The fastener is made in three sizes, 1¾ inches long, 2¼ inches long, and 3 inches long. The manufacturers offer to ship a box on approval, to be returned without charge if an actual trial does not prove their claims.



Serviceable Bench Band Saw

INSTANTANEOUS service is featured as the chief merit of this recently announced, bench, band saw. It is a sturdily built machine and, though it measures only 36 inches in height, will perform 90 per cent of the work of a large machine, it is claimed. All the latest safety devices have been incorporated in its design. The locking, hinged, wheel guards make for the greatest safety of operation and, at the same time, provide an easy method for replacement of saws.

Difficult work is made easy by the large tilting table and the smaller, stationary table behind it. Undesirable twisting of the blade is avoided by the adjustable lower guide and the upper roller guide which is mounted on a strong, hexagonal guide post. Six inches of clearance between the guide and the table provide ample room for large stock.

The highest standard of quality is maintained in the electrical apparatus supplied with the machine. Either an alternating or direct current motor is supplied, either direct connected or connected by a belt. A circuit breaker is furnished as an additional safety feature and as a protection against damage to the whole machine due to overloading. A long cord enables the operator to plug in on any ordinary light socket.



This Small, Bench, Band Saw Will Perform 90 Per Cent of the Work of a Large Machine, It Is Claimed.

Every small home needs a roof which protects and beautifies



To enhance its value, to reduce upkeep costs, the small home should have a roof which is permanent, fireproof and beautiful

Your home is probably the most important investment of your lifetime. If, as is the case with most of us, yours is a place of modest proportions, it is particularly necessary that you do everything possible to keep it attractive, to enhance its value and to prevent useless expense and annoyance.

One of the first points by which your house is judged is its roof. A trim, neat-looking house may be spoiled by a cheap, flimsy roof. A house of rather commonplace appearance can almost be made over by a new roof constructed of Johns-Manville Asbestos Shingles.

In the pictures we print here we cannot show you the warm, harmonious colors, the pleasant blending of shades. You may see these by looking at our colored advertisements appearing in Liberty or Collier's and many monthly publications. Our free color guide also shows the beauty of these everlasting, fireproof shingles. Send for it today.

Johns-Manville Asbestos Shingles are Not Expensive

You can roof your house with cheaper materials than Johns-Manville Asbestos Shingles. But if you do you will have to re-roof in a few years. Other types of shingles will expose you to continuous fire risk.

The wise plan is to end roofing expense forever. Whether you are building a new home, or re-roofing your present home,

Johns-Manville Asbestos Shingles will give you a permanent roof. Their slightly higher cost will be saved several times over because they will never have to be replaced.

Besides this, the beautiful, smart, blended colors, and the substantial appearance of these sturdy Johns-Manville Shingles will make your house more valuable and improve its entire appearance.

Johns-Manville Asbestos Shingles on your home are an investment in beauty, in pride of ownership and in actual cash value. You cannot afford to use any other roofing.

Built-up Asbestos Roofing by Johns-Manville is preferred by the Careful Buyers in Industry

For every type of flat roofed building you will find the ideal covering to be Johns-Manville Built-up Asbestos Roofing. World renowned engineering organizations such as General Electric Company use this roofing for their buildings. It also protects theatres and baseball grand-stands, as well as warehouses, railroad stations, office buildings and factories all over the country. If you have anything to do with the construction or maintenance of any flat roofed building, write to us. We will be glad to tell you in detail about Johns-Manville Built-up Asbestos Roofing and put you in touch with our approved roofer.



Hexagonal shingles on a cottage



Colorblend Shingles on the roof of an early American style house



A Johns-Manville Shingle Roof on a Dutch Colonial Home

JOHNS-MANVILLE ASBESTOS SHINGLES
BRAKE LINING AND INSULATIONS OF ENDURING FIREPROOF ASBESTOS

FREE—Booklet of Color Combinations for Roofs.

JOHNS-MANVILLE CORP., Dept. R—
New York, Chicago, Cleveland, San Francisco
For Canada: Canadian Johns-Manville Co. Ltd., Toronto
(Mail this coupon to branch nearest you)

Send me your free booklet showing how to choose the roof most suitable for my house.

Name _____

Address _____

These shingles make homes easier to sell

Above is an advertisement from the big national advertising campaign on Johns-Manville Asbestos Shingles. Other pages in full colors, and black and white, are going to nearly 25 million

magazine subscribers. Such national advertising adds to the merit and value of Johns-Manville Asbestos Shingles the further advantage that their presence on a home makes it easier to sell.

JOHNS-MANVILLE

C O R P O R A T I O N

NEW YORK · CHICAGO · CLEVELAND · SAN FRANCISCO

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Ready-Built Tile Fireplace Made in One Unit

A MANUFACTURER of ready built fireplaces has completed their casting forms and is now marketing a one unit tile fireplace, which can safely be shipped to any distant point and installed by the buyer. The tile facing, back lining and hearth are actually shipped intact, and can be had in an assortment of colors, in either faience, or hand made reproductions of old Spanish tile.

The decorative features, so necessary to break the monotony and exactness of tile work, is very splendidly taken care of with vari-colored picture panels, brackets, moulds



Fireplaces of Tile Shipped Complete Ready to Set Up with Only a Small Amount of Installation Labor.

and hooded effects. These facings can be used for gas, electric or open-hearth fireplaces. The shelf may also be of tile, the same as the face, or of wood finished in a buff Bedford stone finish. The tile joints are of a uniform depth and width, and are finished with a cement paint in any desired color effect, to match tile facing.

Every square inch of this fireplace is reinforced with metal lath and channel iron to insure strength and safety in shipping. Such a fireplace weighs considerable less than one set piece by piece at building, and it is not even necessary to build any foundation, when used for gas or electricity. The shipping weight of the average fireplace is 700 pounds crated, and they can be shipped second class.



A New Line of Electric Drills

TO supplement a well-known line of tools a leading manufacturer has brought out a new line of electric drills. Years of experiment, development work and exacting tests have gone into the production of this line of drills,



This Electric Drill Has Been Added to a Line of Electric Tools Which Is Already Widely Known.

it is stated, and they combine a number of new features in electric tool construction. Exceptionally powerful motors which give the drills plenty of reserve power for any kind of work are used. Every effort has been made to achieve simplicity of design together

with strength and rigidity, graceful lines and absence of projections which insures good balance and easy holding.

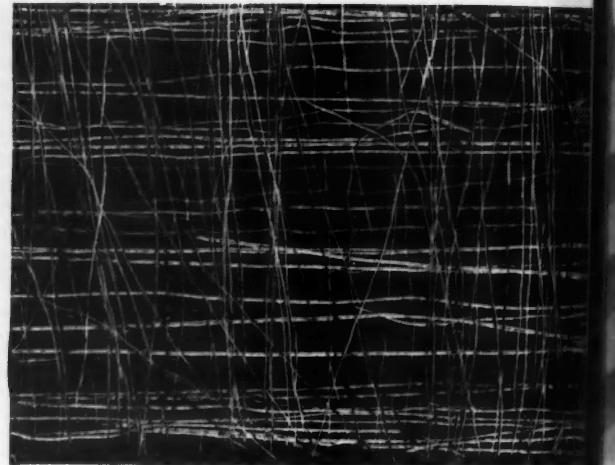
Special attention has been given to obtaining a comfortable handle with a convenient make and break type switch. The switch is so placed that it can be operated to start and stop the motor without releasing the firm grip on the handle. A scientifically designed ventilating system will keep drills cool when in continuous operation. Chuck keys are always a bother for the mechanic and they are easily mislaid and lost, but with this new drill a convenient key holder, in the drill housing, keeps the key always at hand.

Special cable clamps inside of the drill and a full armored attachment plug prevents trouble with the cable when it is suddenly jerked. All strain is removed from the cable connections.



Reinforced Waterproof Paper

CONCRETE reinforced with steel and glass reinforcement with wire are everyday products, the advantages of which are familiar to all. Now the same reinforcing idea has been applied to paper and the resulting product is adapted to a wide variety of uses. This material is made



Sisal Fibers, Embedded in Asphaltum Between Two Sheets of Heavy Kraft Paper, Make a Remarkably Tough Water-Proof Paper Valuable for Many Purposes.

up of two pieces of heavy kraft paper reinforced with two layers of strong sisal fibers, running crosswise in both directions between the two pieces. The fibers are imbedded in two layers of heavy asphaltum which serve to make the paper waterproof and increase its toughness. All the materials are pressed together, while hot, under heavy pressure, resulting in a thoroughly unified product which is very strong, flexible and extremely easy and pleasant to handle.

At first this reinforced paper was used simply as an ordinary building paper, but its great strength and ability to withstand moisture soon showed its value for other uses. Because it could be handled by one man it reduced labor costs. One carpenter can nail one end of a strip without the first end tearing loose even in a strong wind. This material has been used with great success to protect finished floors and costly rugs in model homes, where over 10,000 visitors inspected the house, without damaging the paper. It is also used for protecting exposed building supplies, for temporarily enclosing portions of new buildings, to cover concrete during curing and in many other ways connected with building and other work.



David Lupton's Sons Company, 2203 E. Allegheny Ave., Philadelphia, Pa., has prepared a pamphlet on steel casement windows as "A modern convenience that all may enjoy."

The HUMPHREY Radiantfire Mantel



\$98.00 to \$105.00 Complete

Satisfied Home-Owners

For everybody who plans a home there is a magic thrill in the very word, "Fireplace." Your clients will be everlastingly grateful to you when you show them that they can have such an attractive one as this installed at such slight cost.

You can assure them that this low price of \$98.00 (or \$105.00 in mahogany) includes complete mantel, paneling and the genuine Humphrey Radiantfire. The heat that is smokeless, clean, odorless and *healthful*. Easy to

install; requires no skilled labor; no ashpit or chimney work. Almost as easy to put in as a piece of furniture.

In any room, in any home (where gas is available) this mantel piece can be placed—an ever-satisfying "thing of beauty." Genuine stainless steel of paneling and hood shines like polished silver and the wood mantle shows fine cabinet work.

This remarkable value makes a big hit with home builders. May we send further information?

No smoke—No odor. No ashes—No dust

GENERAL GAS LIGHT COMPANY, KALAMAZOO, MICH.

New York • 44 West Broadway

San Francisco • 135 Bluxome Street

IF IT ISN'T A HUMPHREY IT ISN'T A RADIANTFIRE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

A Sheet Metal Laundry Tray

AN announcement from one manufacturer states that, for the first time, stamped sheet metal has been used, successfully, in the manufacture of domestic equipment of sizeable dimensions, with the placing on the market of this company's new porcelain laundry tray. This company manufactures a brand of porcelain enamel which has for more than two decades been used in the white parts of a number of well-known makes of kitchen ranges, work tops of kitchen cabinets and tables and linings of refrigerators.

After two years of research and experiment, 13-gauge



Laundry Trays Have for the First Time Been Stamped Successfully from Sheet Metal and Produce a Much Improved Fixture.

metal was successfully stamped to a depth of 14 inches, 25 inches wide and 26 inches long at the top, with a 2½-inch rolled rim all around. These dimensions are the standard dimensions for laundry tubs and constitute a complete unit which can be used either independently as a one-compartment laundry tray for small homes or combined with a similar unit for a two-compartment tray.

The importance of the development of this tray is expressed primarily in the fact that for the first time so-called "wet" enamel has been used for large household units. There are, of course, plenty of castings coated with dry enamel on the market, such as bath tubs, lavatories, etc. The successful development of this tray, however, is the first instance whereby the toughness of "wet" enamel has been combined with the lightness and ease of handling of a sheet metal stamping.



Water Softener of New Type

A WATER softener of a new type, sold at a price which makes it readily available for all homes, has been placed on the market. This softener does not use the zeolite mineral of the more familiar types, but employs a chemical applied directly and automatically to the water. The renewing of mineral is, therefore, unnecessary, and the only attention required is that, about once a week, more of the chemical must be put into the supply tank and a small amount of water drawn off from the bottom of the settling tank.

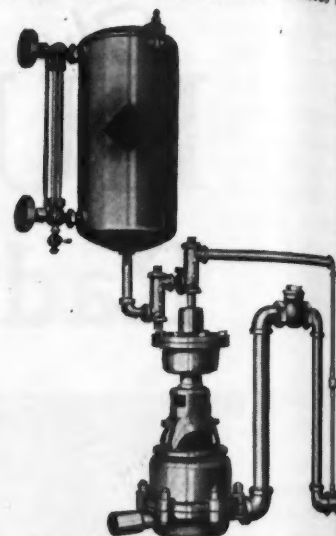
Hydraulic power, as safe, sure and certain as the water supply, operates a breather which draws an accurately measured amount of softening chemical from the supply tank and mixes it uniformly and regularly with the water to be used, as it flows from the supply pipe to the settlement tank. The mixture of the softening compound with the water is completely and rigidly controlled. The only way compound can get out of the reservoir is by the

operation of the mechanism. Softening takes place continuously at exactly the same rate that the water is used. A glance at the gauge on the end of the tank indicates the exact amount of compound in the tank at all times.

This softener can be installed easily and quickly in any home by simply connecting it with the city water line according to illustrated printed instructions. It requires no expensive plumbing. An hour from the time installation begins the softener is in operation.



A New Type Medicine Cabinet

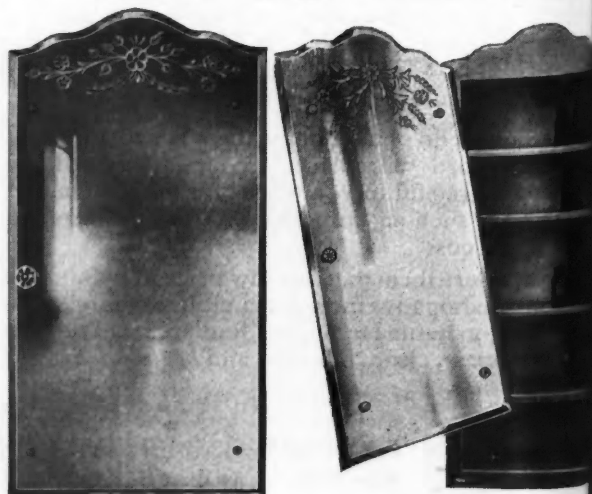


This Water Softener Is Priced to Be Available for All Homes and Does Not Require Renewing of Mineral.

THE accompanying illustration shows a new type of medicine cabinet which incorporates an interesting and valuable departure from the old types. The feature of these cabinets is that the mirror which serves as the door of the cabinet can be adjusted to, or tilted to any desired position so that the entire figure can be seen and also deriving the full benefit of the lighting facilities.

This mirror is not hung on hinges, it can not be slammed shut and, therefore there is no danger of breaking or cracking through carelessness. The style of cabinet shown does away with the unsightly trim that appears around the edge of older style cabinets as only about one inch of cabinet trim can be seen after the Venetian model is set in, as none with the full Venetian model.

These cabinets are furnished in three models, the Venetian, the full Venetian and the plain model. The first two each come in four sizes while the plain model comes in three sizes. All of the sizes have a depth of 4½ inches. The mirrors of the Venetian and full Venetian models are handsomely etched and have the appearance, when closed, of simply fine wall mirrors. All models are furnished either with or without an open shelf recess below the mirror. The two Venetian models come with three glass shelves while the plain type is equipped with three wood shelves.



When Closed, the Door of This Medicine Cabinet Looks Like Simply a Fine Wall Mirror, but It May Be Opened or Tilted to Any Desired Position.



New! A Saw File designed by experts especially for carpenters' use

A FILE that adds skill to your hands, speeds your work, and gives you a better filed saw.

Developed by saw-filing experts in the Disston Factory, where thousands of hand saws are filed every day.

The new Disston Special Extra-slim Blunt Saw File embodies many features, which aid the man who is not expert, to do a good saw-filing job.

New features!

A special cut with plenty of bite; yet it cuts smoothly and lasts for a long time.

Extra-slim so that the user can see just where and how the file is cutting at all times.

Blunt so that, even if unskilled, he can file with a level, uniform stroke; there is no taper and the file "finds its bearing" against the teeth more quickly. Less effort required to use.

Made of Disston Steel—hard, tough and strong. It outlasts two ordinary files.

Here is a file made especially for you!

Your hardware man is now showing it.

HENRY DISSTON & SONS, Inc.
Makers of "The Saw Most Carpenters Use"
Philadelphia, U.S.A.

DISSTON

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Radiator Furniture to Order

RADIATOR furniture is a term of comparatively recent origin which is highly descriptive of a certain type of household equipment. Since it was first introduced the cast iron radiator has been an awkward and unsightly thing taking up space in the room while adding nothing but its practical heating value. Even the more recent designs of radiator, though an improvement over the earlier ones, leaves much to be desired. Radiator furniture was developed to correct this condition.

By radiator furniture is meant radiator covers of sheet steel designed and finished to harmonize with the room decorations and to serve other purposes in addition to the heating function. These covers are made, to order, of heavy gauge sheet steel. The front and side panels are metal grilles in cane or square rod. The finish is many coats of enamel, baked on at a very high temperature. The finishes include perfect reproductions of natural wood and those available are mahogany, dark red, dark brown and light brown; dark, medium and light oak; dark, medium and light walnut; birch; French gray; cream, ivory, and white.

The design of the radiator cover shown here is such that the air enters under the radiator, is warmed and drawn up inside the backshield and passes over the vapor of a humidifying pan. The dust in the air is caught by the vapor and dropped into the pan while the clean, humidified air passes into the room. The pan covers the entire top of the radiator, giving a maximum evaporating surface. It also insulates the top of the cover so that a low radiator may be used for a seat or a high one for a bookshelf, table or stand, doubling the usefulness of this piece of furnishing. The humidifying action makes the room more comfortable at lower temperatures which are more healthful

than higher temperatures and, it is said, actually reduces the cost of heating while at the same time eliminating the cause of much sickness, hot, dry air. Besides all these advantages the removal of dust from the heated air prevents the smudging of walls and curtains. Draperies need not be cleaned so often and redecorating need be done at less frequent intervals.



Indianapolis Home Complete Show

THE central position on the floor of the annual Indianapolis Home Complete Show, which will be held in Indianapolis, Ind., April 7-14, and sponsored by the Indianapolis Real Estate Board, will be a complete demonstration house erected by the Southern Pine Association with the cooperation of J. F. Cantwell, chairman of the show. This house will be another unit in the association's campaign for better home building, and the seventh to be erected, by the association.

The house was designed by Merritt Harrison, of Harrison and Turnock, architects, of Indianapolis. It will demonstrate various late developments in the use of Southern pine in home building as well as how safe and permanent frame construction may be accomplished at nominal cost, according to the association. End matched Southern pine flooring and sheathing will be used throughout the structure. Grade-marked Southern pine is to be given a prominent part in the house and in the exhibits surrounding it, to show how the home builder may use each particular grade according to the purpose for which it is intended.



The Solvay Sales Corporation, 40 Rector St., New York City, offers a new booklet on the subject of "Solvay Calcium Chloride in Concrete Construction."



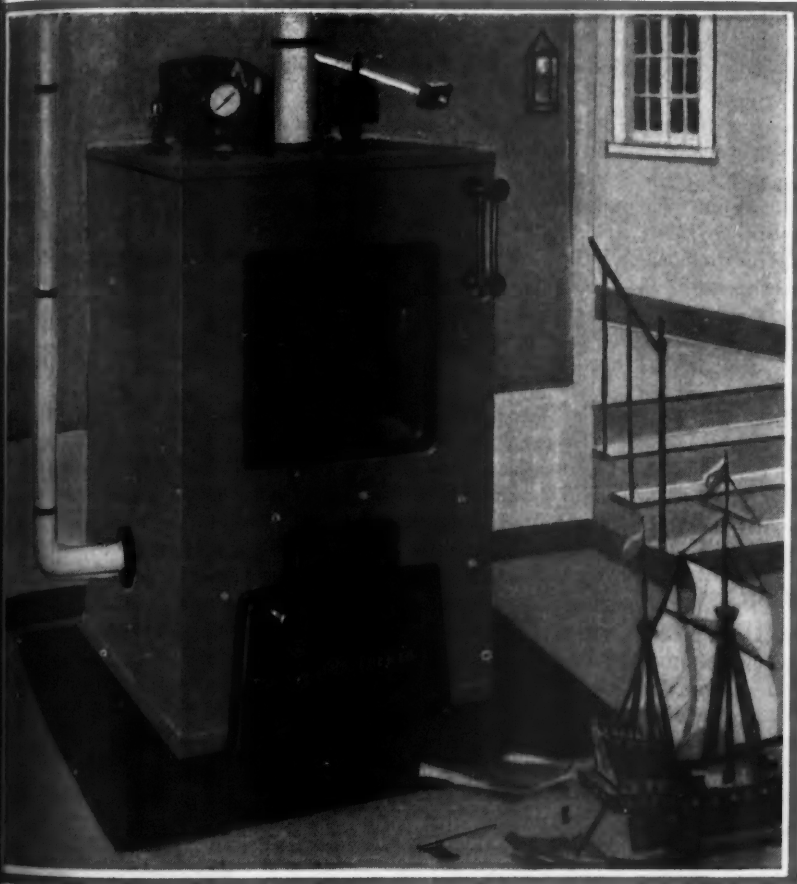
Radiator Furniture Is a Term of Rather Recent Origin Which Denotes Not Merely an Ornamental Sheet Metal Cover to Improve the Appearance of the Radiator, But a Handsome Piece of Furniture Designed to Harmonize with the Decorations of the Room in Which It Is Installed and to Add New Usefulness to the Space Occupied by the Radiator.

YOU Will Appreciate this New Thatcher "Elite" Boiler

In every home you construct you can be sure of perfect heating equipment if you specify the Thatcher "Elite" red enameled boiler. And not alone that, but your possibilities of unusual cellar design are greatly enhanced through the charm and beauty of the new scarlet covered boiler. It is a powerful heating plant—and a saver of fuel through its utmost use of the flames and hot gases under our "staggered fire travel" system.

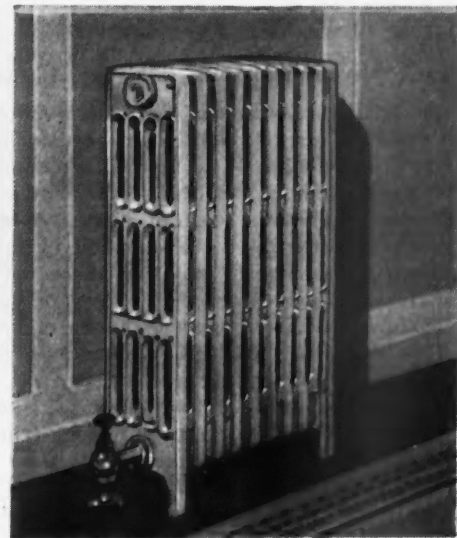


The Thatcher "staggered fire travel" principle means the more economical use of fuel through greater utilization of the flames and hot gases.



The New Thatcher "Elite" Boiler and "Gothic" Radiator

These "Gothic" radiators are gracefully and beautifully proportioned—a vast improvement over the old, clumsy type and are far more efficient in heat distribution. They lend charm to any room, and women are quick to appreciate what this means when decorating a home.



Heavy local and national advertising in full color is featuring the new Thatcher "Elite" Boiler and "Gothic" Radiator. Ask us to send you full details and catalogues.

THE THATCHER COMPANY

39-41 St. Francis Street - - - NEWARK, N. J.
New York, 21 W. 44th St. Chicago, 341 N. Clark St.

THATCHER

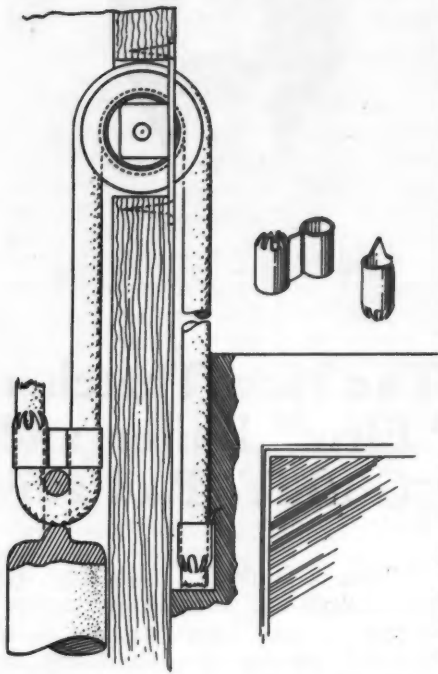
Elite ENAMEL JACKETED Boilers

BOILERS - FURNACES - RANGES - RADIATORS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

A Handy Sash Cord Fastener

A NEWLY invented and very convenient little device, and its application, are illustrated in the accompanying sketch. This sash cord fastener eliminates the tying of any knots in the sash cord and makes possible a quick



These Two Simple Little Fasteners Eliminate the Tying of Sash Cords and Make a Quick, Easy Installation.

and satisfactory installation. The device is really too simple to require much explanation. It is in two parts, one to fasten the cord in the sash and the other in the frame.

The smaller piece is slipped over the end of the sash cord and put into the sash as shown in the complete view. The single spike or tooth at the top holds it in place in the sash while the teeth around the bottom hold it firmly on the cord. The other piece is slipped over the other end of the cord after it has been passed through the window weight and then passed through the other side of the device, as shown. Here again the teeth hold the cord firmly without the necessity of tying.

then passed through the window weight and then passed through the other side of the device, as shown. Here again the teeth hold the cord firmly without the necessity of tying.

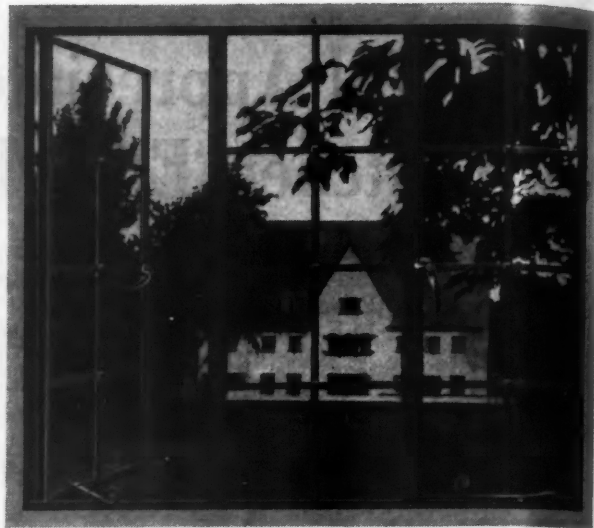


New Improved Steel Casements

A NEW make of steel casement window has been placed on the market which is designed for the standard stock size of glass, eight by 12 inches, thus eliminating all cutting of glass. This, it is stated, constitutes a saving of almost 20 per cent in the cost of glass. A material saving in erection costs and the elimination of field connections is affected through the fact that these windows, up to two units high and three units wide, are made as composite windows and are not combinations of two or more parts. This eliminates the use of mullions between any two hinged sections, giving unobstructed ventilation, light and an improved architectural effect.

These casements are made in four types that differ only in the size and weight of sections used and in the hardware. The materials and workmanship are the same in all four types and the precisions and nicety of construction are identical in all. The four sections are manufactured to maximum dimensions as follows: standard section, 4 feet 6 inches high by 1 foot 8 inches wide; heavy section, 5 feet by 2 feet; extra heavy section, 6 feet by 2 feet 6 inches; super extra heavy section, 8 feet by 3 feet.

All steel used is rolled from new billets of rust-resisting quality into solid sections designed to meet the requirements of rigid construction and perfect contact. Each section is hydraulically straightened and the corners of both frame and leaf are machine mitered, ground and solidly welded, forming a continuous member. The muntins are of "T" section, joined at intersections by passing the horizontal member through a slit under the flange of the vertical member and the joints are hydraulically closed. Where a "T"



These New Steel Casements Are Designed for the Standard, Stock Sizes of Glass, Eliminating All Cutting of Glass.

joins the sash flange is cut back and the webb passed through the sash and welded on the other side. This gives a perfect plane on all four sides, offering an absolutely flat surface for glazing.

All sash are sanded by air pressure till not a trace of mill scale, rust or grease remains and all corners and contacts are polished smooth. The window is then given a coat of anti-corrosive paint, which is baked on, then a coat of enamel paint, which is baked on.



Economical, Dependable Mortiser

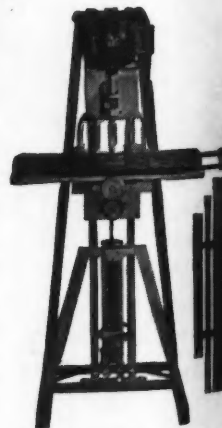
FOR portable or stationary service the hollow chisel mortiser shown here will be found highly economical and dependable at all times. It has a rigid steel frame combining strength with light weight. There is a simple direct drive from the powerful motor to the boring bit, with all gears, belts and idler pulleys eliminated. The machine is equipped with ball bearings so that it requires little attention and is always ready for use, running smoothly and quietly.

Being self-contained, this machine can be set in any position for convenient operation and moved back out of the way when not in use. The vertical position of the mortiser brings the work directly under the eye of the operator and allows him to stand in a comfortable position.

The hollow chisel cuts clean and leaves the mortise free of chips. It travels to the work while the stock is held in a fixed position. Bits and chisels can be quickly adjusted or changed.

The tilting table is adjustable both vertically and horizontally to suit the dimensions of the stock and the hold-down fingers are clamped in any position, by hand wheels at the rear of the table. The length stop gauge can be used on either side of the table.

This machine handles boring bits of from 1/4 inch to 1 inch and is suitable for doweling, boring for sash pulleys, locks and similar work. Mortises from 1/4 inch to 1/2 inch wide and of any length are cut with great rapidity. The simple operation permits anyone to produce best results.



Hollow Chisel Mortiser with Direct Drive from the Motor.

YES, we take the "hard work" once, a true field where is a constant job n open only training th
Mas
Nowhere are so many Contractor business for building for by the pr can learn estimate co building.
L
We teach and lessons Everything building ex study. It's almost as ea
Chica
for B



Hod Carrier Becomes President
 "My first job with a construction company was as a hod carrier. Then decided to learn a trade and took up bricklaying. I saw your ad and enrolled. Am now president of my own company. I owe it all to your training."—T. A. Cironi, New Haven, Conn.

Carpenter Becomes General Manager
 "I only went through 8th grade in school. Was a carpenter when I started your course. In 9 months became Foreman, then Superintendent. Am now President and General Manager of the Kasper Construction Co."—J. L. Kasper, Manitowish, Wis.

\$35,000 in a Year
 "Your training has enabled me to rise from a wage of \$30 a week to an income of \$35,000 a year. Any person could make good in building with your training to help them."—C. L. Stewart, Canton, Ohio.

Amazing New "Blue Print Way" Led Them Quickly To \$4,800 to \$12,000 A YEAR

These men--- and hundreds more like them--- have unmasked one secret of quickly making money. But there is nothing mysterious or uncanny about their unusual success. They are just ordinary men like yourself --- except for one thing. They sent for these income-raising Blue Prints! That was the turning point of their careers.

NOW FREE TO YOU!

YES, without one penny of cost or obligation; you can now take the same easy step that has led others to the top in the "head work" side of the gigantic business of Building. At once, a tremendous new field will open to you. An uncrowded field where opportunities are unlimited—amazing. Where there is a constant call for trained men, and still more men, to fill the jobs now open. And these thousands of big-pay jobs are open only to men with practical Blue Print training—the very training that is now offered you right here.

Mastered in a Few Short Weeks

Nowhere else can you get training like this. Nowhere else are so many openings paying \$4,500 a year and up as with Contractors, Builders, Real Estate Firms, Banks, etc., or in business for yourself. Nowhere else are so many big-pay jobs begging for trained men to fill them as in the "head work" side of building. Yet see how easily you can master this training by the practical Blue Print Method. See how quickly you can learn to run even the biggest building jobs, read plans, estimate costs, and supervise the entire construction of a building.

Learn at Home—Quickly

We teach you at home in spare time with real Blue Prints and lessons as easy to read and understand as your newspaper. Everything is explained and worked out for you by practical building experts. No complicated text books. No grinding study. It's like playing a fascinating new kind of game—almost as easy as A-B-C.

Chicago Technical School for Builders
 Dept. D-121, 118 E. 26th St. CHICAGO, ILL.

Building tradesmen everywhere, all kinds of types of men—have finished this training in as little as 12 short weeks. Yet this is the very training that leads to all of the \$4,500 to \$12,000 jobs both indoor and outdoor—in the 9 big fields of building.

If the opportunities in your present occupation are limited—if you have ever wanted the good things of life that an income of \$4,500 to \$12,000 a year will bring—then choose a "head work" job in building. For now, like hundreds of others have done, you can get into the "head work" end of the building game quickly and easily. You, too, can master this Blue Print training that spells success, a big-pay job or a business of your own, if you act right now.

Simply mail the coupon below for a complete set of real prize-winning Blue Prints and big book, "How to Read Blue Prints." Now sent to you absolutely FREE. Get these facts before you. Then see what fascinating fun it is to learn Building the practical way. See what amazing opportunities open up for you in the seven billion dollar Building Field. Don't wait or delay. Act now. Simply mail the coupon.

If You Live Nearby

Visit our big day or evening school attended by over 1,000 Builders. You get the training at home by mail—same plans, lessons, and instructions.



SENT FREE Big Book and BLUE PRINTS



CHICAGO TECHNICAL SCHOOL FOR BUILDERS
 Dept. D-121, 118 E. 26th St., Chicago, Ill.

Send me FREE, without obligation, your complete set of real architect's Blue Prints, and your FREE Book, "How to Read Blue Prints." Also full details of the course and opportunities in the building field. It is understood that no salesman will call on me.

Name.....
 Address.....
 Town..... State.....

Wall Board Lath

RECENTLY builders have been provided with a well known product in a new form which, the manufacturers state, was produced at the suggestion of lathers, plasterers and contractors who were using this product. The product referred to is a wall board having structural values and widely known as an insulating material. The new form which this material takes is in pieces 18 inches wide and 48 inches long, a size designed for easy handling by the lather, and weighing only $3\frac{1}{2}$ pounds.

The edges of these pieces are beveled and provided with shiplap joints. This feature, because of the strong shiplap joints and the longer line of diagonal reinforcing through the plaster at the joint, made possible by the beveled edges, makes strong tight walls. The long edges fit snugly and securely together and do not require a nailing base. At the ends, five nails per stud, per board, are used. Blued



A Well-Known Insulating Wall Board Is Now Made in Lath Form for Easy Handling.

nails, $1\frac{1}{4}$ inches long with $\frac{3}{8}$ -inch heads are recommended. When applied in this way, when the lath gives under the pressure of the trowel, the shiplap and bevel prevent the next lath from swiping the plaster off the trowel.

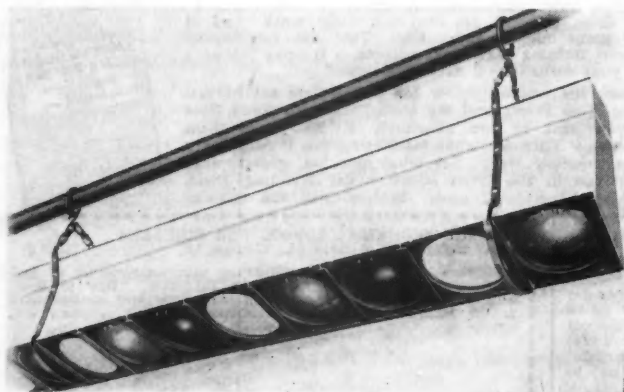
For arches and curves one end of the lath is nailed and the lath bent to the contour of

the framing with all nailing edges supported on the framing. All parts of the lath should be applied with the joints of the courses broken or staggered. Just as with the material of which this is a new form, this lath forms an excellent plaster base to which the plaster bonds both by suction and by mechanical bond with the fibres of the lath.

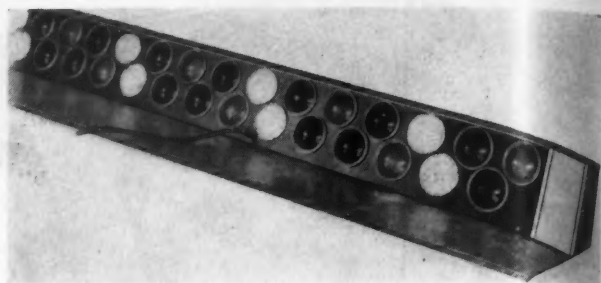


Latest Type Stage Lighting

THE latest designs in a leading line of stage footlights and borderlights are shown in the accompanying illustration. They have been developed to meet new demands on stage lighting equipment. Colored glass diffusing roundels, individual aluminum reflectors, enclosed construction, exceptional strength, bettering lighting, true non-fading colors, attractive appearance, greater flexibility are features now combined with all the desirable characteristics of the



These New Border Lights Are Made in Three Sizes for Lamps from 200 to 1,000 Watts.



Semi-Flush Footlights Which Are Imperceptible to the Audience.

earlier models. The new models include single and double row semi-flush type footlights, single row disappearing footlights, borderlight in three sizes and proscenium lights.

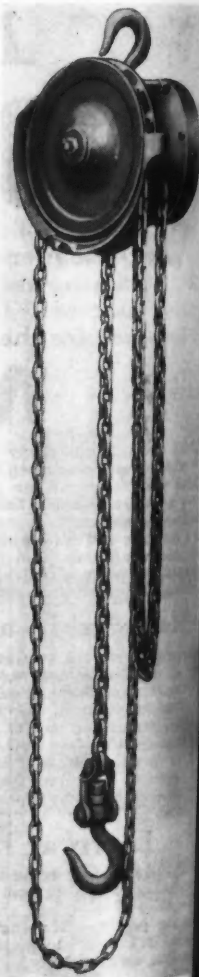
The semi-flush footlights are furnished in two sections, the lighting unit and the trough. The lighting unit embodies the lamps, receptacles, reflectors, diffusing roundels, wiring, and hood as a complete unit. It is entirely encased in a housing of No. 20 gauge galvanized sheet iron with an exceptionally strong self-supporting hood and dirt and dust-proof front, an excellent protection for the lamps and reflectors. The footlight extends but three inches above the stage floor and its contour is straight so that it blends with the stage lines and is imperceptible to the audience.

The borderlights are made in three sizes for lamps from 200 to 1,000 watts. They comprise a single row of receptacles with an aluminum reflector for each lamp and with means for holding colored glass roundels as well as slight grooves for holding color frames with gelatine mediums or glass slides. The receptacles, reflectors and wiring are entirely encased in a housing of galvanized sheet iron that is compact in design, light-tight, well ventilated and substantially constructed, suspended from a pipe baton by chains which permit adjustment in direction of light projection.



Tested Chain Hoists

THE principal factor in a chain hoist is the chain. It must have great strength, great ability to withstand wear and must not stretch under heavy loads. A leading chain manufacturer is now making a high carbon, electrically welded chain for the hoist illustrated here. Every link is proof tested with special instruments and when the chain is assembled it is again tested and must show an overload of 50 per cent above its rated capacity. These hoists are built in capacities of from $\frac{1}{4}$ to 20 tons. It is stated by the manufacturers that this hoist represents their greatest development in durability, efficiency and value.



A Line of Chain Hoists Equipped with Chains of High Carbon Steel, Electrically Welded.

HoltBid

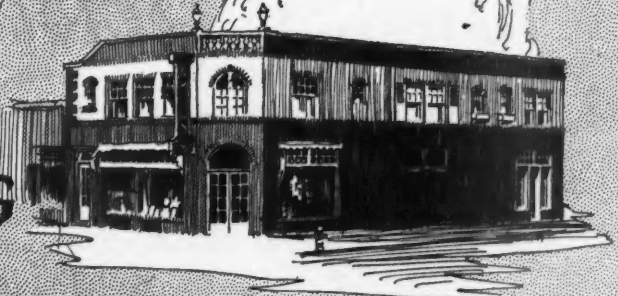
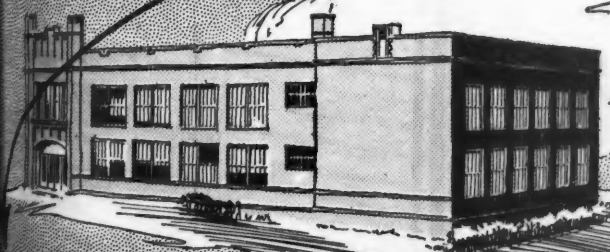
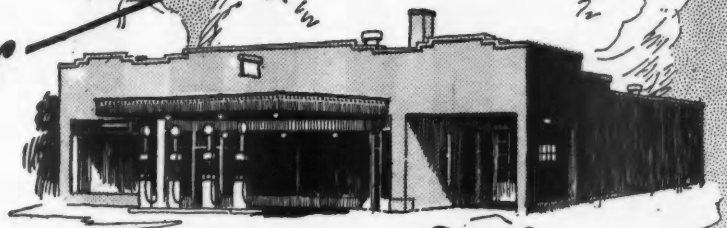
THE MOST PRACTICAL METHOD IN THE BUILDING FIELD



For pricing and developing sales of—

- HOMES
- APARTMENTS
- STORES
- GARAGES
- OTHER BUILDINGS

for



ACCURATELY FIGURING
BUILDING COSTS

\$100

Brings HoltBid for Your Examination

HoltBid Is Easy To Learn

You Can Learn This Accurate and Practical Method In 8 Hours

HoltBid is easy to learn because it deals with the ordinary terms familiar to every one. There are no problems in mathematics. You can learn to HoltBid in eight hours or less—so that you can get the cost on the first plan outlined in Part Six at your own local prices. Thereafter it is only a matter of practice.

100

Brings HoltBid

Besides Homes, HoltBidders can estimate Apartments, Stores, Factories, Garages, certain types of Schools and Churches, Barns, Granaries, Cribs, Machine Sheds, Chicken Houses and all other such buildings.

HoltBid is equally helpful in finding costs on remodel and repair jobs, additions, alterations, adjustments on fire or storm losses.

Every unit cost table in HoltBid is based on actual figures. No guessing, approximating or averaging was done in making up these factors.

The HoltBidder's Key covers 864 different wall framing, each one based on actual material required.

For Mr. _____ (facing front entrance) _____ ft.; Depth _____ ft.; _____
cornice and other construction as specified and checked in details. Similar

DESCRIPTIONS

_____ " of No. _____ Dim. per _____

_____ paper sheetrock and _____

_____ per detail _____

_____ " of _____

_____ subfloor laid _____

_____ paper _____

_____ finish flooring _____

_____ " of per _____

_____ subfloor laid _____

_____ specified herein _____

_____ paper _____

_____ finish flooring _____

_____ Dim. " of _____

_____ Attic flooring and _____

_____ as wall construction _____

_____ as specified for cell- _____

_____ like partitions with _____

_____ relation between studs. _____

_____ Dim. " of con- _____

_____ roof _____

_____ paper under _____

_____ No. of No. _____ finish; _____

_____ crown moldings. _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

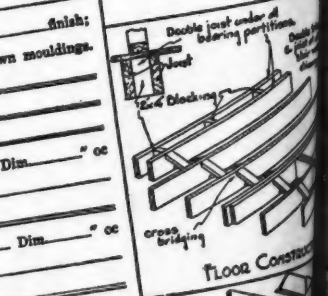
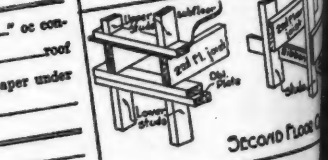
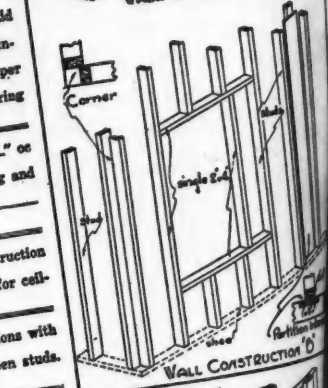
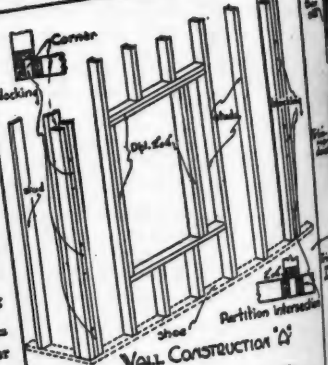
_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

_____ No. _____ Dim. " of _____

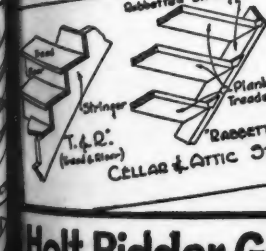
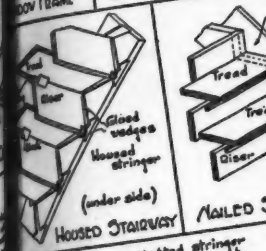
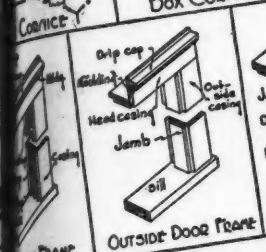
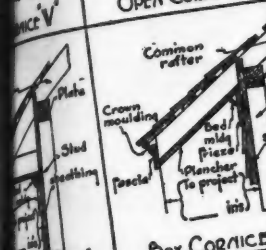
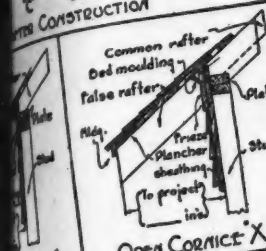
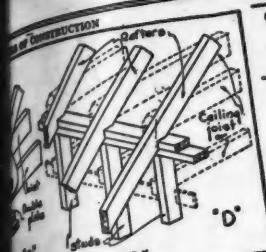
DETAILS OF CONSTRUCTION



RAIL to be of _____ to have _____ treads and _____ risers.

Holt
The C
10
HoltBid

No. _____
 Date _____
 Location _____
 Architect _____
 Contractor _____
 Job No. _____
 City _____
 State _____



SPECIFICATIONS.
 OUTSIDE DOORS with frames as detailed. _____ " casg. _____ No. _____
 Dra. _____ " No. _____

INTERIOR DOORS with
 Dra. _____ " No. _____
 Fresh Drs. _____
 Mirror Drs. _____
 Cased Ovs. _____

WINDOWS to be _____ " thick, with _____
 with or without pulleys, weights, sash cords and
 Dbl. Hung _____
 Dbl. Hung _____

SCREENS for _____ doors, all w/ _____
 and _____

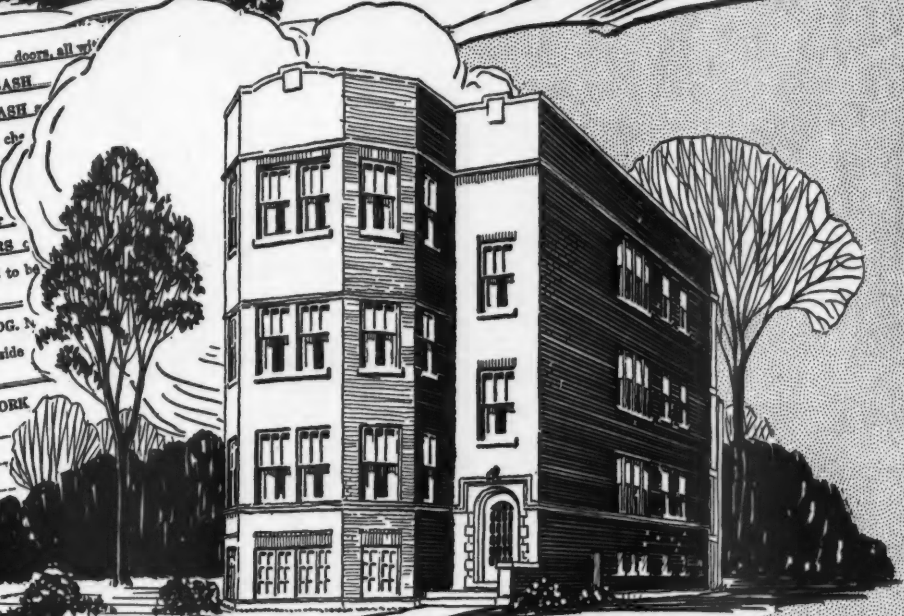
CELLAR SASH _____
 GABLE SASH _____
 MAIN STAIRS as ch _____
 St'g New _____
 No. _____
 Rail around Stair _____

CELLAR STAIRS _____
 BASE BOARDS to be _____
 rooms except _____
 PICTURE MLDG. _____
 TRIM. All inside _____

CABINET WORK _____

COAL CHUTE _____
 RIDGE ROLL, FINISH, HUB _____
 SHEET METAL, VALLEY TIN, FINISH _____
 RAVE GUTTERS _____

FIRE _____
 CH _____
 with _____



Holt Bidder Gets
 the Contract
100
 Holt Bid in Your Hands



I WANT YOU TO
SEE HOLT BID
 You will find it
 worth many times
 its cost
\$ 100
 Brings this Remarkable
 System for your approval

MY PERSONAL GUARANTEE

A.B. 4-28

I GUARANTEE that the HoltBid Method of Estimate Building Costs will be satisfactory to you in every respect. All I ask is that you give it a fair trial, and that is the only condition. If at the end of thirty days you do not find the HoltBid Method exactly as represented, I will refund the small down payment you have made. During the thirty days of free examination it is understood that our corps of expert HoltBidders will hold themselves in readiness to answer any question, and to give you true appreciation of the great value of the HoltBid Method. In accepting your order I place my full confidence in your intentions to give the HoltBid Method a fair trial.

WILLIAM A. RADFORD, President,
 The HoltBid Service Company.

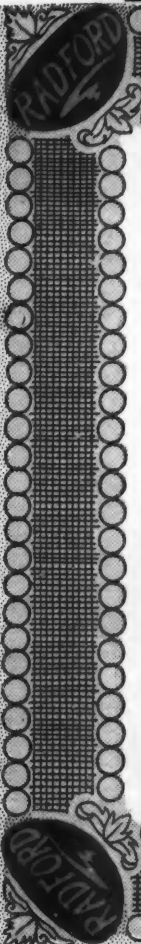
**PIN A DOLLAR BILL TO THIS COUPON
 MAIL IT—AND RECEIVE HOLT BID**

WILLIAM A. RADFORD, President,
 HOLT BID SERVICE CO.,
 1827 to 1901 Prairie Ave., Chicago, Ill.

Please send at once HOLT BID SERVICE of accurately estimating building costs. Enclosed find \$1.00. If I keep HOLT BID more than thirty days, it is understood that I wish to keep the service and I will pay you \$5.00 per month until the balance of the SPECIAL INTRODUCTORY Price of \$85 has been paid. The HOLT BID SERVICE includes all units, as well as a year's subscription to American Builder, the World's Greatest Building Paper.

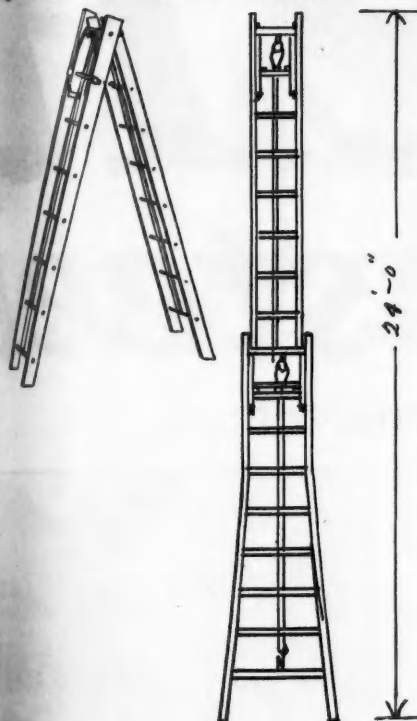
Name.....
 Town..... State.....
 Street Address..... Occupation.....

Note:—The service must be entered in the name of the individual and not the firm.
 (Without the American Builder, we shall deduct \$1.00 from the total purchase price. If you already are a subscriber, we can readily extend your subscription for a year.)



A Ladder of Many Uses

HERE is a ladder designed with the idea of making one ladder take the place of several by being adaptable to six different purposes. It is manufactured from good materials with the best of workmanship and with nothing sacrificed to safety, weight or cost. It is composed of three sections each 12 feet long. In transportation or storage the short length and compactness save time, trouble and storage space.



This Ladder Is Designed to Take Care of Numerous Requirements with One Ladder.

By putting the first and second section together, as shown in the view at the left, you have, in 10 seconds, a truss or stepladder, which is very strong and substantial. Either side may be mounted without danger of spreading. Slipping section one over section two and snapping the rope in place forms a 24-foot extension ladder ready for either light or heavy work. By lowering the 24-foot ladder and adding section three you have a 36-foot

extension ladder. This change also can be accomplished in a few seconds' time, without taking the ladder down. Thus you have, for low work, three 12-foot ladders, a truss or stepladder, a 24-foot extension ladder and a 36-foot extension ladder. The sides are made of 1½-inch basswood or West Coast spruce, and the rounds of ash or oak. By using the ladder jacks made by this company this ladder can be converted into a scaffold which is thoroughly steady and can be raised or lowered with no trouble.



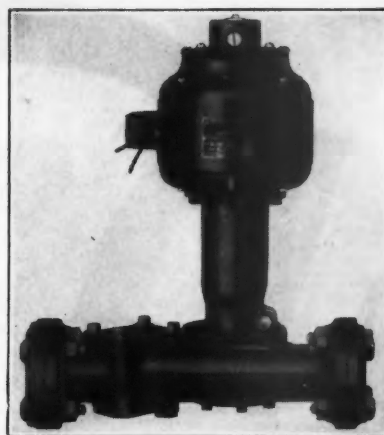
Device for Better Water Heating

THE new device illustrated here is said to bring hot water heating efficiency to a new high plane by circulating water through a system much faster than it ordinarily flows under thermo-syphon action. The principle on which it operates is simple. Cool water possesses higher heat absorbing properties than hot water and it is the function of this device to keep cool water flowing over the fire box. The idea being that water which circulates on a thermo-syphon system stands too long over the fire and loses much of its heat absorbing efficiency before it moves on. This device moves it when it is still at high absorbing efficiency so that much heat ordinarily wasted is put to work.

This device also brings the water back to the boiler at a higher temperature so that less heat is required to bring it up to a good room warming temperature. In addition, the more rapid circulation of water through the radiators carries more heat units to the rooms and, in effect, more water surface is exposed to radiation. It is stated that a hot water system equipped with this device will bring an absolutely cold house up to a comfortable temperature

is a small fraction of the time required with a system dependent upon the natural action of the hot water, and will be effective for rooms which are impossible to heat with the natural system.

The device is extremely simple. It consists of a motor set on a bracket and attached to a small water pump by means of a constantly engaged jaw clutch. The pump is encased in a frame case integral with a pipe section. The pump does not obstruct the pipe line. When the device starts operation a patented check valve closes the main pipe and diverts the water through the pump. When it stops, the water flows unobstructed through the pipe. The action is entirely automatic. It turns on when heat is needed. Continuous operation is not necessary as water once started on a rapid circulation continues to move swiftly for a considerable time. A fuel saving up to 30 per cent, it is claimed, has already been recorded with this device.



This Device Increases Hot Water Heating Efficiency by Increasing the Rate of Circulation.



A Builder's Adding Machine

NEARLY every contractor and building material dealer will find a compact, portable adding machine a real convenience and time saver in his work. A new machine which is particularly well adapted to the purposes of the building trade is illustrated here. It is a machine which will both add and subtract, and has a standard full keyboard. It is so compact and light that it can be carried under the arm and requires only the space of a letterhead on the desk or counter.

Subtraction is controlled by a small lever on the keyboard. This lever can be shifted instantly to make the machine add or subtract. A minus sign is printed opposite all figures subtracted. In operation this feature differentiates figures added from those subtracted.

This new machine is built in both eight and 10-column capacities to total 999,999.99 and 99,999,999.99 or to subtract any smaller amounts from those figures. Control keys, consisting of total key, sub-total key, error key, repeat key, and non-add key are located on the right side of the keyboard in such position that the machine is completely operated with one hand. This new machine was designed for the purpose of a low priced machine for retail and general office use.



Here Is a New Compact Adding Machine of a Type Especially Adapted to the Contractor's Office.

Fenestra steel

for residences, schools, etc.



When Fenestra Casements add both extra beauty and extra conveniences without extra cost, why not use them?

Base your window estimates on the finished installation—including hardware, glass and labor—and you'll find that Fenestra Steel Windows cost no more than ordinary windows—sometimes less.



Light and ventilation are vital factors in this school building—several Fenestra types are ideal for school use.



Builders everywhere are finding that the better steel windows help to sell the houses they build.



Because of their many advantages for the tenant, more and more apartments are being equipped with Fenestra Casements.



The builders of this terrace have added both exterior beauty and atmosphere by the use of Fenestra Casements.

DETROIT STEEL PRODUCTS COMPANY / 2304 EAST GRAND BOULEVARD, DETROIT, MICHIGAN

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Fenestra Windows

for commercial buildings

There is a Fenestra Steel Window exactly suited to every type of window opening—all quickly available through your local Fenestra Dealer. Modernize your buildings with Fenestra.



Even when Fenestra Windows face a narrow alley they provide the small shop with efficient lighting and ventilation.



You can effectively use Fenestra in the upper floors of your store buildings and in transoms over the show windows.



Fenestra windows add to the beauty as well as the utility of the gasoline station.



The rear rooms of your buildings can be as light as the front rooms—by using Fenestra.



Fenestra windows give an individual character to the exclusive shop, store or office.

CHICAGO Factories: Detroit, Michigan, and Oakland, California / Convenient Warehouse Stocks

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

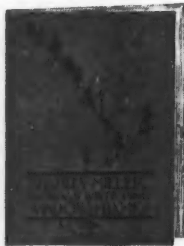
Bradley-Miller
Michigan White Pine
Frames

Their Quality Will Increase Your Sales

The better known Bradley-Miller Frames become in your community the more frame sales you will make, for Bradley-Miller Frames deliver the kind of satisfaction that builds trade.

Contractors, carpenters and builders like their accurate manufacture. They always insure a perfect job. The home owner becomes a booster too, because they stay straight, true and tight year after year.

The remarkable service Bradley-Miller Frames deliver is due to the Genuine Michigan White Pine we put into them and to Bradley-Miller standards of workmanship. Let Bradley-Miller Frames help you increase your frame sales.



Write for our free booklet.

BRADLEY, MILLER & CO.

Marquette Street,
BAY CITY, MICH.



Speedy, Powerful Jig Saw

A NEW type of jig saw which has been introduced recently is shown in the accompanying illustration. Its distinctive features are greater speed and power and operation directly from the motor shaft instead of through belts or pulleys.

The saw blade is fastened only at the lower end, leaving the upper end free. This eliminates obstructions at the top of the saw table, permitting work of much larger dimensions to be handled, and at the same time simplifies the work, particularly inside scrool work. This because, by boring a small hole through which to insert the



Here Is a New Jig Saw Operated Direct from the Motor Shaft.

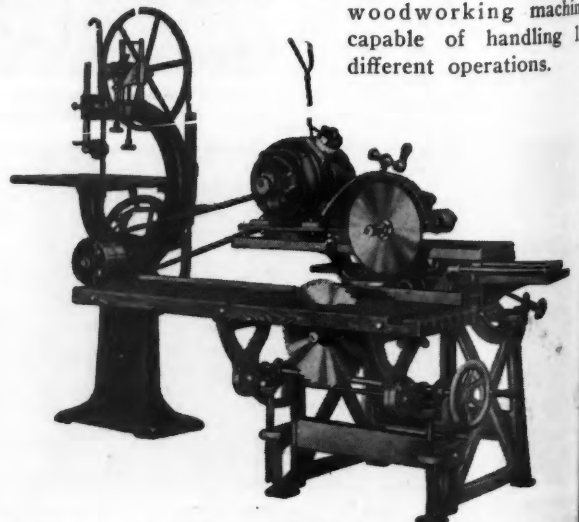
blade, the work can be simply put on or taken off at will. This saw cuts straight lines or curves equally well, turns sharp corners and cuts smoothly and fast. It will cut soft woods up to two inches thick and hardwoods one inch thick. The machine is easily portable, weighing less than 50 pounds, and is fastened to the bench by means of a single bolt.



A Woodworker for Every Need

THE illustration shows a woodworker which is made in four sizes to meet all of the varying requirements which may be placed on a woodworker. The size shown is operated by a motor rated at two h. p., which, it is said, develops 4½ h. p. on 220 volts. The total weight of the machine is 700 pounds and it can be taken down into four parts for easy moving. Its length is five feet and its width 2½ feet. By folding the table it will pass through the ordinary doorway.

This machine has a capacity of four inches for either cross cutting or ripping. It has a six or eight inch jointer, 42 inches long, equipped with a jointer fence and full safety round jointer head. It will rip four inch stock at the rate of 100 lineal feet a minute on a 220 volt current. Like all the other sizes of this machine, it is a complete woodworking machine capable of handling 12 different operations.



A Woodworker Which Will Handle 12 Different Operations and Which Is Made in Four Sizes to Meet Any Requirement.

Don't Gamble

with "Cheap" Paint

It will beat you every time



"When you sit in a game with 'cheap' paint you are beaten before you start." That is the straightforward story the powerful "SWP vs. 'Cheap' Paint" drive is putting before millions of people all over the nation. Simple, indisputable truths are convincing paint users of the high cost of "cheap" paint and the economy of SWP House Paint.

Architects, builders, and contractors have been recommending fine old SWP House Paint for years. Sherwin-Williams advertising is making it still easier for them.

What is true of "cheap" house paint, is also true of *all other "cheap" paint products, varnishes, enamels, lacquers.* It takes expensive materials to make economical paint

products. Only the finest quality goes into Sherwin-Williams paints.

SWP House Paint produces a finish that is richer looking and lasts longer. More than that—SWP is a strong selling point for the house. Its recognized superiority inspires the buyer's confidence that other materials were also selected on a "quality" basis.

Let our technical staff help plan your specifications. We will be glad to answer any inquiries.

THE SHERWIN-WILLIAMS CO.
CLEVELAND, OHIO



Trade-mark Registered

SHERWIN-WILLIAMS SWP HOUSE PAINT

PAINTS • VARNISHES • ENAMELS • OPEX LACQUERS



Buildings Rent Faster sell easier—when radiators are equipped with Trico

Trico Radiator furniture transforms all unsightly radiators into beautiful and useful pieces of furniture—shelves, window seats, consoles. They are furnished in any desired color to harmonize with other room furniture.

They stop smudge. Cleaning and redecorating costs are greatly reduced, often as much as 75%.

The patent Trico humidifying waterpan concealed beneath the cover maintains proper moisture in the air, making the rooms far more comfortable and healthful. This moisture is absolutely essential in preventing furniture and woodwork from drying.

Ten years of development in radiator furniture have made Trico the leader in this field. A district manager in every principal city will be glad to consult with you and serve you. Let us estimate on Trico Radiator enclosures. No charge.

Contractors' and Builders' Franchise Plan

If you haven't received a copy of the New Trico Franchise plan, fill out the coupon now. It means money to you and there is no investment on your part.

A copy of the latest Trico book of ideas on interior decoration will also be sent you on request. Simply check attached coupon.

TRICO, INC.

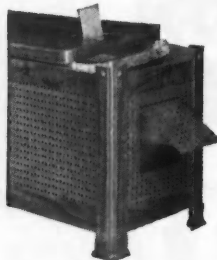
TRICO, Inc., Subsidiary to Art Metal Radiator Cover Co.,
1719 N. Kolmar Avenue, Chicago, U. S. A.

Gentlemen:

- Send New Trico Franchise Plan.
- Send estimate and Trico book on interior decorating.

Name _____

Address _____



NEWS of the FIELD



Henry A. Guthrie Now with Western Brick

HENRY A. GUTHRIE, for many years identified with various phases of the building industry in a promotional way, has been appointed general sales manager of the Western Brick Company, according to an announcement by Frank W. Butterworth, general manager of the company.

Mr. Guthrie leaves the George L. Dyer Company, advertising agency, where he conducted many merchandising campaigns, to take charge of sales for the largest face brick plant in the United States.



Henry A. Guthrie.

Mr. Guthrie has his headquarters as general sales manager of the Western Brick Company in Suite 1604, Builders' Building, Chicago. In addition to directing the sales of face brick, Mr. Guthrie will devote a portion of his time to the promotion of Haydite, the new light weight burned clay aggregate.

Publish Concrete Calculator

THE North American Cement Corporation, 285 Madison Ave., New York City, has published a really unique concrete calculator which is patented by the company. It is in the form of a small disc which will fit into the vest pocket, providing a convenient and quick method of computing the quantities of cement, sand and gravel required for various concrete mixers. It also makes it possible to compute quickly the number of board feet of lumber in various size boards.

Name Pacific Coast Distributor

AN announcement from the American Chain Company, Inc., Bridgeport, Conn., states that E. O. Johnston, district sales manager for the company at 425 Second St., San Francisco, Cal., has been appointed Pacific Coast distributor for Ford chain hoists to the industrial trade.

A Bath of the Future The Combination Bath Tub

Regular Bath, Shower Bath, Seat Bath, Foot Bath, Child's Bath. All in one piece, Patented

Semi-Vitreous Porcelain and Enameled Iron Ware



PLATE 10-E
Enameled Iron Ware, 44x30 inches to tile in recess, only. Enameled white front. Waste in foot section either right or left hand end.



PLATE 11-E
Enameled Iron Ware, 44x30 inches to tile in right or left hand corner. Enameled white all exposed parts. Same as Plate 10-E except for corner installation.

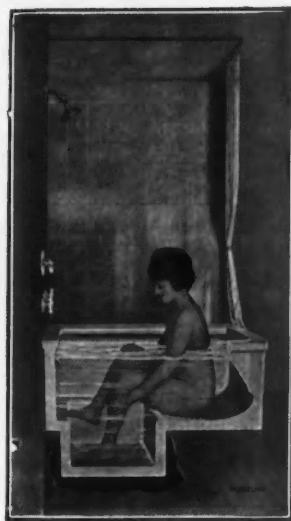


PLATE 30-E
Semi-Vitreous Porcelain Ware. 44x30 inches to tile in right or left hand corner, or in recess. Glazed white all sides.

The COMBINATION BATH is an entirely new departure in the development of modern sanitary comfort, comprising, as it does, a SEAT, FOOT, SHOWER and CHILD'S bath, all in one.

It possesses many essential common sense features not found in any other types. For instance, it is more comfortable and less wasteful of water; it is possible to bathe and treat the feet without the removal of all clothing, by having only a small amount of water in the foot section. The ledges on the end and both sides of the foot section enable one to treat the feet conveniently, while the dimensions of the foot section allow ample space for the feet when standing or sitting. The mother or maid can bathe a child in comfort under ideal conditions. The child can be bathed on the seat section, and then, if desired, dipped in the water filled foot section.

Remember, when you are considering the length of the COMBINATION BATH in comparison with other kinds of styles, that you do not assume a half reclining position when using the COMBINATION BATH, but instead a sitting position; so that your length from the knee down does not count in the length of the space required as it does when using the ordinary bath; also that the uncomfortable, cramped position assumed in the latter case is entirely removed and supplanted by a natural, comfortable posture, such as experienced when sitting in an easy, comfortable chair with just as much room in every direction as a person would have in using the ordinary bath of greater length.

Furthermore, when the COMBINATION BATH is used as a shower bath it is equal to any standard type shower receptor. The arrangement of the seat and foot bath permits the taking of a head or body shower bath, the latter without wetting the hair. This commends it, and is a feature which should not be too lightly regarded; in fact, we strongly recommend installation of showers in connection with the COMBINATION BATH.

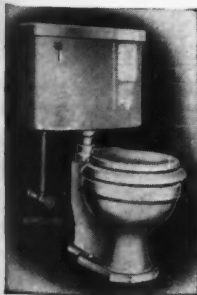


Plate 126-E "The Tranquil" all white Syphon Jet Water Closet Combination.

When one desires to get out of the COMBINATION BATH, he can do so without the aid of grip-rails or even the use of his hands, by merely standing up—just like arising from a chair.

Water can be turned on and off or discharged without changing from a sitting position, instead of being obliged to slide along the bottom of the tub, in order to reach the valves, as is necessary when using any other type bath.

In planning bath rooms, space saving is oftentimes a most important problem, which can be readily and satisfactorily solved by the adoption of the COMBINATION BATH. This is all accomplished without encroaching on the space required for persons weighing as much as 250 pounds to an extent that comfort is sacrificed in any degree.

Tone will be given the bath room wherein such a distinctly attractive and meritorious fixture as the COMBINATION BATH has been installed—an added attraction fully appreciated and not likely to be overlooked by your guests.

We furnish plans for installing the COMBINATION BATH, avoiding the necessity for having any part of the waste fittings extended through the ceiling below the bath room, requiring a suspended ceiling; which, in many cases, would prove undesirable.

These plans provide for raising the bath about four inches above the floor level, and filling in the open space with tile. This increases the extreme height of the tub from floor to top to about twenty-one inches, which is slightly less than the height of a staple bath on legs or base.

Many of the COMBINATION BATHS have been installed in this manner, and have proven entirely satisfactory.



Plate 100-E Lavatory on Pedestal. Two sizes—24x20 inches and 26x22 inches.

Write Us for Descriptive Booklet Giving Measurements and Other Details

WHEELING SANITARY MFG. CO.
WHEELING, W. VA.

Manufacturers of High Grade Plumbing Fixtures

Trussless Arch Roof Covers Democratic Convention Hall

ONE of the most interesting problems in auditorium construction presented itself when it was decided to hold the National Democratic Convention in Houston.

It was necessary to have a building that would seat from eighteen to twenty thousand people. Quick and economical erection was absolutely necessary. A spacious auditorium that would be airy was paramount, due to the extreme heat in Houston during the summer months. Furthermore, the best acoustical conditions obtainable was desired.

The architectural design for this auditorium was made by Mr. Kenneth Franzheim, architect, New York City, and his associate, Mr. J. E. R. Carpenter. The engineering calculations as to stresses were made by Hurlbut & Van Vleck, engineers, New York City. The general contract has been let by the City of Houston to the Universal Construction Company as general contractors for the sum of \$145,000, which includes a sub-contract to the Lamella Trussless Roof Company of Houston, Texas, for the auditorium roof construction, including columns and consisting of 85,000 square feet.

The Lamella roof construction comprises three parts: one large span of 120 feet in the center and two smaller spans of 76 feet each along each side of the span. The length of the Lamella

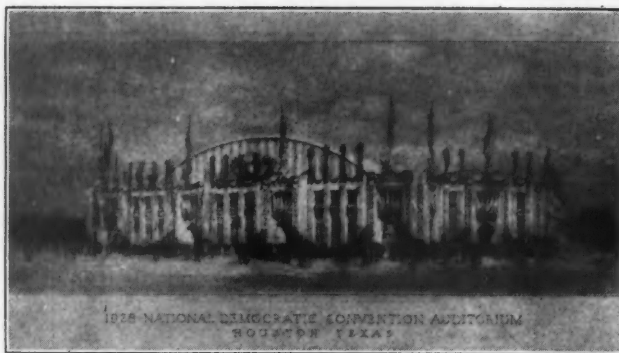
construction is 324 feet and the height in the center approximately 60 feet.

The springing line of the center arch is 38 feet high and the springing line of the side bays 30 feet. The space of 8 feet in between the two serves a double purpose; it provides for sufficient height to connect the sills of the Lamella roof at those points into a girder effect, so that the columns supporting the two spans are spaced at over 40 feet on center. By doing this it was possible to have the entire large roof area rest on only 12 center columns. All the lumber being used in this building is southern pine, furnished by the Kirby Lumber Co., the Lamella Trussless Roof Co. of Houston being one of John Henry Kirby's business enterprises.

The roof construction is made from specially designed pieces of lumber joined together in net-like fashion to cover large spaces in one clear span, thereby forming a uniform wooden arch. It is in effect a series of intersecting arches resulting in a design which requires a minimum

of decorative embellishment. The absence of obstructions aids materially in the distribution of light and the mesh-like formation produces unusually good acoustical conditions. If desired, the underside of the roof may be easily covered with standard fireproof or insulation material or finished with lath and plaster. It can also be readily sprinkled.

This roof construction has been used extensively in all parts of the United States.



The Great Convention Hall Which Houston, Texas, Is Providing for the National Democratic Convention of 1928.



Italian Travertine

rock, in preference to metal ceilings—Travrtile applied on the side-walls over plaster—Produced a perfect insulation against heat and cold and also deadened sound. Lincrusta-Walton wall coverings are made in a great variety of patterns appropriate for private homes and public places.

This New Wall Covering Applied to Plaster or Wall Board Makes a Permanent Wall

*Inexpensive—Easily Applied—Washable—Decorative
Built Up in Linseed Oil—No Surface Cracks*

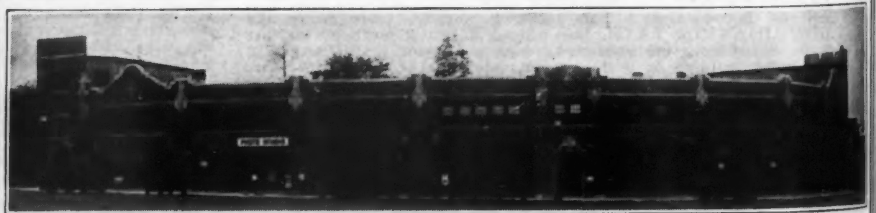
Travrtile fabric—imitation Italian Travertine Marble—made in any color, satisfying every taste. Applied like wall paper.

Non-repeating pattern of blocks removes the usual mechanical effect. Duplication of line on both sides of sheet saves labor and worry in application.

Travrtile on all walls assures permanency and beauty. Desirable for hotels, apartment houses, banks, public halls, stores, offices, etc.

Contractors and Builders, investigate Travrtile.

Send at once for samples and free literature. Also name of your wall paper supplier.



Nelson M. Ayres, Owner, West Englewood, N. J., 18 Stores with offices and corridors. Travrtile was used on all side walls, and Lincrusta-Walton pattern No. 290 for ceilings.

What Mr. Ayres says about Lincrusta-Walton:—"It is the most decorative, most economical and satisfactory decoration I have ever seen. The tenants are well pleased and have had many favorable comments. Have specified Lincrusta-Walton on several business blocks and a 300-family apartment house about to be started."

Signed: Nelson M. Ayres.



Ceiling Pattern No. 290

LINCRUSTA-WALTON COMPANY

Hackensack, New Jersey

Division Tait Paper and Color Industries, Inc.

The END of the SEARCH

The Perfected BAZARK CHEMICAL WATER SOFTENER

SOFT WATER should be used every day—365 days of the year. There are so many uses for it in every day home life that it has become a positive necessity. Bazark engineers have developed the first fool-proof all-automatic chemical water softener—the only logical way to secure an uninterrupted flow of chemically softened water that is clean and pure. The low price of the Bazark Auto Water Softener puts it within reach of all and will prove the end of the search for those who are now looking for the ideal water softening equipment.

*No Home, Apartment or Public Building
Need Be Without One — Now*

Bazark softened water flows at full pressure without interruption the instant any soft water faucet is opened. Sizes for every need. First cost is low—lower than any other softener on the market today. Costs less than *half a thousandth* of a cent per gallon to keep the domestic size Bazark Softener in operation.

Easily INSTALLED

The Bazark Auto Water Softener is easily installed in less than an hour. Its design is so simple, its construction so sturdy that with ordinary usage no servicing is required. It requires no double plumbing. Full directions go with each machine so that any good plumber can install and get your Bazark in perfect operation in a very short time.

*Guaranteed
for one
Year*



Mail to-Day

Dept. 41

BAZARK CORPORATION
Rockford, Illinois

Gentlemen:—We are interested in knowing all the facts about the NEW BAZARK AUTO WATER SOFTENER. Send us your proposition by return mail today with the understanding that there is NO OBLIGATION attached.

Name _____
 Firm _____
 Address _____
 City _____ State _____
 PLUMBER HOUSE OWNER HOME BUILDER
 ARCHITECT CONTRACTOR



No Backwashing or Reconditioning It Couldn't Be Simpler

The only attention required by the Bazark Softener is the filling of the reservoir, as illustrated below, with a gallon of Bazark softening compound about once every 6 or 8 weeks depending entirely upon the amount of soft water used during that period. When new compound is added, instead of having a lot of backwashing or reconditioning work to go through as you have in the case of the mineral type of softeners, you have only the small amount of effort necessary to draw off a few gallons of water from the settling tank or hot water tank depending on the type of installation in your home.

For Quicker Sales



Residence of R. O. Smith, Kansas City, Mo., Edward Buehler Delk, Architect, Exterior Trim finished with Cabot's Double White and Green Collopakes, Exterior Walls finished with Cabot's Old Virginia White Collopakes, Roof of Cabot's Creosote Stained Shingles. Walls and 2nd floor insulated with Cabot's XX and XXX Quilts.

Insulated houses sell more easily today. The public knows that home insulation increases comfort both winter and summer and saves coal bills.

Some insulating materials increase costs and reduce profits. Government and other tests make us believe that Cabot's Quilt saves building expense and gives most insulation at lowest cost.

Cut the coupon below (Roll of Quilt) and send it in today for full Quilt Information and U. S. Bureau of Standards Home Insulation Tests.

For Effective—Economical House
Insulation, USE

Cabot's Quilt

IN SUCCESSFUL USE FOR OVER 30 YEARS



Mott Reorganization Completed

REORGANIZATION of the new J. L. Mott Company, Inc., the consolidated concern which has grown out of the recent merger of the former Mott Company and its subsidiaries with the Laib Company and the Columbia Sanitary Manufacturing Company, has been effected and the company incorporated under the laws of Delaware, according to an announcement from George H. Laib, president and chairman of the board of the new company and its various subsidiaries.

The J. L. Iron Works, sales subsidiary of the Mott Company, will remove its New York offices and show room, on May 1, from Fifth Ave. at 17th St. to a new building at 369 Lexington Ave., which will be known as the Mott Building. An elaborate show room is being fitted up on the first floor.

With the reorganization the name of the Columbia Sanitary Company has disappeared and it is now operating under the name of the J. L. Mott Company, Inc.



Tile Company Appoints Whitmer

THE Flint Faience & Tile Company, Flint, Mich., a General Motors concern, announces the appointment of J. D. Whitmer as production manager. He will also be in charge of development work for the company. He was formerly associated with the production department of the American Encaustic Tile Company, of Zanesville, Ohio.



J. D. Whitmer.



Milcor Sales Force Increased

BECAUSE of the increased demand for its various products the Fireproof Material Division of the Milwaukee Corrugating Company, Milwaukee, Wis., has been growing so rapidly that it has been necessary to enlarge its production facilities and sales force, according to a recent announcement of the company. Julius A. Pfeiffer has been made director of sales of the division; H. B. Spackman, formerly of the Northwestern Expanded Metal Company, has been appointed special representative in the fireproofing line; C. C. Banholzer has been assigned to the Wisconsin and Northern Michigan territory; J. G. Decker will have his headquarters at Minneapolis and be in charge of the Northwestern territory, and G. C. Lendon has been assigned to the Detroit territory.



Change Size of Gyplap Board

THE width of Gyplap sheathing boards has been changed from 32 inches to 24 inches, according to an announcement from the United States Gypsum Company, Chicago. As now manufactured each board is 24 inches wide, eight feet long and ½ inch thick. The change was made because of a need for greater convenience in handling the boards before and during application. In the new size it is possible for the carpenter to carry two boards at one time, one under each arm, and application is also easier. The ½ inch gypsum core of Gyplap sheathing, the tongue and groove edges and the waterproof surfacing remain unchanged.

WANTED

FRANCHISE AGENTS



A Golden Opportunity

START YOUR OWN BUSINESS
SELLING AND APPLYING

MALLEABLE ASPHALT (MASTIC) FLOORS and ROOFS

Easily Applied—No Heat—No Special Tools

An unusual Mastic Composition that is different from other similar products in ingredients, method of manufacture and in results.

This material has been successfully used in such buildings as Marshall Field (retail store), Field Museum, Butler Bros., warehouse, Crane Co., foundry, etc.

We appoint one Franchise Agent in each town and our specialty salesmen help our Franchise Agent sell. No large investment in stock required. An ideal line for

Contractors and Building Material Men. Two-way Profits—one on the material—one on the installation. Our Maco (Colloidal) asphalt, a composition easily mixed with Portland Cement and sand for building Malleable Asphalt (*Mastic*) Floors, and for permanent patching and repairing old concrete floors, loading platforms, sidewalks, driveways, etc.

A wonderful money maker that fits in with the Malleable Asphalt (*Mastic*) Roofing and Flooring. Nearly every building in your town is a prospect.

HERE IS A REAL OPPORTUNITY

We want responsible men to act as our Franchise Agents. Send in the coupon today for **FREE** samples, outline of advertising we do for you, helps we offer and full information. Write today, your territory won't be open long.

MALLEABLE ASPHALT CO.
6355 Broadway CHICAGO, ILLINOIS

MALLEABLE ASPHALT CO.
6355 Broadway, Chicago, Ill.

Please send me free samples, and complete information. I am interested in your Franchise Plan.

Name

Address

Town..... State.....

Contractor Building Material Dealer

Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

"Brass Pipe and Health" is the title of a booklet issued by the Copper & Brass Research Association, 25 Broadway, New York City. It sets forth how buyers and builders of homes can co-operate with municipal water departments in protecting the cleanliness of the water supply.

"The Zagelmeyer System" is the title of a booklet published by the Zagelmeyer Cast Stone Block Machinery Company, 1100 S. Henry St., Bay City, Mich., describing its machinery and methods of casting plain and granite faced concrete building blocks.

The Sarco Company, Inc., 183 Madison Ave., New York City, offers a catalog of Sarco products including industrial steam traps, temperature control strainers and heating systems, vapor, vacuum and low pressure, and also two pamphlets on its radiator traps.

The United States Gypsum Company, 300 W. Adams St., Chicago, has recently published a sheet of "Architectural Data on the U. S. G. System of Sound Insulation."

The Canton Clothes Dryer Co., Canton, Ohio, offers an illustrated catalog booklet on its dryers which are heated with gas, steam or electricity.

The Beardslee Chandelier Mfg. Company, 216-220 S. Jefferson St., Chicago, offers the following booklets on its products: Distinctive Lighting Fixtures, Catalog 43; Lighting Fixtures for Public Buildings, Catalog 40; Denzar, The Unit of Brightness, Catalog D-8.

The A. S. Aloe Company, 1819-23 Olive St., St. Louis, Mo., has published a 1928 edition of its Contractor's Labor Saving Equipment Bulletin covering the various machines and tools which it manufactures.

The Monarch Sales & Engineering Co., 2010 Locust St., St. Louis, Mo., has issued a pamphlet illustrating and describing its "Triple Heat" boilers which do not require fire brick.

The Artistic Lighting Equipment Association, 711 Graybar Bldg., New York City, has published a booklet covering complete information on its sales promotion and refixturing campaign.

The Evans Elevator Equalizer Co., Bedford, Ind., offers a booklet of information on its system of equalizers for passenger and freight elevators.

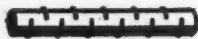
Charles J. Geiser, P. O. Box 1127, Chicago, Ill., has written and published a small handbook under the title, "Practical Information—Care and Repair of the Plumbing and Heating System in Your Home," which places this useful information in a convenient form for reference. Price, \$1.

"The Modern Foreman," by Robert Grimshaw, M. E., published by the Gregg Publishing Company, New York, N. Y., is a book of organized industrial knowledge for the foreman, factory worker, managing executive and all ambitious workers, laying down clearly and precisely the principles of successful foremanship. Price, \$2.50.

The American Chime Clock Company, 1643-D Ruffner St., Philadelphia, Pa., offers a booklet, "How to Build Your Own Grandfather's Clock," cataloging the various styles of clock for which they furnish working drawings and sell works. The working drawings are furnished at a nominal price.

"Color Schemes of Adam Ceilings" is the title of a very handsome portfolio of designs, lithographed from water color sketches by Gerald K. Geerlings and Betty F. Geerlings, reproducing the original studies by the Adam brothers, now in the Sir John Soane Museum, London. It is published by Charles Scribner's Sons, 597 Fifth Ave., New York City. Price, \$2.

Unusual Service for the Contractor



Round and Square Deformed Bars

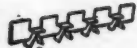


High Chair

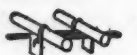


Lower Slab Bar Spacer

Bar Chair



Lower Beam Bar Spacer



Joist Beam Spacer

Welded Solid Steel Sash



Portable Electric Hand Saw

Ryerson combined service on all steel products saves time, money and trouble

The Special Contractors and Builders Division of Ryerson Steel-Service is without parallel in the building fields.

This department has its own warehouses and provides complete service on all reinforcing for concrete, Steel Joist, Metal Lath, Steel Sash, and all the various steel building products are also included.

In addition, structurals, bars, plates, sheets, rivets, bolts, wire, etc., are furnished from the general steel departments. Trench braces, jacks, electric drills, and hundreds of other tools needed on every job are supplied by the machinery and small tool departments.

Contractors use the Ryerson Warehouses as if they were their own. Reinforcing steel, lath, sash and other miscellaneous materials are kept under cover until they are ready to use each item. Delivery is according to their schedule.

Large fleets of trucks and private switch tracks help provide service unequaled by any other source of supply.

All types of jobs are figured and lump sum or pound price quotations prepared.

Write for Complete Information.

JOSEPH T. RYERSON & SON INC.

CHICAGO
CINCINNATI
BUFFALO

MILWAUKEE
DETROIT
JERSEY CITY

ST. LOUIS
CLEVELAND
BOSTON



Triangle Wire Mesh Reinforcing

Continuous Stirrups



Step Reinforcement

Spirals



Expanded Metal Reinforcing

Expanded Metal Lath



RYERSON REINFORCING-SERVICE

MYERS SELF-OILING DEEP WELL WATER SYSTEMS

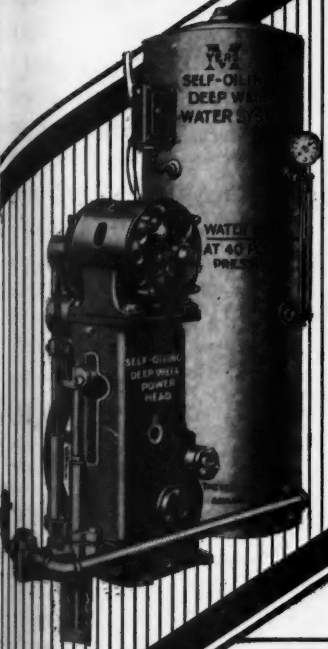
A REGISTERED TRADE NAME

To thinking contractors, builders and others who are in the water system game to serve their customers satisfactorily and completely, and to make money consistently, this advertisement will be highly important.

Those who are selling and installing water systems are learning through experience that it requires more than one style or size to meet installation requirements as they exist in any community. Depth, volume, location and maintenance are all factors to be reckoned with in every water system sale. And we have yet to find a single style or a single size of water system that will meet all of these conditions satisfactorily.

Little doubt but that your experience has been the same as ours. If you have not been fortified with a complete line like the MYERS you have been out of luck—the other fellow has been getting part of the business that belongs to you.

Take Off Your Hat
To The
MYERS
PUMPS - WATER SYSTEMS - HAY TOOLS - DOOR HANGERS



Greater and greater demand from year to year for Myers Water Systems has brought about a remarkable development in the Myers Line—a development of such scope that it now permits of every dealer meeting every demand of every prospective purchaser with a Myers Water System of the right style and size to meet his individual requirements.

Think this over. It means a lot to both you and your customers. So much indeed that we urge you to study the illustrations of the five Myers Deep Well Water Systems appearing in this advertisement, keeping in mind that they are representative of the Myers Line with its superior features and numerous styles for both shallow and deep well service which will enable you to get more of the water system business in your vicinity.

It's time to act. Write or wire for catalog and information.

THE F.E. MYERS & BRO. CO.
ASHLAND, OHIO.

Manufacturers for over Fifty Years of MYERS' HONOR-BILT' PUMPS for Every Purpose, WATER SYSTEMS - HAY and GRAIN UNLOADING TOOLS - BARN, FACTORY and GARAGE DOOR HANGERS - STORE LADDERS, ETC.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

To Manufacturing Independence



F. A. LIND
ALTOONA, PA.

H. W. SEWALL
RENTON HARBOR, MICH.

WM. J. LYONS
NORWALK, CONN.

Messrs. RECKTENWALD AND BALL
CHICAGO

J. E. STRANDBERG AND C. E. SWANSON
KANSAS CITY

PROVEN SUCCESSES POINT THE WAY FOR YOU TO FOLLOW

Consider these facts! Lyons, whose picture you see above, has a business now valued at more than twenty times his original investment. Lind of Altoona, who started with \$1,750 five years ago, recently refused an offer of \$100,000 for his plant. The Kansas City Duntile Company increased a \$3,000 investment more than thirty times. Frauenfelder of St. Louis has built a \$100,000 business.

What is the secret? Simply courage and determination plus what is probably the greatest manufacturing opportunity of this generation. Men like these men, from all walks of life, have found in Duntile manufacturing the way to rise from the futile, competitive ruts of life into independence and success. There are more than 400 Duntile manufacturers today, making Duntile that went into construction worth more than \$150,000,000 last year.

DUNTILE

THE PERFECTED ALL-PURPOSE CONCRETE BUILDING UNIT

Working Specifications in "Sweets"

There is no other business opportunity today just like Duntile manufacturing. There won't be another in a blue moon.

Try to conceive of a business where the efforts of other men instead of competing with yours simply point out the right paths to follow! A manufacturing business where every detail of plant design, manufacturing processes, exclusive machinery, selling and advertising is worked out for you in advance and proven sound and profitable by the records of hundreds of actual cases. A business you can own and operate in your community that has built a nationwide reputation for the product you make and sell locally. The field is wide open in hundreds of localities. But your city may not be open long. Can you afford not to get all the facts? Send the coupon now for our book "Basic Facts."

W. E. DUNN MFG. CO.
415 W. 23rd St., Holland, Michigan



Get this Book
which
Started Hundreds

W. E. DUNN MFG. CO.,
415 W. 23rd St., Holland, Mich.

Show me through your book, "Basic Facts," how average ability and some capital win manufacturing independence for those supplying DUNTILE in each community. Also show me how I can manufacture DUNTILE in a plant of my own at a profit of 30 to 60%.

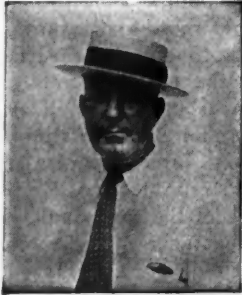
Show me how I can build permanent masonry walls at cost of frame and make more money for myself.

NAME.....

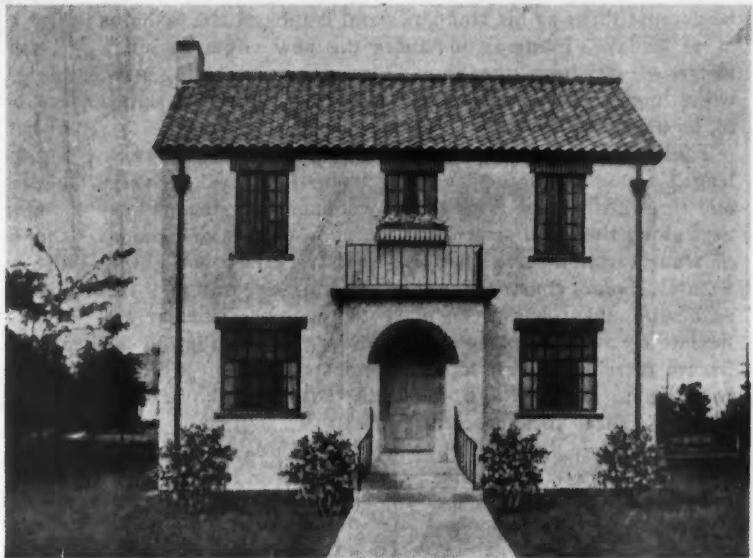
CITY.....STATE.....

STREET ADDRESS.....

Duntile Points The Way Permanent Fire-Proof Homes at Cost of Frame



Mr. C. H. Dexheimer, well-known Toledo contactor who startled the building world by constructing a fire-safe home of Duntile and steel at practically the cost of ordinary construction.



The Dexheimer Duntile and steel house at Toledo, Ohio. In a letter to the Wm. B. Hillebrand Duntile Company of Toledo, Mr. Dexheimer says of the Duntile used: "It laid up quickly, required less mortar and made a perfect base for plaster and stucco, saving us over \$1,000 in labor and materials. This made it possible to put the house on sale at no greater cost than one of ordinary construction."

Mr. Dexheimer's accomplishment in building a fire-safe home at the cost of an ordinary house is typical of hundreds of cases where Duntile brings fine permanent construction out of the luxury class and makes it available for all—cheaper in construction than brick—less than the cost of good frame! Permanent, fire-safe, strong beyond all requirements, full mortar bed . . . beauty, rich colorings and textures . . . over forty color variations obtained by Mat Glazing.

Versatile beyond any other material! For every building need from cellar to garret. A material which has gone into the biggest garage in Canada, the finest school in Brockton, Mass., the country home of a wealthy Virginia coal operator, the home of a famous foreign diplomat, and thousands of other homes, churches, schools and every other type of building. Duntile is literally sweeping the country.

Learn for yourself why so many builders are making such enviable reputations through their amazing accomplishments with Duntile and why as a result the Duntile industry is rapidly becoming the nation's building sensation. Use coupon at the left for a vitally interesting summary of the facts.

**Skyscraper
or
Cottage-**
DUNTILE
*meets every
requirement*



**Investigate
for Yourself**



New Fixtures for Old

By ROGER A. LEA

CHANGES are said to keep civilization in motion. Customs change, manners change, habits change, and styles change with astonishing rapidity. Man becomes so absorbed in these changes that in a short time he accepts them as his standards and laughs at the fashions of yesterday. In many instances the new vogue is but a means of satisfying the human desire for something new, while in many other instances the new has been designed to fit new conditions.

The woman who today walks down the street in ankle length dresses calls forth a smile from the crowd. Everyone turns to gaze at a horse and carriage carrying passengers along the main street. As styles in clothes and modes of transportation have changed, so have styles in lighting fixtures, home construction and interior decoration. Gas as an illuminant has given place to the more efficient and flexible electricity, yet how often does one find the old gas fixture merely wired to carry the electric current which is working to illuminate a modernly furnished home? In these instances incandescent lamps are being dressed in a style of a past generation.

Not only are the gas fixtures out of style, but the source of illumination has outgrown this older dress just as a boy soon outgrows his first suit of long trousers. In the days when electric lighting was first installed in the home, it was highly advisable to have both gas and electricity in the same fixture for we were never quite sure when the current would be shut off. Generating machinery and methods of power distribution have been so improved in recent times that there is little need to fear the failure of the lighting system except under most exceptional conditions. The first incandescent lamps were of such low intensity that it was not particularly objectionable to have them visible through a clear or etched glass shade projecting at an angle from the fixture. The new lamps, being so much brighter and giving so much more light, have outgrown the old fixture and are most annoying and glaring when they are visible under the shade. The lamp sockets, directed at all angles from the fixture, send shining light into the eyes of those seated in the room and thus are unpractical as well as unsightly. Curiously enough, the new lamps have a faculty for attracting one's attention to the old fixtures—the very piece of furnishing which the housekeeper is most desirous of concealing. Like other styles, fixture styles are progressive, the old giving place to the new, which are more artistic and efficient.

Harmony is the essence of success in many spheres, even in the achieving of a restful and attractive room. The rigid and often ornate gas and electric combination fixture can seldom, if ever, be said to be in harmony with the delightful simplicity of decoration in the furnishings of our homes

today. Such a fixture, being so foreign to the remainder of the room, stands out in contrast, striking a discordant note while the lighting it provides is often concentrated in the center of the room, due to the low hanging light; and the attractive corners of the room remain in a shadow, appearing gloomy and repellent. A properly designed and properly hung ceiling fixture may be the hostess' best means of exhibiting the charm of her room and insuring the comfort of her guests, while the improperly designed fixture producing poor illumination in the room, creates an unpleasant atmosphere and often leaves the guests ill at ease.

Quite as bad as the gas and electric fixtures are many of the fixtures designed about fifteen years ago. These for the most part were hasty reproductions of the antiquated gas fixture and today present the same faults which detract from the lighting and appearance of the room. How easy it would be to have all the old fixtures removed and replaced by new ones. The cost of such a change is surprisingly low and may be considered almost negligible when measured by

the joy, comfort, and beauty resulting from the modern lighting installation. Taking advantage of the relatively small cost of change from old to new, many thousands of people are today enjoying to a greater extent the benefits offered by electricity.

And yet, in spite of all this, are your friends smiling at your new incandescent lamps dressed in the styles of the past?

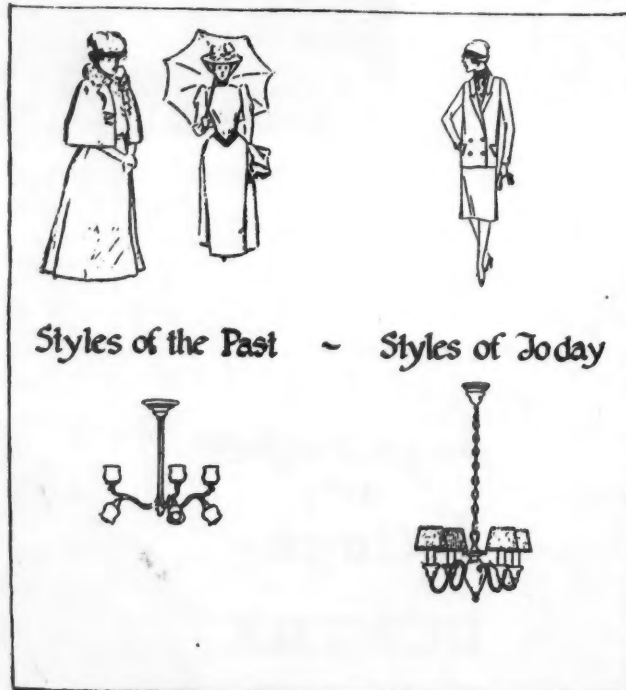


Would Restrict Commercial Area

A WARNING against the danger of too much "first-commercial" zoning was sounded in the 1927 report of the National Capital Park and planning Commission, of which J. C. Nichols of Kansas City, former chairman of the city planning committee of the National Association of Real Estate Boards, is a member.

According to this report, there would be four times as large a commercial area as necessary for the anticipated population, if the tendency to zone for commercial purposes the property fronting on streets used as major thoroughfares were to receive the definite approval of the zoning commission. This tendency is natural because the noise of traffic makes such property less desirable for residential purposes, the commission finds.

The National Capital Park and Planning Commission was instituted in 1924, for the purpose of regional planning and zoning for the territory in and around Washington, D. C. Its findings as to proportion in commercial areas were made following a study of the effects of the zoning act which has been in force in the District of Columbia for over seven years.



The Building Industry Has at Last Become Style Conscious and Is Stepping Right Along with the Procession.

CONTRACTORS' EQUIPMENT



Concrete Mixed in Transit

A SPECIALLY designed body, in which concrete is continually agitated while in transit, makes it possible for the Ready Mixed Concrete Corporation, of Richmond, Virginia, to deliver concrete from its central plant to various parts of the city. Considerable economies are naturally obtained by concentrating the raw materials at a central plant in this way, mixing them there and delivering the concrete thoroughly mixed to various construction projects as needed.

In the accompanying illustration is shown an International Harvester Model 54-C chain-drive motor truck, equipped with a 2-yard body of this type, delivering concrete to a hopper. This is one of the six Internationals of the same type and similarly equipped used by the Ready

Mixed Concrete Corporation for making concrete deliveries from its central plant in Richmond.

The concrete is agitated while in transit by paddles geared to the transmission. It is claimed that this agitation prevents any segregation of the aggregate between the mixer and the job and makes possible a more favorable water-cement ratio. At the delivery point, therefore, the concrete is said to be stronger and more workable.

The body may be hoisted to two positions. In the higher position, the outlet is 9 feet above the ground, as shown in the illustration. In this position, concrete may be delivered to storage hopper for removal by wheelbarrow, to hopper used with tower equipment or to chute for delivering concrete for sidewalks or foundation walls.



Many Cities Builders Are Now Buying Their Concrete Already Mixed, from a Central Mixing Plant. This motor truck mounted equipment delivers the mixed concrete to the job.



A $\frac{3}{4}$ -Cubic Yard Clamshell Crane Charging Bins for Low-Cost Concrete Work.

The body is elevated to lower position when the concrete is directly dumped out for road or street work.



How a Power Crane Reduced Material Handling Expenses

MODERN methods have again proven to be the most economical methods. In this instance a survey was conducted in the modern material storage yards of Baker & Holmes at Jacksonville, Florida. Carefully compiled figures indicate that this building supply dealer reduced the cost of handling aggregate from 35 cents per ton to 4 cents per ton by installing a Harnischfeger clamshell crane and steel bins.

Owing to the scarcity of day laborers in many sections of the country, and the gradual increase in such wages, many building supply dealers and contractors are rapidly installing labor saving machinery of various kinds such as clamshell cranes, because substantial savings over slow hand methods have been proven.

When a car or aggregate is spotted for unloading by hand the first cost amounts to approximately 15 cents per ton. When the storage pile grows to unusual proportions another 10 cents per ton is required to get the aggregate on the pile and keep it from sliding onto the tracks.

This, however, is only the first source of waste when handling aggregate by hand. The material must next be loaded onto wagons or trucks to be hauled to the job, necessitating another handling cost of at least 10 cents per ton. A third source of waste results when the stock pile becomes spread over a large area. The space itself is valuable in many cases and all the aggregate cannot be scooped from the ground.

Baker & Holmes found that six steel bins and a gasoline powered clamshell

crane reduced their material handling expense 88.57 per cent per ton. The elevated bins have a capacity of 125 tons each, making their total capacity equal to approximately twelve carloads. The crane unloads a 60-ton car, dumping the aggregate into these bins, in approximately 40 minutes. The material can now be spouted into wagons or trucks at great speed. Trucks having a capacity of five tons can be loaded in twenty seconds.

A crane of this type is not strictly confined to storage yards. When the bins are filled and trucks are not hauling, the machine can readily be converted into shovel, trench hoe, skimmer scoop and can be used for tearing up old pavement, cutting trench, or preparing the grade for paving.



Mechanical Hoeman Saves in Mixing Mortar on Pittsfield Building

THE efficiency and economy of machine mixing of mort for plaster, brick and tile over hand methods was convincingly shown in the construction of the nearly completed 46-story Pittsfield Building by T. G. Nicholson & Co., the contractors.

The mixer, a Marsh-Capron Mechanical Hoeman, was used to supply mortar for both bricklayers and tile setters. It was placed on the first floor, and a loading platform was built on a level with the top of the mixer drum with a long runway leading up to it. The wheelbarrows, full of sand and "putty," were run up to this platform and dumped into the mixer. Three men kept the mixer going, one wheeling up the sand, another operating the mixer and water supply, and the third wheeling up the putty. The mortar was discharged into a large trough on the floor level, from which men shoveled it into wheelbarrows, and wheeled the mortar to the hoist, where it was elevated to the floor desired.

When asked by his interviewer as to the cost of mixing with the Mechanical Hoeman over the old hand mixing



Clamshell Crane in the Modern Material Storage Yards of Baker & Holmes Jacksonville, Fla.

methods, Mr. Smith, the construction superintendent, in a few concise statements told of the great savings effected by the machine. He said: "I have between 46 and 50 bricklayers working every day. I need over 100 tons of mortar to supply them. The same number of hand mixers could not begin to supply either the amount or the quality of the mortar turned out by this machine. At least one hand mixer is needed for every eight bricklayers or six hand mixers for forty-eight bricklayers. This one machine with three men working serves fifty bricklayers and turns out a far better mortar." Three hand mixers at 90c an hour, \$7.20 a day, a saving of \$21.60 a day, was made cutting the wages for mixers in half.

Machine mixing is rapidly supplanting hand mixing of mort for plaster, brick and tile on the basis of the advantages of a superior mortar and savings in mixing costs reported here.

For use on smaller buildings, two and three stories high, where a construction elevator would be too costly, this mixer is supplied with a powerful hoist which brings about further construction savings.



G. E. Secretary Retires

BYRON F. WESTOVER, secretary of the General Electric Company for the past 34 years, retired on March 1st and William W. Trench, assistant secretary, has been elected by the board of directors to succeed him. Mr. Westover has been actively identified with the electric industry for 40 years.

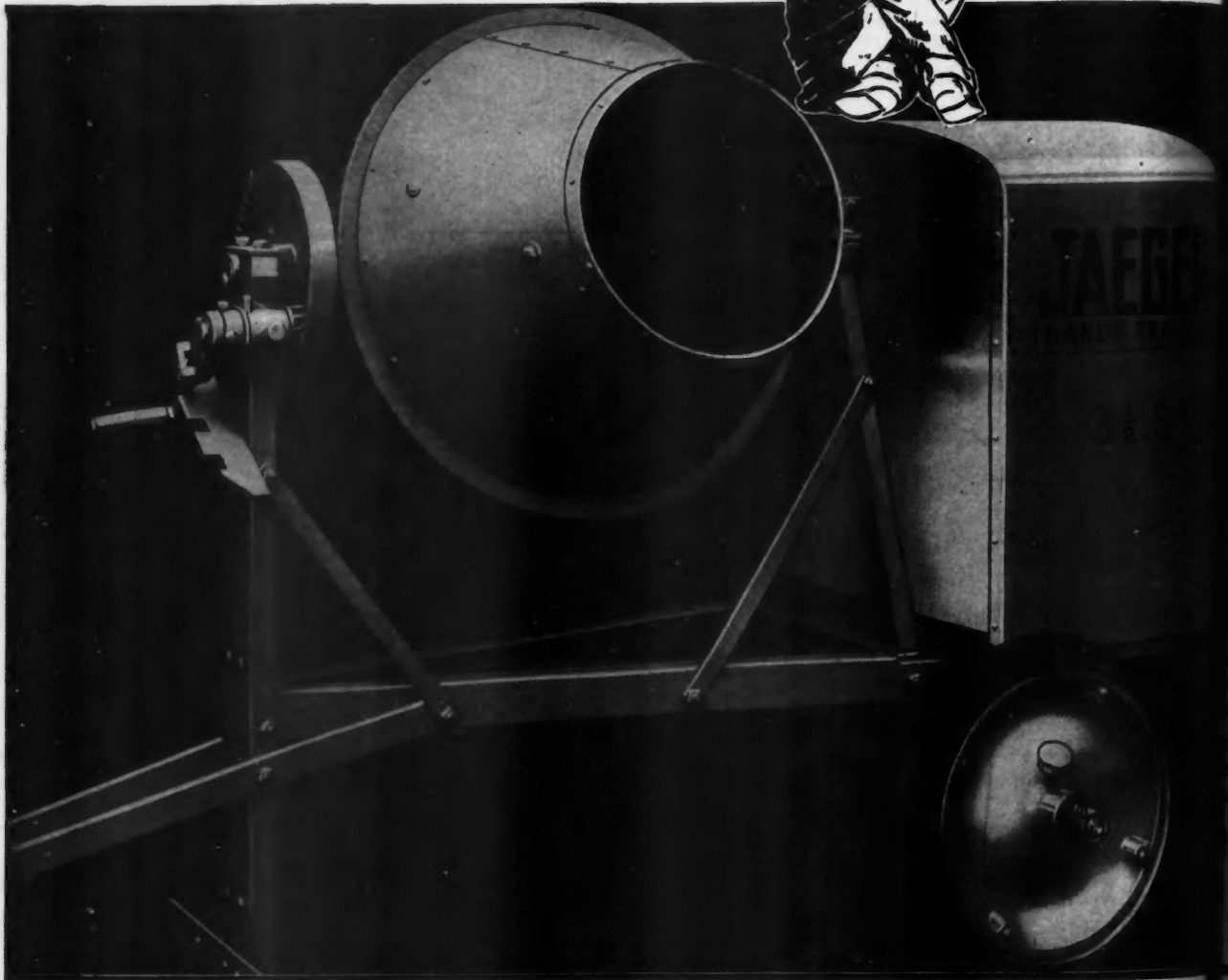


This View Shows the Charging and Discharging Opening of the Mixer Drum of the Mechanical Hoeman on the Pittsfield Building.

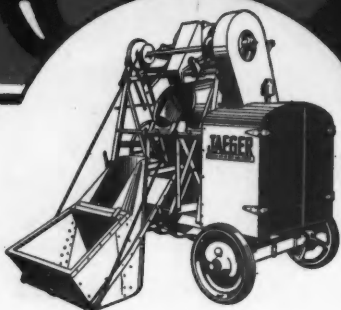


Loading Platform Built to a Level with the Top of the Mixer Greatly Facilitated Loading on the Pittsfield Building Job.

LOOK



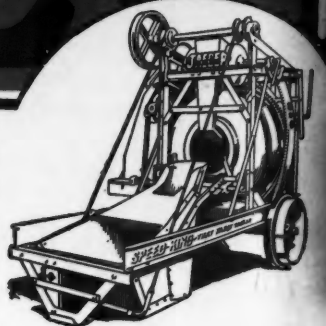
VIA THE



JAEGER MIXERS ARE BUILT IN ALL TYPES TO FIT ANY JOB!

Timken Equipped Tilters power loader models from a popular priced 3 1/2-S or light 7-S one bag up to four bag half yard size. Ask about our Hoist attachment.

Heavy Duty Non-Tilters from famous 7-S Speed King illustrated (a one bag mixer for \$200 less) up to 28 ft. sizes for skyscraper work.



FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Only -----
\$179.50 NET CASH F.O.B. COLUMBUS

or this Genuine Jaeger
 All-Purpose Mixer...
**NEVER BEFORE such
 Quality at this Price!**

CAPACITY: A full half-bag size, 3½ cubic feet mixed concrete
 a batch. Also mixes mortar.

HIGH SPEED: Famous Jaeger "Flat Spot" Drum - more batches
 thorough mixed concrete per day. Discharges clean in 5 seconds.

PORTABLE: Balanced - one man handles it. Trails any-
 where a Ford will go. Roller bearing disc wheels with rubber
 tires furnished at above low price - steel wheels at still lower price.

POWERFUL: Husky 2 h.p. F. & J. engine with Wico magneto,
 completely housed.

Check these specifications! Look again at the price! Only Jaeger,
 world leader in size and sales, can make you a mixer like this
 to sell at this price. Convenient terms if you want them.

See the whole story about it and other genuine Jaegers, tilters,
 rollers, and plaster mixers, up to 28 ft. sizes. Save time by
 using the coupon - right today!

THE JAEGER MACHINE COMPANY
 521 Dublin Avenue - COLUMBUS, OHIO

Over 100 Jaeger service stations, distributors and branches are located in all prin-
 cipal cities - no delays - Standardize on Jaeger and profit by our quick service.

**YOU WANT THIS
 NEW Catalog.
 SEND TODAY!**

*No one will buy mixers
 until they've seen Jaeger's
 NEW Catalog - Tilters,
 Non-Tilters and Plaster
 Mixers - all sizes - at prices
 almost sensational.
 Just off the press.
 Write today!*

JEIR

Mail NOW!



Jaeger Machine Co.
 521 Dublin Avenue, Columbus, Ohio

Please send by return mail your catalog, prices and best
 terms on Genuine Jaeger Mixers as checked below:

Non-Tilt Mixers Plaster Mixer Tilting Mixers

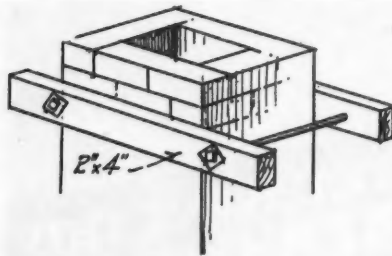
Name _____
 Address _____
 City _____
 State _____

Casting Concrete Chimney Caps and Wall Coping

AFTER a brick chimney or parapet wall has been built it is frequently desired to cast a concrete chimney cap or wall coping in place.

While this operation is simplicity itself when its requirements are thoroughly understood there are several little factors that have to be given consideration and the builder who has not handled an item of this kind before is frequently at a loss as to how to hold his forms in place.

Two simple methods may be used. The first method is shown in Sketch No. 1. This method is suitable for a chimney but not for a parapet wall. Two pieces of 2 by 4-inch lumber, each about a foot longer than the chimney, are bolted on opposite sides of the chimney with a pair of long bolts placed as close to the brick work as possible, thus forming a yoke around the chimney.



Sketch No. 1.

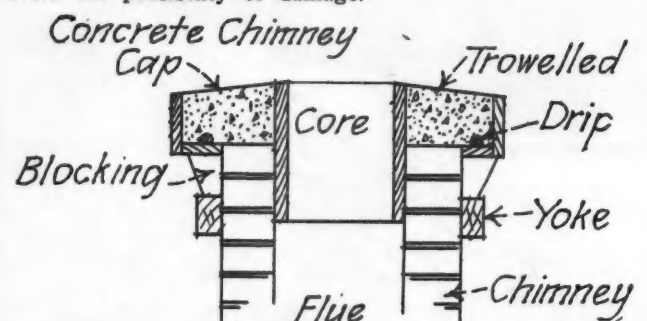
On top of this yoke the form may be built, as shown in Sketch No. 2, which shows a section through the chimney and forms in place.

With a parapet wall the problem is not quite as simple. The usual method is shown in Sketch No. 3. A light yoke is made up as shown in the drawing and slipped over the forms. While one man hold the forms in place a second man drives the spreader down between the top legs of the yoke, thus spreading them apart. As the legs of the yoke are pivoted at the cross-tie, this forces the lower ends of the legs together and clamps the forms tightly to the wall. This same construction may be used for the chimney if desired.

Particular attention is directed to the small triangular or half round strip marked "drip molding." This should be very lightly tacked in place so that when the form is taken down it will come loose from the form and remain imbedded in the concrete. If it is made fast to the form, it is likely to break off the thin edge of the green concrete when the form is taken down.

By allowing it to remain in place it can be taken out at the end of the job, at which time the concrete will have set sufficiently hard to avoid the possibility of damage.

Particular attention is directed to the small triangular or half round strip marked "drip molding." This should be very lightly tacked in place so that when the form is taken down it will come loose from the form and remain imbedded in the concrete. If it is made fast to the form, it is likely to break off the thin edge of the green concrete when the form is taken down.



Sketch No. 2.

Particular attention is directed to the small triangular or half round strip marked "drip molding." This should be very lightly tacked in place so that when the form is taken down it will come loose from the form and remain imbedded in the concrete. If it is made fast to the form, it is likely to break off the thin edge of the green concrete when the form is taken down.

It is worth noting in this connection that the suction of the concrete will frequently lift the top course of bricks if they are not protected in some way. The usual custom is to cut a strip of tar paper about one inch narrower than the thickness of the walls, as shown in the drawing, which is placed in the forms before the concrete is poured. This prevents the concrete from coming into contact with all but a small area of the brick, on which the suction is not sufficient to cause trouble.

It goes without saying that such a form should be thoroughly calked in the joint between the form and masonry in order that the grout may not run down the wall of chimney from which it would be hard to remove it after particularly if a tapestry brick is used. W. F. LOCKHART

What the Public Wants

(Continued from page 128)

Tribune Sunday Small House Page, the first regularly published full page newspaper editorial department on this important subject. A year later the institute supervised the construction of its first Model Demonstration Home as the first official suburban New York home for the observance of the first annual "Better Homes" week under the national direction of Secretary of Commerce Herbert Hoover, as president or chairman.

The institute created the first nationally syndicated newspaper page of interest to home seekers and better building and this syndicate now has a circulation of nearly 5,000,000 readers distributed from coast to coast. During this time the plan service of the institute grew to be one of the largest in the world, and the institute continued to build Model Houses, one after another, in New York suburbs. As a result of the activity in this connection, readers' interest in the New York Herald-Tribune Small House page grew to such proportions that other newspapers in other cities invited the institute to conduct similar demonstrations outside of New York, New Jersey and Connecticut.

In the later half of 1926, and the year 1927, the institute further extended its program to 28 different cities, carefully selected as population centers where the greatest good could be accomplished along better building lines. The co-operating members of the institute, consisting of non-competitive interests in the building and allied trades therefore, received the publicity of demonstrating their products and equipment in hundreds of homes, as the institute rules require each builder to construct an average of nine other houses of the same specifications as the Model House.

During 1926-1927 the Home Owners' Institute conducted a national magazine and newspaper advertising campaign in connection with which \$128,271.12 was spent. In addition, thirty-two co-operating manufacturers and associations spent upwards of a million dollars for tie-in magazine and newspaper advertising. This all attracted favorable attention toward the Model Homes and additional houses built by the co-operating realtors and builders who use the products of the co-operating manufacturers.

Mr. Moore states that during 1928 the national demonstration Model Homes campaign will be continued with some slight changes in the list of supporting manufacturers and associations, and that the advertising budget of the institute has been increased to \$225,000.00 for magazine newspaper and direct mail work.

General Electric Makes Awards

DURING the year 1927, the General Electric Company, Schenectady, N. Y., awarded \$51,561 to 4,913 of its employes for their suggestions to improve working conditions or increase the efficiency of the company's operations. During the year 15,059 suggestions were offered.

New Electric Hammer Versus Man Power

THE average workman with a sledge hammer and bull point strikes 50 or 60 more or less effectual blows a minute. The new electric hammer strikes 2,300 sharp, hard blows a minute.

Actual records show it will cut a stairwell 3 by 10 feet in a 12-inch reinforced concrete floor, in eight hours—1,300

tilting saw base which can be set and locked at any angle within this range by means of a slide and locknut, as shown in the illustration. Still another new feature is that of the width gauge for vertical sawing, which can be set for any width from zero to six inches. With it various widths of strips can be sawed without the necessity of marking and with greater accuracy and uniformity.

Contractors and builders will find these two new features great time savers in the cutting of rafters and in concrete



Workman Armed with Electric Hammer Cuts Out Chases for Pipes in About One-Tenth the Time Doing It the Old Way.

holes for theater seat expansion bolts $\frac{9}{16}$ by $2\frac{1}{2}$ inches in 18 hours, hammering a 1-inch hole in concrete at the rate of 3 inches a minute, or in brick at the rate of 8 inches a minute.

The builder, electrician or plumber saves days on jobs of any size and cuts his labor costs in half over the old method of laboriously pounding away for hours, and incidentally never hits his thumb.

Just plug into any light socket, grab the pistol grip, pull the trigger switch and let her go. The hammer will do the rest.

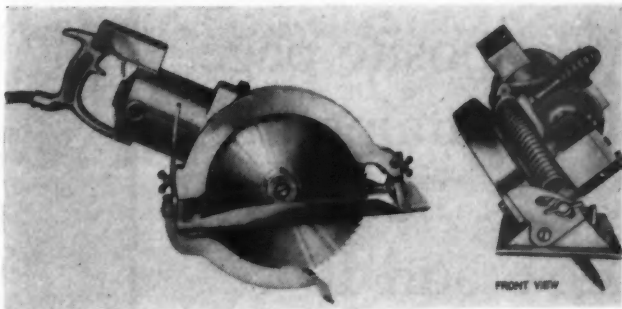
The new and improved electric hammer weighs $15\frac{1}{2}$ pounds, and comes in a compact kit with compartments for chucks, turning wrenches and drills.



Electric Hand Saw Cuts Bevels

HERE is a new portable electric hand saw which, in addition to vertical sawing, provides for bevel sawing at any angle up to 60 degrees. This is accomplished by a

form work. The machine is equipped with a universal motor of special design which operates on both A. C. and D. C. and is furnished in 110 volt, 220 volt and 250 volt. Each saw is furnished complete with one 11 inch and one nine inch blade, ready for use.



A New Electric Hand Saw Which Does Bevel Cutting Well as Straight Cutting.

MORE BATCHES A DAY

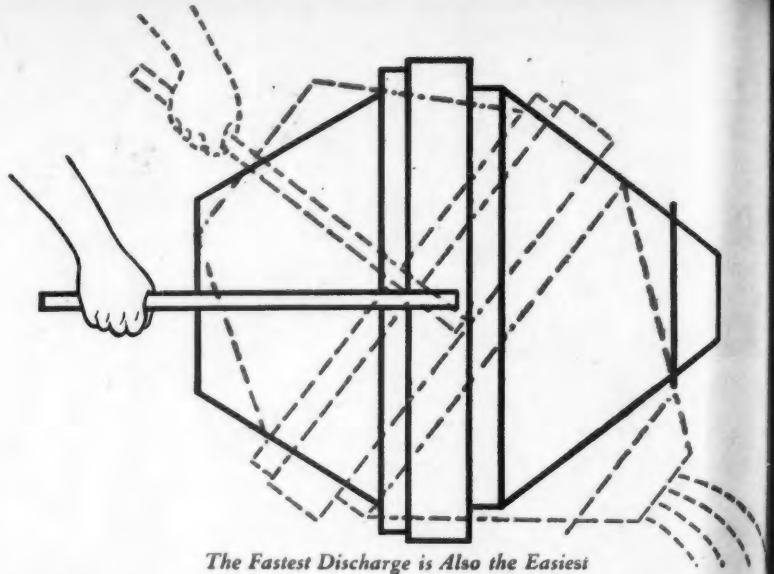
SHORT, QUICK TILT OF SMITH

The Smith Name
has stood for
the best in
Concrete Mixing
Machinery since
1900



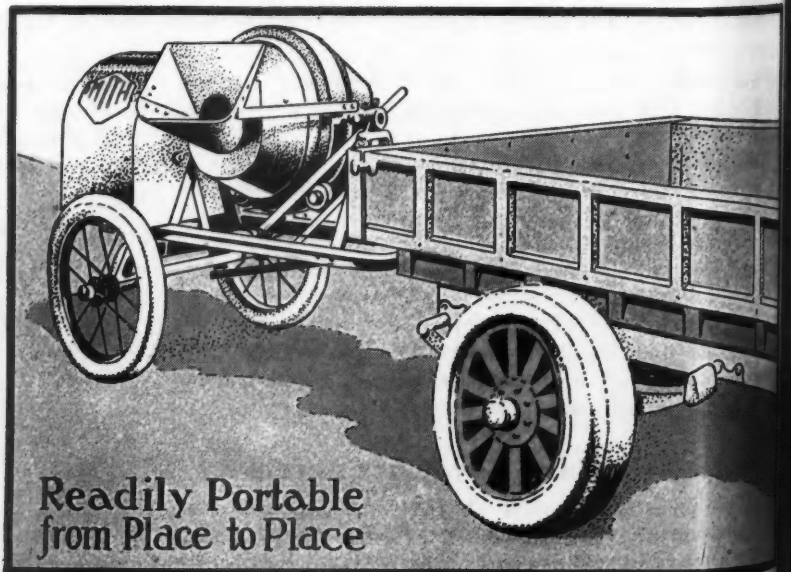
Smith 3 1/2-S Tilter — another mixer of 8 seconds discharge—furnished with or without power loader. Can be had as two-wheel trailer or with 4 steel or cushion-tired wheels. Capacity 35 to 50 yds. a day.

Clip and Mail
the Coupon
on opposite page
for Catalog on
2 1/2-S, 3 1/2-S, 5-S
7-S and 10-S
Smith Mixers



SMITH has applied the same general design to the Mascot (2 1/2-S) Mixer as is used in the big Smiths of 1, 2 and 4-yard capacity—the Tilting Mixers that have for many years been the choice of contractors on the world's largest construction jobs. The smaller user of concrete gets the same proven smoothness of operation—the same speed—the same long life, in Smiths of 2 1/2-S, 3 1/2-S, 5-S and 7-S capacity.

Only in the intervals between actual mixing of batches can you save time — and no other drum approaches a Smith Double Cone Drum in eliminating non-productive hours.



Y MEANS MORE PROFIT H MASCOT CUTS OUT WASTED TIME

The Smith Double Cone Drum is discharged in 8 seconds—then tilts back through a short arc ready for the next batch

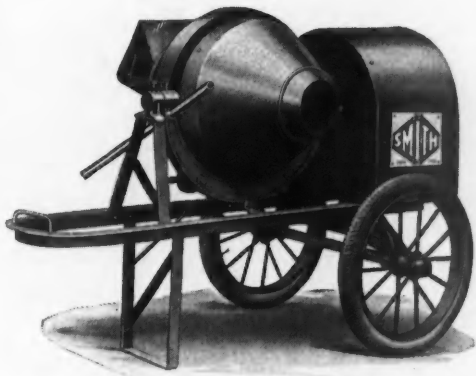
Charge, mix, tilt — charge, mix, tilt! That's the program, hour after hour, with a Smith Mascot. No wasted seconds that add up into hours of non-productive time. More cubic yards of concrete per day—the job done quicker—more profits for the contractor.

Mascot [2½-S] is a fully developed machine that truly expresses Smith's 28 years of mixer building. As tough at every point as a mixer can be made—free from trouble—a profit maker for years.

And Now at New Low Price—Get the Mascot for Your 1928 Work

Increased production and improved manufacturing methods enable us to give you the Mascot — engineered like the big Smiths — at a price that will surprise you. You can have a rugged, well built, long-life concrete mixing machine at a lower price than has ever heretofore been possible.

The T. L. SMITH COMPANY
1026 32nd St., MILWAUKEE, WIS.
Sales Offices and Service Stations in All Principal Cities



The Smith Mascot (2½-S), all steel frame, full trussed rear axle—discharge operated from either side—electric welded steel drum of 5/64" plate—choice of steel wheels, demountable cushion tires, or wheels for Ford 30 x 3½ tires. Daily capacity 25 to 40 cu. yds.

Detailed specifications, our Catalog No. 528 and new price sheet should be in your hands now so you can get a Smith early. Use the coupon—clip and mail it NOW!

SMITH MIXERS

THE T. L. SMITH COMPANY
Milwaukee, Wisconsin

Please send me a copy of your mixer Catalog No. 528
We are especially interested in _____ mixer.

Name _____ Date _____
Address _____ City _____ State _____

1026

Own Your Home Show Opens

ON March 31 the eighth annual Chicago "Own Your Home Building and Equipment" Exposition will open in the Coliseum and will continue through April 7 under the auspices of the Chicago Real Estate Board. The exhibits cover every phase of home building and home ownership from construction materials and methods to kitchen ranges and wall papers. The central feature is a street of homes facing on a village green, but with the rear portions cut away to show the details of construction. Prizes will be awarded for the best exhibits in each of seven classifications and a grand prize for the best exhibit on the floor. Lectures by various authorities are given each afternoon and are included in the admission price.



Inso Board Now in Production

THE new factory of the Stewart Inso Board Company, at St. Joseph, Mo., was completed last summer, but actual production of Inso board was not started until about



Dr. Sidney D. Wells.

Dr. Sidney D. Wells, formerly of the U. S. Department of Agriculture Laboratory at Madison, Wis.



Reports on Condensation and Weathertightness

IN connection with the work of its department of engineering research, the Detroit Steel Products Company has announced the publication of two bulletins for builders and home owners that deal with the problems of condensation and weather-tightness in residential windows.

The first, entitled "Condensation on Residence Windows," was written by W. C. Randall, chief engineer of the company, and contains a record of several laboratory tests showing the causes of condensation. The tests are written up so that the layman can readily comprehend their significance. Practical suggestions for removing condensation are included in the bulletin.

The second bulletin, entitled "Weather-tightness in Residence Windows," is a comparison of Fenestra steel casements with double hung wood windows in the matter of weathering qualities. Laboratory tests form the basis for the bulletin which can be readily comprehended by home owners. Architects and contractors will find the material presented in "Weather-tightness in Residential Windows" particularly interesting.

the first of the year because of experimental work in the practical problems of manufacturing an entirely new product which had to be completed. The factory was placed in full production with a capacity of 100,000 square feet per day, with 24 hour operation. The factory was located at St. Joseph because of its central location, exceptional facilities for distribution and its proximity to the principal source of raw material. Inso board is manufactured from wheat straw by a process perfected by

Distribute Southern Pine Manual

MORE than 500 sales representatives in all parts of the United States are now users of the Southern Pine Association Salesmen's Manual which was first published six months ago, according to a statement from the association headquarters. It is also stated that an even greater distribution of the publication is now in prospect.

The Salesmen's Manual was compiled to supply salesmen with information and data which they should have about Southern pine. It is kept up-to-date by the regular publication of insert sheets, setting forth the latest developments of value to salesmen. The Manual is published in a "brief and to the point" form but at the same time is all inclusive as regards reliable information concerning long leaf and short leaf Southern pine. It may be obtained, in its latest form from the offices of the Southern Pine Association, in New Orleans, La.



Sigwalt Joins Agency

ANNOUNCEMENT has been made that H. P. Sigwalt, who for the past five years has been advertising manager of the Milwaukee Corrugating Company, is entering the advertising agency field on April 1, with the Cramer-Krasselt Co., of Milwaukee, Wis., where he will take charge of the industrial advertising division. D. C. Smith has been appointed to succeed Mr. Sigwalt as advertising manager of the Milwaukee Corrugating Company.



H. P. Sigwalt.

Kalman Co. Opens Houston Office

THE Kalman Steel Company has opened a branch office in Houston, Texas, under the charge of H. W. Goodman, who has been transferred from the company's Detroit office. The new office will cover the states of Texas and Louisiana, with headquarters at 938 Bankers Mortgage Building in Houston.



Watson Heads Metal Lath Club

AN announcement from the Milwaukee Corrugating Company, Milwaukee, Wis., states that W. F. Watson, district manager of the company's fireproof material division at the Chicago branch, was recently elected president of The Metal Lath Club of Chicago, an organization of building material men organized for the purpose of bettering conditions in the Chicago district and working with the Chicago Code Committee in preparing the new building code and to assist metal lath manufacturers in their campaign for better plasing.



To Represent Chain Belt

THE O. B. Avery Company of St. Louis, Mo., now represents the Chain Belt Company, Milwaukee, Wis., as distributors of its line of pavers, concrete mixers, mortar and plaster mixers and saw rigs. The O. B. Avery Company maintains large warehouse and yard space in St. Louis and has opened an office at Little Rock, Ark. Mr. Avery, formerly district manager of the Western Wheeled Scraper Co., is president of the company and Mr. Jones, formerly district manager of the Northwest Engineering Company, is in charge of sales.

NEW—RADICALLY DIFFERENT!

Floor Surfacing Machine and Edge Sander

The American Edger

The Only Machine in the World that Surfaces Butt Ends, Edges, Door Openings, Hallways, Stair Landings, Closets and all Places Inaccessible to Drum Machines, WITH THE GRAIN OF THE WOOD! Eliminates all Hand Scraping and Light Borders!



Sanding Door Openings

Fast, light, economical—the ideal machine for carpenters and small builders. Does the job complete with no hand scraping. Works in a space twenty-eight inches wide with the grain of the wood as easily as in open areas. Produces a perfect finish free from waves and imperfections of all kinds. A necessary machine for floor surfacing contractors.

Operates by means of abrasive belts driven by friction over surfacing shoes. Surfaces within one-quarter of an inch of the base board at front and on either side of the machine with quarter round (shoe strip) removed. Roughs and finishes faster than a man can roughscrape with hand tool. Very economical to operate. Belts changed instantly.



Sanding Corners

The "American Edger" is the machine the building industry has needed for years—it solves the last hand labor problem in floor surfacing—that of scraping edges, which left light borders when the finish was applied. Now, this is all eliminated. By use of the "American Edger," perfect results are certain at an actual saving of labor. Be the first in your town to own an "American Edger"! It will mean great demand for your services and big profits. Complete information sent free without obligation. Mail the coupon today.

A Complete Line of Floor Machines and Supplies

There is a style and size machine in the "American" line for every floor surfacing or maintenance requirement—five terrazzo floor surfacing models, one for dry grinding marble floors (exclusive principle found only on this machine), three models for floor maintenance which by means of special attachments can be used for waxing, polishing, scrubbing, scouring and sanding—and the "American Edger" and "American Universal" for wood floor surfacing. Supplies which include all grits of abrasive materials for all types of machines, repair parts, floor wax and accessories are stocked in the twenty direct factory branches in addition to the machines, which means over-night service to practically every point in the country.

American Floor Surfacing Machine Co.
515 S. St. Clair St., Toledo, Ohio

The American Floor Surfacing Machine Company,
515 So. St. Clair St., Toledo, Ohio

Without obligation send free details at once on the "American Edger."

I am a contractor.

I am interested in the floor surfacing business.

Name

Address

City..... State.....

Fine Lines of Store Building Emphasized by Indiana Limestone

GEORGE N. RAY, Architect

THE attractiveness of this Washington, D. C., store and office building is emphasized by the use of Indiana limestone having a rubbed finish. The structure is known as the Duryea Building and was designed by George N. Ray, architect.

A rather unusual and interesting feature of the building

elevator, as well as a stairway.

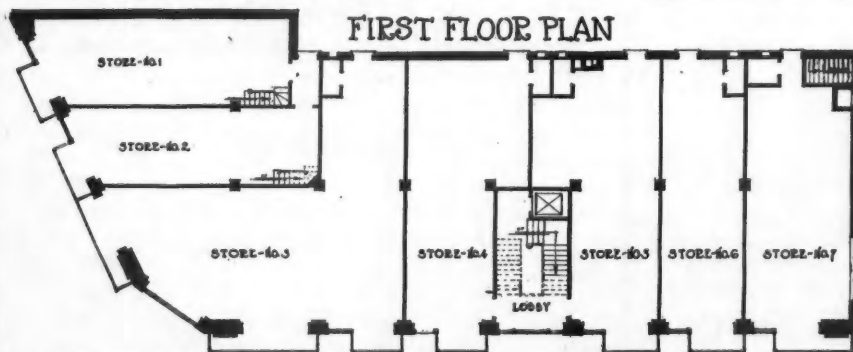
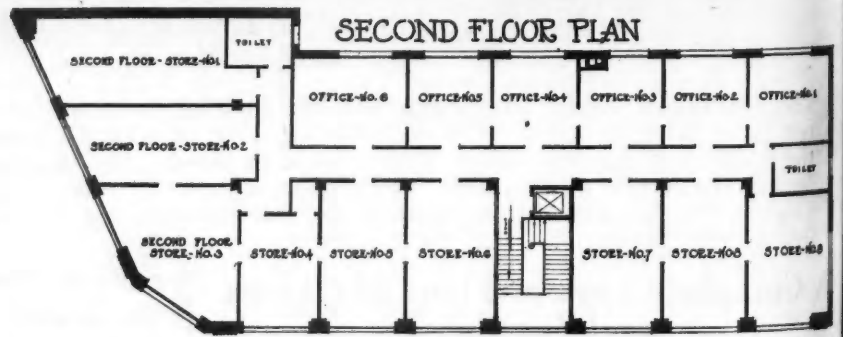
The streets at the corner do not intersect at a right angle but at an obtuse angle and advantage has been taken of this irregularity to have an impressive corner entrance to the largest store, which is occupied by an automobile sales agency. The long lines of the columns on each side of



Exterior View of the Duryea Building, Washington, D. C., an Exceptionally Well Designed Store Building, the Fine Lines of Which Are Emphasized by the Use of Indiana Limestone Facing. It has display store windows on the second as well as the first floor.

is that it was designed for stores on the second floor as well as the first. The show windows on the second floor are as wide as those on the first floor and ornamental cast iron window spandrels have been used with good effect at the second floor level.

The entire first floor is devoted to store spaces and lobby, while, on the second floor, there are offices, as well as stores, with toilets at each end of the dividing corridor.



First and Second Floor Plans of the Duryea Building, Showing How the Store and Office Space in This Building Is Laid Out. Note the wide corner entrance for the automobile sales agency on the first floor.

this store entrance have been stressed by tooling the limestone in vertical lines extending to the coping at the roof level.

Wood Utilization Meeting

THE annual meeting of the National Committee on Wood Utilization of the Department of Commerce has been called for Friday and Saturday, May 4 and 5. The sessions will be opened Friday afternoon in the conference rooms of the Commerce Building, Washington, D. C., and will follow a lumber conference called by Secretary Hoover, May 3 and 4.

There
Wonder
ing Misc
in a six
able for
any pur
3 1/2, 5,
16-3, ad
power
and the
employin

5-7-1

This
the 5-7
ing disc
chain dr
quick w

This Loader Skip

EMPTIES!

Every Bit of Material in Each Batch Flows into the Drum of the **WONDER MIXER**

This is one thing you can depend on in a Wonder—because it is scientifically designed.



There is a Wonder Tilting Mixer made in a size suitable for your any purpose—3 1/2, 5, 7, 10, 14-S, all with power loaders and the sure-emptying skip.



THE shape of the loader skip on the Wonder Mixer positively insures that every particle of material for each batch goes into the drum of the mixer. No need to bang the skip with a shovel to jar out dry materials.

The Wonder loader skip is scientifically designed to discharge its contents at an angle of 55 degrees from the horizontal—not theoretically but actually 55 degrees. At this angle gravity is bound to work. The bottom of the skip is made of one continuous piece of sheet metal from back to nose. There are no seams or sharp corners to catch and hold any of the material.

In addition to this extreme angle and special construction of the skip, the Wonder Mixer has the additional feature of the Wonder Skip Bumper ready for use in the event that sometimes damp material tends to stick inside the skip. This feature is illustrated above and can be used to "bump when a bump is needed." It bumps the skip without jarring any other part of the mixer structure.

Simple to operate and most effective, the Wonder Loader Skip with its shape and the Wonder Skip Bumper give you a mixer with which you can do more jobs with more profit per job.

5-7-10-S WONDER Mixer With Power Loader

This illustration shows the Wonder Mixer with power loader made in the 5-7 and 10-S sizes, with—fast, thorough mixing action—simple pouring discharge—drum with guaranteed bearing—one man lever control—chain drive to overhead shaft—dependable LeRoi power plant—Wonder-quick water tank—Alemite lubrication.

Learn How This Skip Bumper Works

Construction Mch. Co, 103 Vinton St. Waterloo, Ia.

I'm certainly interested in bigger profits this year. Please send me catalog and prices on machine checked below.

Tilting Loader Models	Tilting Trailers
<input type="checkbox"/> 3 1/2-S <input type="checkbox"/> 5-S <input type="checkbox"/> 7-S	<input type="checkbox"/> 3-S <input type="checkbox"/> 3 1/2-S
<input type="checkbox"/> 10-S <input type="checkbox"/> 14-S	<input type="checkbox"/> 5-S With Auxiliary Hoist for plaster.
<input type="checkbox"/> Non-Tilt Mixers	

Name _____

City _____ State _____

WONDER
ORIGINAL TILTING MIXER
Construction Machinery Co.

ACCEPT NO SUBSTITUTE

Sterling



SPECIAL STERLING FEATURES

Self-lubricating bearings
10-spoke wheel
Malleable iron brackets
Smooth wheel face
Wrought steel hub
Riveted and cast to hub spokes
Fixed rolled steel axle
"V" front tray braces

Selected maple handles
Special tubular steel handles
Handles clamped — not bolted
Top of tray reinforced
Channel steel legs
Riveted leg braces
Extra leg shoes
Wrought iron handle tips

All parts interchangeable

"self-lubricating" axle bearing—guaranteed for the life of the barrow—means longer life and easier wheeling.

No oil service ever needed—permanent lubrication supplied. Rolls as smoothly when it is old as when it is new.

The Sterling wheel and axle assemblies are scientifically made to reduce wheeling effort and withstand hard service. Pre-lubricated fibre bearings in each end of the hub. The hub is wrought steel. Axle shaft is round, cold rolled steel, in place of the ordinary common bolt and is locked to malleable brackets by means of split pins—cannot turn or bind. The spokes are riveted and shouldered to the tire and cast to the hub. The tread of the tire is smooth. The Sterling wheel has "10 spokes" instead of the usual 8, this shortens the distance between spokes and strengthens the tire. This unusual wheel and axle assembly—on all Sterling barrows—means more capacity loads per man per day and results in more real profit.

Buy by Sterling name — leading hardware and equipment dealers have them or they can get them quickly from our complete stock warehouses at Chicago, New York, Philadelphia, Pittsburgh, Cleveland, Detroit, St. Louis.

STERLING WHEELBARROW COMPANY

Milwaukee

Wisconsin

MOTOR TRUCKS *and* TRAILERS



Points on Truck Maintenance

Part 1—Tires And Wheels

BUILDERS who are experienced in the mechanics of motor truck operation know that there are many little knacks to a maintenance policy which will help to reduce costs.

This article is devoted to describing briefly some of the major points, about which every builder should know.

Watch Care of Tires

An item of no small importance in the total cost of operating motor trucks is that of tires. The life of tires can be greatly prolonged and their part of the operating expense materially reduced if they are given proper treatment in every-day use. The following ten points are especially important:

1. Don't overload. Overloading stresses the tires beyond their elastic limit, destroying the life of the rubber and the durability and cushioning quality of the tires.

2. Don't overspeed. Excess speed magnifies the impact of the tire on road bumps and causes overheating.

3. Don't run in car tracks, as this cuts the tires by centering the pressure at one point instead of evenly over the tread. The edges of the rails, particularly the guard flanges of street car tracks, are very sharp and running rubber tires over them is much like running them over the edges of steel knives.

4. Don't spin the wheels or permit them to run out of line on account of a bent axle. Many drivers speed up their engines under the erroneous impression that this will increase traction. The slower a wheel turns, the better traction it has. The more gently it is turned the less liable it is to slip.

5. Avoid skidding. In applying the brakes, the wheels should not slide. Not only does sliding the wheels injure the tires, but it reduces the braking effect. Quicker action is secured when the wheels barely turn and the abrasion on the tires is least. Don't turn corners at such a speed that the wheels skid, and don't bring truck to a stop by sliding the wheels.



Proper Attention to Truck Maintenance Spells the Difference Between Satisfactory and Economical Transportation and Transportation at Excessive Cost Which Cuts Into the Builder's Profit.



The Tires and Wheels of the Truck Must Take Up a Large Proportion of the Road Shock and Require Careful Attention, Especially Where Trucks Are Operated Under Rough Road Conditions, as Is so Often the Case with a Contractor's Equipment.

6. Slivers on solid tires should be promptly cut off as soon as they appear. If the sliver is left on, it will contribute nothing to the strength of the tire, but will continue to flap and the tear will extend until half the tread is torn loose.

7. Most anti-skid devices are very hard on tires. Don't use them unless it is absolutely necessary, and then be sure they are correctly applied.

8. Bad roads are obviously injurious to tires. On a road with a rough surface, the tire rests successively on irregularities, which have the effect of overloading that particular portion of the tire.

9. To avoid unnecessary strain on pneumatics or flat spots on solids, lift the truck weight from the tires by raising on jacks when the truck is to be idle any considerable length of time.

10. With pneumatic tires it is important to know your inflation pressures. Proper inflation pressure is as important as proper loads and speeds.

Many concerns neglect to take care in loading to see that the load is evenly balanced on the body. It is often a matter of habit to place the load in one particular position every time, which, of course, causes premature wear on the chassis at that point. It is always best to place the greater part of the load toward the front of the body.

Perhaps you have noticed that most trouble with springs, axles, wheels, tires, etc., is on the right-hand side of the truck. This is because most roads slope on the sides, and, since it is necessary to keep to the right in driving, the right wheels are caused to ride on a lower plane than the left wheels. It is well, for this reason, to take advantage of the full road in open stretches where it can be done with just consideration for others, and to give particular attention to adjustments and general care of the right-hand side of the chassis.

Watch Truck Wheels

A cracking sound coming from the hub of a motor truck indicates something wrong in the wheel bearings. Unless this is promptly attended to, a burned-up wheel bearing may result and there is danger of what drivers call a "hot box," which is likely to lock the wheel on to the axle or burn the axle in half, permitting the wheel to roll off. Imagine what would happen if this should occur on a down grade with a heavily loaded car. When this cracking sound from the hub becomes audible the driver should put his hand on the hub, and if he finds it hot he should carefully examine the bearings. Probably he will find a couple of the rollers cracked or broken. If this is so he should drive slowly and carefully to the nearest place where they can be replaced.

Operators of vehicles that are equipped with wood wheels must not neglect to give them an occasional coat of paint to preserve the wood grain from the elements. The wheels on a truck are exposed to thousands of road jolts in every mile traveled. They are called upon to absorb shocks to a greater extent than most other parts of the truck. The current slogan fostered by paint manufacturers, "Save the surface and you will save all," has no better application than to wood wheels on a motor truck.

Parts II and III of this article will appear in following issues of this department



Lumber Delivery Equipment

EVERY lumber company is faced with the problem of finding an adequate and efficient system of transporting its products. The Howard Lumber Company, of Ogdensburg, New York, besides serving the city trade, also sells and delivers lumber and building supplies within a radius of 30 miles, as this company's business has expanded motor trucks have been used increasingly.

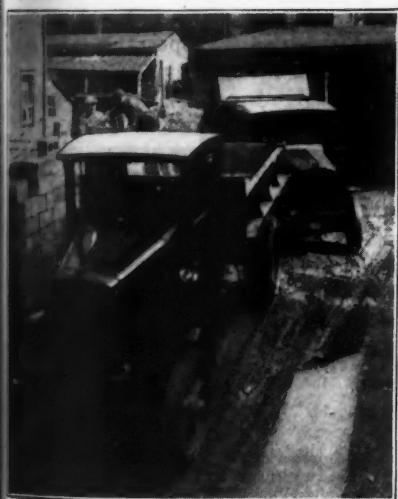
AL
INTI
Cons
view
Mode

"Re
Gentler
Abo
Internat
than ple
truck. I
it gave
the cost
to be v
order fo
this. I
unexcel
Will gl
anyone.

Conven



Above: Ten Model 74C Heavy-Duty INTERNATIONAL Trucks used by the Consolidated Company of Chicago. The view below shows the Model 74 and a Model 63 on the job.



When You Think of TRUCKS—remember INTERNATIONAL



HERE is a name easily memorized and well to remember. It stands for a mighty organization with a fine reputation. It is also the name of as fine a motor truck as you can buy.

Trucks that have INTERNATIONAL on their radiators are good trucks. They have to be good. They've got to be a credit to an institution that has inspired confidence and kept faith for nearly a century. They are trucks built to give service that will foster continuing faith in the future products of the International Harvester Company. They are trucks that are ALL truck—from accelerator to exhaust, from radiator to tail-light.

In the 23 years that they have been working in all lines of endeavor, they have kept faith and have added many thousands of names to our fast-growing roster of satisfied friends. You too will join this legion if you will investigate International when it's time to buy trucks.

Sizes and models for every type of load—the Special Delivery for ¾-ton loads; Speed Trucks, 4 and 6-cylinder, 1¼, 1½, and 2-ton; Heavy Duties, double-reduction and chain drive, to 5-ton. See the trucks at the nearest display room. We will send you folders on request.

"Re-Orders on Performance"

Gentlemen:
About six months ago I purchased an International truck from you. I am more than pleased with the performance of this truck. Having used several other makes it gave me the opportunity to compare the cost of operation—which I have found to be very low. I have just placed an order for another one on the strength of this. I have found your 24-hour service unexcelled in my experience with dealers. Will gladly recommend your trucks to anyone.

Respectfully,
M. L. HALL (Signed)

INTERNATIONAL HARVESTER COMPANY

606 So. Michigan Ave. OF AMERICA Chicago, Ill.
(Incorporated)

Convenient Service Everywhere through 142 Up-to-the-Minute Company-owned Branches



The Howard Lumber Company, of Ogdensburg, N. Y., Maintains an Efficient Lumber Delivery by Using a Three-Ton Truck for Long Distance Trips and a 1½-Ton Truck for Emergency Trips When Speed Is Necessary and Loads Are Light.

The Howard company uses one heavy-duty truck of three-ton capacity; one 1½-ton truck adapted to light, fast hauling. The latter, with its long, low chassis, is much used for quick deliveries of lumber and builders' supplies.

The Howard Lumber people route their orders so that they can use the three-ton truck almost entirely on the long distance deliveries, except for emergency calls when speed is necessary and loads are light, when the light truck is employed. According to Mr. Howard, president, the

three-ton is especially well suited for use in loading and unloading of cars.

The company's yard is located on the Rutland Railroad, but it also hauls a distance of about two miles from the New York Central. Its trucks are greased and oiled by the driver regularly and are kept well washed and painted so that they always are attractive in appearance and add to the company's reputation in the locality.

There are three fair-sized lumber concerns in Ogdensburg and they are all using the same kind of trucks.



Your Profits Increased painting the improved DeVilbiss way

Faster painting, more jobs done in present working time, less cleaning up—that's one way your profits are increased painting with the DeVilbiss Spray-painting System.

The greater satisfaction of your customers with the improved quality of painting, as well as with the short time required for the different jobs, brings increased profits through widespread endorsement of your work and methods.

DeVilbiss equipment is practical, complete and reliable. Its operation and upkeep costs are negligible items. Your men will like to paint with it and you'll like the DeVilbiss service.

We'll gladly mail you further FACTS regarding DeVilbiss equipment and how painting with it will increase your profits. Address—

THE DEVILBISS CO.

238 Phillips Ave.

TOLEDO, OHIO

New York
Chicago
Detroit
Philadelphia
Indianapolis
San Francisco

DeVilbiss
Spray-painting System

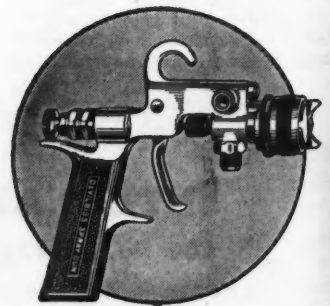
Pittsburgh
Cleveland
Cincinnati
Milwaukee
St. Louis
Minneapolis
Windsor, Ontario

New DeVilbiss Spray Gun Type AV

One new and unparalleled feature of this Gun is the spray head with graduated adjustment controlling both character and width of spray. The graduated adjustment control makes possible a quick return to a previous setting for producing any desired spray. The air can also be cut off, producing a round spray. This adjustable spray head eliminates split sprays and "overspray."

Among the many other outstanding features of the AV Gun is the positive self-centering of the nozzle parts—these parts are always in perfect alignment.

This new Spray Gun is a DeVilbiss quality product throughout. Let us send you the complete story.





Utility Truck with Dump Body

Proved Dependability and Economy for Builders

UTILITY TRUCK

\$495

(Chassis only)

f. o. b. Flint, Mich.

This price now includes 30 x 5 balloon tires on all four wheels.

Also
Light Delivery

\$375

(Chassis only)

f. o. b. Flint, Mich.

The General Motors Proving Ground

Comprising a tract of 1245 acres, the General Motors Proving Ground at Milford, Mich., is the greatest outdoor laboratory ever devised for testing and proving automotive products.

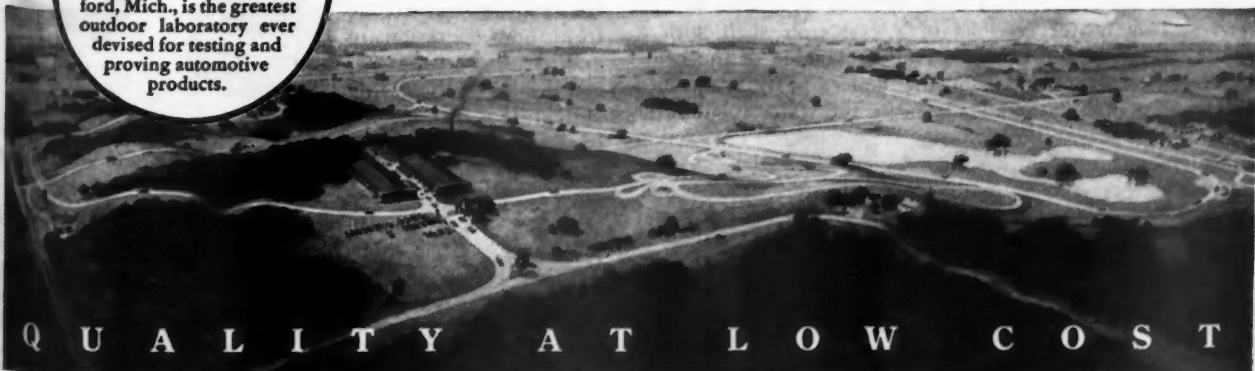
The outstanding dependability and economy of Chevrolet trucks have been proved by millions of miles of testing on the roads of the General Motors Proving Ground—and by millions of miles of usage in the hands of owners in every line of business!

Fast, rugged and dependable . . . and amazingly economical in their consumption of gasoline and oil—Chevrolet trucks have repeatedly demonstrated

their ability to provide the world's lowest ton-mile cost. Builders and Contractors all over the country have learned by actual experience that Chevrolet trucks meet their strenuous needs perfectly—and with outstanding economy.

Your Chevrolet dealer can provide a body type designed especially for your needs. See him today and arrange for a trial-load demonstration.

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

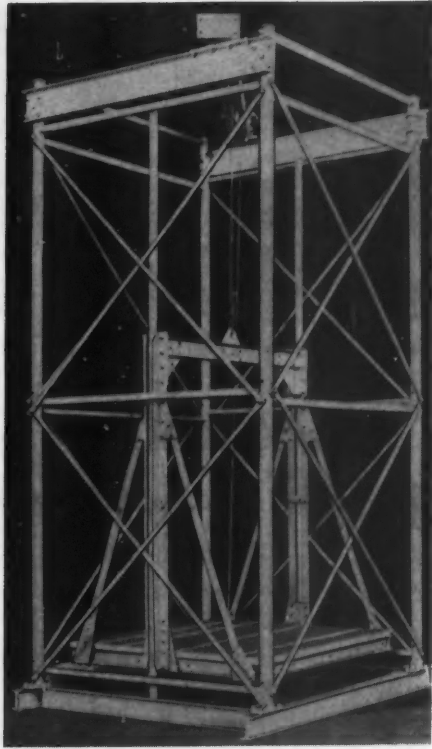


Q U A L I T Y A T L O W C O S T

Improved Steel Hoist Towers

REALIZING the economy of steel design as applied to towers for the hoisting of miscellaneous materials on construction work, a well known manufacturer developed and placed on the market steel, material hoist towers. The 1928 model tower, shown in the illustration, introduces a method of eliminating nuts and completely protecting bolt threads from the weather, which marks a step forward in steel tower design.

Cages are built in two sizes, one for two wheelbarrows and one for three wheelbarrows. An elevator bucket can be used for handling concrete on the material elevator cages when desired. These towers have a minimum number of loose pieces for each $6\frac{1}{2}$ foot section of tower and require a minimum of bolts, no nuts, and have all intermediate section bolt threads protected from the weather. These features insure easier erection and dismantling, greater salvage and easier warehousing.



A New and Decidedly Improved Model of a Steel Hoist Tower Already Well Known.

Standard towers can be built to a height of 300 feet, either single or double cage, and can be increased in height to 400 feet by the addition of 100 feet of extra heavy section. Figures taken from actual jobs indicate that the single cage can be erected at the cost of one-half man hour per foot and the double towers at a cost of one man hour per foot, with fairly efficient labor.



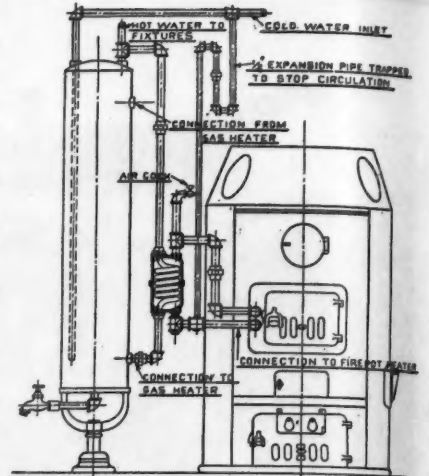
Economical Water Heater

WHETHER a heating system be steam, vapor or hot water this domestic water heater can be installed and will give a constant flow of hot water at all times. With a warm air furnace it may also be used as shown in the sketch. This heater consists of a cast iron shell with a copper coil inside and attached entirely outside of the heating boiler. Hot water from the boiler, passing up into the cast iron shell automatically heats the water for domestic use as it passes through the copper coil. The action is positive and efficient with any type of heating system. This heater costs no more than other heaters, it is stated, and can be installed at no more expense than a fire pot heater in ordinary cases.

This heater has a single, heavy gauge, copper coil of ample length. There are no brazed joints. The two ends of the coil are expanded and rolled into sleeves, locked in by an eccentric flange and jamb nut which also protects the joint against strain of installing. There is no chance of corrosion, the tube end butts against the pipe connection.

The cast iron shell is separated in the middle for accessibility and is bolted together permanently tight.

The heater can be used with any type of new or existing boiler. The latest types of boiler have tapped openings and other boilers can be drilled and tapped for it easily. After the water in the range is once heated the only operating cost is the cost of heating water to replace that drawn out so that the use of this heater is economical. It is built to serve indefinitely and there is nothing about it to burst or wear out.



A Constant Flow Is Assured at All Times with This Domestic Water Heater on Any Heating System.



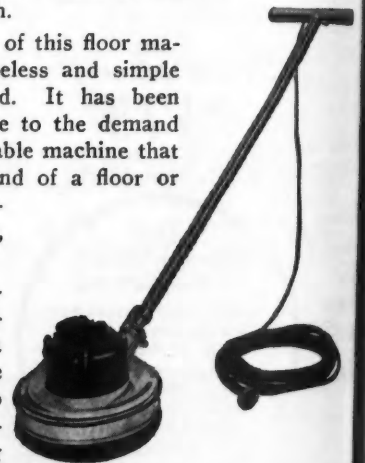
A Noiseless Floor Machine

A MANUFACTURER of high grade floor machines has recently brought out a machine which is described as being noiseless. It is of 10-inch rotary design and equipped with a special vertical motor with wall bearings of well-known make. All gears are proportioned to give maximum power and smooth operation. The pinion meshes directly with the ring gear, making a direct drive.

The body is made of a strong, reinforced aluminum alloy casting and the handle is of steel tubing, nickered, with bronze handle bars. The helical gears are encased in a grease filled chamber, assuring minimum wear. The machine is in perfect balance and very easy to operate. The total weight of the machine, 35 pounds, is on the brush.

The principal feature of this floor machine is that it is noiseless and simple to operate, it is stated. It has been brought out in response to the demand for a light weight, portable machine that can be used on any kind of a floor or floor covering for waxing, polishing, scrubbing, sanding or refinishing.

The various attachments are interchangeable and it takes but a few seconds to change from one operation to another, due to the special design of the spring clutch. It is of the same quality and finish as this company's heavier machines and has been designed for use in clubs, hospitals, schools, apartments and offices. It is said that the cost makes it applicable to moderately priced homes. Two heavier and larger models are carried in stock, the weight and sizes being 65 pounds for the 10-inch and 85 pounds for the 12 or 14-inch models. All are equipped with extra heavy duty, rubber covered cable, complete with connector and can be operated from any convenience outlet or socket.

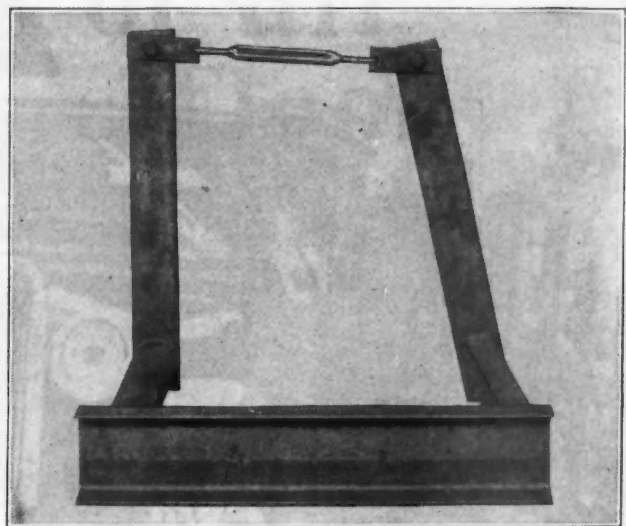
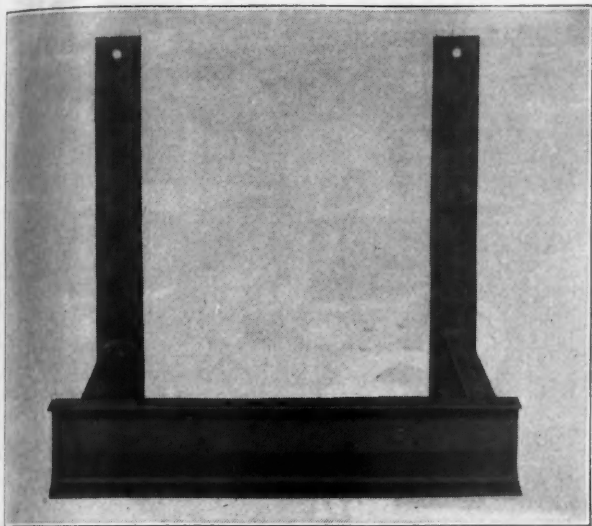


Here Is a Floor Machine Designed to Eliminate All Noise in Operation.

NO OTHER FRAME SO RIGID

CAN'T LOOSEN — NO RIVETS

CAN'T TWIST—TUBULAR CROSS-MEMBERS



Ordinary Construction Gives—Novo Remains Rigid

Novo NH and DH Hoists are the only hoists with welded tubular cross-members—the only hoists with the greater strength and rigidity which such construction provides. What this means on your job is convincingly illustrated in this simple test.

A channel and a tubular member, of approximately the same weight, were welded to a common base. An upright was then welded to the free end of each—so that the two were exactly parallel and perpendicular. A turnbuckle, fastened to the tops of the uprights, was then drawn up.

The illustration above shows the result. The tubular member shows no twist at all. But the channel bent many degrees under the same load.

It is the tubular cross-members

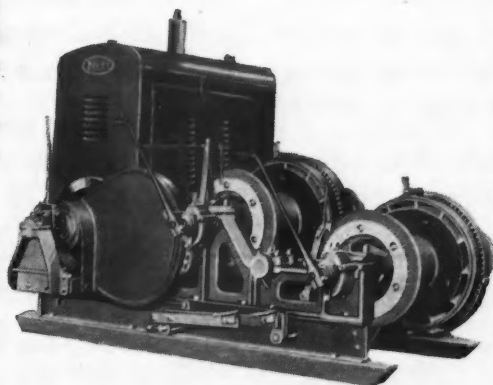
that make Novo Hoist frames stiffer and stronger.

And this stiffer construction prevents out-of-alignment—reduces bearing wear—adds many years of service—and increases operating efficiency.

In addition, the Novo frame is welded throughout, which makes it extremely solid—reduces the weight—and eliminates all rivets that are likely to become loose.

This rigid construction—plus many other features, such as double flywheels—keep Novo Hoists operating smoothly many, many years after the ordinary hoists have been discarded.

Novo Hoisting Handbook shows how these can be applied to your own jobs.



NOVO ENGINE COMPANY, 202 Porter Street, Lansing, Michigan
C. E. BEMENT, Vice-Pres. and Gen. Mgr.

NOVO
PUMPS — ENGINES — HOISTS

Service, parts and sales in 65 cities

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

ECONOMY



ECONOMY gets right down to dollars and cents. When economy goes beyond initial price and makes itself felt in operating and maintenance costs throughout a long truck life, it points the sure road to profits.

Low operating costs, dependability, power and speed stand out boldly in the experiences of the hundreds of thousands of operators of Graham Brothers Trucks and Commercial Cars And the economy becomes most complete and convinc-

ing when the extremely low initial prices are noted—and the fact that similarly priced repair parts and service are available from Dodge Brothers Dealers . . . *always* and *everywhere*.

Safety, driver comfort, ease of operation, fine appearance, complete trucks to fit any business all these add their weight

in influencing seasoned operators to purchase more than Sixty-five Million Dollars worth of Graham Brothers Trucks and Commercial Cars a year.

2-TON	\$1595
6-cylinder engine, 4-speed transmission, 4-wheel brakes (Lockheed Hydraulic.)	
1½ TON	\$1245
4-speed transmission, 4-wheel brakes (Lockheed Hydraulic.)	
1-TON (G-BOY)	\$895
½-TON COMMERCIAL	\$670
Chassis Prices f.o.b. Detroit	
½-TON PANEL DELIVERY CAR	\$770
(Complete with body f. o. b. Detroit)	

GRAHAM BROTHERS TRUCKS

Sold and Serviced by
Dodge Brothers
Dealers Everywhere

Built by
Truck Division of
Dodge Brothers, Inc.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Hail the King of all Floor Sanders!

—Speedmatic

HERE is the latest type of floor sander. Highspeed—that means more square feet per day—and increased profits to you.

Even better work—because the stabilized drum means smoother floors due to absence of vibration. The Speedmatic has a new development of the floating drum principle. Neither held rigid in a solid frame nor on short arms but supported on two long arms, allowing the drum to “float” on the floor. These arms are pivoted at the ends instead of the center. Speedmatic weighs only 252 lbs., yet it gets more pressure on the drum and insures even cutting the full length of the drum.

The cutting efficiency is increased as the friction surface between the small diameter drum and floor is greatly reduced. This cuts down operating expense by using less abrasive paper but it gives you faster cutting and greater floor coverage every minute.

No chatter marks or wave marks, because there is no rocking motion. It's eliminated by tension springs directly in back of the drum. Sands up to the quarter-round.

Perfect results can be secured by the Speedmatic by inexperienced workmen as it is as nearly trouble-free as any moving mechanism can be made. The Porter-Cable Machine Company have been building Sanding Machines for years.

You Can Make Generous Profits With a Speedmatic

Thousands of floors in your town need a sanding machine. There is money under your feet.

Don't pass up these profits—quick and easy in this new field. Get in on the “ground floor”—and watch the dollars pile up in surfacing old and new floors. Experience is unnecessary. You can start immediately to re-create beautiful floors from old ones.

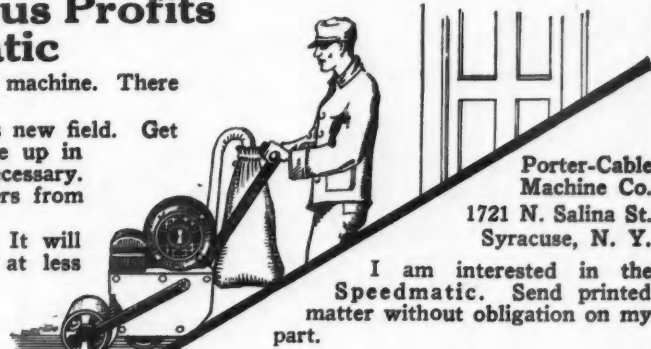
No other floor sander can touch the Speedmatic. It will outspeed and outfinish any other at less cost and at less operating expense.

Write today for interesting printed matter.

**PORTER-CABLE MACHINE
COMPANY**

1721 N. Salina St.

SYRACUSE, N. Y.



Porter-Cable
Machine Co.
1721 N. Salina St.
Syracuse, N. Y.

I am interested in the
Speedmatic. Send printed
matter without obligation on my
part.

Name.....

Address.....

Big Work Ahead?—

Perhaps Our Service Can Help You



HAVE you heard about the latest American Builder service now offered to builders absolutely without charge?

It puts you in touch with leading manufacturers of building material, equipment and supplies whenever you want to know about the latest developments or any information as to products, prices or deliveries.

You may need a hoist, a derrick, a crane, pumps, trucks, tractors, concrete mixers, woodworkers, electric hand saws, unloaders, scaffolding or a steam shovel.

We have left a space below for you to describe any important jobs you have in prospect where you might use better equipment to reduce costs. Be sure and fill this in—it may be the most profitable thing you ever did.

AMERICAN BUILDER MARKETING SERVICE, 1901 Prairie Ave., Chicago, Ill.

(2)

Gentlemen:

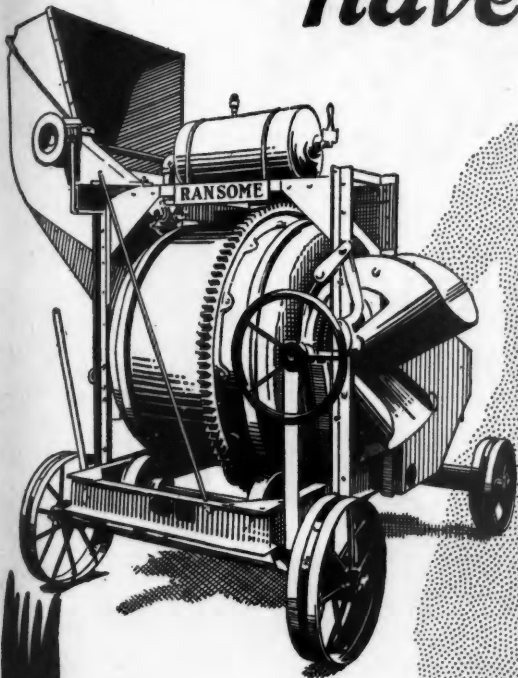
Please put me in touch with all interested manufacturers in regard to the following items for which I am in the market or expect to be in the market shortly: (state exactly what you want—prices, literature, nearest point of distribution, etc., as well as the nature of the material required).

Describe any important job you have in prospect or contracted for where labor-saving contractors' equipment might reduce your costs—

Name.....
 Street and Number.....
 City.....
 State.....

Please check your occupation: Building Contractor Dealer in Building Materials
 Prospective Home Builder Architect

7-S & 10-S Standard Ransome Building MIXERS have the **PUNCH!**

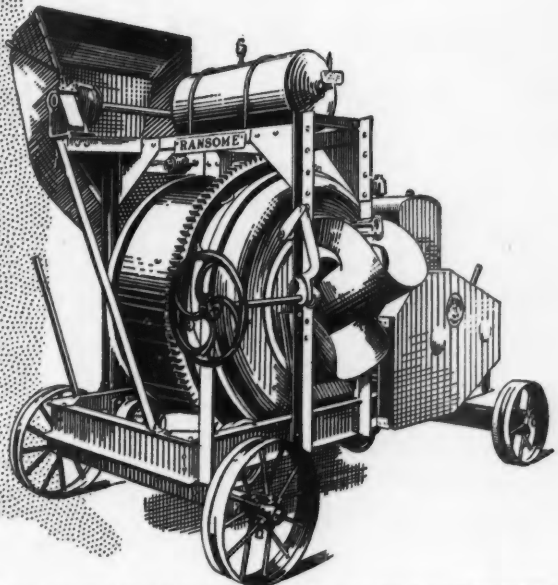


FRONT AXLE—built of two 4" Channels, width 1 $\frac{1}{4}$ " cold rolled stubs.
MAIN FRAMES—made of two 6" Channels.
MAIN ROLLERS—12" in diameter.

In This Corner We Have The Ransome 10-S

DRUM—51" in diameter by 39" wide.
DRUM ROLLERS—12" x 2 $\frac{1}{4}$ "—car wheel iron, Timken Roller Bearings on Drum Rollers.
CONTROL—One set of levers located at drum end of mixer.
GASOLINE ENGINE—LeRoi or Novo—4 cylinder.
WATER MEASURING TANK—16" x 40"—capacity, 37 gallons.

*Ransome—the first mixer in the ring
—the last to enter the repair shop.*



Fast, rugged mixers that knock out the work in record time—that is the general reputation of Ransome 7-S and 10-S among mixer "fans". Look over the measurements of the 7-S—then you'll see why it has the "guts" to stand up and "take" it.

DRUM—45" in diameter by 35 $\frac{1}{2}$ " wide.
DRUM ROLLER TRACKS—2" wide—1 $\frac{1}{2}$ " thick, forged rolled and turned from solid billets of locomotive tire steel.

Mail this Coupon!



Ransome Concrete Machinery Company
 Duellen 1850—Service for 78 Years—1928 New Jersey

Get ALL of the facts about these fast, husky Ransome Mixers. Learn how they've performed—what they're made of!

RANSOME CONCRETE MACHINERY COMPANY
 Dept. A. B. Duellen, N. J.
 Without obligation, send me full information about the 3 $\frac{1}{2}$ -S Tilter; 5-S Builder;
 7-S Builder; 10-S Builder.

Name _____
 Address _____ City _____ State _____

"I'm never too busy to talk about **SKILSAW**. It's THE electric handsaw. No more old fashioned hand saws for me!

This machine has paid for itself on this job and then some. It cost me \$135.00. That's saving money isn't it?

Of course the reason it saves money is because it saves time. Not only on these forms I'm building but in framing a house, cutting joists, rafters, sheathing, grooving, and one hundred other sawing jobs.

SKILSAW works FAST with no effort on my part. I just plug it into the nearest socket. It's ACCURATE too, and absolutely SAFE.

This model I'm using weighs 18 lbs. and has a cutting capacity of 2 $\frac{3}{4}$ ". The base tilts for making bevel cuts and is adjustable to depth.

The $\frac{3}{4}$ horse power motor sure gives it power. I also have a smaller **SKILSAW** which weighs 10 lbs. and cuts up to 2" dressed lumber. **SKILSAW, INC.**, sell it for \$60.00, and there are larger models cutting up to 4 $\frac{1}{8}$ ".

If you want my advice, order one. It will pay for itself. Or ask **SKILSAW** to demonstrate on your own work."

"Say, are you too busy to tell me about that electric hand saw?
I am a contractor and want to know if one of them will save me money."

Without obligation I will gladly watch a 5 minute demonstration

Name _____

Address _____

Skilsaw Inc., 3822 Ravenswood Ave., Chicago,

Individual Portable Machines for Woodworking

Wallace Machines save time and money

EACH one is especially designed to do a certain class of work. They can be carried wherever that kind of work is being done. They're always ready for instant use without endless adjusting and regulating.

Wallace Machines are small and light weight. They take up little room. They can be quickly and easily moved from place to place in the shop and out on the job. All you do is attach the plug to the nearest electric light socket. You take the machine to the work—never haul heavy, awkward, cumbersome materials to the machine.

Big jobs and little jobs—heavy jobs or jobs requiring the greatest neatness, accuracy and delicate handling—it's all the same to a Wallace band saw, universal circular saw, planer, jointer, or lathe. There is no belt to slip or cause annoyance. Nothing complicated. Set them up in a jiffy.

The results are amazing. Man power is saved and that means enormous savings of costly time. Materials are conserved and that also means saving money. The work is uniform and done much quicker than by hand. Thousands of contractors say that Wallace Individual Portable Machines have "spoiled" them for anything less efficient.



This photograph shows how one contractor saves money by applying "The Wallace Idea" to his business. C. B. Lynde, Jr., of Clinton, Mass., does his own mill work right on the job. Wallace Portable Machines double the amount of work done by his men and greatly increases his profits on each job.

FREE TRIAL!

Investigate the money-saving advantages of Wallace Machines. We will send one or more of them and you can find out for yourself how valuable they are, how they quickly pay for themselves. The trial costs you nothing. Send today for the Wallace Catalog and full details of the free trial offer.

Wallace
PORTABLE MACHINES
BELTLESS—
Attach to any
light socket

J. D. WALLACE & CO.

136 S. California Ave., Chicago, Ill.

You may send me your book on Wallace Portable Machines and full details of Free Trial Offer and easy terms.

Name.....

Address.....

Substantial Reasons Why You'll Want the Improved Schlueter

HERE are eight substantial reasons why the Improved Schlueter is a *better* Floor Surfer: 1. Steel Roller which adjusts itself to floor irregularities by a patented suspension feature. 2. No weights to lift. 3. No levers to manipulate. 4. Surfaces right up to the quarter-round. 5. Long wearing link belt chain drive. 6. Baldwin motor. 7. Positive suction gathers all dust. 8. Five Year Guarantee. No other surfer—not one—has all these desirable features.

COMPARE any other Floor Surfer with the Improved Schlueter. Point for point list the good qualities of each. Ask of the other, "What features have you that can compare with the eight listed here". And when you have the answer

JUDGE which surfer has a right to do *your* work. Inevitably, necessarily, it will be the Improved Schlueter.

ACT on your decision. Send for the Schlueter. Try it yourself. No salesman will bother you, and, of course, there is no obligation. The Improved Schlueter always sells itself. Write for full details of *Free Trial Offer*.

LINCOLN-SCHLUETER FLOOR MCHY. CO.

222 West Grand Avenue

Chicago, Ill.

4
SIZES
Tell us what kind
of work you do
and we'll
recommend the
size that will
do your
work right



A Bit of Sound Logic

THE Improved Schlueter is not an undersized "portable." As you can see, it is full size; yet there is not an ounce of unnecessary weight! We make a portable flexible shaft sander, for stairs and small jobs, but it takes the weight, power, and stamina found only in a full-sized machine to "eat" away the surface of hardwood floors hour after hour, all day long. Use the Improved Schlueter on your next job.



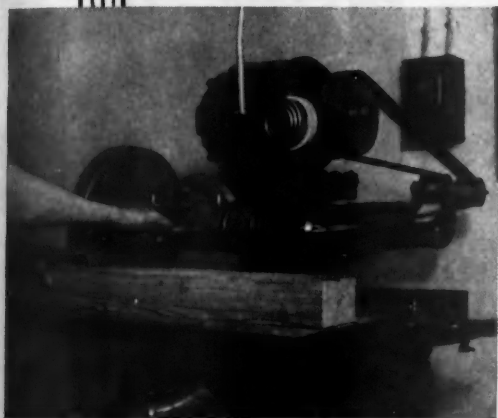
RIGID

20th CENTURY WOOD- WORKER

Agents
Everywhere

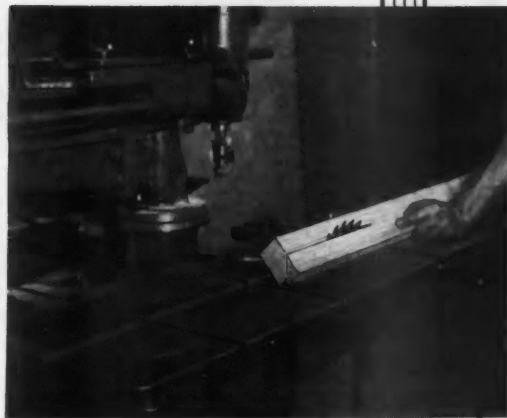


SIMPLE



BALL BEARING

BORING
CROSSCUTTING
PLOWING
DADOING
BEVEL RIPPING
STICKER WORK
RIPPING
MITERING
ETC.

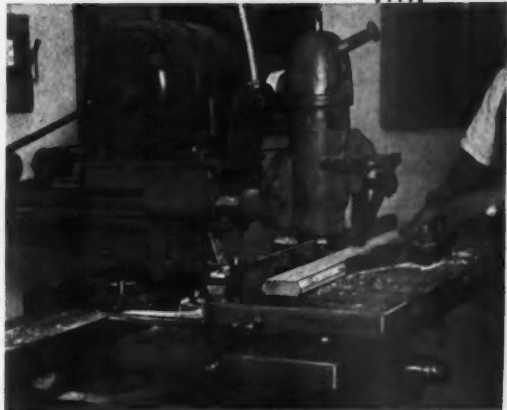


ECONOMICAL



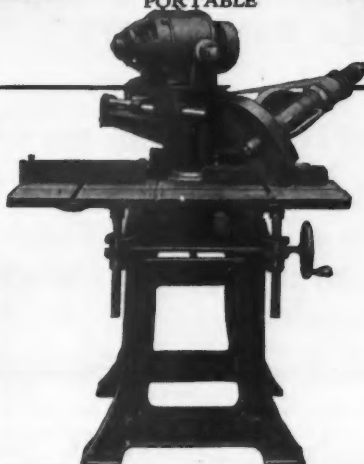
VERSATILE

Builders
Carpenters
Shipyards
Contractors
and
MAINTENANCE
DEPARTMENTS



PROFITABLE

PORTABLE



There is a Twentieth Century Woodworker near you and a representative who will be glad to show you this modern Woodworker in actual operation.

The Twentieth Century Woodworker may be purchased on easy terms!

Tear out and mail the coupon on the opposite side. It will bring the Twentieth Century Catalog, and the name of nearest dealer.

TEAR OUT AND MAIL

Twentieth Century Sales Agency,
1321 Arch Street,
Philadelphia, Pennsylvania

Dear Sirs:

Please send me the name of the nearest Twentieth Century Woodworker representative, also the Twentieth Century Woodworker Catalog and Booklet.

Name _____

Street _____

City _____

A PAIR of PROFIT MAKERS

A Black & Decker Portable Electric Hammer and a Black & Decker Portable Electric Drill—

"With the Pistol Grip and Trigger Switch"



The Electric Hammer is shown driving a flat chisel cutting a mortise, and the Electric Drill is shown driving a large diameter ship auger.

Mortising with the Electric Hammer is merely one of many operations for which it may be used. This Hammer will drive bushing tools, caulking tools, flat wood chisels, corner chisels and all types of special form tools. It strikes hard blows at the rate of 2,300 per minute and will drive a star drill through brick or concrete at an amazing speed—1" diameter holes at the rate of 8 inches per minute in brick—and 3 inches per minute in concrete.

The Portable Electric Drill has become one of the most important of small tools used in building operations for boring holes in metal or wood.

Both of these Black & Decker Portable Electric Tools operate on direct or alternating current of any cycle without the use of any auxiliary apparatus. Merely plug into an ordinary electric light socket.

For further information write to

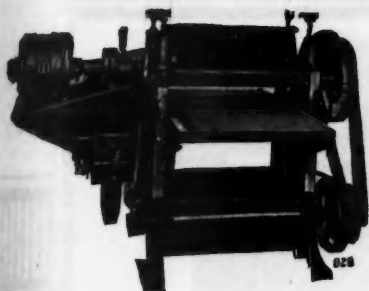
The BLACK & DECKER MFG. CO.

TOWSON, MD., U. S. A.

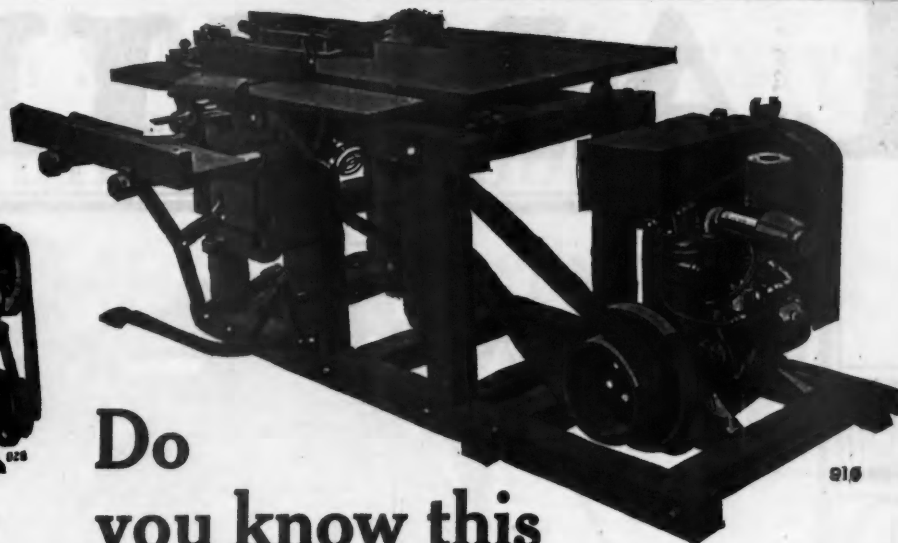
Black & Decker Mfg. Co., Limited, Toronto, Ontario

Black & Decker, Limited, Slough, Bucks, England

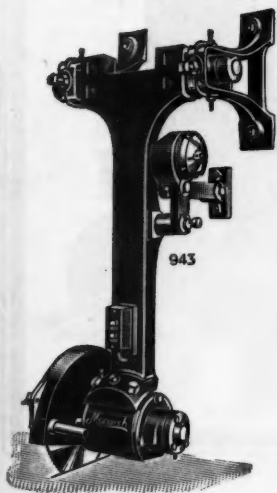
FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Pony Planer
with electric motor attached



Do
you know this
portable Woodworker?
*It has saved thousands of builders
time and money!*



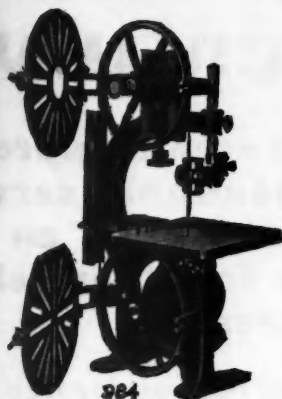
Swing Cut-off Saw
with electric motor built in

This machine often pays for itself on the first few jobs. It eats up rush work. And it is built to stand up under heavy strains.

Four men can work on this woodworker at the *same time*, without interference. When you want to do cross cutting, the gauges can be removed in *five seconds!*

Yet this speedy and adaptable machine can be moved anywhere. Take it right on the job, where you need it. Simple and reliable. The arbor, for instance, runs in *self-oiling* babbitted boxes strongly yoked together. This insures strength, permanent alignment and cool-running bearings.

Send for our free catalog giving further particulars of this and other machines. Cut out the coupon below and mail it today. Thousands of builders have cut operating costs and put through rush jobs with these sturdy practical machines.

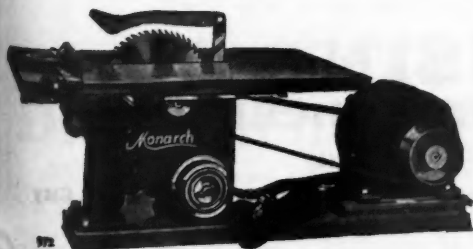


New Bench Band Saw
with wheel guards

American Saw Mill Machinery Company

Manufacturers of all varieties of Saw Mills and Woodworking Machines
60 Main Street Hackettstown, N. J.

Clip and Mail Today



Ball Bearing Bench Saw

AMERICAN SAW MILL MACHINERY CO.,
60 Main Street, Hackettstown, N. J.

Gentlemen: Please send me free your booklet on—

- | | | |
|--|-----------------------------------|---|
| Variety Woodworkers <input type="checkbox"/> | Planers <input type="checkbox"/> | Hoists <input type="checkbox"/> |
| Band Saws <input type="checkbox"/> | Jointers <input type="checkbox"/> | Saw Tables <input type="checkbox"/> |
| Mortisers <input type="checkbox"/> | Sanders <input type="checkbox"/> | Portable Saw Mills <input type="checkbox"/> |

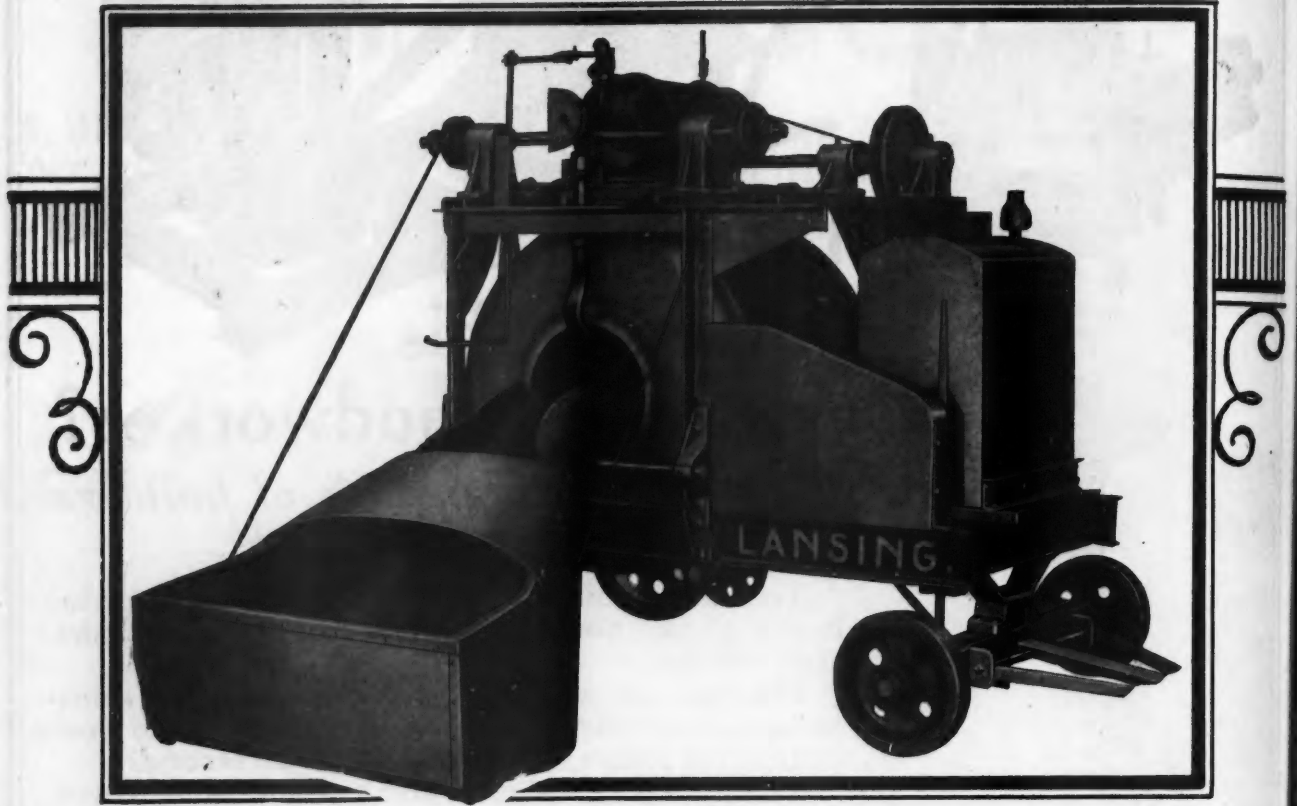
Check the one in which you are interested. (These are only a few from our complete line. Ask for what you want.)

Name.....

Address.....

City..... State.....

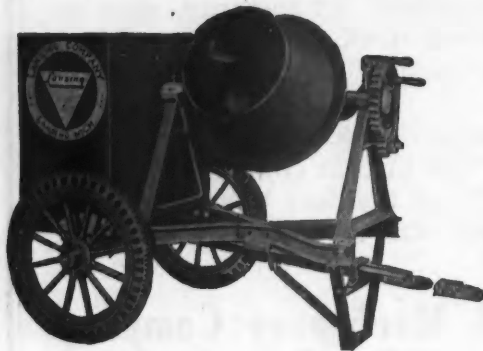
LANSING



Leading for nearly Half a Century

The Lansing Line still stands supreme. Backed by our dependable service Lansing products have built an unequalled reputation for themselves and their manufacturer.

We will gladly send you our catalog free of charge. Just drop us a post card.



LANSING CO.
LANSING MICHIGAN

BRANCHES

Boston Chicago Philadelphia Kansas City
Minneapolis San Francisco New York

America's Most Progressive Builders Choose



Level Position
Note the visibility of the two spirit levels.

Transit Position
Note the unusually large tilting radius—45 degrees above or below horizon line.

The "UNIVERSAL" Level-Transit New—Different—Better

The "Universal" Level-Transit is designed especially for heavy duty service in connection with all survey and check-up work on building and road operations.

Its novel, patented construction combines absolute precision and perfect results with a greater speed than is possible with any other type of surveying instrument.

All of those parts that in the older types of combination instrument are exposed to damage and resulting inaccuracy are eliminated in the "Universal" through the use of a single solid bronze standard frame of sturdy shock-proof construction.

Years Ahead of Old Type Leveling Devices

Important New Features

Perfect optical and mechanical alignment of the telescope is always positive because of the three points of support, namely, at the center and at the two extremes of the standard bridge.

A lock and release lever system that cannot fail gives instantaneous action. Pressure on the release levers instantly disengages the telescope at both ends thus permitting a tilt of 45 degrees above and below the horizon line.

There is no horizontal turning of the telescope, no lifting it from its support, no danger of dropping it, no loosening or tightening of screws or bands, nothing to disturb its accurate adjustment.

Complete Equipment

Consists of polished solid oak case with heavy leather carrying strap and lock. Heavy split leg tripod of straight grained maple provided with strong iron shoes. Sun shade, dust cap, plumb bob and all other necessary accessories.

Detailed Information

through any of these Dealers or directly through our offices

Albany, N. Y.—W. L. Coughtry Co., 52 State St.
 Atlanta, Ga.—Atlanta Blue Print Paper Co.
 Baltimore, Md.—The Hirschberg Co., 418 N. Howard St.
 Boston, Mass.—Frost & Adams Co., 27 Arch St.
 Buffalo, N. Y.—Sullivan-McKeegan Co., 937 Ellicott Sq.
 Chicago, Ill.—Charles Bruning Co., 445 Plymouth Court.
 Chicago, Ill.—The C. F. Pease Co., 813 N. Franklin St.
 Cincinnati, Ohio—L. M. Prince Co., 108 W. 4th St.
 Cincinnati, Ohio—The Ferd. Wagner Co., 113 E. 5th St.
 Columbus, Ohio—The H. Cole Co., 24 N. High St.
 Denver, Colo.—Lallie Instrument Co., 809 14th St.
 Detroit, Mich.—Acme Camera Exchange, 517 Shelby St.
 Detroit, Mich.—K. H. Gettner, 19 Woodbridge St., West.
 Detroit, Mich.—M. J. Waterston, 427 Woodward Ave.
 Kansas City, Mo.—Oswald Griner, 313 E. 10th St.
 Los Angeles, Calif.—Dietrich-Post Co., 812 S. Spring St.
 Memphis, Tenn.—Memphis Blue Print Paper Co.
 New York, N. Y.—Charles Bruning Co., 102 Reade St.
 Rochester, N. Y.—H. H. Sullivan, Inc., 67 South Ave.
 St. Louis, Mo.—Fink Instrument Co., 804 Pine St.
 San Francisco, Calif.—Dietrich-Post Co., 75 New Montgomery St.
 Syracuse, N. Y.—H. H. Sullivan, Inc., 204 E. Genesee St.

Distributors' names for Portland, Pittsburg, Cleveland, New Orleans, and Philadelphia on request.

David White Company, Incorporated

Manufacturers of White's Improved Surveying and Drawing Instruments

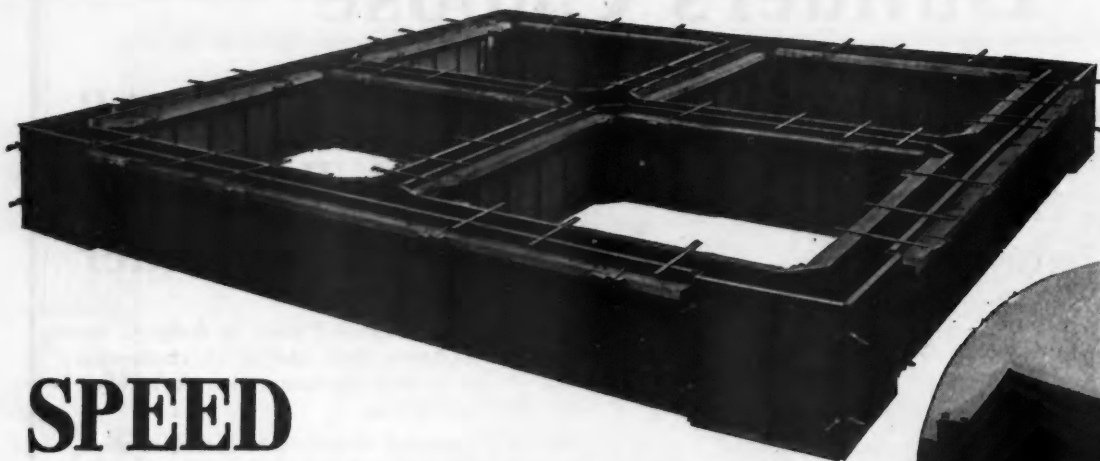
Home Office and Works:

315-319 Court St., Milwaukee, Wis.

Branch Office:

400 So. Hoyne Ave. at W. Van Buren St.
Chicago, Ill.

METAFORM



SPEED AND STRENGTH IN CONCRETE BUILDING



Use Metaform—The Modern System for Handling Concrete Construction

The Metaform system consists of reinforced plates of various standard sizes which can be quickly locked together to form one smooth continuous mold of any size or shape. Adjustable to meet all conditions as they come and infinitely more speedy than wood construction. Metaforms enable one man to erect more square feet of form in a given time than by any other system. No spoilage of wood when metaforms are taken down. Good for all jobs, too, not for just one as is wood.

Metaforms will earn their first cost in less than a single season and may be used over and over again for years.

Metaform equipment is the sure sign of a progressive building contractor today—a contractor who can do more work in the same time, do it better and make bigger profits out of it than the man who still sticks to the out-dated system of wood construction.

There is a Metaform for every type of building construction, including road rails, curb and gutter rails, sidewalk forms and integral curb and base forms.

Write for booklets describing Metaform. Use the Coupon below.

METAL FORMS CORP.
MILWAUKEE, WISCONSIN



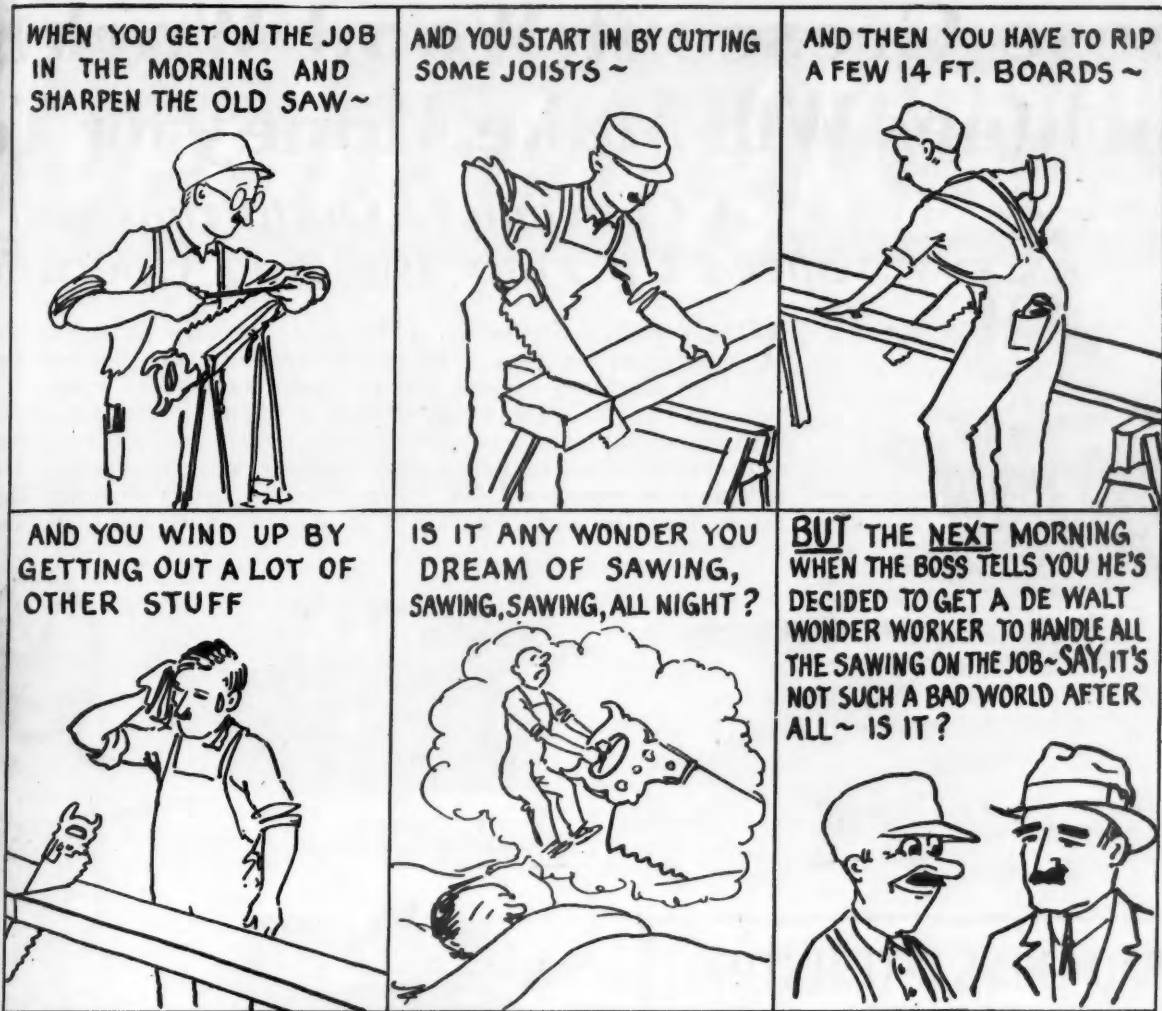
**This COUPON
Will Bring The
INFORMATION**



Metal Forms Corp.,
Milwaukee, Wis.

Gentlemen: Please send me full information about Metaforms. How will they help me out in my business of

Name.....
Address.....
City..... State.....



Give your carpenters a chance to use their heads!

If each carpenter comes on the job in the morning and exercises his back all day on hand sawing, there's not much chance for him to use his head—to do the work he can do, wants to do and ought to do for the wages you're paying him.

You can quickly put your men on more productive work when you have a DeWalt Wonder Worker on the job. It's fast and accurate on cutting rough framing, sub-flooring, sheathing, interior trim and any other work about a building. Two men can easily carry it anywhere on the job. Direct drive gives it plenty of power. And of course it's fully guaranteed.

If you're "from Missouri" we'll arrange for a demonstration on your job. Just fill out and send us the coupon.

DE WALT PRODUCTS COMPANY
661 New Holland Ave. Leola, Pa.

DE WALT
Wonder Worker
The Economy Wood Worker

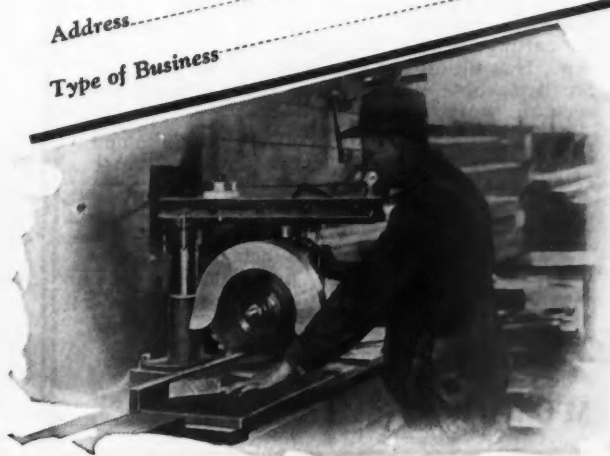
De Walt Products Co.,
661 New Holland Ave., Leola, Pa.
I'd like to know how the DeWalt will save money on our job.

Your Name

Firm Name

Address

Type of Business



These Crescent Wood Working Machines Will Make Money for You

A Convenient Outfit that will Speed Up Your Building Operations

YOUR profits depend on your ability to turn out good work speedily at low cost. This convenient outfit of Crescent Wood Working Machines enables you to handle all necessary operations right on the job. Their combination of many special time-saving features with sturdy dependability, ample capacity and wide range of usefulness renders them a real money-making investment. Used as standard equipment by many leading wood working shops throughout the world, because they turn out more and better work and reduce costs.



Fig. 298
Crescent Universal
Wood Worker

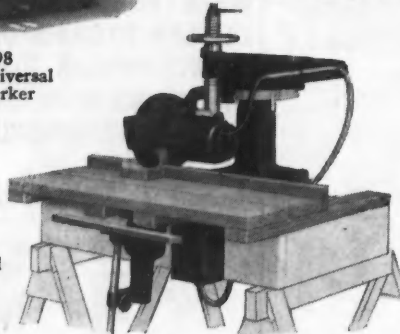


Fig. 383
Crescent Universal
Cut-Off Saw

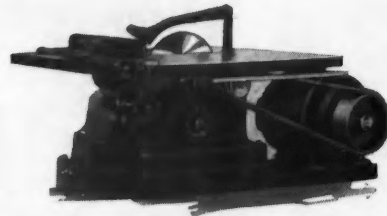


Fig. 345
Crescent No. 2 Saw Table

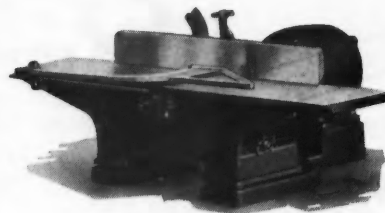


Fig. 351
Crescent 6" Jointer

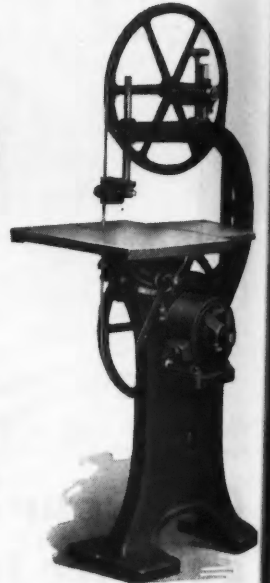


Fig. 320
Crescent 20"
Band Saw

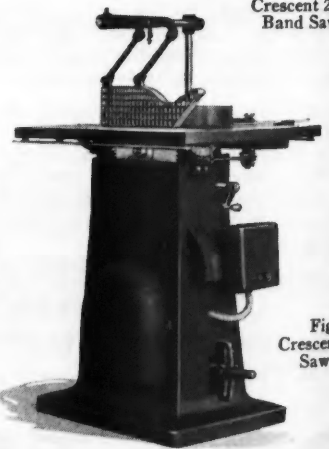


Fig. 386
Crescent No. 14
Saw Table

READ THESE INTERESTING DETAILS

Fig. 298—The Crescent Universal Wood Worker is a complete planing mill outfit for shop use including band saw, jointer, saw table, borer, reversible single spindle shaper. Various attachments may be added adapting it for a wide range of work.

Fig. 383—The Crescent Universal Cut Off Saw will do straight cutting off, angle cutting, ripping. An exceptionally convenient machine that will save a lot of money for the building contractor.

Fig. 345—The Crescent No. 12 Saw Table has capacity for cutting through stock 2 inches thick with a 7-inch saw. It has tilting top and is especially convenient for individual use on finishing jobs.

Fig. 386—The Crescent No. 14 Saw Table has self contained 2 h.p. motor, and capacity for cutting through 4-inch thick with a 12-inch saw. Has tilting top and ball bearing mandrel. Small machine with large capacity, adapted for accurate work.

Fig. 320—Ball Bearings and self contained motor drive add to the convenience and ease of operation of the Crescent 20-inch Band Saw. This machine is very substantially built and is of ample capacity for doing a lot of work.

Fig. 351—The Crescent 6-inch Jointer may be furnished for use on pedestal or bench. Has ball bearings, four-knife round safety head and automatic guard. Exceptionally well built and highly efficient.

**HIGHEST QUALITY—
MONEY-SAVING PRICES**

**WRITE
TODAY**

for

**Complete
Illustrated
Bulletins**

Write for complete information. Illustrated bulletins on machines shown here sent free on request. Also if you are interested in other machines in the Crescent line ask for circulars on Self Feeding Rip Saws, Shapers, Variety Wood Worker, Planers, Matchers, Disk Grinders, Table Cut Off Saws, Swivel Saws, Hollow Chisel Mortisers, Borers, Tenoners.

The Crescent Machine Co.
224 Main Street
Leetonia, Ohio

Everlasting Money Makers!



—“Save Time and Money”

“Trouble Savers are Money-Makers.” Henry Schweitzer, Mt. Healthy, Ohio.

“We have saved many hundreds of sets of wooden scaffolding by use of your brackets. Trouble Savers are very much easier to handle and have saved us a great deal of money, both in labor and material.” A. M. Miller, Washington, D. C.

“We bought a dozen of your Trouble Savers and have used them on one job—but must say they have more than paid for themselves, let alone the material saved.” Wm. Eberlein, Jr., Ocean Side, L. I.

“Trouble Savers are the cheapest and most efficient equipment I have ever used.” Wm. G. Metzler, Buffalo, N. Y.

—“Insure Safety”

“Trouble Savers are safer than wood and carry more weight.” August Hitzman, Cincinnati, Ohio.

“Trouble Savers are 10 times safer than wood.”

“My men have no fear of falling when working on Trouble Savers, and can therefore accomplish more work—with no loss of time in erecting scaffold.” L. Davis, Sharon Hill, Penn.

“We find Trouble Savers perfectly safe and have had fewer accidents since we have used them.” Baughman Bros., Kenmore, Ohio.

—“Last Forever”

“We are still using the first Trouble Savers we bought nine years ago.”

“We have used Trouble Savers eleven years and are just as good as when received.” H. E. Barnes, Willoughby, Ohio.

“Trouble Savers are perfectly safe and there is no wear out to them.” A. F. Shaver, Toledo, Ohio.

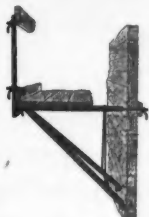
Trouble Saver Steel Brackets



Trouble Saver Nail Attached Brackets
Support a ton weight. Held by 4 nails. Braced by 2 legs. Fold for cartage or storage.



Trouble Saver Studding Brackets
Support a ton. Will not bend. Hook around studding. Firmly braced by 2 legs. Fold for cartage or storage.



Trouble Saver Bolt Brackets
Approved by State Industrial Commissions. Detachable rail standards. Held by 1/2 inch bolts. Fold for cartage or storage.

Trestles and Shinglers



Trouble Saver Adjustable Steel Trestles

Quickly adjusted to desired height. 8 sizes. Each size adjustable from 4 to 15 different heights, giving a range from 18 inch to 12 feet by 3 inch lifts.



Trouble Saver Asphalt and Wood Shinglers, Asphalt Shingler held by two nails. Can be removed without raising the shingle.

Wood Shingler put on without nails. Takes only a second to put in position or to remove.

TROUBLE SAVER STEEL PRODUCTS

- Bolt Brackets with Safety Railing.
- Studding Brackets
- Nail Attached Brackets.
- Adjustable Trestles.

- Ladder Jacks.
- Wood Shinglers.
- Asphalt Shinglers.
- Mortar Board Stands.
- Sectional Steel Scaffolding.

The Steel Scaffolding Company

1101 Governor St., Evansville, Ind.

Special Trial Offer

Find out for yourself how **TROUBLE SAVERS** Multiply Profits

The time to get the benefit of the big economies made by **Trouble Savers** Steel Scaffolding is **RIGHT NOW**.

You can save part or all of the cost of **Trouble Savers** before you decide to keep them. They pay for themselves on their first job. We send them to you on a 30-Day Trial.

Please send us details of your 30-Day Trial on the following:

- Studding Brackets
- Nail Attached Brackets
- Bolt Brackets
- Adjustable Trestles
- Wood Shinglers
- Asphalt Shinglers

Try **TROUBLE SAVERS** at Our Expense

Mail the Coupon Today

Name.....
Address.....
City..... State.....

DANDIE 10-S



Charging skips correctly shaped, and big enough to take materials without crowding and to shoot them into drum in one clean swift slide!

Mixing action that means uniform, easy-spouting concrete to the last shovelful of every batch!

High speed discharge with no time-wasting dribble at the end!

Dandies are high speed money-makers!

Compact, easily portable units that haul quickly from job to job, go down into excavations or up to the top stories, or wherever you want to take them, without a mess of trouble!

Built for High Speed, and built to stand it!

To know how the Dandie is built — to know its engineering and details, is to know it for the *Remarkable Value!*

Write for catalog D-1

Dandie 5-S, 7-S, 10-S — 5-S single cylinder; 7-S and 10-S two or four cylinder, radiator-cooled Ricardo head gasoline engine. Rubber tires with disc wheels or steel-rimmed wheels. Complies with A. G. C. standards.

A4582-1

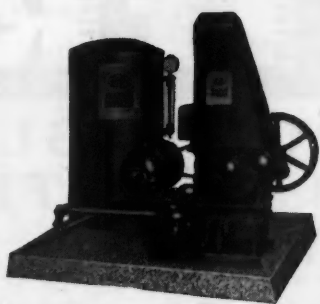
KOEHRING COMPANY, MILWAUKEE, WISCONSIN

PAVERS, MIXERS — GASOLINE SHOVELS, CRANES AND DRAGLINES

Sales Offices and Service Warehouses in all principal cities

*Foreign Department—Room 1370, 50 Church Street, New York City
Mexico, P. S. Lapum. Cinco De Mayo 21, Mexico, D. F.*

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



*Cut the cost
of pumping water on
your building jobs*

Turn to D-L Water Systems for all-around efficiency on construction work. Handle water on any job . . . and do it at low cost. Use a D-L electric pump to drain seepage and swamps . . . to pump out excavations and sumps . . . to boost water to higher elevations and top floors of tall buildings. Operate a D-L water pressure system for deep or shallow wells. Use current from a Delco-Light electric plant or central station line. Either way, D-L Water Systems cost very little to operate. They range in capacity from 125 to 440 gallons per hour. They carry the same broad guarantee applied to every product of General Motors. They are the pumps you should use if you want dependable pumping service.

Mail the coupon for complete information. Do it now—today.

DELCO-LIGHT COMPANY
Subsidiary of General Motors Corporation
Dept. R-114, Dayton, Ohio



**DEPENDABLE ELECTRIC
WATER SYSTEMS**

Also Manufacturers of DELCO-LIGHT Electric Plants

DELCO-LIGHT COMPANY,
Dept. R-114, Dayton, Ohio
Please send complete information about D-L Water
Systems for Building Contractors.

Name.....
Address.....



This Elevator is in practical use on the Stadium of Butler College of Indianapolis, Indiana. We have a good many in use all over the country.

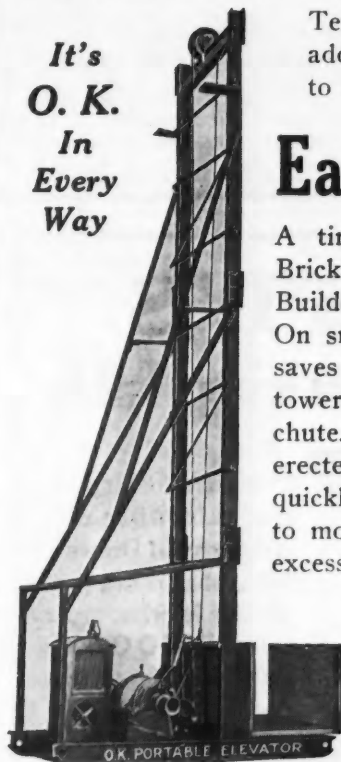
The **O-K**
**PORTABLE
ELEVATOR**

Here is a portable elevator especially designed for hoisting materials in wheelbarrows or concrete buggies. All steel construction, electric welded. Equipped with a single drum O. K. Hoist and 8 or 12 h. p. Gasoline Engine.

**Height Changed
AT WILL**

Ten-foot sections can be added to the O. K. Hoists to reach any desired height.

*It's
O. K.
In
Every
Way*



Easy to Move

A time and labor saver for Bricklayers, Plasterers and all Builders for hoisting materials. On small buildings the O. K. saves expense of erecting hoist tower for elevator or concrete chute. Sections are easily erected to necessary height and quickly dismantled when ready to move. No lumber loss—no excessive labor expense.

We also manufacture a complete line of gasoline and electric hoists in all capacities, also portable air compressors. Check coupon below for the O. K. catalog.

O. K. CLUTCH AND MACHINERY CO.
COLUMBIA, PA.

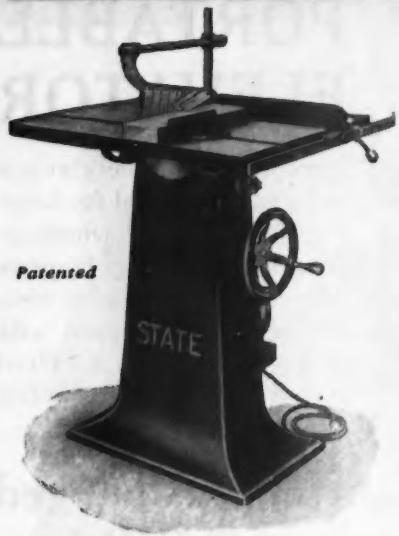
O. K. CLUTCH & MACHINERY CO.,
Columbia, Pa.

Please send your latest catalogs of equipment as checked.

PORTABLE HOISTS PORTABLE AIR
ELEVATORS COMPRESSORS

Name.....
Address.....
City.....State.....

COST CUTTERS



Patented

STATE PORTABLE SAW AND JOINTER

are truly cost cutters. The time and labor they save pays for them in a short while. The ease with which they can be operated and moved from job to job make them most desirable. A guard is provided assuring perfect safety.

If you have been considering a light portable saw rig you need look no farther. We feel certain that this machine will meet your most exacting requirements.

Built of the best materials; every part machined to a thousandth of an inch, built for accurate, continuous performance. State machines will last a lifetime.

YOU CAN GET ONE OF THESE MACHINES AT A SMALL COST

Let us tell you how. The coupon is for your convenience.

STATE MFG. & ENG. CO.
2756 W. Fulton St., Chicago, Ill.



STATE MFG. & ENG. CO.
2756 W. Fulton St.
Chicago, Ill.

Please send me complete information on your saw rig and jointer.

Name.....

Address.....

Town..... State.....

POST'S Norwood Drawing Table



If you are looking for a *serviceable* and *substantial* Drawing Table that is not prohibitive in price, order a **NORWOOD**, a *sturdy* table at *low cost*.

The top is raised easily and maintained at any height by clamps at the sides; the angle desired is obtained by releasing clamp screws and moving the curved arches until the required position is reached.

Top is made of selected pine wood, and the stand of well seasoned oak, shellac-finish. Comes in seven (7) sizes ranging from 23 x 31 inches to 48 x 72 inches top.

Ask for **FREE CATALOG**, giving full description and prices of our entire line of **DRAWING STANDS, BUILDERS' LEVELS and TRANSITS, BLUEPRINT, DRAWING and TRACING PAPERS and DRAFTING ROOM SUPPLIES.**

THE FREDERICK POST COMPANY
P. O. Box 803 CHICAGO, ILL.

All the Products

Advertised in these pages can be recommended to

American Builder Readers

Dealings with these advertisers will prove to be highly profitable to you.

Be progressive and investigate what these important houses have to offer you.

If you are interested in any product that is not mentioned here, please write us. We will gladly put you in touch with the manufacturers' best fitted to supply your needs.

American Builder
1827 Prairie Avenue, Chicago

The Binks Spray Gun applies paint 60% to 80% faster than Hand Work!



BUILDERS

Paint by Machine

Pocket the Difference!

Builders should not lose time in acquainting themselves with the speed and economy of Spray Painting.

If you turn your painting jobs over to a painting contractor, by all means try one with a Binks Portable Spray Painting Outfit. Buildings are completed for earlier returns; the work is mechanically even and mechanically better. The spray forces paint into surfaces. The speed is the same regardless of surface texture. One man does the work of four or five hand painters. Binks—Spray interiors, exteriors, equipment—everything!

A-C-T N-O-W

If you operate your own painting crew, get busy with a Binks Portable Spray Painting Outfit at once. The big season is ahead. The outfit quickly pays for itself—after that bigger, quicker profits! Write us for details today.

BINKS SPRAY EQUIPMENT COMPANY

Dept. D. 3121 Carroll Ave. Chicago

Branch Offices

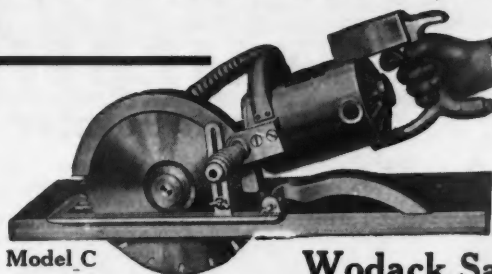
NEW YORK CITY
56 Warren St.

DETROIT
4456 Cass Ave.

SAN FRANCISCO
371 5th Street

Representatives in Principal Cities

Wodack Tools Cut Construction Costs



Model C

Wodack Saws

The Wodack Electric Hand Saw is not a cheap saw but is built for speed and durability. It cuts from 0" to 4 7/8" lumber, but weighs only 24 lbs. 3/4 h.p. G.E. Universal Motor. 11" and 8" diameter saw blades. PERFECT SAFETY GUARD.

The Wodack cuts any lumber anywhere, and if desired can also be used as a table saw. Special saw dust blower makes it easy to follow line.

Model B for Bevel Cuts

Has a convenient rip gauge and tilting base for bevel cuts to 60°. Handy for jack rafters. The 11" blade is necessary for deep bevel cuts. Same powerful motor as Model C. Saws any lumber from 0" to 4 7/8" in ONE CUT.

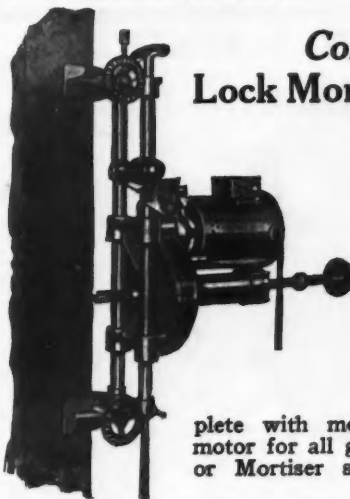


FRONT VIEW

Model B

Combination Lock Mortiser and Router

2 Tools in 1



Cuts both face plates and barrel in ONE OPERATION in an average time of less than one minute per door, counting time to put on and take off. Saves 50c on every door and does better work. 1/2 h.p. G.E. Universal Motor. Router attachments come complete with mortiser. Just remove the motor for all grooving jobs, etc. Router or Mortiser sold separately if desired.

All Attach to Light Socket

For nine years Rogers & Co. have been selling time-saving tools to builders. We know your needs from the practical side. Two years' steady advertising in this paper shows, we believe, that we can save you real money with the best tools of their kind at present on the market. Re-orders seem to prove it.

F. L. Rogers and Company

23 South Jefferson St.

Chicago, Ill.

Stock also carried at New York branch

Mail the Coupon Today

F. L. Rogers & Co., 23 South Jefferson St., Chicago, Ill.

Send me literature on the Wodack Saw, Wodack Combination Lock Mortiser and Router and the name of nearest demonstrator.

Name.....

Address.....

City..... State.....

Build It With a Boice and Save!

No matter what you want to build, Boice can help you. Everywhere, men are finding it easier to do jobs on Boice-Crane Machines. You can do every job with amazing speed and accuracy, and save hours of time. The initial cost is so surprisingly low that Boice-Crane Machines will prove the best investment you can possibly make in your shop. They are most economical, practical and efficient and being portable you can keep them handy to your workmen.

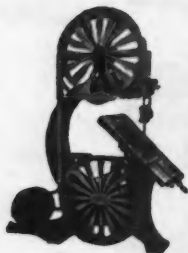


It's easier to level with the Boice Jointer. The fence tilts 45° as shown.

Guard swings out of way while rabbeting.

4" Bench Jointer

Has extra long tables, smoothly ground. Length 36 inches. Assures true, straight edge to all work even on boards up to 18 feet long. Cutting width of knives 4 1/2 inches. Has 3-knife safety head, perfectly balanced. Same head also handles moulding knives. Ball-bearings. Fence tilts both ways 45 degrees. A 1/4 or 1/3 h.p. motor is directly connected to head. Operates from light socket. Also may be had with pulley for belt drive.



14" Bench Band Saw

A rugged and unusually capable machine. Saws 7-inch thick stock. With ripping fence will rip stock 18 inches wide. Has 14-inch wheels dynamically balanced. Bronze bearings throughout. Takes blades 3/16 inch to 1/2 inch wide. Table tilts 45 degrees. Aluminum wheel guards. Driven by a 1/3 or 1/2 h.p. motor attached to light socket. Sold with or without motor.

Send for Catalog

The complete line of BOICE-CRANE Bench Machines operate from light socket. Includes Band Saws, Jointers, Circular Power Saws, Jig Saws, Mortisers and Lathes. Send for our 64-page catalog illustrating and completely describing these machines as well as our guarantee of satisfaction or your money back. Send today.

The Boice Universal Handisaw



Sold with or without motor and base.

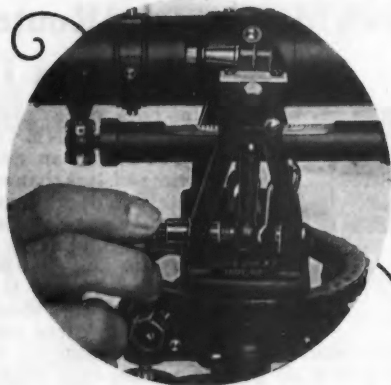
It is amazing the work this machine will do. Table 15" x 17", tilts 45 degrees for beveling. Elevates for grooving. Swings 9" saw and cuts 2 1/2" stock. Saw guard with splitter. Insert takes 6" x 1" dado head, cope heads and 8" sand disc. Also has insert providing opening for 2" jointer head. Jointer attachment quickly fits on right of table. Guides always remain parallel to saw regardless of elevation or tilt of table. No other saw of equal cost has this feature. Machine as illustrated rips and joints boards 2" thick without stopping. Other new, low cost attachments for this saw will PLANE



Table tilts 45 deg.

BOARDS TO THICKNESS, shape, bore, tenon, drum sand, grind, disc sand, rout, polish and make mouldings. Operates from light socket.

W. B. & J. E. Boice, Dept. A.B. 4-D, Toledo, Ohio



Levels in Any Direction By the Simple Turn of a Screw

No fussing with four leveling head screws to make the bubble stay in the center when turning the telescope in any direction.

Simply point toward the leveling rod, bring the bubble to the center by the turning of a slow motion screw. The line of sight is thus easily and accurately leveled in any direction.

No. 385 Gurley Tilting Level



W. & L. E. Gurley, Troy, N. Y.

W. & L. E. GURLEY
514 Fulton St.
TROY, N.Y.

Send me Bulletin No. 285, descriptive of the New Gurley Tilting Level.

Name.....
Address.....

Construction of the *Wagon Hotel at Topeka, Kansas.*

This hammer has been in constant operation each working day since its purchase, steadily drilling and chipping concrete, and each day saving Pratt-Thompson Construction Company the wages of six men.

More than 2500 % returned in the investment.

Today Pratt-Thompson Construction is purchasing another Syntron brand

TRY THIS LEACH LOW PRICED ALL STEEL TILTER

On Job after Job

the

Syntron

ELECTRIC HAMMER



pays big dividends

An investment in one or more Syntron Electric Hammers will not only pay for itself in cutting labor costs, but will continue to pay such dividends year after year.

On every construction job there is use for a Syntron, drilling, chipping or channeling in masonry, stone or concrete—3600 mighty powerful blows a minute.

Don't be without a Syntron Electric Hammer. Its value to contractors all over the land is amply demonstrated by the many recommendations it receives daily.



NO MOTOR
NO GEARS

The Syntron Electric Hammer operates from the light socket, has only one moving part, is light in weight and low in cost. Send coupon for complete description.

What You Get From The Leach

All-steel construction—makes for longer life.

“Over-sized” drum—for greater capacity.

Rigid frame—Alemite lubrication—Greater portability—Disc wheels, rubber tired!

In no other tilting trailer of this size will you find more time and money saving advantages than the Leach. Remember it's low-priced and absolutely will outlast ordinary mixers of its kind. Get the details.

LEACH COMPANY

Dept. 3

Oshkosh, Wis.

SEND COUPON

THIS WILL BRING YOU DETAILS!

- Type M60—9 pounds—drilling capacity 3/8".
- Type C60—15 pounds—drilling capacity 1/2".
- Type A60—17 pounds—drilling capacity 1".
- Type R60—20 pounds—drilling capacity 2".
- Type RC Spader.
- Type R-2-30 Riveter.
- Type RR-1-30 General Utility Heavy Duty.
- Type R-1-30 General Purpose.

SYNTRON COMPANY, Dept. A-4,
400 Lexington Avenue, Pittsburgh, Pa.

Send full details, performance records, etc., on Syntron Electric Hammer, as checked. No obligation, of course.

Name.....

Firm.....

Address.....

City & State.....



Leach Company,
Dept. 3, Oshkosh, Wis.

Gentlemen: Kindly send me without obligation, details and prices of your tilting mixer.

Name.....

Address.....

City.....

What a whale
of a lot of trouble
a little inch can make!

**One Inch Slice
Cut From Building**

Special Dispatch to THE SUN.
SEATTLE, Washington.—One of the oddest tasks in building history here was finished recently when a one-inch slice was cut from a concrete building which had bulged over onto adjoining property. An offer to buy the inch of land under trespass was turned down, the owner desiring to sell the entire lot at a figure which the prospective purchaser thought prohibitive.

Needless to say, "Somebody blundered!" Which goes to prove that, in the long run, it is false economy to use any but the *most dependable* instruments.

K & E

CONVERTIBLE LEVELS

usually are found on jobs where *accuracy* and *speed* mean dollars to the contractor.



Catalog sent on request
KEUFFEL & ESSER CO.

New York, 127 Fulton St. General Office & Factories, Hoboken, N. J.

CHICAGO
SAN FRANCISCO

ST. LOUIS
MONTREAL



USE NAILS
*that hold
and last.*

Nails are small items from the standpoint of size and cost, but when you consider how many roofs have to be reshingled—how many floors relaid because of certain fundamental defects in the nails used—you will appreciate their importance.

Notice the rectangular, wedge shape of Reading Cut Nails. They drive straight and hold fast at every point in contrast to wire nails which hold only by surface friction. Reading Cut Nails do a neat job. They never split the board because they spread the wood with the grain and not across it; Government tests prove that this old-fashioned type cut nail has 72% greater holding power than the round wire nail.

Try Reading Cut Nails on your next job and see for yourself.

READING IRON COMPANY
READING, PA.

**READING
CUT NAILS**

How Do You File Your Saws?



YOU'LL have faster, cleaner cutting saws if you file them on a Foley. You'll save time and eye-strain, too. Just clamp your saw in the Foley and turn on the motor—the Foley's steady mechanical arm brings all the teeth to exactly the same size, and makes pitches and bevels uniform. Your saw will cut better than new!

Files All Kinds of Saws—hand, back and rip—band, 1/8 to 4 1/2" wide—cross-cut circular, 3" to 24" in diameter. Files and joints in one operation. Retoots old hand saws. Easy to operate. Only two cents an hour to run. Files a hand saw in an average of only ten minutes—band and circular saws in far less than half hand filing time.

**FOLEY
AUTOMATIC
SAW
FILER**

Send for FREE Plan

Mail the coupon and we'll send you our special offer. We'll also send you a FREE plan that will make it easy for you to own a Foley out of the extra cash you get filing saws for others. Don't miss this FREE offer. Here's the coupon—mail it now—

COUPON

FOLEY SAW TOOL CO., Inc.
128 Foley Bldg., 9 Main St. N. E.
Minneapolis, Minn.

Please send me the **FREE** Demonstration offer on the Foley and the **FREE** plan that makes it easy for me to own a Foley.

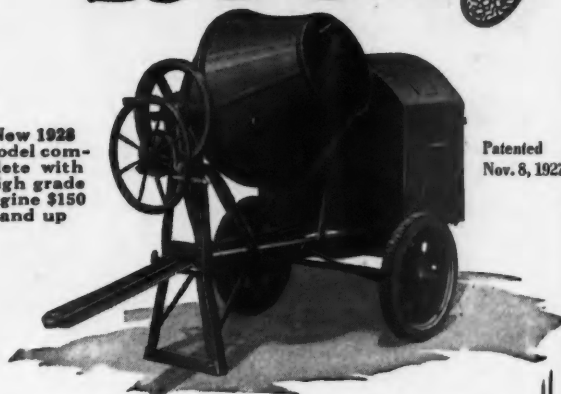
Name.....
Address.....

**Faster
Handier
Now
Ready**

New
No 3 1/2
**KWIK-MIX
TRAILER**

New 1928 Model complete with high grade engine \$150 and up

Patented Nov. 8, 1927



**Featuring the New
Friction Tilting Device**

An astounding improvement found exclusively on the new Kwik-Mix Trailer. Gives more speed, greater ease, better work. This and other exclusive improvements places the Kwik-Mix far in advance of any other mixer made. "Greatest improvements I ever saw on any Mixer," say contractors who have seen our new 1928 line.

Write Today for New Catalogue

Write for new catalogue giving concrete evidence that Kwik-Mix Mixers are real money makers and leaders in the field.

In addition to the No. 3 1/2 Trailer we manufacture mixers with a capacity of 1/2 to 2 bags.

Write TODAY.

Kwik-Mix
Concrete Mixer Co.
Dept. 70
Port Washington, Wis.

**Most Complete Catalog
of
Late Model
Low Priced
MIXERS
Ever Published**

KWIK-MIX
CONCRETE MIXER

Kwik-Mix Concrete Mixer Co.
Dept. 70
Port Washington, Wis.

Please send me catalogue and terms on the Kwik-Mix Line.

Name.....
Street.....
City..... State.....

The KENT COMPANY, INC.

101 CANAL ST., ROME, N. Y., U. S. A.

A Sanding—Refinishing—Waxing—Polishing and Scrubbing Machine.

Use the J. C. M. model for sanding, refinishing, waxing and polishing. Only a few seconds required to change from one attachment to another. The machine is universal in its uses; plugs in any light socket—weighs 85 lbs. Designed to perform perfectly. Built of the finest material. We have successfully overcome the objection of rotary machine making circular marks on the floors. Back of this machine lies over seventeen years of development of floor surfacers.

OWN YOUR OWN

The J. C. M. model will pay for itself on just a few small jobs. Eliminate waste time and make more money by doing five times the work possible by hand.

WE INVITE COMPARISON

We invite comparison and the opportunity to give the fullest information concerning the J. C. M. model. Put this machine up against any floor machine on the market and decide for yourself.



THOUSANDS IN SUCCESSFUL USE

In all parts of the world thousands of these J. C. M. model floor machines are in use today. Satisfaction is a byword with all of our users and we guarantee this to you in your purchase of a Kent product. Our machine will produce a velvet finish which numbers of floor finishers have advised us is better than can be obtained by hand or any other way.

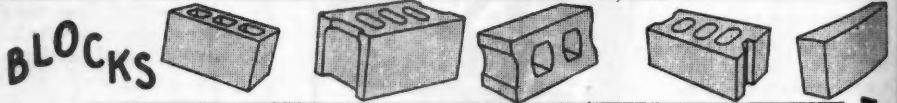
J. C. M. MODEL

WRITE TODAY

No matter what kind of work required—sanding—polishing—waxing or refinishing—the Kent J. C. M. model will do the work satisfactorily and better than any other. You can purchase a J. C. M. on a payment plan. Write today for full information.

The KENT CO., INC.
101 Canal St., ROME,
N. Y., U. S. A.

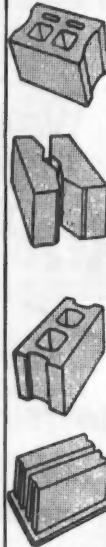
NOW is the time to get in to the business of concrete products manufacture!



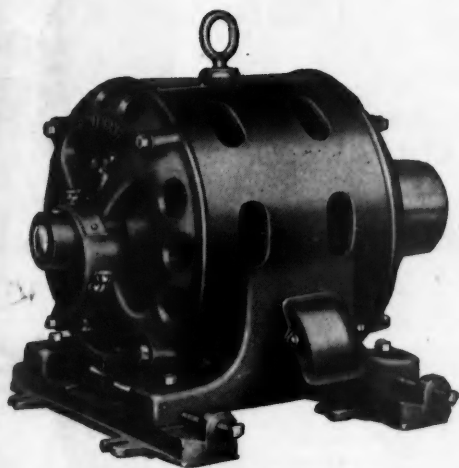
And before you start—

Get the benefit of the advice of the most experienced concrete products plant engineers in the country—men who can help you lay out an efficient plant, select and install labor-saving machinery that will assure your ability to make a good product and sell it at a good profit. Tell us what concrete units you want to make—let us put behind you the accumulated experience of the largest manufacturer of concrete products plant equipment in the world.

Consolidated Concrete Machinery Corp.



"They Keep a-Running"



5 Horse Power Century Type RS Repulsion Start Induction Single Phase Motor

Century

Proved Reliability

For more than 24 years Century Type RS Repulsion Start Induction Single Phase Motors have given daily proof of their reliability in all classes of service in all parts of the civilized world . . . They are widely used in all installations requiring high starting torque and low starting current—such as electric refrigerators, oil burners, house pumps and similar apparatus . . . The brushes last—they touch the commutator only during the starting period, about 1/900th part of the time the motor is operating . . . Bearings are long lived—they are machined from phosphor bronze castings, the best bearing material obtainable . . . The windings are thoroughly insulated and are then saturated with insulating varnish. This preserves the insulation and protects the windings . . . Dampness does not affect them. . . . At least one year's continuous 24-hour-per-day operation, *without reoiling*, is assured by the Century Wool-yarn System of Lubrication, standard on all 1 horse power and smaller frame sizes.

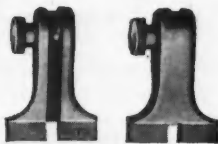
Built in standard sizes from 1/8 to 40 horse power.

CENTURY ELECTRIC COMPANY
1806 Pine St. St. Louis, Mo.

33 Stock Points in the United States
And More Than 50 Outside Thereof



"They know how to make tools"



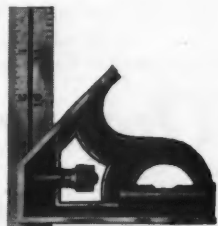
No. 111

"See this 439 Combination Tool?—well, the fellows who designed that knew what carpentry work is!"

"It's got a rule, square, level, protractor, bevel, degree and pitch-to-foot indicator and plumb—all in one tool. And with these four levels set in the stock I can level either under or on top of the work!"

"Seems as though all Starrett's have got a lot of brains behind 'em—as well as quality and lasting accuracy. That's why I use 'em."

Your tool dealer will gladly show you these and other Starrett Tools. Write us for Catalog No. 24-6 containing complete description.



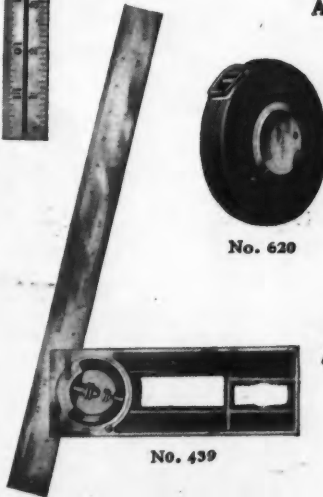
No. 94



No. 108

THE L. S. STARRETT CO.

World's Greatest Toolmakers
Manufacturers of Hacksaws Unexcelled
Steel Tapes—Standard for Accuracy
ATHOL, MASS., U. S. A.



No. 439



No. 181



No. 470

Use Starrett Tools



PIONEER MANUFACTURERS

Miles Complete Face Down Power Unit which includes Miles Face Down Block Machine, Automatic Power Tamper and Elevator and Feeder.



1898
to
1928

CONCRETE EQUIPMENT

COMPLETE LINE CONCRETE PRODUCTS PLANT EQUIPMENT



Miles Complete Power Stripper Unit which includes Miles Power Stripper, Automatic Power Tamper and Elevator and Feeder.



Miles Hand Stripper Machine can be operated either by hand or power, makes both blocks and tile all sizes.



Miles Face Down Block Machine can be operated by hand or power, makes all sizes and design blocks.



Miles All-Power Operated Stripper Machine to be used in connection with Complete Power Plant as shown above, makes both block and tile all sizes.

Write for General Catalog. Dept. 6

THE MILES MANUFACTURING COMPANY
Jackson, Michigan, U. S. A.



"There's More Gold in Floors than in the Hills"

Save this Gold Dust
with a

FREE-O-DUST SUPER-SURFACER

A
Money Saver
as well as a
Money Maker

Is your floor work wasting money for you? The Free-O-Dust saves your profits year in and year out by doing a faster and better job than can be done by any other known way of floor sanding and resurfacing. Start saving this money now. Let us tell you how without cost to you.

NEW IMPROVEMENTS

The Ermco V-belt for driving the drum and fan is a great improvement over the old chain drive. The Ermco V-belt runs smoother, lasts longer, and is cheaper to replace. Also the Alemite greasing system is just one more addition to make the Free-O-Dust the Super Surfacers.

We sell on easy payments. Write us today.

ELECTRIC ROTARY MACHINE CO.
3824 W. Lake St., Chicago, Ill., U. S. A.

Stake Your Claim with This Coupon

Electric Rotary Machine Co.
3824 W. Lake St.,
Chicago, Ill.

Send me free booklet regarding the floor surfacing business and your Free-O-Dust Super-Surfacers.

Name.....

Address.....



RELCO CONCRETE GARBAGE RECEPTACLE



New → PROFITS, SALES!

HEALTH authorities demand sanitary methods of garbage handling. The Relco offers an underground concrete garbage container that is permanent, durable, efficient and neat. You make them easily with the Relco Concrete molds.



Lasts Forever
COSTS LESS

Home owners, builders, contractors and hardware dealers furnish quick outlets for your products.



Efficient Relco Molds

The Relco Molds are very simple to operate and any laborer without previous instruction can do perfect work. We also furnish castings necessary at very reasonable prices. Sales will be easy too, for we furnish advertising helps.

R & L CONCRETE MACHINERY CO.

Successors to RABER & LANG

Kendallville, -:- Indiana



Mail this now!

R & L Concrete Machinery Co.
1828 Mill Street
Kendallville, Indiana _____ 19__

Send Relco folder and prices. I am interested.

Name _____

Address _____



*In the Shop or at the Job—
You Can Do It Quicker,
Better, Cheaper, with*

H & A Portable, Bench Wood-Working Machines

THE H & A Swing Saw for cutting to length and squaring long dimensions—the Rip Saw for cutting rafters, trimming sash, screens, doors, for fitting casings and flooring, for dadoing, grooving, tenoning or rabbetting—the Bench Jointer for planing, jointing, beveling, rabbetting. Any one of these machines will pay for itself on your next big job—by enabling one man to do the work of ten, and do it better.

Portable—take the machine to the job. Plug into the nearest lamp socket. Save 90% of your hand labor cost! All bench type machines—or we can furnish floor stands if you want them. Write for catalog and prices.



- Rip Saws
- Cut-Off Saws
- Jointers
- Band Saws
- Lathes
- Scroll Saws

HESTON & ANDERSON
204 Western Ave., Fairfield, Iowa

TRIM SEASON IS AT HAND—CARTER-IZE NOW
THE CARTER DOOR SET *The Modern Door Equipment*

The Carter Lock Mortiser will mortise at least ten times as fast as by hand, and every mortise exact to size length and depth, and always in the exact center of the door.

One minute to set, then all you do is to pump the handle.

Machine stops Automatically when depth is reached.

Simple—Isn't it?

Builders Wise,
CARTER-IZE



With the Carter Power Hand Plane you can fit doors and sash from two to five times as fast as by hand, and always smooth, regardless of grain—bevel or straight, AND with the Carter Hinge Butt Router upwards of 90 doors and jambs can be routed for hinges in a day, and every one perfect.

The Carter Lock Mortiser on Door—Weights Only 23 Lbs.

THE R. L. CARTER CO., Inc., - **Phoenix, New York**
 Folder 9-A Tells the Whole Story—May we Send it? Time Payments May Also be Arranged—Pay as They Earn
 (NO INTEREST CHARGES)

There's more profit in a
HUTHER SAW



Backed by fifty years experience in the making of highest grade saws, each Huther Saw has a quality built into it that insures maximum length of service.

Huther Bros. Saw Mfg. Co.
ROCHESTER, N. Y.
Makers of Better Saws for More Than Fifty Years

6 1/2 Miles of Speed-grits



Speed-grits FLOOR PAPERS do not shed grit and ruin your job, because scientific drying insures a properly dried glue bond that anchors the grain to the paper backing.



SCIENTIFICALLY DRYING

When the drying racks are loaded with Speed-grits GARNET or DURUNDUM Floor Paper, they hold 6 1/2 miles of material - - enough to finish quite a few floors. And it's no ordinary drying. Temperature and dampness are accurately and automatically controlled, so that your drum covers are as nearly perfect as it is possible to make sandpaper.

Manning Abrasive Company, Inc., Troy, N. Y.

MANNING ABRASIVE CO., INC.,
P. O. Drawer 74, Troy, N. Y.

I am interested in Speed-grits for floor sanding. Without obligation, send me more information.

Name.....
Street.....
City..... State.....

AREALLY The HIGH GRADE MIXER AT AN AMAZINGLY LOW PRICE

BOSS 3 1/2 S TILTER

LOW CHARGING TYPE

Just the right size. Big enough for an average foundation a day, yet small enough to be easily handled about the job or towed behind touring car or truck. Makes small jobs pay big profits. Quickly pays for itself in saving over hand labor costs. New low prices will amaze you. Investigate! Mail coupon now for details.



Mixes mortar as well as concrete. Mixing always in plain sight.

Gear Driven—Gear Dump! The Boss 3 1/2 S Tilter is a marvel of fast, easy operation. With it two men can turn out as much work as six men using old-fashioned, back-breaking methods. Equipped with 5 second "Easy Dump" arrangement. High speed mixing action. Batch mixed 60 times a minute—produces more uniform aggregate. Water gaps make blade and bowl self cleaning.

Full 1 Year Guarantee! BOSS Mixers are noted for their long life. They are built almost entirely of steel and forgings. Materials and workmanship guaranteed for 1 year. The 3 1/2 S Tilter is driven by powerful 2 H. P. motor requiring the minimum of gasoline a day.

Investigate! Before you decide on what mixer to get, send for full particulars. Note the unusually low prices. Compare the superior quality. The complete line of BOSS Mixers and Hoists is backed by 17 years of manufacturing experience and is endorsed by over 17,500 users.

CLIP AND MAIL THIS COUPON NOW

AMERICAN CEMENT MACHINE COMPANY
216 S. Fourth St. Keokuk, Iowa

Please send me complete details and prices on the BOSS 3 1/2 S Tilter

Name.....
Address.....
City..... State.....

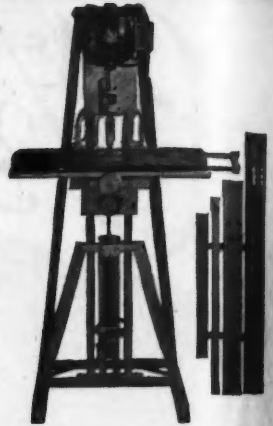
Specifications
Capacity based on crushed 1 1/2 inch stone in aggregate, dry 6 cu. ft., wet 3 1/2 cu. ft. Average daily 30 to 40 cu. yards. 20 x 27 inch bowl with 19 inch opening. Loading height 40 inches. Frame 4 in. steel, 14 x 3 in. steel wheels or 24 x 3 rubber tires. Alemite lubrication.

Adopted by Contractors in U. S. and Foreign Countries.

U. S. Govt. [100]; Clough, Bourne Corp., N. Y. [40]; Tokio Elec. Bureau, Japan [80]; Cameron, Joyce & Co., Iowa [25]; Stone & Webster, Mass. [13]; State Highway Departments of Illinois, Iowa, Missouri, Massachusetts, Pennsylvania, Michigan, Minnesota, Kansas, Georgia and other states.

BEARCAT MORTISER and BORER

Complete your shop equipment with this fine, speedy, Power Mortiser. Ball-bearing electric motor runs from light socket. Uses standard Hollow Chisels and Machine Bits. Equipped with Tilting Table, Hold-down Fingers and Length Gauges. Everything ready to run. A MONEY-MAKER FOR CARPENTER AND CABINET SHOPS. IDEAL FOR MANUAL TRAINING SCHOOLS.



THE PAXSON COMPANY
Dowagiac, Mich. AB-4-28

Please mail circular and special price on Bearcat Mortiser and Borer.

Name.....
Address.....
City..... State.....

Mail the Coupon today for circular and special price offer.

THE PAXSON COMPANY
DOWAGIAC, MICHIGAN
SAW RIGS — SANDERS — MORTISERS



No. 39
"Junior"
Woodworker

A Whole Shop in One Unit

Builders and Contractors are enabled by this Universal Woodworker to do practically all of their woodworking operations in a time-saving way, as many machines are combined in this one. It is not necessary to send work to the mill work shop as this combination of several machines enables you to do 30 different operations.

WRITE FOR ILLUSTRATED BULLETIN

BUILDERS
of
GOOD MACHINERY
SINCE 1904



The Sidney
Machine Tool Co.
857 Highland Ave.
Sidney, Ohio

To Make Spring Business Pay More Profit

and summer—fall and winter business, too—

Use Reliable Scaffold Brackets on every job—

They are time and money savers—

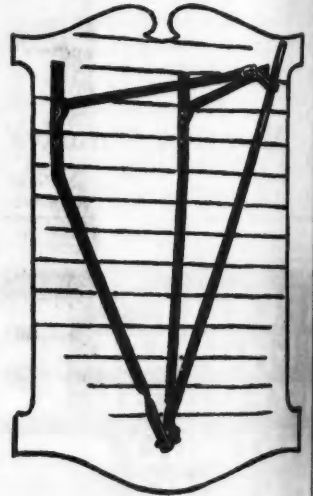
Used on frame, brick or stucco construction—

Known to the trade for years—

Try them before you pay a penny.

We ship on approval—C. O. D.

Send for catalog and price list.



Reliable Scaffold Brackets

No holes to plug after they are removed

ELITE MANUFACTURING CO., - Ashland, Ohio

\$35 COMPLETE WITH MOTOR

F. O. B. CHICAGO



15 DAYS APPROVAL MONEY BACK GUARANTEE

18 TOOLS IN ONE
Greatest Machine You Ever Saw

The S&B 8-in. Combination Saw (18 tools in one) is the ideal machine for the shop, factory or the home; will rip, cross cut, bevel, miter, mortise, groove, drill, tenon, grind, rabbet, buff and polish. Motor is mounted on a base that is a part of the machine proper. Complete with attachments and price includes 1/2-H.P. Motor, 60-Cycle, 110-volt A. C., run from any light socket. Shipping weight 100 lbs.

(Planer attachment to fit on table top will smooth pieces up to 2 inches wide, \$12.00 extra.) Write for Complete Illustrated Folder.

SCOTT-BANSBACH MACHINERY CO., 139 So. Clinton St., Dept. 71, Chicago, Ill.

The New Automatic Control ELECTRIC



GUARANTEED TO SAVE GLUE AND TIME — WRITE FOR FREE TRIAL OFFER

J. D. WALLACE & CO.
2809 ADAMS ST.
CHICAGO, U.S.A.

GLUE POT



KNICKERBOCKER MORTAR AND PLASTER MIXERS

They cut mixing costs, produce better mortar and plaster with less cement and lime or gypsum.

No. 1 Serves
12 to 15 plasterers
25 to 35 masons

No. 1½ Serves
12 plasterers
15 to 25 masons

No. 2 Serves
6 to 10 plasterers
12 to 20 masons

Ask for catalog of mortar, plaster and concrete mixers and saw rigs

The Knickerbocker Company, Jackson, Mich.

ONE MAN WITH ALOE'S "JIFFY" SAW DOES THE WORK OF 10 MEN WITH HAND SAWS

FREE TRIAL EASY TERMS

Saves 85% of the Hand-Saw Labor — Runs All Day on One Gallon of Gasoline...

Save the high wages of ten hand-sawyers—save hours upon hours of time—with Aloe's new high-power "Jiffy" Portable Gasoline Saw Rig. Does anything that a hand-saw can do and does it ten times as fast. Cross-cuts, rips and miters, dados, rabbets, etc. Works up 8,000 to 10,000 ft. of lumber a day with one man operating.

Learn More About the "Jiffy" Gasoline Saw Rig
Just sign and mail the coupon—and let us tell you more about the "Jiffy" Saw—about our liberal TRIAL offer—about our Easy Ownership Plan, which gives you several months to pay and all this time the "Jiffy" Saw in your possession is paying for itself faster than the small monthly payments come due. Mail the coupon now.

A. S. ALOE COMPANY
1810 Olive St. St. Louis, Mo.

ITS WONDER FEATURE — SWINGING-TYPE ARBOR

The old, cumbersome method of pushing the lumber against the blade is done away with. On cut-off work, the saw is drawn through the lumber by a convenient handle, which also acts as a safety guard. In mitering, the blade also moves through the lumber. For ripping, a full-length guide is clamped on the table, insuring accuracy, the arbor is locked at the center of the table and the lumber is moved against the saw in the regular way. Has powerful 1¼-h.p. air-cooled, single-cylinder gasoline engine, mounted in vibrationless spring mounting with lever starter—runs as smooth as an electric motor. Portable — mounted on wheels—can be taken out on the job and moved anywhere you want it from basement to upper floors—gasoline power always with it.

What Users Say!

"I have used the Saw Rig four weeks and it has paid for itself."
"Perfectly satisfactory from the standpoint of operation and has saved many times the cost of the machine."
Names furnished on request

SAW MOVES THROUGH WOOD



FULL LENGTH RIPPING FENCE

MAIL COUPON TODAY

A. S. ALOE COMPANY, 1810 Olive Street, St. Louis, Mo.
Without obligation, please send me full particulars about the high-power "Jiffy" Portable Gasoline Saw Rig and details of how it pays for itself.

Name.....

Address.....

BURFO

SLATE CUTTER
PUNCH and
HAMMER



AJAX BRACKETS

last indefinitely and pay for themselves on the first job. Use them to apply all sizes of slate, tile, asphalt, metal and wood shingles. Instantly adjustable to any pitch roof.

BURFO

cuts and punches slate or asbestos shingles without waste or breakage.

Send for all the particulars



AJAX folding metal SHEATHING AND ROOFING BRACKETS

THE QUICKEST EVER AND AS SAFE AS THE EARTH UNDER YOUR FEET.



AJAX BUILDING BRACKET CO.

1551 Rydal Mount Road

Cleveland Hts., Ohio

Lower Prices—Easy Terms



3-3 1/2-5
7 & 10
SIZES

NEW HYATT ROLLER BEARING MIXERS

The Finest of Fine Mixers

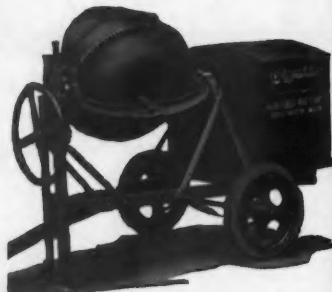
Hyatt roller bearings throughout, roller-drive chain, Dot high-pressure lubrication, malleable wheels, divided type mixing blades, automatic return—everything provided to make it the fastest, easiest operated, most durable mixer built.

Republic

Republic Concrete Mixers are built in all sizes from half bag up, in both tilting and non-tilting types.

Dealers carry complete stock for quick delivery.

Write for Catalog



REPUBLIC IRON WORKS, Tecumseh, Mich.

For more profit on spring work— Get a Parks!



\$495.00
including 2 h. p. motor

"Carpenter Shop Special." Six necessary units in one compact but convenient machine. 18-inch band saw, 9-inch jointer, 16-inch lathe, 10-inch circular saw, mortiser, shaper. Ball bearings and independent drive on every unit. 2 h. p. motor. Built for real work in every detail.

This Parks "Carpenter Shop Special" will save you the wages of 3 to 5 men on every house you build, and show you more profit on your work. Figure Parks-cost into your jobs instead of extra-labor cost! That's the way to more work and bigger profits on lower bids that get you the contracts.

PARKS

WOODWORKING MACHINES

Send for Catalog of the Parks 1928 line

The Parks Woodworking Machine Co. Fergus & C. H. & D., Cincinnati, Ohio
Can. Factory 208 Notre Dame East, Montreal

LUFKIN Boxwood Rules



Well built from the best of materials. Clearly marked. Preferred by good mechanics everywhere.
Send for catalogue

TAPES --- RULES --- TOOLS

THE LUFKIN RULE CO.

SAGINAW, MICH.
New York Windsor, Ont.



*That's the
stone for
me!*

The

Carborundum Combination Stone

CARPENTERS like the "look" and the "feel" of this sharpening stone. They like the way it takes hold.

They find this promise of perfection borne out in performance, when they use the Carborundum Combination Stone to make keen the edges of their tools.

Keeps tools keen and cutting clean—plane bits, chisels, scraper knives—all the straight edge tools in their kits.

You will appreciate this "double duty" feature that gives the Carborundum Stone its name of "Combination"—there's a coarse grit side to start your edge, and the other side is fine grit for finishing off your edge razor-sharp.

Carried by Hardware Dealers Everywhere

SEND FOR CATALOG C-2

THE CARBORUNDUM
COMPANY
Niagara Falls, N. Y.
CANADIAN
CARBORUNDUM CO., LTD
Niagara Falls, Ont.

Carborundum is the
Registered Trade
Name used by The
Carborundum
Company for Billion Car-
bide. This Trade
Mark is the exclusive
property of the Car-
borundum Company.



Carborundum

ABRASIVE PRODUCTS

**On
the
job**

Esskay
Universal Electric
Wood Worker

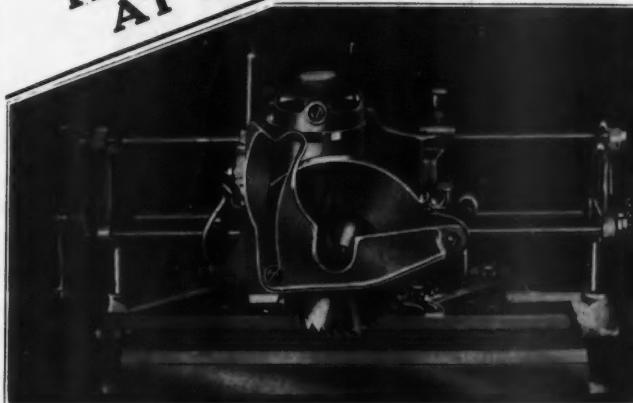
←Serves Both→

**In
the
shop**

Stationary
or Portable

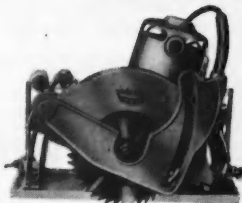
**HIGH EFFICIENCY
AT A LOW COST**

Illustration below shows
the Esskay Woodworker
mounted for stationary
jobs.



UNSCREW TWO BOLTS AND YOU HAVE THIS

Esskay Portable Saw



This shows the Esskay as a separate Portable Power Saw which can be carried around with ease and is a regular wonder worker in the way it eats up sawing jobs.

SOLD SEPARATELY IF DESIRED

In Either Way the Esskay Can Do

BORING MITERING
SANDING RIPPING
GRINDING CROSS CUTTING
DADOING BEVEL RIPPING

Esskay Manufacturing Co.

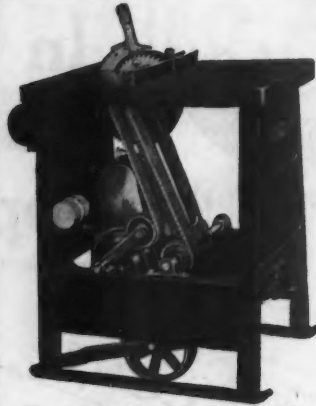
327 Second Ave., North
MINNEAPOLIS, MINNESOTA

I WANT MORE INFORMATION

Name _____

Street _____

City _____ State _____



One man moves it (wheels provided).

WHY SAW LUMBER BY HAND?

When You Can Take A Power Saw Out On Every Job
The Saving You Make With Its Use Is A Real Profit

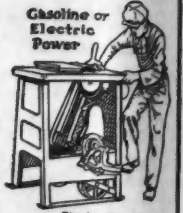
Here is a Powerful, Portable, Carpenter, Sawing Machine not dependent on electric service or skill of the operator. Will cut rafters, studs, stairhorses and bridging; square long dimensions as fast as you can handle the lumber. For trimming sash, doors, screens, fitting casing and flooring. Will do those smooth, accurate jobs with 50% of the cost of hand fitting.

Cross Cuts, Rips, Miters, Dados

Furnished with either gasoline or electric power, or both. Gasoline equipment weighs 300 pounds and is positively without vibration. Runs all day long on a couple of gallons of gas and a little oil. Will saw as much lumber as a crew with hand saws. Build 1928 buildings 1928 way.
If you will write, we will make you a trial offer that will interest you. Delivery from stock or warehouse near you.

Manufactured by

4445 Royalston Ave., D. W. ONAN & SONS, Minneapolis, Minn.



Starter Provided



Two men load it.



FOUR of a thousand REASONS WHY

You Should Own

THE FARRAND RAPID RULE

1. A dignified companion for your watch, coiled neatly in a nickel-plated cup, this six-foot measuring stick fits snugly in the vest-pocket.

2. With slight pressure of thumb and forefinger, you have instantly available six inches—or six feet of accuracy.

3. It is RIGID. You can measure flat surfaces, vertically or horizontally. It supports itself, cantilever fashion, for about five feet from the held end.

4. It is FLEXIBLE. You can measure circumferences with the Farrand Rapid Rule. You can bend or twist it without harm.

Possessing the desirable features of both the wooden rule and the steel tape, without their many limitations, THE FARRAND RAPID RULE is in every way

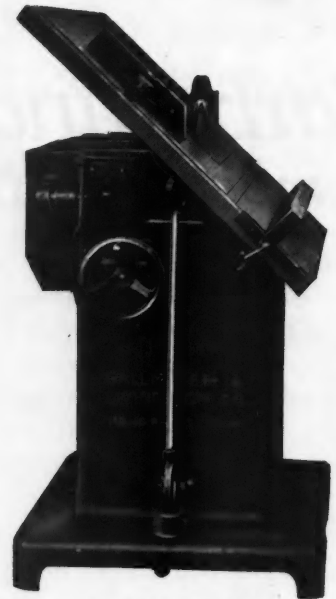
A MODERN TOOL FOR MODERN CRAFTSMEN

Price \$5.00

Ask Your Dealer or Write

HIRAM A. FARRAND, Mfr.

Room 639 A, 149 Broadway
New York City



The Greatest Yet Built For Contractors

The Gallmeyer & Livingston motor on arbor universal saw bench is the most advanced saw-bench obtainable and is especially built for high speed production. It provides the maximum of speed, accuracy and compactness at the very minimum cost.

The motor on arbor construction eliminates belts, gears and flexible couplings and gives the most efficient and most positive drive possible to obtain.

It is the first machine of this type suitable for operation with lighting current. It is portable—easily moved from place to place. Send for descriptive circular.

GALLMEYER & LIVINGSTON CO. 206 Straight Avenue
GRAND RAPIDS, MICHIGAN



The New "YANKEE" No. 2100

Is Made for Those Who Appreciate the Best.
Built Like a Precision Tool

There has never been a brace like it—works like a watch—but unbreakable. Dust-proof! Moisture-proof! Quick, positive shifter. The chuck is a two jaw and holds any bit (round, square or taper) up to 3/8" capacity. Handles of hard rubber. Won't warp, shrink, crack or bind. Top handle is ball-bearing.

Must Be Handled To Be Appreciated.
Have Your Dealer Demonstrate It To You.

NORTH BROS. MFG. CO., PHILA., PA.



The Master Slide Rule



Makes "Inside" Measuring Easy

Made especially for all difficult inside and outside measuring. Any length from 2 to 8 feet. Finest boxwood. Extra legible markings.

Cut out "guesswork"—use the MASTER SLIDE RULE and always be accurate—exact—safe! This scientific measuring device is the last word in rules. No rule supersedes the MASTER SLIDE RULE for accuracy and simplicity.

Here's an advertising idea for dealers in building materials. Get our quantity prices on these rules with your name printed on each rule and give them to your clients to measure for the material or equipment you supply.

For taking inside measurements order a MASTER SLIDE RULE from your dealer, or if he does not carry them, write directly to us.

MASTER RULE MFG. CO., 821 E. 136 St., New York City

BEAVER

COMBINATION
WOODWORKER



12
MACHINES
IN
ONE

DOES
THE WORK
OF AT LEAST
FIVE MEN

CUTS
CUTTING COSTS 80%

Write for Free Folder B.A.B-4

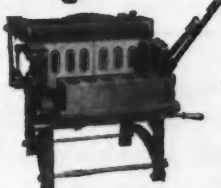
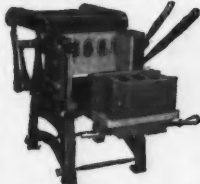
HUTCHINSON MFG. CO., INC.
MAIN OFFICE AND FACTORY, NORRISTOWN, PA.

CONTRACTORS Make Double Profits!

You can use your slack or spare time making Block, Brick or Tile and make double profits. You can increase these profits by using your output in your own building operations. Your returns on the surplus over and above your own requirements, sold to others, will soon pay for the small investment required for SUCCESS equipment. With SUCCESS machines you can make highest quality products at low cost. Full information in SUCCESS Book sent free. Write today.

SUCCESS BLOCK MACHINE

Will equip you for making the approved three core block in five sizes and in three new designs. With it you can supply all building requirements. Makes accurate block of true dimensions and of normal wet mixture. Equipped for hand or power. Send for catalog and our new low prices.

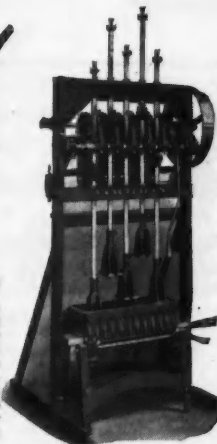


SUCCESS TILE MACHINE

You can lower construction costs with this machine. More and more builders are now demanding units that are easy to handle and lay up quickly. This machine produces high quality tile in three sizes, in three distinctive designs, and makes two at each operation. Large capacity, either hand or power. Catalog gives prices and specifications.

HEAVY DUTY TAMPER

Saves one to two men's labor. Doubles output of Block, Brick or Tile. Can be used on any one or all three machines. Insures greater density of product, and more uniform high quality. Semi-automatic in operation. All movements controlled by one lever. Heavy rigid construction. Channel steel frames, reinforced and electrically welded. Send for catalog giving full details.



CONCRETE EQUIPMENT CO.
550 Ottawa Ave., Holland, Mich.

Catalog Tells All—Write Today

NO DEPOSIT REQUIRED

USE—TEST—COMPARE
a "Sterling" Convertible Wye Level
Phila. Model No. 40
on your job for 10 days at our expense.

The "Sterling" is built sturdier to insure accuracy, permanence of adjustments, longer life, and eliminate maintenance costs. The special features enable you to save money by doing more work in less time.

You be the judge—
TRY it before you BUY it.

Designed and Made by

WARREN-KNIGHT CO.
136 N. 12th St., Philadelphia, Pa.
USED EVERYWHERE

Compare a "Sterling" with YOUR idea of what the BEST Level should be—
No expense of any kind.
Express charges prepaid.
No obligation to purchase.

Return this coupon with your letterhead

WARREN-KNIGHT CO.

136 N. 12th Street - Philadelphia, Pa.

I am willing to TRY a "Sterling" on my job at your expense.

Send me Bulletin FL-24—illustrating the "Sterling"—describing the many ways it can be used—giving details of free trial offer and easy terms on which I can secure it.

Name.....

Address.....

Business.....



Patented.

Gold Medal
Highest Award

Sonqui-Centennial International Exposition—1926

Crofoot SCREEN TACKER

Try This Crofoot Screen Tacker
5 Days FREE

and begin to profit by the advantages of this modern device which knows no speed laws and will operate 24 hours a day without extra pay. Many times the speed of ordinary hammer and tacks.

Fully Guaranteed

Holds 78 staples at one loading. Reloads completely in 3 seconds.



**J. B. Crofoot
Company**
P. O. Box 783
Chicago, Illinois

Crofoot Screen
Tacker
only \$9.75
(postpaid when check
accompanies order.)

Price included 10,000 genuine Crofoot staples. If tacker does not prove satisfactory in five days, return at our expense and your money will be refunded.

THERE'S A BIG DIFFERENCE BETWEEN A KENNEDY BALL BEARING SAW

and the Ordinary Plain Bearing Kind That Cost Less and Sill for Many

Before paying big money for a high priced saw rig, get full particulars about the Kennedy Utility Saw, the little saw that is doing the big saw's work. Sturdy enough to be belted direct to a gasoline engine or motor car engine. Operates from a light socket where current is available. Takes saws up to 6 inches.

Rips, Cross-cuts, Grooves,
Mitres, Sands, Drills, Grinds.
2'x8' Threat For Dado and
Moulding Cutters

Quickly pays for itself.
Without motor \$25.00.

Your money back if it fails to
please you.

Send for Catalog

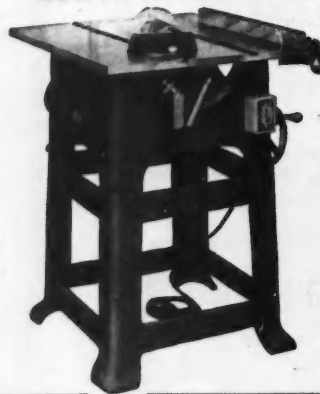


RALPH KENNEDY
111 N. 7th St.
Philadelphia

SAW FAST—SAVE MONEY

With this
"OLIVER"

Portable Saw Bench



It operates from the light socket. The saw raises and lowers for depth of cut and tilts for angle sawing, allowing the table to remain level and at its natural working height at all times. Cuts 2 1/2" deep, with 8" saw. Takes 1/2" dado heads. One user who makes perfect fits for glue joints on the machine says, "Work is many times easier. Able to do a better job than was possible with hand tools. Sawed edges are as smooth as if dressed by a plane." Ask for the new "Oliver" Junior Line Catalog which describes this machine as well as the complete line of "Oliver" Portable Machines.

OLIVER MACHINERY CO.
1099 Canby St., Grand Rapids, Mich.

Made \$2700 on \$97.00 Investment Making Porch and Garden Furniture

H. G. Young, of New Jersey, cleared \$2700 in spare time, with two UTILITY Molds—A Louisiana man cleared \$1334 on an investment of \$53—Mr. Browning, a contractor, made \$761. An Illinois man says, "My business is growing and I will be compelled to discontinue my other work." Materials cost but a few cents—Selling prices range from \$3 to \$21. Others are enjoying a profitable business, supplying the growing demand of homes, estates, parks, cemeteries and public buildings for permanent porch and garden furniture. The "UTILITY" book started them on the way to big profits. Let it start you, too. Either spare time, part time or full time basis. Easy to make—complete instructions in catalog. Send for "UTILITY" book today—Also machinery catalog of Brick, Block and Tile Machines.

CONCRETE EQUIPMENT CO.
500 Ottawa Ave., Holland, Mich.



Send for Catalog

ZIMMERMAN PATENT IRON BASE

NO MORE
WATER SOAKED
BASES

The Zimmerman Patent
Iron Base prevents rotting of
wood columns.

The Zimmerman is the only
base having center bearings.
Lifts the column from 1 1/4 to
6 inches off the floor, allowing
the air to circulate between the
column and the floor. Water
runs off without wetting the bot-
tom of column. Specify this
base by name.

S. CHENEY & SON, Manlius, N. Y.

If

YOU DO NOT FIND
WHAT YOU WANT

in the AMERICAN BUILDER,
write us and we will try to
get it for you.



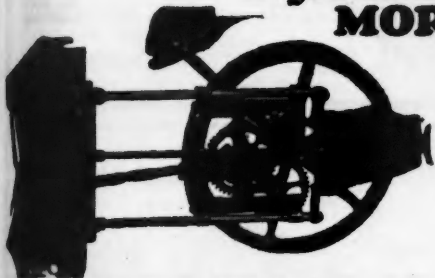
It Does an Hour's Work in 6 minutes!

Here's a machine that will do in six minutes what the best carpenter can scarcely do in an hour with brace and chisel—cut two perfect, smooth-bottomed mortises. In other words, if you pay \$1 an hour for labor this machine will save you from 40 to 42 cents a mortise.



But the Champion Mortiser does not require highly skilled labor to operate it, and that means a still bigger saving to the owner. A saving that in a day's run means real money—a saving big enough to actually pay for the machine in less than ten hours as many contractors have proven!

The CHAMPION MORTISER



Let us show you why. Try it on our 15-day trial offer. Money back if not satisfied. Send for free literature.

Colgan Machinery & Supply Co.
404 Hayden Bldg.,
COLUMBUS, OHIO

YOU have heard a lot of big claims about

FLOOR SURFACING MACHINES

Now Write To **NATIONAL** and get the facts



Sold on Easy Terms

WORKS FASTER

Makes More Money for You

Because the National surfaces two to three times as many square feet per day as other machines, IT MAKES MORE MONEY for you. It also costs less to buy and stands up better.

No Waves—A Perfect Finish

The National gives a better finish everywhere. Sands uneven floors as perfectly as even ones. Surfaces right up to the quarter round—no side roller required. The best machine for old floors.

No Extras to Buy

Delivered to you fully equipped with everything needed to operate the machine—sandpaper included.

- 5 Day Free Trial
- 5 Year Guarantee.
- 10 Months to pay without interest.

NATIONAL SANDING MACHINE CO.
4567 Diversey Ave. Chicago, Ill.

Send me literature telling me how I can increase my profits \$20.00 to \$45.00 a day with the National.

Name.....
Address.....
City..... State.....

COSTS LESS

MAIL COUPON TODAY



Paintair MACHINE and Pneu-Gun

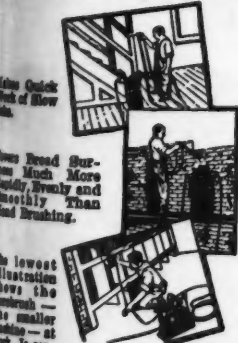
Paint by Machine and Do a Week's Work in One Day

\$100.00 DOWN

Immediate Delivery on Your Own Terms

We show our confidence in the Paintair Machine with Pneu-Gun Atomization by sending it to you on the recommendation of your banker or on part payment, because we depend on the utility and efficiency of the equipment to sell itself after you get it. Motor driven, \$299.00 Complete. Gas engine driven, \$315.00 complete.

Further information page 227 Sweet's Engineering Catalog.



Most Quick Work of Blow Gun.
Covers Broad Surfaces Much More Rapidly, Evenly and Smoothly Than Hand Brushing.
The lowest illustration shows the Atomizer—the smaller machine—at work. It carried as easily as a kit of tools, but is just as complete as Paintair Machine. Price \$149.50, \$50.00 down—balance on your own terms.



Make more by serving more

Do your leveling and plumbing the modern, accurate way. Mistakes are always costly. By actual experience you can save an average of \$2.00 a day or more on every job as a result of the speed and accuracy possible with this specially designed Beckmann level and transit.

A Genuine Beckmann More Cannot Be Said

Beckmann instruments are known the world over. They are noted for precision and accuracy—for their sturdy construction and long life.

This model is designed for the use of builders and contractors. It cuts time and mistakes in leveling buildings, floors, walls

and foundations—in running lines for fences, streets and ditches—in surveying lots and locations.

Easy to learn to use. Big volume makes the price very low.

Write for our booklet "Low Priced Precision"

The L. Beckmann Co.,
548 Jackson St.,
Toledo, Ohio.

Please send me your book, "Low Priced Precision."

Name.....
Address.....
City.....



MELLISH-HAYWARD Co.
Manufacturers, Established 1894
211 W. AUSTIN AVE. CHICAGO, ILLINOIS

Please send me Catalog 105 and full details on cutting painting costs with the Paintair Machine and Pneu-Gun.
Name.....
Address.....

Electric Capstan Winch—
for all purposes.



WINCHES

Safety Worm Geared Winches
—made in eight sizes, 100 to 6000 pounds capacities.

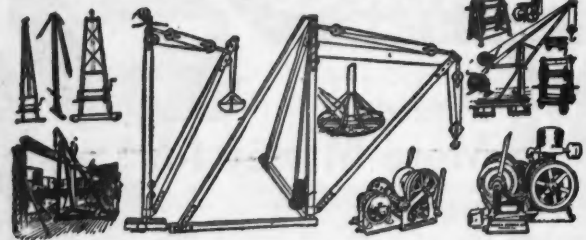
Manufacturers of winches for all purposes. Power, Electric and Hand Winches. For Motor Trucks, Tractors and general purposes. Also Lifting Jacks and Rollers for Lumber Trucks.

Write for Bulletins and prices. State for what purpose winch is to be used, and weight of load to be lifted.

Manufactured by
Stimmel Winch & Machine Works
Works and Offices: 562-66 W. 22nd St. New York City

We Mfg. A COMPLETE LINE OF BUILDERS' DERRICKS and Winches



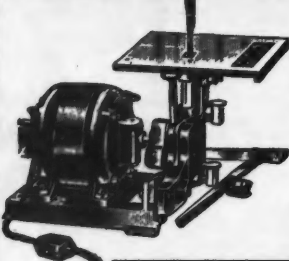
WE SEND DERRICKS ON TRIAL TO RELIABLE CONTRACTORS
OUR MOTTO IS SATISFACTION OR DERRICK RETURNED

Write for Circular No. 2 with illustrations, descriptions and best prices on our complete line. Sagen Builders' Derricks are built of the best Crucible Steel and Malleable Iron Fittings which makes them light, strong, safe and durable. The derricks will please you, and probably more than pay for themselves on the first job. Get one on trial.

SASGEN DERRICK CO., 3101-3125 W. GRAND AVE.
CHICAGO, ILL.
NEW YORK OFFICE—130 West 42nd St.

Sawing Jobs Simplified

The International MOTOR SAW



does everything a bench saw should do. Cross cutting, mitering, ripping, beveling, scroll work—inside and outside—all are accomplished without changing blades or parts. Press the button and start sawing. Ideal for carpenters, builders, shop and home owners, manual training, etc. Portable, weighing less than 50 pounds.

Write for particulars.

The International Stamping Company
Dept. B
400 North Leavitt Street, Chicago, Illinois

A TOOL FOR EVERY JOB



This Combination Woodworker takes care of all your work. No other equipment is needed. Detachable lathe makes it portable. Get this complete workshop equipment and watch your PROFITS RISE.

Write for Particulars.

Kornau Machine Co.
Gulow and Vandalia Sts.
Cincinnati, : : Ohio

KEYSTONE—Concrete Mixer of Merit

New 1928 Models now ready.

Distributors and dealers wanted



GRAY IRON FOUNDRY CO.
Reading, Penna.

FORSTNER BITS

BRACE & MACHINE

THE FINEST Tool Manufactured for important wood work.

Specially adapted for Hardwood operations; indispensable to the High Class Carpenter and for Cabinet and Pattern Works.

Manufactured by
THE PROGRESSIVE MFG. CO.
TORRINGTON, CONN.

Special Offer

A sample bit up to 1 inch in diameter will be mailed postage prepaid, upon receipt of 75c to any woodworker or carpenter.




THE SUPERIOR SPEEDSTER

This machine should save you 100 hours on every job.

Will Eliminate Hand Sawing On Your Job

Because it is built with swinging arbor and tilting table it is the ideal machine for the builder. The Speedster may be powered with gasoline engine or electric motor and so can be used anywhere.

This machine is as easily moved as a wheelbarrow and so can always be moved to the work rather than bringing the work to it.

New bulletins describing the Speedster are ready—send for one.




Jones Superior Machine Co. 1260 W. North Ave.
CHICAGO, ILL.

Waterston's Aluminum Vise

The handiest and most practical vise made for the Carpenter. Weight, only 2 lbs. Easily attached to end of Bench or Horse by tightening thumb screw. Holds boards, windows or doors plumb or horizontal. Both Screws work in Steel Bushings, making a strong, serviceable vise.

J. M. WATERSTON—424 Woodward Ave., Detroit, Mich.
Send for our No. 25 Catalog showing a complete line of Carpenters' Tools.


\$3.75 Postpaid



PROFITS With IDEAL HOISTS

Save money wherever there is a rope or cable to pull. Made in two sizes, 1,200 to 2,000 lbs. capacity. Reversible and non-reversible—single and double drum, with or without engine. Write today for complete information.

UNIVERSAL HOIST & MFG. CO.
196 East 14th St. Cedar Falls, Iowa

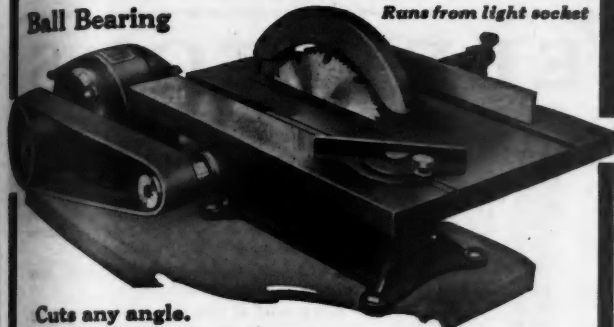


Safety - Saw

RIPS - CROSS CUTS - MITERS - JOINTS
GROOVES - RABBETS - TENONS - BORES
MORTISES - DADOES - BEVELS - SANDS

Ball Bearing

Runs from light socket



Cuts any angle.

Table tilts to 45° and raises for any depth of cut or Dado

Handles 2½" Material with 8" Saw

Do your work on this machine and save many hours hard labor. The Safety Saw will handle 80% of your inside trim, closets, shelving, cabinets, etc., and will pay for itself on the first job.

WITHOUT MOTOR \$35.00
WITH ½ H. P. MOTOR \$67.00

SAFE TOOL MFG. CO., Bridgeport, Pa.

Metal Table
14' x 17'

\$48⁵⁰

Including: ¼ H. P. A. C. Motor, Belt, Pulley, 8 in. Saw, 2 Guides, Aluminum Guard.

Free Trial
Write for Folder SAB-

QUICK ACTING *The Taylor* SELF LOCKING
TRADE MARK

Clamps

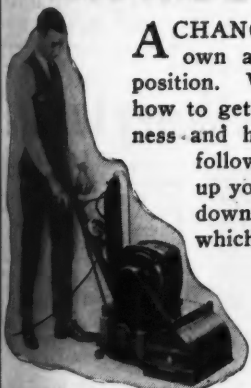
An Investment
Not an Expense

The quickest and strongest clamps made. That's why they're the standard in U. S. Government Works and in such concerns as General Electric Co., Dodge Bros. Motor Co., Victor Talking Machine Co., etc.

We can PROVE it in your own shop. Write today.

James L. Taylor Mfg. Co.
Poughkeepsie, N. Y.

Get Into the Floor Surfacing Business While the Field is Fresh



A CHANCE to have a business of your own and still retain your present position. Write today—let us tell you how to get started in this Paying Business and how you can make good by following our method in working up your business. Free Trial. Part down—balance easy payments, which machine will earn for you. \$40 to \$50 a day easily earned with the AUTO-MATIC—the result of 16 years' manufacturing experience. Will save the wages of 5 men and do

work that will stand inspection against the light. SKF ball bearings, carefully protected from dust—Whitney Silent Chain—Roller Pressure Regulator—Force Feed Lubrication—Edge Roller Border Work Eliminated—Steel, not cast iron construction—all dust taken up on forward operation with New Vacuum Nozzle—all working parts inclosed.

The Little Automatic Surfacing Machine is a wonder for removing varnish from desk tops, counters, etc., or for all sorts of new work.

WAYVELL CHAPPELL & CO.
28-40 Jackson St., Dept. Z WAUKEGAN, ILL.

Free Trial G & B Model 45

Fully Equipped and Guaranteed
Convertible
Transit-Level
for
Universal Service

Easiest to Operate

\$50⁰⁰

Instruction Book
FREE



Approved by
Thousands of
Satisfied Users

Ask Your Dealer

or
Mail Coupon

Terms

GEIER & BLUHM, Inc., 670 River St., Troy, N.Y.
Please send me free Booklet and Information.

Name Address



**FOREST CITY BIT & TOOL COMPANY
MANUFACTURING**



Improved Hollow Mortising Chisel No. 28
Registered Trade Mark "FOREST CITY"

High Quality Hollow Mortising and Wood Boring Tools that give service and satisfaction. Write for new catalog illustrating and describing our complete line of FOREST CITY tools.

Incorporated 1890

FOREST CITY BIT & TOOL CO., ROCKFORD, ILL., U. S. A.



Router Bit No. 400

SAVE 1/2 ON YOUR MILLWORK



SIMPLICITY

Combination Woodworker

Performs 28 different, practical operations. 8 machines in one. Makes all kinds of wooden articles, including lawn, garden and built-in furniture way below usual cost.

1000 Useful Salable, Big Profit Designs Illustrated in Our Plan Books. Write for money-making information.

**COMBINATION WOODWORKING MACHINE CO.
551 W. Randolph St. Chicago, Ill.**

ELEVATORS

**Electric and Hand Power
Dumbwaiters
Builders Hoists
Material Elevators**



Electric Power Units, or Attachments, for Hand elevators. Don't fail to investigate this most efficient device.

Our Elevators are time and labor savers, easy to install.

State kind of elevator wanted, capacity, size of Platform, and overall height as well as platform travel.

**Sidney Elevator Mfg. Works
SIDNEY, OHIO**

The Contractor's Delight

Specially Designed for Contractors



**Special
Contractors
Keyboard
&
Specification
"Tabulator"**

WRITING up specifications on the L. C. SMITH SPECIAL CONTRACTOR'S model is easy. All the symbols and extra keys contractors and architects need. Time-saving, convenient specification tabulator. Equally good for business correspondence. The world's only ball-bearing typewriter; longest wearing; easiest running; turns out best appearing letters, specifications, carbons.



**\$3
DOWN**

Yours for 10 Days FREE

To show you what a difference this specially designed contractor's model makes, we'll send you a Re-Newed L. C. Smith for a 10-day trial. You can save \$40 by buying now. Write today for details.

**SMITH TYPEWRITER SALES CORP.
294-360 East Grand Avenue Chicago**

BETTER CONCRETE WALL'S



Low in Price, High in Efficiency

50% LABOR SAVING 50%

Our MOLDS build perfect concrete buildings any design solid or double walls.

Send for literature

**GREENE'S STEEL MOLDS
NORTH MILWAUKEE, WIS., U. S. A.**



Open



Closed

TAYLOR COLLAPSIBLE HORSES

Taylor Collapsible Horses are easily taken apart or assembled. Can be carried or delivered to different jobs conveniently.



Can be made any size, length or height.

Will carry 8,600 pounds without a creak. No nails or braces.

Send for Complete information

**TAYLOR COLLAPSIBLE HORSE CO.
730 West Harrison St. Chicago, Ill.**

What Contractor Has Money to Burn?



You would never sink money in one wood mixing box after another and put up with the inconveniences, delays, wasted material, etc., if you knew how little HELTZEL steel mixing boxes cost. Perfectly smooth bottom and sides. Nothing to catch the mixing mix. Last indefinitely. Three sizes. Write for prices.

**The Heltzel Steel Form & Iron Company
Warren, Ohio**

HELTZEL

The ZAGELMEYER SYSTEM

Is the only one that produces perfect concrete blocks. ELIMINATES COMPETITION — INCREASES PROFITS. No other block made like it, therefore you have no competition. PRODUCTION COST LOW — PROFITS BIG. Produces block, brick and tile for less than any other. Your locality may still be open. Write today.

1102 S. Henry St. ZAGELMEYER CAST STONE BLOCK MACHINERY CO. Bay City, Mich.

MULTIPLE MOLDS FOR CASTING BLOCK -- BRICK -- TILE



5x8x12 Tile

Send for Free Catalog

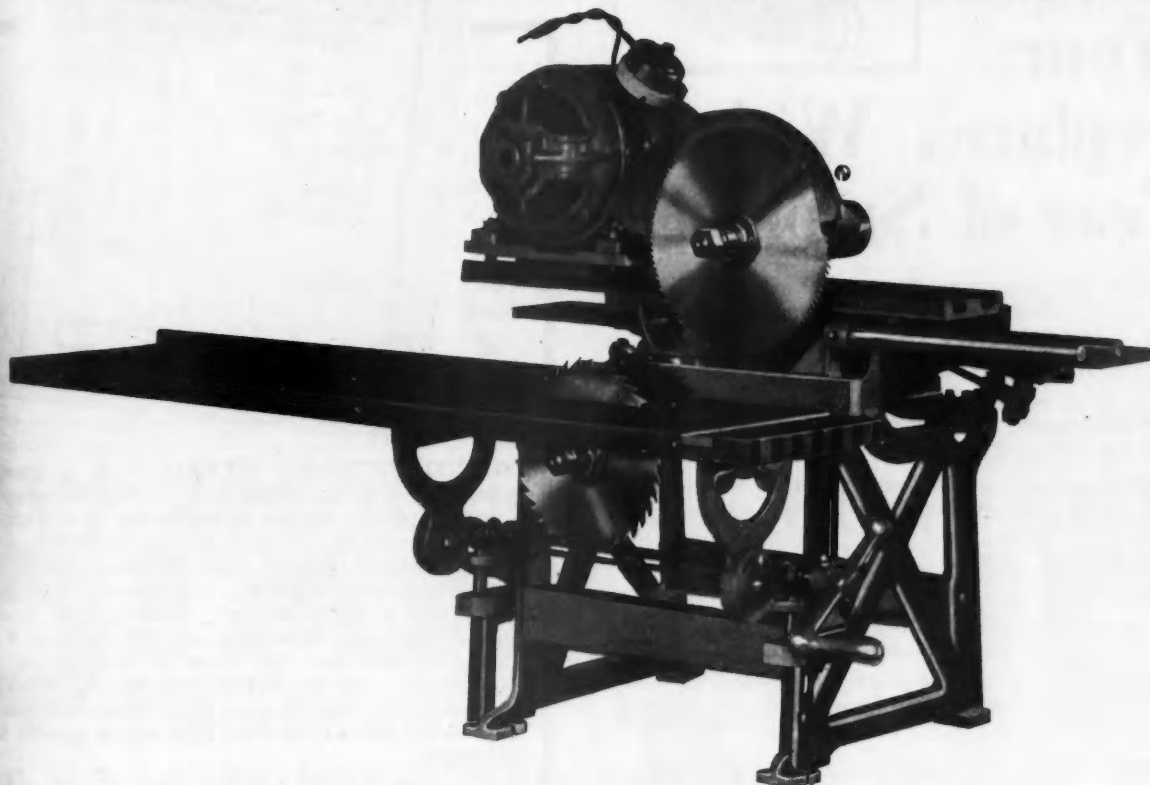


Waterproof Block with Beautiful Face

LET THE Master-Universal-Woodworker INCREASE YOUR PROFITS

SAFE DURABLE RELIABLE EFFICIENT

Made in Four Sizes---Driven by Electric Motor or Gasoline Engine



FOR A DOZEN YEARS

THE MASTER WOODWORKER has been an old and tried friend to thousands of contractors and builders.

The call for the MASTER comes from those who demand **SAFETY**, and **RELIABILITY** as well as **EFFICIENCY**.

The only Portable Universal Woodworker with a twelve year record of **DURABILITY**.

Convenient Payment Plan—Let the MASTER pay for itself out of the **PROFITS** it earns.

MASTER WOODWORKER MFG. CO.

ESTABLISHED 1917

**Congress and Brush Sts.,
DETROIT, MICH.**

**MASTER
WOODWORKER
MFG. CO.**

**Congress & Brush Sts.,
DETROIT, MICHIGAN**

Send me your new catalogue
and easy payment plan.

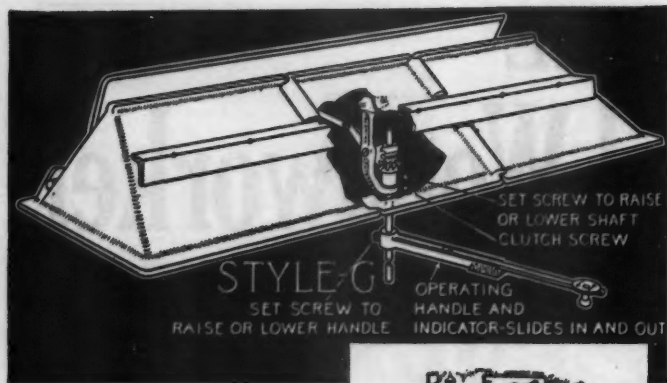
NAME.....

ADDRESS.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

The MASTER is twelve machines in one. It performs with ease and efficiency the following operations:
Cross Cutting, Ripping, Dadoing, Stair Housing, Jointing, Routing, Planing, Rabbeting, Boring, Grinding, Moulding, Tenoning, Mitering, etc.

1928
BIG BO
S
ta, es-
cor
ity, as
ks
cy
50%
crete
d or
LDS
S. A.
urn?
ver sink
ood mi-
ther and
nconv-
vated
ron know
ELTZEL
ses cost.
bottom
thing to
g tool.
Three
prices.
el Fern
pany
Ohio
L
ful Fee



Build Your Fireplaces Without Fear of Smoking

The proper functioning of a fireplace depends on a number of factors, none more important than the Damper which controls the draft and location of the damper in the fireplace throat.

Realizing this, contractors and builders, home owners and architects, are increasingly depending on the Colonial Damper which compels correct fireplace construction in the throat—the vital part—controls draft perfectly, avoids smoking, and gives every possible guarantee of an absolutely satisfactory fireplace.

The new Style "G" of the Colonial head may be set high up in the throat—two, three, or even more courses above the opening—where best results of draft control and regulation only are to be secured.

A crack or open joint mars the beauty of a fireplace. It cannot be easily pointed up without showing and disfiguring the facing. Avoid such a possibility. Use the PATENTED COLONIAL DAMPER, the only Damper made which provides for expansion and contraction.

The Colonial Damper, Ash Trap, Ash Pit Doors, etc., at your dealers.

To avoid vital errors that ruin a fireplace, write for a blueprint and free construction details.

GLO-HOT GRATE ELECTRIC-HEATS



Fits any fireplace, looks like live coals, heats from concealed "Glo-Bar" under hood.

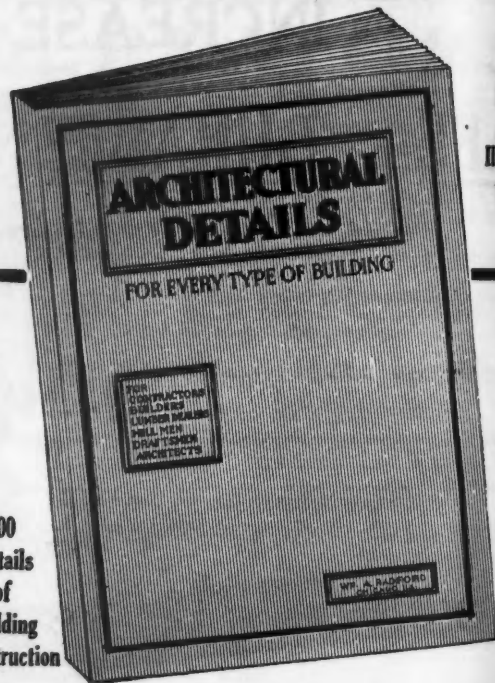
Send 10c for "The Best of Pals" The Wonder Instrument. Gives Plumb, Angle, Level, Square—Many other uses.

Colonial Fireplace Company
4604 Roosevelt Rd. Chicago, Illinois

Colonial Head-Throat and *Damper*

THIS BIG BOOK FREE!

with your New or Renewal Subscription to AMERICAN BUILDER



160 Pages of Illustrations

500 Details of Building Construction

"ARCHITECTURAL DETAILS" is a complete manual of building practice, as applied to carpentry, construction and the use of millwork. It is a remarkable collection of full-page plates, accurately drawn and reproduced to exact scale, showing clearly every detail of modern building construction and finish. These plates make plain the framing and construction of residences of every type. This volume, 9 x 12 inches in size, has 160 pages of illustrations. All dimensions, angles, measurements and joints are made so plain and are so well illustrated that the man on the job will have no difficulty or trouble doing the work.

How to Get Your Free Copy

Send in your new or renewal subscription for one year at the regular rate of \$2.00 and we will send you "ARCHITECTURAL DETAILS" absolutely FREE, postpaid.

Offer good in U. S. and Canada. Add \$2.00 to Foreign Countries.

USE THIS COUPON FOR YOUR ORDER

THE AMERICAN BUILDER A. B. 4 28
1827 Prairie Ave., Chicago, Ill. 1927

Enclosed find \$2.00 for which Enter Renew my subscription to The AMERICAN BUILDER for one year and send me free and postpaid, a copy of your book, "Architectural Details."

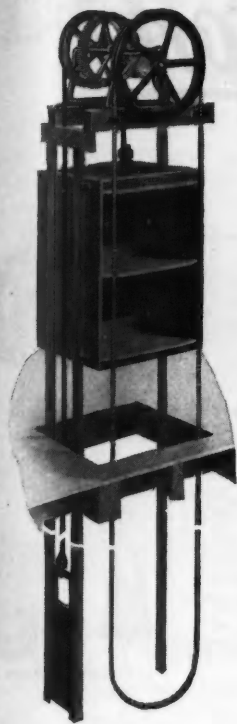
Name.....

STREET OR.....

BOX No.....

P. O.....STATE.....

My occupation is (Check Only One)
 Dealer Builder Architect Real Estate Miscellaneous



TYPE "FDCG"
Geared Dumb Waiter

SEDGWICK DUMB WAITERS AND ELEVATORS — FOR ALL PURPOSES

Sedgwick Hand Power Dumb Waiters and Elevators, designed and built by specialists of thirty-six years experience, insure satisfactory service and lowest ultimate cost.

Consult us for recommendations, blue-prints, and prices covering equipment best adapted to your needs.

Standard sizes ready to ship, special sizes built to meet any requirements and shipped on short notice.

STANDARD SIZES — READY TO SHIP

Dumb Waiters	Elevators
20 inches x 16 inches	3 feet x 3 feet
24 inches x 20 inches	3½ feet x 3½ feet
28 inches x 24 inches	4 feet x 4 feet
32 inches x 28 inches	4½ feet x 4½ feet
36 inches x 36 inches	5 feet x 5 feet
	6 feet x 6 feet

SEDGWICK MACHINE WORKS
154 West 15th Street NEW YORK

WRITE FOR NEW CATALOG

SAVE 20% TO 40% ON FUEL BILLS

DIAMOND METAL WEATHERSTRIP

Can Be Installed in New or Old Buildings—Pays for Itself by Savings in Fuel and Decoration

A PERMANENT PROFITABLE YEAR ROUND BUSINESS

METAL WEATHER STRIPPING

SOME FINE TERRITORY STILL OPEN

We desire to establish dealers to sell and install our product in every county in every state in this country where we are not now represented, and to those who can give us the volume of business that will justify it, we will give exclusive sale. Hundreds of men in the Diamond Weatherstrip business are making from \$3,000 to \$6,000 every year. Write us your particular qualifications, location and business now.

-----USE THE COUPON BELOW-----

The Diamond Metal Weather Strip Co.,
Columbus, Ohio.

Gentlemen: Send me your Dealers' Proposition, please.

AN AGENCY IS PROFITABLE, INVESTIGATE NOW.

Name

Address

City....., State.....

Business Now.....

ADDRESS AT ONCE
THE DIAMOND METAL WEATHER STRIP CO.
COLUMBUS, OHIO.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Ackerman-Johnson



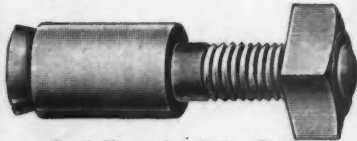
Expansive Screw Anchor



Ackerman-Johnson

Expansive Screw Anchors hold greater load, particularly an agitated load, than any other expansive fastening made.

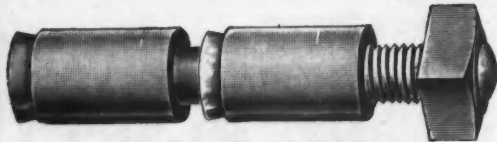
To drill the concrete and complete a fastening requires but a fraction of the time taken for any other method and the saving is often more than the cost of the anchors.



Stud Expansion Bolt (Single)

Ackerman-Johnson

Expansive Screw Anchors excel equally for fastenings to all the vitreous substances from plate glass to concrete and rock and that excellence has been substantially recognized by the larger contractors and construction engineers of the United States and parts of the world abroad.



Stud Expansion Bolt (Double)



Single Screw Clamping Pipe Strap



Concrete Insert

Ackerman-Johnson Co.

625 W. Jackson Blvd., Chicago
53 Park Place, New York City



Old European Slate Roofs and Flagging

Beautify your home and garden by using Knickerbocker Slate flagging in the veranda and garden walks. Exactly the same old slate roofs of Europe with their rich colorings and strong natural texture may be had by the use of Knickerbocker Slate.

Roof and slate flagging suggestions upon request

Knickerbocker Slate Corp.

E. J. JOHNSON, President

355 W. 26th St., New York



DOLLARS FROM DIRT!

Washing Houses and Buildings with the

NIELCO Lightning Washer

(PATENTS PENDING)

The only machine on the market to wash houses, buildings or in fact any painted surface, tile terra cotta, glazed brick and stucco.

Do you know that 90% of the houses painted each year are painted because they are dirty and NOT because they need paint?

When a house needs paint,—to wash it the NIELCO Way saves paint and money.

Every home owner is interested.

\$20 A DAY!

is easily made with one machine and two ordinary laborers because as much work can be done in five minutes as is done with ordinary hand methods in an hour.

NIELCO Cleaning Compound used exclusively with the Lightning Washer assures you of uniformity in results and is GUARANTEED harmless to hands, clothing, paint, lawn or shrubbery.

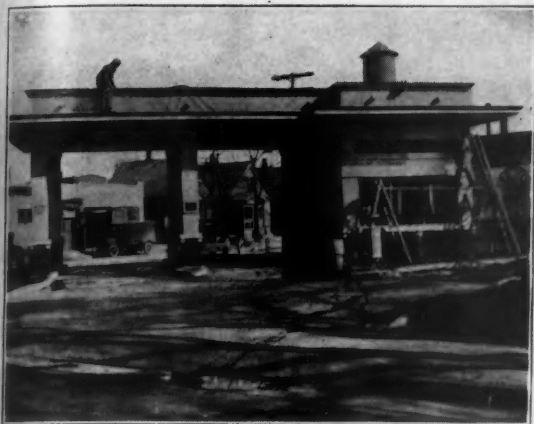
EXCLUSIVE TERRITORY

is available to contractors and builders who can see the money making opportunity of this business under a liberal franchise that protects you against competition. We help you get started, show you how to get business, how and where to advertise, how to make estimates, in fact tell you all the details of how we started here and the substantial profit made every day on every machine in operation.

NIELSEN INDUSTRIES, INC.

5419 CLOTTE AVENUE

DETROIT :: MICHIGAN



Washing Stucco

WRITE NOW

for proposition telling how you can have your

Expenses Paid to Detroit

and see for yourself how the Nielco Lightning Washer operates, and how it will make profits for you.



Join the Crowd...

- Costs Less
- No More Weights
- No More Pulleys
- No More Cords to Break
- No More Spring Bolts

*Over 10,000
Contractors and
Builders save 2/3
of Window Costs
They Sent 50c for
a Sample pair of the
**THE AUSTRAL
SASH SUSTAINER***

Send 50c and this Coupon for Sample

AUSTRAL WINDOW CO., 101 Park Ave., New York

Gentlemen: Please send me a sample pair of AUSTRAL SASH SUSTAINERS, for which I am enclosing fifty cents (this covers actual production cost, postage and handling).

Name _____ Company _____

Address _____

American Steel & Wire Company's

WIRE FABRIC

"The Steel Backbone for Concrete"



823,000 sq. ft. of Wire Fabric reinforces the Concrete floor slabs in the new Equitable Trust Building, New York City

THE Equitable Trust Building in the heart of New York's Financial District is built to endure for all time. Each construction feature represents the best available in the special field.

The short span concrete floor arch, WIRE FABRIC REINFORCED, is positive protection against fire, load and quake.

Wire Fabric is produced from high strength cold drawn steel which insures absolute safety. Being furnished in rolls it provides continuous reinforcement, properly distributed, and is easily and quickly installed. There is a style or weight for every floor load. WIRE FABRIC is also furnished in light weights for beam wrapping or temperature reinforcement. Write for complete information.

SALES OFFICES

- | | |
|---|--------------------------------------|
| CHICAGO.....208 So. La Salle Street | NEW YORK.....30 Church Street |
| CLEVELAND.....Rockefeller Bldg. | BOSTON.....Statter Bldg. |
| DETROIT.....Foot of First Street | PITTSBURGH.....Frick Bldg. |
| CINCINNATI.....Union Trust Building | PHILADELPHIA.....Widener Bldg. |
| MINNEAPOLIS-ST. PAUL..... | ATLANTA.....101 Marietta Street |
|Merchants Nat'l Bank Bldg., St. Paul | WORCESTER.....94 Grove Street |
| ST. LOUIS.....506 Olive St. | BALTIMORE.....32 So. Charles Street |
| KANSAS CITY.....417 Grand Avenue | BUFFALO.....670 Elliott St. |
| OKLAHOMA CITY.....First Nat'l Bank Bldg. | WILKES-BARRE..... |
| BIRMINGHAM.....Brown-Mark Bldg. |Miners Bank Bldg. |
| MEMPHIS.....Union and Planters Bank Bldg. | *SAN FRANCISCO.....Russ Bldg. |
| DALLAS.....Praetorian Bldg. | *LOS ANGELES.....2087 E. Slauson Av. |
| DENVER.....First National Bank Bldg. | *PORTLAND.....777 Nicolai St. |
| SALT LAKE CITY.....Walker Bank Bldg. | *SEATTLE.....4th Ave. So. & Conn St. |
- *United States Steel Products Co.



Pointing the Way to Easier Selling

Steadily increasing faucet consciousness on the part of the home maker has resulted in a real demand for faucets that are modern, that are made to last and to harmonize with the rest of the home appointments.

And Hays faucets, with their improvements of design, ideas of convenience and beauty fill the new demand and answer the thought of the home maker. Thus Hays faucets are the real factor in helping to sell the modern home buyer.

The Hays Basin faucet illustrated is a splendid example of the beauty of Hays faucets and their completeness of design. Has both drinking glass and soap receptacle which is a feature found only in Hays faucets. Finished in nickel or the new chromium plating, a beautiful and lasting finish that supercedes old fashioned nickel that will tarnish, always bright.

Hays faucets are sold only through the wholesaler of plumbing supplies to the plumbing store. Be sure to look for the name Hays on your faucets.

Write for folder describing this new line of faucets and our concealed bathroom equipment. Sent free.

WHEN YOUR FAUCETS ARE MARKED HAYS YOU CAN FIND NONE BETTER

THE HAYS MFG. CO., Liberty & 12th Sts., Erie, Pa.

HAYS FAUCETS



Builder, Cary A. Hawkins, Syracuse, N. Y., WEATHERBEST sidewalls in two shades of Gray with Green on roof

To Sell on Sight . . .

Build your next small home with WEATHERBEST Stained Shingles. Have sidewalls in gray, white or brown with a harmonious WEATHERBEST roof, and you will realize that superior WEATHERBEST colors and quality make an instant appeal to prospective purchasers. Such quality of material creates confidence with prospects that the rest of the building and equipment is above the average.

This superior quality is due to the WEATHERBEST policy of using only 100 per cent edge grain red cedar shingles broken out of the bundles and dipped by hand. The colors are uniform and beautiful and there is a full penetration of stain. Thorough inspectors replace any imperfect shingles and repack bundles to full count.

Let us send sample colors with Portfolio of color photographs showing a wide range of WEATHERBEST Stained Shingles in combinations for sidewalls and roofs. Enclose 10 cents (stamps or coin) to cover mailing and handling. Ask for data and service on remodeling and reshingling.

WEATHERBEST STAINED SHINGLE Co., Inc., 137 Main St., North Tonawanda, N. Y. Western Plant—St. Paul, Minn. Distributing warehouses in Leading Centers.

3rd Prize Winner
WEATHERBEST Old Home Remodeling Contest.



Modernized home of Mr. Madison Gilbert, Owosso, Mich. Shingles for sidewalls cost \$145.35. Other remodeling cost \$920. Entire labor \$155.05. Increased valuation—over \$2,000.

One of 39 prize winners in the famous WEATHERBEST Remodeling Contest of 1927.

Weatherbest
STAINED-SHINGLES
FOR ROOFS AND SIDE-WALLS

Send for folder showing other prize-winning homes, and ask how our Service Dept. can help you with suggestions for individual jobs or remodeling business.

WEATHERBEST STAINED SHINGLE Co., Inc.
137 Main St., North Tonawanda, N. Y.
Enclosed is 10c (stamps or coin). Please send WEATHERBEST Color Chart, Portfolio of Photographs showing WEATHERBEST Homes in color. Also enclose book on Modernizing and Reshingling Old Homes. Also send poster showing prize winners in contest.
Name.....
Address.....

KV

Clothes Closet Fixtures



K-V Clothes Closet Fixtures make the small clothes closet possible. Small clothes closets save money on construction costs. K-V Fixtures actually help sell homes, and thousands are being installed every year. Now endorsed by leading architects, contractors and builders. By all means find out what this convenience fixture will mean to you this spring.

KNAPE & VOGT MFG. CO. Grand Rapids, Mich.

Use this Information Coupon

Knapé & Vogt Mfg. Co.,
656 Richmond St., Grand Rapids, Mich.
Please let me have full details as to how I can use the K-V Fixture and save money on my home building program. Send me information of various styles, sizes, prices and discounts.
Name
Address
Architects Contractor Builder

Premier Telephone Cabinet, No. 25. Revolving doors, opening at a touch, expose telephones at right height. Hinged drawer accommodates directory and provides shelf for phone when sitting. Bell box and wires completely hidden but readily accessible.



EVERY designer and builder should have a copy of the 1928 catalog of Premier Built-In Conveniences. Consider this telephone cabinet: It adds many dollars in value to the home, yet it costs only a few dollars. It is convenient, practical, handsome, one of those tricky, appealing, clever little conveniences that make you think "why hadn't

someone thought of *that* before?" Yet this is only one of the famous Premier family. Others are a folding breakfast nook, ironing boards, a seat that disappears into the wall, divider or buttress cabinets, a flexible unit-built kitchen cabinet, and every one comes *complete*, in a carton, ready to install and finish. You should know more about Premier Built-In Conveniences. *May we send you catalog and specifications.*



PREMIER

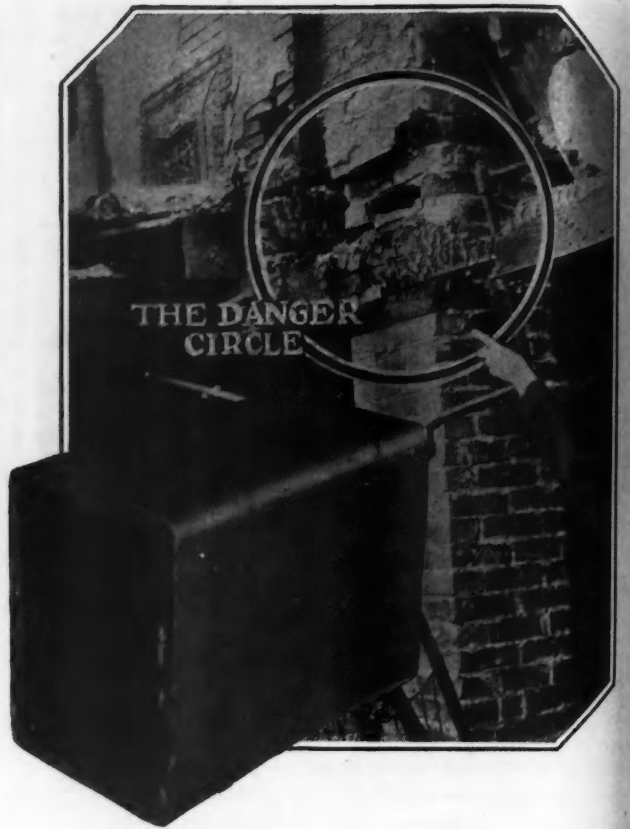
Standardized WOODWORK

2211 Mills Street



El Paso Texas

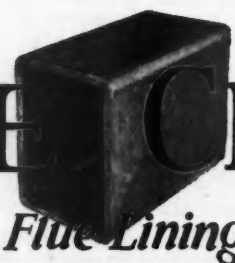
Premier Built-In Conveniences are stocked by jobbers in principal cities and sold by leading retail lumber dealers. There is probably a dealer near you.

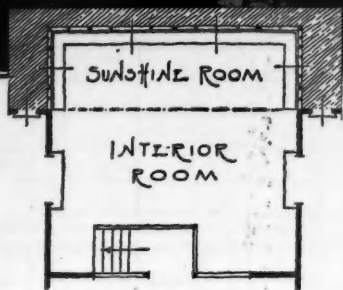


Fire clay flue lining would have prevented three out of ten residence fires

CLAY PRODUCTS ASSOCIATION
CONWAY BUILDING
Chicago

FIRE CLAY
Flue Lining





Clinch the Sale With a Sunshine Room Like This

IT looks like a millionaire's plaything, but in reality adds only \$515 for materials to the cost of the house.

Plus cost of erection, which is easily done by your own men.

Or we will quote you on the job complete, including erection.

It is 7½ feet wide and 25 feet long.

As the plan shows, this Sunshine Room is set against the open side of an interior room. It gives more than double its own area of sun-drenched indoor garden and living room space.

Worth twice its total cost in increased property value.

Vastly more than that in sales appeal.

We've worked it all out from your side. Let's get down to brass tacks together.

Hitchings Company

General Offices and Factory:
ELIZABETH, N. J.

New York 136 Liberty Street	Oak Lane, Philadelphia 6709 North Broad Street
Wilkes-Barre 402 Coal Exchange Bldg.	Boston 161 Massachusetts Ave.
Albany, N. Y. Postoffice Box 921	

(Please Print Plainly Name and Address)
Send me full facts about your Sunshine Room.

Name _____

Address _____



ARCHITECTURE

Learn at Home

HUNDREDS of men have become successful architects through the home-study courses of the International Correspondence Schools.

The textbooks are complete and practical, and are so well regarded by educators that they are used by many leading colleges and technical schools, including Cornell, the Iowa State College of Agriculture and many others.

Geo. A. Griebel, who was a stone cutter when he enrolled with the I. C. S., is now making \$10,000 a year and was Superintendent of General Construction for the State of Ohio for two years before he opened his own office.

Ralph M. Snyder, another I. C. S. student and a former clerk, earned \$12,000 the first year he started in business for himself as an architect. The Equitable Building in New York City was erected under the direction of I. C. S. Student H. S. Gardner, then Superintendent of Construction for the Thompson-Starret Co.

The first step these men took was to mark and mail an I. C. S. coupon similar to the one below.

Make your start the same way and make it right now. We'll gladly send you free information about the I. C. S. courses in Architecture or any other course in which you are interested.

Mail the Coupon Today for Free Booklet

INTERNATIONAL CORRESPONDENCE SCHOOLS

"The Universal University"

BOX 8163-C SCRANTON, PA.

Without cost or obligation, please tell me how I can qualify for the position, or in the subject, before which I am marking X:

- | | |
|---|--|
| <input type="checkbox"/> Architect | <input type="checkbox"/> Navigation |
| <input type="checkbox"/> Architectural Draftsman | <input type="checkbox"/> Salesmanship |
| <input type="checkbox"/> Reading Architects' Blueprints | <input type="checkbox"/> Advertising |
| <input type="checkbox"/> Contractor and Builder | <input type="checkbox"/> Window Trimmer |
| <input type="checkbox"/> Building Foreman | <input type="checkbox"/> Show Card, Sign Painting |
| <input type="checkbox"/> Concrete Builder | <input type="checkbox"/> Business Management |
| <input type="checkbox"/> Structural Engineer | <input type="checkbox"/> Private Secretary |
| <input type="checkbox"/> Structural Draftsman | <input type="checkbox"/> Business Correspondent |
| <input type="checkbox"/> Plumber and Steam Fitter | <input type="checkbox"/> Bookkeeper |
| <input type="checkbox"/> Heating and Ventilation | <input type="checkbox"/> Stenographer and Typist |
| <input type="checkbox"/> Plumbing Inspector | <input type="checkbox"/> Higher Accounting |
| <input type="checkbox"/> Foreman Plumber | <input type="checkbox"/> Commercial Law |
| <input type="checkbox"/> Sheet Metal Worker | <input type="checkbox"/> Common School Subjects |
| <input type="checkbox"/> Civil Engineer | <input type="checkbox"/> Mathematics |
| <input type="checkbox"/> Surveying and Mapping | <input type="checkbox"/> English |
| <input type="checkbox"/> Electrical Engineer | <input type="checkbox"/> Illustrating |
| <input type="checkbox"/> Electric Lighting and Railways | <input type="checkbox"/> Railway Mail Clerk |
| <input type="checkbox"/> Electric Wiring | <input type="checkbox"/> Civil Service |
| <input type="checkbox"/> Telegraph Engineer | <input type="checkbox"/> Mining Engineer |
| <input type="checkbox"/> Telephone Work | <input type="checkbox"/> Metallurgy |
| <input type="checkbox"/> Mechanical Engineer | <input type="checkbox"/> Gas Engine Operating |
| <input type="checkbox"/> Mechanical Draftsman | <input type="checkbox"/> Textile Overseer or Supt. |
| <input type="checkbox"/> Machine Shop Practice | <input type="checkbox"/> Traffic Manager |
| <input type="checkbox"/> Stationary Engineer | <input type="checkbox"/> Automobiles |
| <input type="checkbox"/> Chemist | <input type="checkbox"/> Agriculture |
| <input type="checkbox"/> Pharmacy | <input type="checkbox"/> Poultry Raising |

- | |
|----------------------------------|
| <input type="checkbox"/> Spanish |
| <input type="checkbox"/> French |
| <input type="checkbox"/> Radio |

Name _____
Street and No. _____

City _____ State _____

Occupation _____

If you reside in Canada, please send this coupon to International Correspondence Schools Canadian, Limited, Montreal, Canada.

How to Make Permanent Concrete



Formula for using Anti-Hydro for hardening and waterproofing concrete

This "ANTI-HYDRO" formula for permanently hardening, water-proofing and damp-proofing concrete, stucco and cement mortar has stood unchanged for 24 years. During all this time it has been successfully used on every type of concrete hardening, water-proofing, acid-, alkali-, and oil-resisting work and has never failed to produce extremely satisfactory results.

Being a liquid integral compound, "ANTI-HYDRO" mixes readily with the gauging water without the aid of skilled labor. It is easy and economical to use. It so enriches the concrete that one troweling is usually sufficient for a perfect finish. It also strengthens the concrete and accelerates the hardening of cement, thus eliminating costly overtime work.

"ANTI-HYDRO" is the oldest compound of its kind in existence. Use it on your next job for real, lasting satisfaction.

KEEP THIS TABLE FOR REFERENCE

	Cement	Sand	Stone	Anti-Hydro to water	One gallon covers
Mass Concrete.....	1	3	4	1:10 or 15	2/3 yards
Plaster Waterproofing and Floor Topping	1	2		1:10	1"-100 sq. ft.
Stucco Undercoats...	1	3		1:10	Both coats 80 to 100 sq. ft.
Stucco Finish Coats..	1	2 1/2		1:10	
Brickwork Above Grade.....	1	3		1:15	1000 brick or 50 cu. ft.
Brickwork Below Grade.....	1	2		1:12	700 brick or 35 cu. ft.
Acid Resist. Tank Lining.....	1	1	1-grit	1:8	3/4"-80 to 100 sq. ft.
Road Work.....	1	2	4	1:10	2/3 yards
Grout.....	1			1:3	600 ft. 1 coat

ANTI-HYDRO WATERPROOFING CO.
265 BADGER AVENUE, NEWARK, N. J.

SAVE \$50.00 TO \$100.00 ON YOUR HEATING EQUIPMENT



We are MAKERS, not dealers, and will supply you with a Hess Welded Steel Furnace, with all pipes and fittings at a lower cost than you can buy from mail order houses or other dealers.

Let us prove it. A sketch of your house will enable us to make a heating plan and estimate. No obligation on your part, and we're glad to do it.

Hess furnaces burn any fuel, never leak and deliver all the heat.

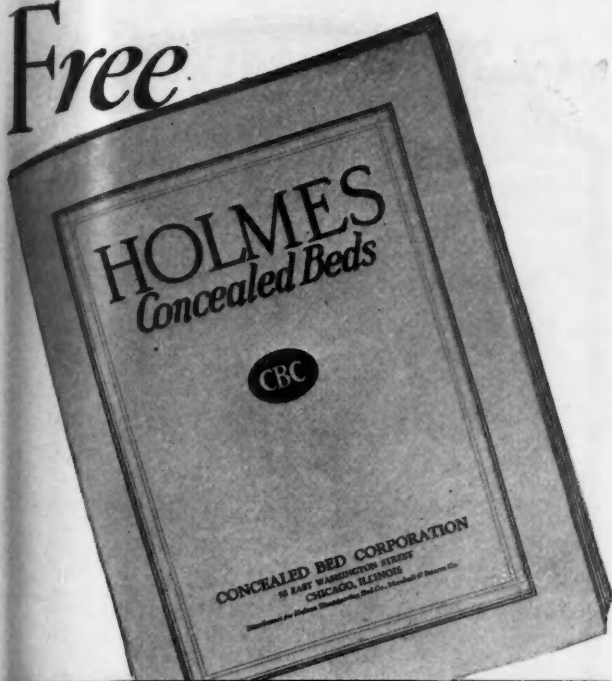
On the market 54 years, and better than ever.

Ask for our 48 page booklet on heating.

HESS WARMING & VENTILATING COMPANY
1220 South Western Avenue, Chicago, Illinois

BRANCHES AT: DETROIT CINCINNATI MILWAUKEE

Free



To
**ARCHITECTS-BUILDERS
and CONTRACTORS**

In the modern compact homes and apartments of today every room must serve to the utmost.

A guest room is essential—also the play-room, den and sewing-room. Holmes Concealed beds answer the problem of providing these essential extra rooms in every home—large or small.

Holmes Concealed Bed Experts have gathered together in a special Concealed Bed Catalog valuable suggestions and ideas that every designer and builder of modern homes should have. This book of facts on how to add extra rooms without the cost of building them is FREE for the asking. Mail Coupon below now.

*An Economic Problem Solved
the HOLMES Way*

The building dollar of today must be carefully spent, if full value is to be received. Present day homes must of necessity be compact. Therefore Holmes Concealed Beds solve the problem of making the available dollar meet the home building demand.

CONCEALED BED CORPORATION

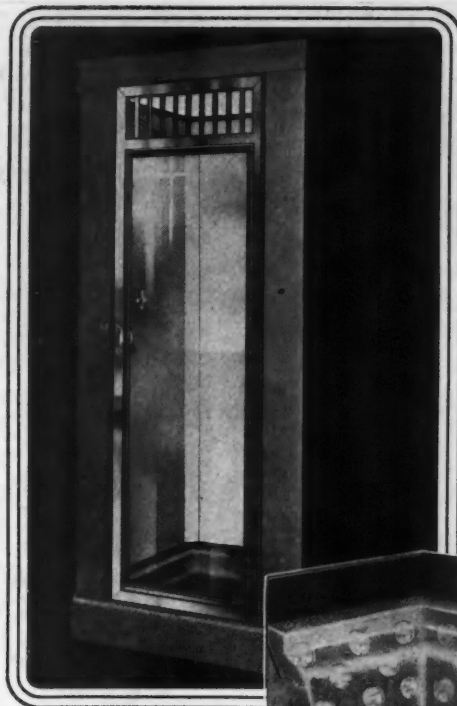
Distributors for Holmes and Marshall & Stearns Co.

58 East Washington St., CHICAGO, ILLINOIS

*Mail this
Coupon
To-day*

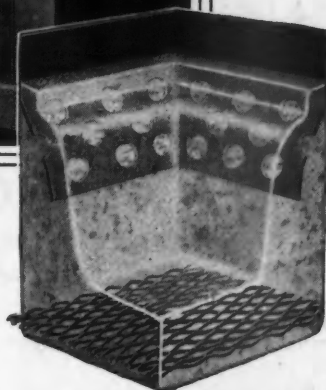
CONCEALED BED CORPORATION, Dept. 42
58 E. Washington St., Chicago, Illinois
Gentlemen:— Please send a copy of the Catalog on Holmes Concealed Beds and how they solve the Extra Room problem.

Name _____
Address _____
City _____ State _____
Occupation _____



The "Admiral" with "Nautilus" Door.

Corner section, Fiat Receptor. Integral with Compartment. Leakproof Construction. (Patent applied for.)



**The Popular
Bath Made Practical**

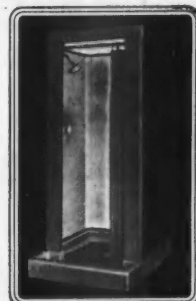
Fiat

SHOWER BATH COMPARTMENTS

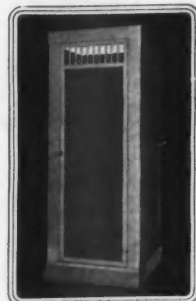
The public is educated to and demands showers and a FIAT Shower Bath Compartment is the last word in bathing facilities. It greatly simplifies the problems of installation and cost. Every residence, apartment, summer home, etc., should have one.

The FIAT Shower Bath Compartment represents the greatest progress made in shower enclosures. Selling points galore: Doubles the bathing facilities of the home—construction positively leakproof—no trouble from building settling—rigidly built and distinctively finished—sanitary throughout—slipproof floors—a complete unit within itself—shipped knockdown—installed in minimum space—adaptable to new or old buildings. Furnished with glass doors or shower curtains. Sold exclusively through plumbing trade—complete installation by plumber.

For information on the additional good points about FIAT Shower Bath Compartments, send the coupon for a free copy of our beautiful, illustrated 32-page catalog.



The "Admiral" with Extended Receptor



The "Ensign" with "Marine" Door.

FIAT METAL MFG. CO.
1201 Roscoe St., Chicago, Ill.

FIAT METAL MANUFACTURING CO.
1201 Roscoe St., Chicago, Ill.

Please send me full information regarding Fiat Shower Bath Compartments.

Name.....
Street.....
City..... State.....

Please check—I am a Contractor , Plumber , Architect , Dealer , Realtor , Home Owner



OAK FLOORS
enhance their value

Houses laid with "Perfection" Brand Oak Flooring command a better price on the open market.

You can depend upon "Perfection." In two modern plants operated by skilled lumbermen, only the finest oak is selected. After proper seasoning and kiln-drying, it is perfectly milled and matched so that it lays smooth and stays smooth. It is graded and handled so carefully that upon arrival anywhere, it is always in perfect condition. Leading lumber dealers gladly feature this nationally advertised brand.

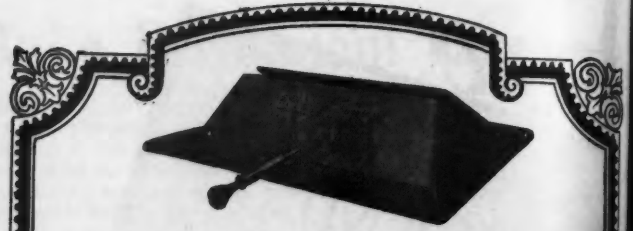


There's a size and grade for every structure, new or old. Write today for full particulars

ARKANSAS OAK FLOORING CO., Pine Bluff, Ark.

PERFECTION
Brand Oak Flooring

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



*How to Avoid
Fireplace Troubles*

THERE are three common, yet serious fireplace troubles experienced by many builders. They are poor draft regulation, smoke and soot and insufficient heat. Back of these three evils are a dozen causes which, if the builder knows, he can eliminate during the construction.

Most of these fireplace troubles are due to faulty construction and poor equipment.

To help builders avoid fireplace evils, we have published the Donley Book of Successful Fireplaces. In this book the causes of fireplace ills are thoroughly discussed, and their preventions pointed out. It also contains construction plans, 59 fireplace designs and description of Donley Successful Fireplace Equipment. A copy will be sent to you upon receipt of 25c in stamps or coins to cover mailing.

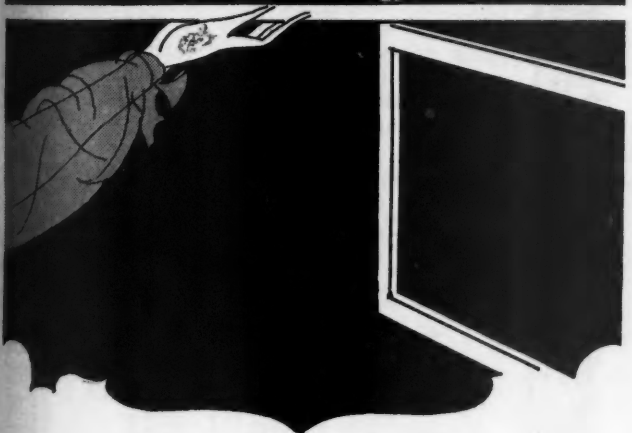
The Donley Brothers Co.
13910 Miles Avenue • • Cleveland, Ohio

REG. U. S. PAT. OFFICE



tha
come o
Pella R
come o
Pella R
come o

PELLA
Rolscreens
TRADE MARK



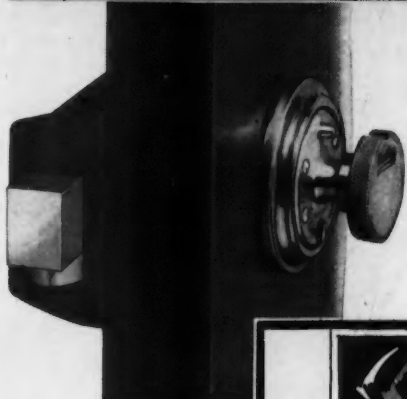
**Window Screens
that are "never taken down"
No Spring Screening Duties**

ROLSCREENS roll up and down
ROLSCREENS are all-metal construction

Pella Rolscreens are the modern note in window screens. They overcome one of the most troublesome and expensive seasonal household duties. Rolscreens are permanent, built in with the windows. Up, they are protected and completely out of sight. Down, they are almost invisible—no unsightly frames. Learn more about these ideal window screens. A valuable feature in any home or building.

ROLSCREEN CO., 33 Main Street, Pella, Iowa
Illustrated Rolscreen Booklet Sent on Request

This Modern Door Lock



**Uses
No
Keys!**



No more worrying about lost, mislaid and forgotten keys! No more getting yourself locked out of your home! No more fumbling for keys when loaded down with bundles! With Dudley Combination Keyless Door Locks you can forget keys forever and can enjoy a greater degree of protection than you have ever known. The Dudley can't be picked; but provides bank-vault security for your home, garage, silver chest and other places where valuables are stored. Principles proved sound on 4,000,000 Dudley Keyless Padlocks now in service. A patented audible dial with notched neutral starting point assures your opening the *Dudley* in 4 seconds even in the dark! Send coupon below for descriptive folder and prices. No obligation.

DUDLEY Keyless Door Lock

Agents Wanted Wonderful opportunity to get into highly profitable business for yourself. Start in spare time. A few territories still open for capable men of high character. Send coupon now for special free lock offer open to agents only!

DUDLEY LOCK CORPORATION
Dept. 84, 26 North Franklin Street, Chicago

Tear Off and Mail This Coupon Now!
Dudley Lock Corporation (Dept. 84-J)
26 No. Franklin St., Chicago, Illinois.
 Without cost or obligation to me, please send complete data on Dudley Keyless Door Locks.
 I want facts on your special Agent's Free Lock Offer and big money-making proposition.
Name
Address
City..... State.....



**It pays to provide this
convenience for all casements**

If you show prospective buyers that every casement is equipped with a smooth-running, quick-acting, automatic-locking Win-Dor Operator, you make a *real impression*—particularly where there are inside screens. For Win-Dor works *through* the screens which consequently never have to be opened. Insects are kept out, drapes remain clean.

Win-Dor Series 25 is particularly suited to use with steel casements. Fits all leading makes without special drilling. Surprisingly inexpensive, very good-looking, comes in all finishes at a wide range of prices. Send for new catalog, just out, showing full line of recently improved casement hardware specialties. Drop us a line today.



**Win-Dor
CASEMENT HARDWARE**

The Casement Hardware Co.

402-A North Wood Street, Chicago

CASEMENT HARDWARE HEADQUARTERS

M **M**
Nature's Permanent Mineral Colors

*1/5th of the
Brick Work is Mortar!*

What about its Color?

EVERY builder recognizes the value of *colored* brick and its use as a means of beautifying the wall. *Most* builders also realize that full advantage of the opportunities for beautifying the wall are not taken as long as the mortar between the brick remains uncolored. One-fifth of the brick work is mortar. Why neglect its color?

So many and varied are the charming effects in brickwork obtainable through Clinton Mortar Colors that they deserve the thoughtful consideration of every progressive builder.

Manufactured since 1887 Clinton Mortar Colors have maintained a place of leadership and are today recognized by architects and leading builders as "standard."

Complete Information regarding Clinton Mortar and Cement Colors and their use will be sent upon request.

CLINTON METALLIC PAINT CO.
 548 Clinton Road, Clinton, N. Y.

Clinton Mortar Colors

CLINTON METALLIC PAINT COMPANY **CLINTON N. Y.**



**"Presto . . .
and it's out of sight!"**

Here's a screen that helps you sell the homes you build - the new Higgin rolling screen!

Demonstrate its superior performance . . . how smoothly and quickly it disappears from sight. Point out its improved construction . . . how taut and even the mesh.

You won't have to explain the household conveniences of this type of screen. Every woman, and man too, fully understands the trouble it eliminates - the storing, removing, painting.

This new rolling screen is every bit as outstanding in its class as are the other types of Higgin screens in theirs - rigid tests and experiments prove it!

And we know you will find it a selling point for your residences and buildings. The coupon will bring full information.

THE HIGGIN MFG. CO.

Specialists in Screens since 1893

General Offices: Washington Ave., Newport, Ky.
Kansas City, Mo., Toronto, Ont.

HIGGIN
ALL METAL
SCREENS

The Higgin Mfg. Co.
502 Washington Ave.
Newport, Ky.

Please send complete information regarding your new rolling screen.

Name _____

Street _____

City _____ State _____

Screens that last longest, cost least -- Higgin Screens last!

Wonder Line

Built-In

SPECIALTIES

The Wonder Line of built-in wall cabinets have many novel features found only in Carlson made cabinets.

We use nothing but the best of materials and the workmanship is unmatched. Our line is complete. Ironing boards (all types), combination table and ironing board, medicine cabinets, telephone cabinets.

THE WONDER
Medicine Cabinet

Regular type or tilting. Venetian Model with adjustable mirror. No hinges. The Venetian Model is made in four standard sizes with or without open shelf recess type, below mirror.



Patents applied for

THE WONDER
Telephone Cabinet

Saves marring of walls when telephone is installed or disconnected. May be placed in a wall between rooms and used from either room. Has special compartment for phone directories. Rough opening 14 in. by 55 1/2 in. Depth required 8 1/2 in.



Patents applied for

THE WONDER KNIGHT
Ironing Board

Fits between standard studs. Made of clear spruce, rigid and lasting. The best buy on the market.

Hugo M. Carlson Co.

Not Inc.

1809 Balmoral Ave., Chicago, Ill.
Telephone Edgewater 6893

Show Room:

B-32 Builders Building



Patents applied for

Please send me further information.

NAME

ADDRESS

STATE

SEND DEALERS NAME



Sell Homes Easier Rent Them Faster

CARDINAL TOGGERY RACKS give the space of two closets in one. They keep toggery smooth, hats in shape, shoes off floor—all in plain sight, within easy, instant reach. Cardinals lighten women's work. There are thousands in use everywhere. Housewives like Cardinals—because they add a finishing touch to homes and make them really modern.

Cardinals are important selling and renting features. Their cost is small, their benefits great. They are of heavy-gauge metal, all-nickeled, strong, beautifully made and look the part of quality—through and through. Attached in a few minutes, fit all doors, last a lifetime.

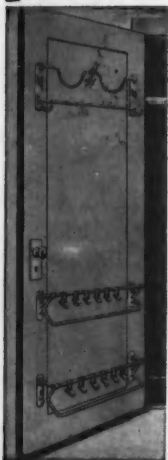
CARDINAL Toggery Racks

are a necessity in the small apartment, an added convenience in large ones—and in all houses, city and country, they not only save closet-room—but make it. You can see for yourself the appeal in them to every family, large or small.

Write today for prices and quantity discounts. For a very small outlay, you can add a big profit factor. Cardinals have a mighty persuasive force—the instant you swing open the closet door. They are certainly a big talking point.

**THE CHARLES FISCHER
SPRING CO.**

244 Kent Ave. Brooklyn, N. Y.
Telephone, Greenpoint 10,000



KIMBALL SA LIGHT ELECTRIC ELEVATORS

Now, a Light Electric Elevator for every class of retail store, warehouses, hospitals, apartments, bakeries, mortuaries, office buildings, factories and other institutions where fast, safe, low cost elevator service is an absolute business necessity.

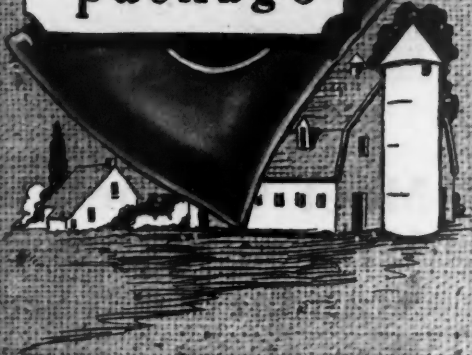
It meets a need for a safe, practical, inexpensive outfit for smaller business institutions.

Furnished complete. Information and prices upon request.



Cloth

The economical
cement
package



What's the *sense*
of throwing away
cents on every
bag of cement?
~~~~~ Order  
deliveries made  
in *cloth sacks*  
and save money

**TEXTILE BAG**

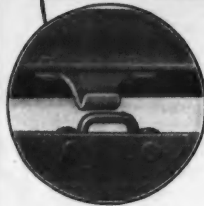
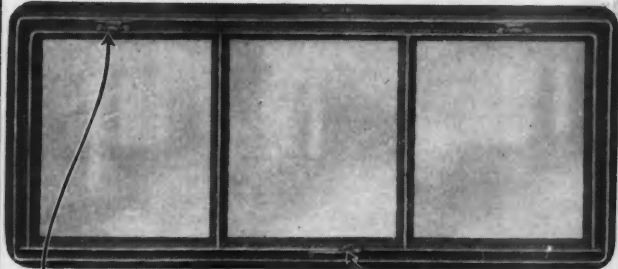
MANUFACTURERS ASSOCIATION  
7310 WOODWARD AVE., DETROIT, MICH



# KEWANEE

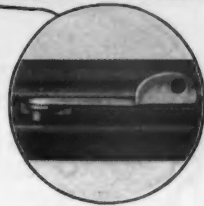
Copper Steel

## BASEMENT WINDOWS



Close up of  
Hanger-Hinge

Improve  
the Value  
of Any  
Property



Improved Cam-  
Action Lock

### 75% More Light and Ventilation Yet Cost No More

Kewanee Copper Steel Basement Windows provide for the basement openings the maximum in the way of durability, attractiveness and convenience at low cost. They convert the dark, gloomy cellar into a well-lighted livable room.

Made of strong compact sections of rust-resisting Copper Steel, Kewanee Windows are not to be compared with the old-fashioned bulky yet frail wood frame and sash.

The cost of Kewanee Windows is small, their advantages many. They are a wise investment for the property-owner, and reflect credit on the architect who specifies, and the builder who installs them.

If you are not familiar with the many advantages afforded by Kewanee Copper Steel Basement Windows, by all means write at once for our new catalog showing the complete Kewanee line.

DEALERS: There are substantial profits in handling Kewanee Copper Steel Basement Windows, because of the big demand. Architects specify them—builders buy upon sight. Send for our agency proposition and liberal discounts.

### KEWANEE MFG. CO.

407 Tremont St.

Kewanee, Illinois

Also Makers of Kewanee Copper Steel Basement Chutes

#### Mail this Coupon for Complete Information

KEWANEE MFG. CO.  
407 Tremont St., Kewanee, Ill.

I am a  
 Builder  
 Architect  
 Property Owner  
 Dealer

Please send me full information regarding  
Kewanee Building Products.

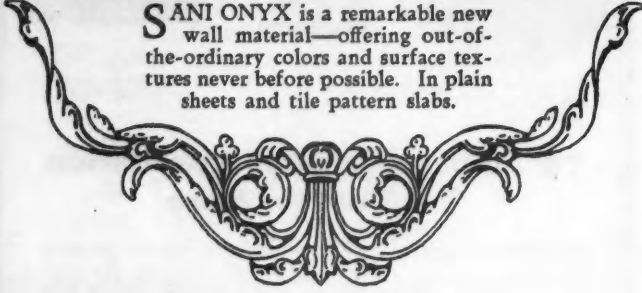
Name.....

Address.....

City..... State.....



**S**ANI ONYX is a remarkable new wall material—offering out-of-the-ordinary colors and surface textures never before possible. In plain sheets and tile pattern slabs.



**Y**OU know how it is in selling homes. People are quick to seek and spot the *unusual* touches.

And Sani Onyx is distinctly and distinctively different. No longer are you limited to commonplace materials and ordinary effects, in designing bath rooms and kitchens.

Sani Onyx lifts the old-time limitations and opens a whole new world of decorative possibilities.

What's more, Sani Onyx, you know, doesn't crack, chip, check or discolor, even after *years* of service. What a talking point that will make!

MARIETTA MFG. COMPANY  
80 Brookside, Indianapolis

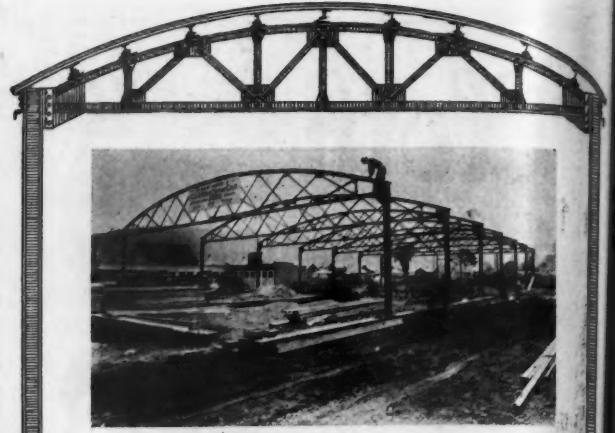


You will want, for your files, the new Sani Onyx book picturing a variety of installations all in full color. Surely you may have a copy. Just drop us a line today.

We have some choice territory available for Construction Houses or representatives. If interested, write for particulars.

Beautiful **SANI ONYX**  
SAVITREOUS MARBLE

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



INTERNATIONAL STEEL BOWSTRING TRUSSES "GOING UP"

## Meet Competition With International Standardized Steel Bowstring Trusses

**T**HE strength and economy of International Standardized Steel Bowstring Trusses has won many jobs for aggressive contractors all over the country. With this construction, you can offer your customers: 1, maximum economy without sacrifice of strength; 2, graceful appearance; 3, a great saving of wall and roof materials; 4, easy erection; 5, superior lighting and ventilating possibilities; 6, minimum fire risk; 7, highest quality and lowest ultimate cost. It will pay you to investigate!

### Help to Reliable Contractors Given FREE—

The International Engineering Department will be glad to co-operate with you in designing plans and figuring estimates—at no cost to you! Just write us the details of your construction problems, and we'll work closely with you to help you land the profitable contracts. Write for free catalog.

## INTERNATIONAL STEEL & IRON COMPANY

Evansville Dept. 18 Indiana

### INTERNATIONAL PRODUCTS

|                 |                  |               |
|-----------------|------------------|---------------|
| Store Fronts    | Public Garages   | Steel Trusses |
| Steel Columns   | Steel Girders    | Steel Windows |
| Steel Ceilings  | Elevators        | Skylights     |
| Sidewalk Lights | Roof Ventilators | Coal Chutes   |

Our Complete Stocks Assure Prompt Delivery

PIO

# BLACKBOARDS

## for All Requirements

Our products include Permaroc, Duroplate, Enduraroc, natural slate tack board and cork board. We positively guarantee the highest quality in all our materials.

We will gladly furnish drafting room details and specifications for your blackboard and bulletin board problems. Architect's details and a list of recommended areas and heights of blackboards covering all school, laboratory and lecture room requirements will be sent upon request.

Our quotations on blackboards and bulletin boards will save considerable money for you.

*Samples sent free on request*

**E. W. A. ROWLES CO.**

2345 So. LA SALLE ST.,  
CHICAGO, - - ILLINOIS



**ROWLES  
TACK BOARD**

**ROWLES  
CORK BOARD**



**"YOU HAVE TRIED THE REST  
—NOW TRY THE BEST"**

# PIONEER

## READYBUILT FIREPLACES

### BRICK --- STONE --- TILE

Shipped from coast to coast—in over 100 beautiful designs—various colors. Send for our latest catalog—which shows and proves why Pioneer Fireplaces are better than others.

## OUR ELECTROFIRE GRATES COST LESS

than you have been paying—and are finished better.

**ORIGINATORS OF READYBUILT FIREPLACES**

- UNION MADE -

**BUILT IN CHICAGO ONLY**

**"Pioneer Made---Made PIONEER"**

*Write us today for full information and prices.*

*Our agents proposition will interest you.*

**PIONEER FIREPLACE & SUPPLY CO.**  
5327 W. Lake St., Chicago, Ill.

Pioneer Fireplace & Supply Co.,  
5327 W. Lake St., Chicago, Ill.  
Please send me complete information on your  
line of fireplaces and equipment.  
Name .....  
Address .....  
Town .....  
State .....

FOREMOST in the development of new electrical devices for theatrical purposes—we have consistently maintained highest standards in manufacturing our lighting specialties. The Line is complete, correctly designed, modern, and dependable in every respect. An illustrated catalogue is available . . . forwarded upon request.

Your inquiries are cordially invited.

**KLIEGL BROS**  
 UNIVERSAL ELECTRIC STAGE LIGHTING CO., INC.  
 ESTABLISHED 1886  
 THEATRICAL · DECORATIVE · SPECTACULAR  
**LIGHTING**  
 321 WEST 50th STREET  
 NEW YORK, N. Y.

Sisalkraft used for closing-in and as a wind-break on stagings is  
*“warmer than canvas  
 and far cheaper” . .*

**C**LOSING-IN doors and windows and as a temporary protection during the course of new construction or remodeling is only one use of Sisalkraft, the tough, strong, waterproof, new material. Contractors who have used it for closing-in and as a windbreak on stagings in large building construction this past winter state that Sisalkraft is warmer than canvas, and decidedly lower in cost.

Send for samples of Sisalkraft and discover its unusual combination of strength, toughness and complete waterproofing. Sisalkraft is so strong that you can't tear it.

The Sisalkraft Co.  
 228 N. La Salle St. Chicago, Ill.

**SISALKRAFT**  
 “MORE THAN A BUILDING PAPER”

AB4—GIV



## HEADQUARTERS

for Peoria's social, civic and business affairs. A beautiful transient and tourist home with cheerful lobby; quiet writing nooks; luxuriously furnished, outside, sleep-insuring guest rooms; well appointed dining halls with unsurpassed cuisine and an unusual type of hearty service—all at no more than you have been accustomed to paying for less than Hotel Pere Marquette and its personnel offer. We invite you and your friends to make this your Peoria home.

### HOTEL PERE MARQUETTE

H. EDGAR GREGORY, Mgr.

Peoria, Illinois

400 ROOMS

400 BATHS

## All the Products

Advertised in these pages  
can be recommended to

### American Builder Readers

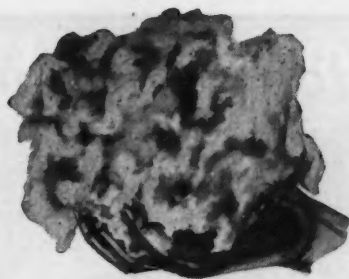
Dealings with these advertisers will  
prove to be highly profitable to you.

Be progressive and investigate what  
these important houses have to  
offer you.

If you are interested in any product  
that is not mentioned here, please  
write us. We will gladly put you  
in touch with the manufacturers  
best fitted to supply your needs.

### American Builder

1827 Prairie Avenue, Chicago



## Insulates Best Says U. S. Bureau

ON YOUR next job, insulate with Gimco Rock Wool. Not only insulates against cold and heat, but also against FIRE, water, vermin and SOUND. Rock wool is listed by the U. S. Bureau of Standards as the most efficient 100 percent fire proof, chemically stable insulator known today. Approximately 90 percent of its volume is DEAD AIR space.

# Gimco

ROCK WOOL

Gimco is Rock Wool at its best. It is produced by drawing molten silica rock into fine, long fibres by a special process which also anneals the fibres, making them tough, elastic and waterproof. This silica rock is found in only one community—Alexandria, Indiana.

### 3 CONVENIENT FORMS

Gimco Rock Wool is available in three convenient forms to meet every need and requirement of installation—Loose; Felted (which we term Flexfelt) and Granulated Rock Wool.

1. **LOOSE ROCK WOOL**—Light, fluffy and easy to handle. Wonderfully adapted for insulating walls and attic floors in new homes or attic floors in old homes. Tucks in easily and quickly between joists or studding. Packed in handy 50-pound bags.

2. **FELTED ROCK WOOL (Flexfelt)**—Easy-handling, blanket-like form in varying thicknesses. Fabricated between metal lathe, providing stucco base when used on outside and plastering base when used on inside.

3. **GRANULATED ROCK WOOL**—Loose Rock Wool ground into uniformly small particles. Ideal for hard-to-get-at, inaccessible applications. Just open handy 50-pound bags and pour in where desired.

Ask your building supply dealer about Gimco Rock Wool. He can show you samples and quote you prices. If your dealer doesn't handle, write us direct.

### Low Cost Will Surprise You!

A better insulator at a lower cost!  
Hard to believe, but it's a fact.  
Don't pay fancy prices for  
ordinary insulators when  
you can get Gimco  
Rock Wool at sur-  
prisingly low cost.



General Insulating and Mfg Co.  
Alexandria, Indiana Send copy of  
free book on Rock Wool Insulation.

*Send To-day for New Book!*

Get All  
the Facts—

Name \_\_\_\_\_  
Address \_\_\_\_\_

# Millions of Square Feet Already Erected

## “LAMELLA” PATENTED Trussless Arch Roofs



Lamella Roof 55' 6" x 98' 6" on St. Aloysius Hall, St. Louis, Mo.



Lamella Roof 60' x 150' on Columbia Tire Service Station, Miami, Fla.

Adopted for auditoriums, dance halls, garages, warehouses, factories, etc., in all parts of the country. Spans up to 150'.

Lamella roofs are thoroughly safe and are quickly and economically erected. Good distribution of light, excellent acoustical conditions and beautiful architectural appearance. Descriptive folder sent on request. See page 216 of this magazine for additional particulars.

Lamella Roof Syndicate, Inc.  
45 West 45th St., New York City

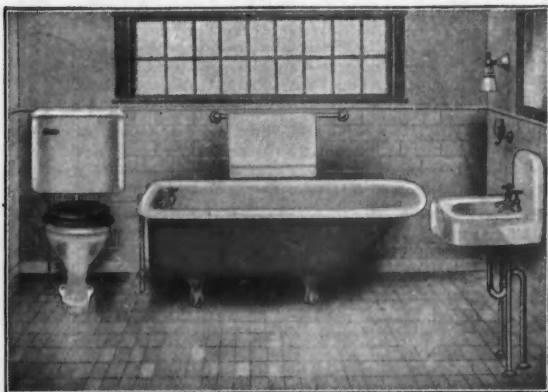
Lamella Trussless Roof Co.  
801 Kirby Bldg., Houston, Tex.

Lamella Constructions, Inc.  
801 Norris Bldg., Atlanta, Ga.

Lamella Trussless Roof Co.  
904 Bank of Commerce Bldg., St. Louis, Mo.

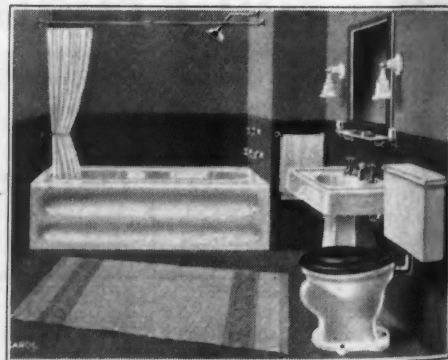
## Representative Bargains from Our New Catalog

### on Quality Plumbing & Heating Material



**The Jewell** An inexpensive high grade outfit of latest style that carries the stamp of perfection, priced very low at..... **\$56**

Bath Tub and Lavatory are cast iron, heavy porcelained and fully equipped. Tub lengths to 5 ft. same price, 26 or 30 in. wide. Closet has deep seal syphon action wash-down bowl.



**The Peerless** Beautiful Complete **\$102**

Highest type of Bathroom. Fixtures are solid and massive. Tub, Closet and Lavatory, heavily enameled inside and out. Closet is deep seal syphon action, wash-down type with jet. Solid porcelain tank. Shower equipment shown \$11 extra.



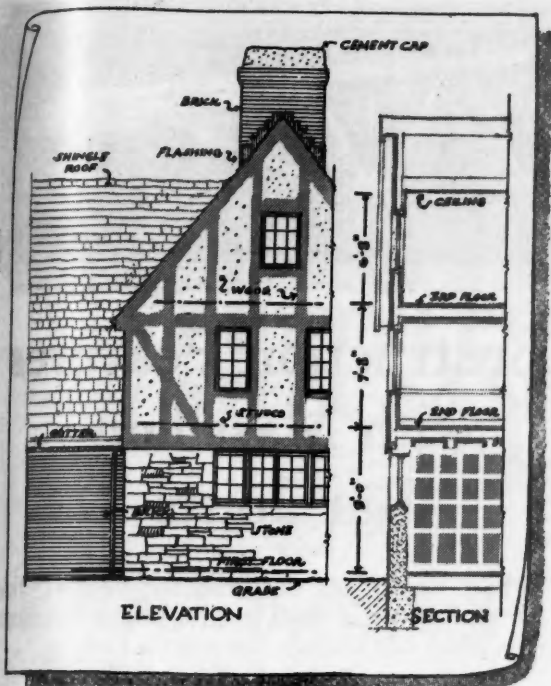
**Hot Water Heating Plant Complete For 6 Rooms**

and bath with 900 ft. Boiler and 275 ft. Radiation of your own choice for only **\$275**  
Larger systems equally as low. Send your plans for estimate—No Charge.

**WHOLESALE PRICES**  
on the best plumbing and heating supplies. Everything **GUARANTEED**, or we refund your money. Only high class goods sold.  
**Prices Always Lowest**  
**CATALOG FREE**

**YOU CAN ALWAYS SAVE MONEY AT KAROL'S**  
and be assured of the best quality of goods and fast service. We carry a big stock and can make immediate shipment. Try us  
**ESTIMATES FREE**

**B. Karol & Sons Co.,** 800-10 So. Kedzie Avenue, CHICAGO, U. S. A.



## Don't Be Satisfied with an Indistinct Blueprint

It is true that we sell a great deal of White Ink for altering blueprints, but to save your own time, to avoid costly errors, be sure that the white lines in your blueprints are clear and sharp by having your tracings made in Higgins' Drawing Inks instead of in pencil.

Each phase of construction,—stonework, brickwork, woodwork, plastering, hardware, plumbing, as well as details, elevations and perspectives can be indicated to very definite advantage in Higgins' Blacks or in the brilliant, waterproof colors. Each has individual characteristics which immediately distinguishes it on the blueprint.

In the drafting room or "on the job," be sure that you have a sufficient supply of America's standard drawing inks. You may obtain them at any supply dealer's or blueprint house.

### BLACKS

**WATERPROOF**—Insoluble when dry—for working drawings.  
**GENERAL** (Soluble)—for fine line work, India Ink tints and washes.

[For specification writing, use Higgins' Eternal Black Writing Ink. Writes jet black and eternally remains so—reproduces well on tracing or blue-print.]

### Brilliant COLORS Waterproof

Each mixes freely with the others. Far superior to water colors or oils for wash work.

CARMINE GREEN INDIGO VIOLET  
 BRICK RED BLUE BROWN YELLOW  
 ORANGE VERMILION SCARLET

### Waterproof WHITE Opaque

Are you using Higgins' Drawing Board Paste, which is especially prepared to make drawing paper or tracing cloth lie flat on the drawing board? If not, try it today.

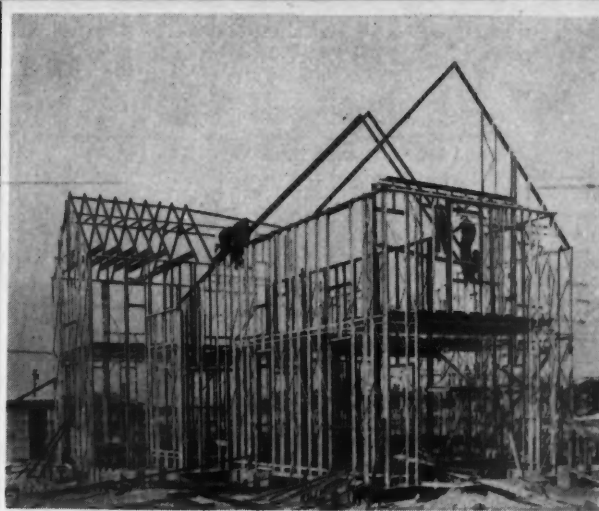


CHAS. M. HIGGINS & CO.  
 271 Ninth Street Brooklyn, N. Y.

# HIGGINS' Drawing Ink

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

## STEEL FRAME HOUSES



## Home Construction Has PROGRESSED

*The Home Owner Wants Permanence And Safety.*

Every home occupant likes to feel that his family is safely sheltered.

## *The Steel Frame House Is Safe Against*

**TORNADO  
 FIRE  
 SETTLING  
 LIGHTNING  
 VERMIN**

Our units are so made that they thoroughly brace the house independently of exterior materials. Veneered with brick or stucco. Looks like any other house.

**COSTS NO MORE**

**Walter Bates Steel Corp.**  
 Gary, Indiana

*General Building Structural Steel, Steel Transmission Towers, Poles, Substations*

WALTER BATES STEEL CORP.,  
 Gary, Indiana.

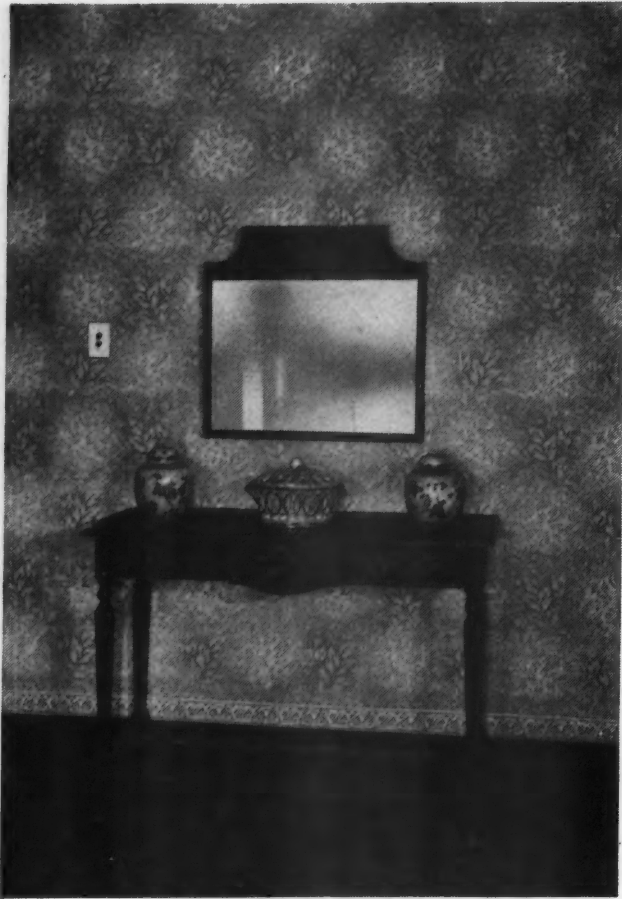
Gentlemen: Kindly send me full information regarding houses of steel construction.

Name.....

Street.....

City..... State.....

Occupation.....



## Wall-Tex has strength to make its beauty lasting

 THE Columbus-Union Oilcloth Company can point with pride to its many handsome patterns for 1928. The hallway illustrated above, by a prominent interior decorator, is made permanently beautiful with Wall-Tex No. 3063. Its rich beauty will endure for years. It conceals a remarkably strong, flexible fabric.

Wall-Tex fabric wall-covering helps to prevent cracks in walls and ceilings by strengthening the plaster, or hides cracks should they occur. In

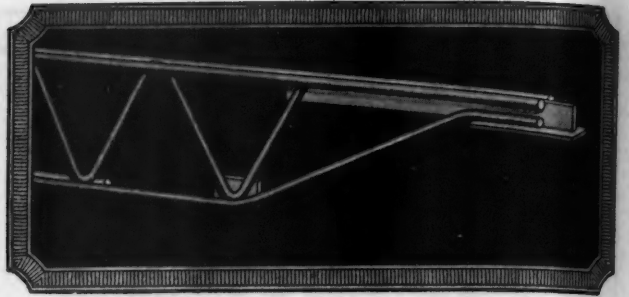
houses where the plaster is old, Wall-Tex conceals the imperfections. Nothing equals it for ceilings.

The 1928 Wall-Tex line includes designs to harmonize with the decoration of any room in a home. Glossy finishes as well as dull. Plain patterns for painting, frescoing, stenciling or rough-cast plastering. Wall-Tex is hung just like wallpaper. It can be wiped clean with a damp cloth.

Architects, builders, decorators should write for full information on their particular requirements. The Columbus-Union Oilcloth Company, Columbus, Ohio.

**WALL-TEX**  
PERMANENT  
WALL-COVERING X

With the name that's easy to say and hard to forget



## Construction Features with Massillon Bar Joists

THESE steel joists designed for building fire-proof floors and roofs in all types of buildings, have manifest advantages for contractors.

**Built in Standard Stock Sizes:** Massillon representatives or our engineers at Canton give prompt service in submitting quotations or recommendations. Shipments are normally made from stock.

**No Cutting or Fitting in the Field:** The joists are rapidly placed without cutting or fitting. The smaller floor openings are framed with standard Massillon headers. Stair wells and larger openings are framed in the usual manner.

**Ease of Erection:** The depth at the end is standard for all joists with center of gravity below the line of support. Joists are placed by the usual building trades in their natural position, ends clipped with simple clips to beams or bricked into masonry walls. The end joists in each panel are anchored with simple anchors to parallel wall or beam, intervening joists braced laterally with wire bridging and joists are ready to carry their load.

**Floor Lath:** Self-centering rib floor lath is rapidly and securely fastened to the joists by driving a simple wood lath wedge through the lath between the top bars of the joists. Where wood floor finish is laid on the concrete sub-floor wood nailing strips are carried on simple screed clips.

**Piping Features:** Conduits, piping and plumbing are handled in direct lines through as well as parallel to the joists. These building trades work after the concrete floor slab is poured and the building enclosed and do not delay the building operation.

**Ceiling Lath:** Rib ceiling lath or pencil channels for carrying flat lath is rapidly wired to the bottom bars of the joists. A simple ceiling extension carries the ceiling support to the walls at the ends of the joists.

**Cost:** It has been demonstrated time and again that the Bar Joist floors can be built into strictly fireproof buildings at a cost between that of wood joist construction and other types of approved fireproof floor construction.

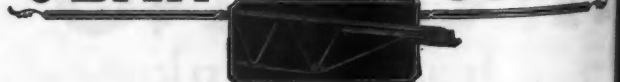
We solicit opportunities of quoting on work under your control. Where redesigns may be used to advantage our recommendations will be furnished without obligation. Pamphlets sent on request.

**THE MACOMBER STEEL CO.**

909 Belden Ave., Canton, Ohio

Manufacturers of

**MASSILLON**  
BAR JOISTS



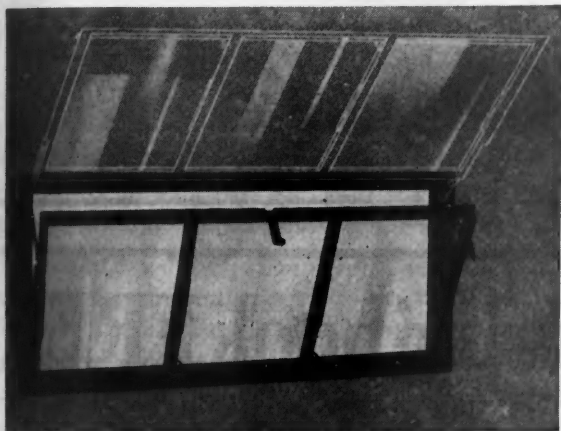


# Vento

## PUTTYLESS STEEL SASH

*Cuts Costs*

### INCREASES THE VALUE



U. S. Pat. 3-4-24-Pats. Pend. Manufacturer or Distributor of infringements will be Prosecuted.

Builders everywhere are welcoming "VENTO" Puttyless Steel Basement Sash as the greatest advancement in steel sash construction in years.

"VENTO" Steel Sash cuts cost of installation and increases the value of any building.

"VENTO" takes no putty—to stay soft. Saves cost of glazing—makes "VENTO" worth dollars more.

The many superior qualities found only in "VENTO" Sash make them the most desirable feature you can put in a home.

Go to your dealers today; ask him to show you "VENTO" Steel Basement Sash. Look at it closely; test its rigid construction and note its superior qualities. Install them on your next job; they will give you and your client complete satisfaction.

If your dealer does not carry them, write us for complete information. We will gladly furnish it free of charge.

*Just fill out the coupon below.*

**VENTO STEEL SASH CO.**  
Muskegon, Mich.

VENTO STEEL SASH CO.  
Muskegon, Michigan

Please send me full information about "VENTO."

Name.....  
Address.....  
City..... State.....



Beautiful!  
But Will It  
**WORK**  
?

**Yes**

That is the answer to the prospective home owner's query. A fireplace that actually functions as a heating unit presents a great appeal to all home lovers. We manufacture a complete line of fireplace equipment, from gas logs, gas heaters, andirons, portable fireplace baskets to dome dampers, etc. All are fully guaranteed. We invite you to inspect our line. Coupon below brings our illustrated catalog.

**The Ohio Foundry & Mfg. Co.**  
Stuebenville, Ohio

*Established 1846*

THE OHIO FOUNDRY & MFG. CO.  
Stuebenville, Ohio.

Gentlemen: Please send me your catalog.

My Dealer's name is.....

Name.....

Street.....

City..... State.....

# RUBBER TILE FLOORING

*A New and Profitable Business*

**For Building Contractors, Decorators, Mantle and Tile Dealers, and Others**

The new process that is used in manufacturing this "**REAL RUBBER**" tile flooring gives it the pleasing beauty of marble and quiet softness of rubber. You will always be proud of the "**REAL RUBBER**" tile floor because permanent beauty and richness of color are built into it by the manufacturer. It is easy to lay on concrete and wood subfloors.



*Write for samples, laying instruction and literature.*

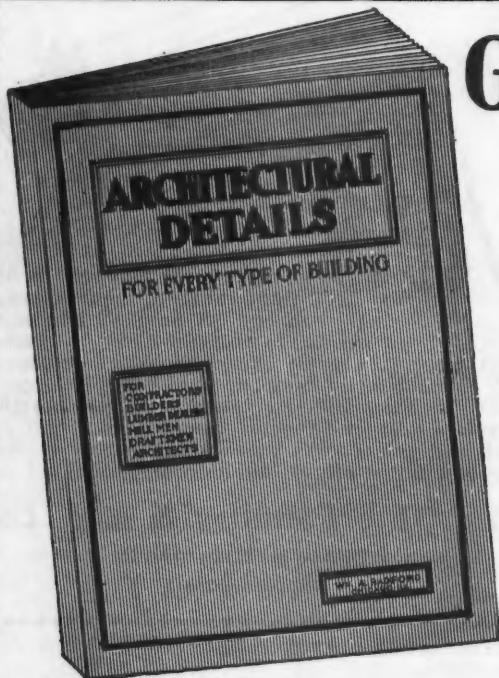
*The Test of Quality*

**J. D. STRUTZEL RUBBER CO.**

1606 COLLINS ST.

DEPT. B

JOLIET, ILLINOIS



## Get this big book FREE

With Your New or Renewal Subscription  
To AMERICAN BUILDER

"ARCHITECTURAL DETAILS" is a complete manual of building practice, as applied to carpentry, construction and the use of millwork. It is a remarkable collection of full-page plates, accurately drawn and reproduced to exact scale, showing clearly every detail of modern building construction and finish. These plates make plain the framing and construction of residences of every type. This volume, 9 x 12 inches in size, has 160 pages of illustrations. All dimensions, angles, measurements and joints are made so plain and are so well illustrated that the man on the job will have no difficulty or trouble doing the work.

**Clip and Mail This Coupon, NOW!**

**HOW TO GET YOUR FREE COPY**

Send in your new or renewal subscription for one year at the regular rate of \$2.00 and we will send you "ARCHITECTURAL DETAILS" absolutely FREE, postpaid.

*Offer good in U. S. and Canada. Add \$2.00 to Foreign Countries.*

THE AMERICAN BUILDER  
1827 Prairie Ave., Chicago, Ill. 1923

Enclosed find \$2.00 for which **Enter** my subscription to **Renew** The American Builder for one year and send me free and postpaid, a copy of your book "Architectural Details." AB-4-23

NAME \_\_\_\_\_

STREET OR \_\_\_\_\_

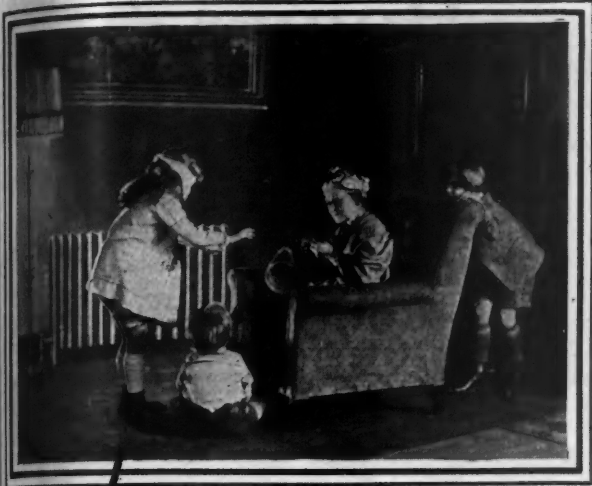
BOX No. \_\_\_\_\_ STATE \_\_\_\_\_

P. O. \_\_\_\_\_

My occupation is (Check Only One)  
 Dealer     Builder     Architect     Real Estate     Miscellaneous

Clip

# COMFORT



*with THRUSH System of Hot Water Heating!*

WHEN a man buys a home for his family he is investing primarily in comfort. It is the greatest and most important investment that he makes, for upon it depends the health and happiness of his home life. When you sell a man comfort without flaw, you have made not only a pleased customer but a booster.

Comfort depends more on heating than upon anything else entering into the make-up of the home. Install Hot Water Heating, Thrush Equipped, and you have made certain that the heating plant will provide only comfort, complete comfort, not worry and discontent. Thrush System is dependable in performance and best of all, provides real fuel economy.



Thrush System is nationally advertised and we are selling thousands of interested home builders about it monthly.

There is a real interest in better home heating. Thrush Equipment will add sales value to any home you build.



W. A. THRUSH & CO. Dept. B. \_\_\_\_\_ 19\_\_  
 Peru, Indiana  
 Please send me your booklet about Home Heating.  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 My Heating Contractor \_\_\_\_\_

**THRUSH SYSTEM OF HOT WATER HEATING**

*Color is the "Buy Word" - let Miami Tile put Sales across!*

# MIAMI TILE

*The colorful, everlasting tile for walls*

The popular cry is for color in the home and Public building!

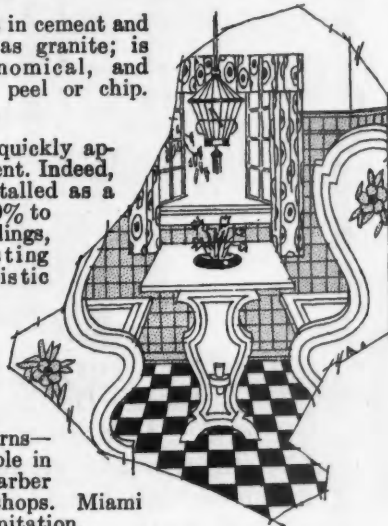
NO more dreary, unsanitary walls. MIAMI TILE—like a magician—waves a wand of color, and cheerless rooms are transformed into gems of lasting loveliness.

MIAMI TILE—wrought in cement and asbestos—is as durable as granite; is washable, fireproof, economical, and CAN NOT crack, craze, peel or chip. It comes to you in sheets.

MIAMI TILE is easily, quickly applied with screws and cement. Indeed, an entire wall may be installed as a unit, at a saving of from 30% to 50%. Steel or wood mouldings, in blending or contrasting shades, permit of artistic effects. Special mouldings for the corners.

*Permanent--Easily Installed--Economical*

MIAMI TILE—as eternal as the building it adorns—is particularly invaluable in apartments, hotels, barber shops, restaurants, food shops. Miami Tile is the last word in sanitation.



*Tile in Sheet Form for Ease and Economy of Application*

**COLORS**  
 Tan  
 Blue  
 Gray  
 White  
 Green  
 Orchid

**Distributors:**

Valuable and exclusive territory open. We help you sell. Write today.

**MAIL THAT COUPON**



**Note These Details—**

- Bull nose moulding and clip.
- Inside corner cap for bull nose.
- Inside corner moulding.
- Base moulding and clip.
- Inside corner cap 'or base moulding.

**THE MIAMI CABINET CO.**  
 MIDDLETOWN, OHIO

THE MIAMI CABINET CO. Middletown, Ohio  
 Please send me full particulars about MIAMI TILE.  
 Name.....  
 Address.....  
 City.....

Check here:  
 Architect  
 Contractor  
 Owner  
 Dealer



*Operates from Bath,  
Kitchen and  
Laundry*



**GAS-GARD**  
- WATER HEATER CONTROL -

## Helps Sell Homes!

**ATTRACTS MORE ATTENTION THAN FEATURES COSTING MANY TIMES MORE**

GAS-Gard water heater control is a system for lighting and turning off any type of gas water heater by merely touching an electric button. Red indicator lights in switches tell you when heater is lighted. Safety attachment turns off heater should it be forgotten. Installed without conduits. Gas-Gard appeals to builders because it makes houses easier to sell. Home buyers like it because it is safe, convenient and keeps gas bills low. **A SELLING FEATURE WORTH FIVE TIMES ITS SMALL COST! INVESTIGATE!**

*Write us today for complete information.*

**GAS-GARD CO., Inc.**  
370 E. MAIN ST., ROCHESTER, N. Y.

**5 Points of SUPERIORITY**

- 1 It will last indefinitely.
- 2 It is leakless, packless and noiseless.
- 3 It requires a very small amount of electric current.
- 4 All mechanical parts backed by a manufacturer's guarantee.
- 5 It is fully protected by broad, fundamental patents.



## HESS CABINETS and MIRRORS

*Snow-White Steel*



**COLONIAL**  
*Another De Luxe Style*

Beautiful — Distinctive.  
The mirror entirely conceals the cabinet.  
Suitable for the finest bath room.  
Made in six sizes. We make five other popular styles.

*Ask your jobber; or write for illustrated booklet.*  
**HESS WARMING & VENTILATING CO.**  
Makers of Hess Welded Steel Furnaces  
1220 S. Western Avenue, Chicago.

# DACOR



### Double Capacity clothes closet hook

Now even the small closet embodies a special appeal to the home builder when equipped with Dacor, the six-in-one clothes closet hook. Each Dacor hook, only 8 inches long, notched to prevent crowding and slipping, holds 6 suit or dress hangers. The Dacor equipped closets present a feature every woman appreciates.

The set of three Dacor hooks fully equips the average clothes closet and accommodates 18 garments without crowding. Hooks finished in nickel, brass or japan to match trim.

**WRITE for SAMPLE SET**

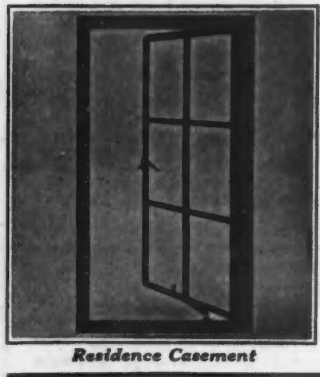
Write to-day for set of three and equip one closet to convince yourself of Dacor's outstanding features. Give name of your local hardware dealer and enclose \$1.00 to cover cost and postage. A dozen will equip the 4 closets in the home you are building. \$4.00 per dozen.

When ordered in quantity for equipping apartment houses, hotels, etc., Dacor can be had in any finish desired.

*Dealers and jobbers write for details.*

Manufactured by  
**DAVIS TOOL & ENG. CO.**  
6483 Epworth Blvd. DETROIT

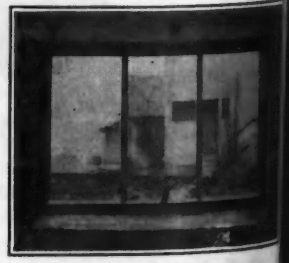
## THESE WINDOWS WILL MAKE A PROFIT!



**DEALERS** are making money in handling Bayley-Springfield Steel Windows. Designed for all types of buildings. Bayley construction features make for great strength and economical installation, and are the result of 45 years' experience in architectural ironwork. Carried in stock so that a dealer's turnover makes the Bayley line an attractive proposition.

**THE WM. BAYLEY COMPANY**  
128 West North Street SPRINGFIELD, OHIO  
*Sales Offices and Warehouses in Principal Cities*

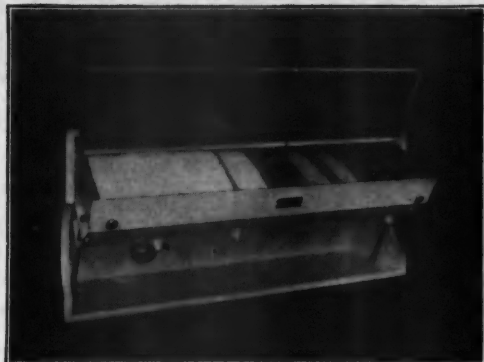
### Bayley-Springfield Steel Windows



**Windows for Basements**  
The Bayley Window for basements, residences, apartments and other buildings. Fine for side walls in garages and small buildings. Cost no more than wood, yet give 50 per cent more light. Made in four standard sizes.

# Modern Kitchen Equipment for the Modern Building

See below how the PANTRINETTE utilizes the upper portion of the main work shelf which is ordinarily wasted, yet leaves the work top free, thus relieving the upper shelving of numerous cans, jars and boxes. Observe how easy it is to withdraw the food product wanted by simply turning the control handle.



PANTRINETTE OPEN READY FOR FILLING

**More Space—Less Waste.** This compact, sanitary metal container for the staple, dry groceries is a complete pantry in one unit. Its convenience and attractiveness instantly appeal to the housewife.

**A Space Saver for Architects and Builders.** The PANTRINETTE utilizes waste space (see photo). It is easy to install in either wood or steel cabinets. Made of heavy gauge metal finish with sanitary lacquer inside and two coats baked enamel outside. Hardware is nicked.

Made in 8 sizes from 4 to 9 bins—19½" to 48" long.

Write for complete information and descriptive folder

MAXWELL-BURKE, INC.

228 North La Salle St., Suite 1254, Chicago

THE

# PANTRINETTE

(TRADE-MARK)

The builders of the St. Clair Hotel and Apartment Building made certain that the kitchens, too, would be equipped with every modern convenience. They installed in each kitchenette apartment this new, sanitary metal grocery container.



Architects Onan and Lillenthal, Chicago



SIGN OF STABILITY

# MESKER

STANDARD BOWSTRING STEEL ROOF TRUSSES

WRITE FOR CATALOG

BETTER TRUSSES FOR LESS MONEY

GEO. L. MESKER & CO. EVANSVILLE IND.

## MESKER BUILDING PRODUCTS for PROGRESSIVE BUILDERS

Complete Store Fronts

Ornamental Marquise

All Steel Airplane Hangars

Metal Skylights

Steel Ceilings

Hollow Metal Windows

Fenestra Steel Sash

Industrial, Casement and Basement

Miscellaneous Metal Building Specialties

SEND FOR NEW CATALOG AND PRICE LIST

**BUILDERS FREE PLAN AND ENGINEERING SERVICE**

**Geo. L. Mesker & Co.**  
Evansville, Ind.

COUPON

Geo. L. Mesker & Co.,  
30 Ingel St., Evansville, Ind.

Gentlemen:

Please send me catalogs I have checked:

- Standard bowstring steel roof trusses.
- Complete store fronts.
- Cast iron lamp standards.
- Metal ceiling.

NAME.....

ADDRESS.....

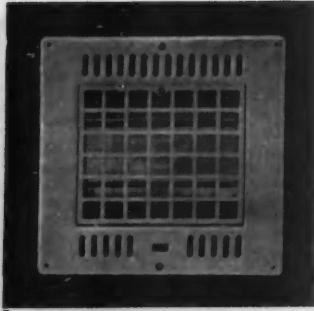
CITY.....STATE.....

Store Front Designs — Garage Plans  
Airplane Hangar, Factory and Warehouse Plans

FURNISHED FREE TO BUILDERS

*"Mesker Blueprints make customers out of curiosity seekers"*

LET US SERVE YOU



**Radia Wall Type Heater**  
The very thing for the bathroom or dressing room. A permanent installation that adds 100% to home comfort and appeal. The Globar element, unharmed by water, makes it ideal for bathrooms. Requires wall opening 14"x14"x3 1/4". List Price \$26.00.

# RADIA ELECTRIC HEATERS



Every spring sees a great flurry of building. The homes that turn over quickly with a greater return of profit are the homes that contain modern appliances, a year or two ahead of all the rest.

Convenience, Beauty and Appeal are what Radia Electric Heaters really represent and are the outstanding features that strike prospective home owners.

What better way to set off the interior of a home than in an attractive fireplace, alive with the realistic flames artificially produced within the Radia Log. A generous supply of heat may also be had at the turn of the switch.

Quick, clean, odorless heat in the Bathroom or Bedroom, instantly available on chilly days before the furnace is started or as an auxiliary in the dead of winter is the purpose of the Radia Wall Heater—and it serves its purpose well and economically.

A post card will bring you full descriptive literature and prices. Write today.

**F. W. SHEPLER STOVE CO.,**  
1300 Sheffield St., Pittsburgh, Pa.

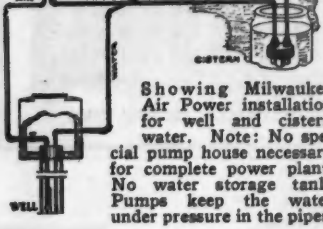
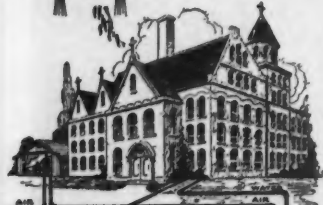
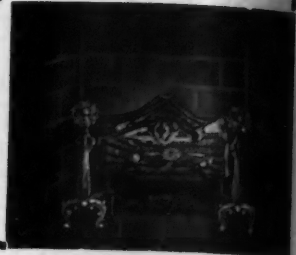


**The Radia Fireplace Log**

A reproduction of a log fire that is startlingly real. It may be used as an artificial flame producing ornament or as a heater—a separate switch controls the Globar heating element.

Made in three widths 18", 23" and 28".

List Prices \$26.00—\$45.00.



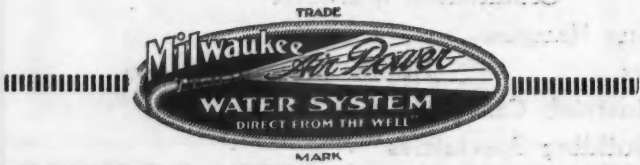
Showing Milwaukee Air Power installation for well and cistern water. Note: No special pump house necessary for complete power plant. No water storage tank. Pumps keep the water under pressure in the pipes.

## Complete Water Service

Water from as many sources as you choose—from the well, from the lake for sanitation and sprinkling, from the cistern for laundry—hard and soft, hot and cold. All this with one Milwaukee Air Power Water System. There is no water storage tank to foul in summer or freeze in winter. Water comes

directly from source—pure, fresh, healthful. Either double or single cylinder pump according to the capacity required by customer. Keeps pressure on all fixtures equal and powerful. Available at the turn of a faucet. Capacities, 100 gals. per hour and up. Write for complete literature and dealer proposition.

**MILWAUKEE AIR POWER PUMP CO.**  
1 Keefe Ave., Milwaukee, Wis.



## Lower Fire Insurance Greater Beauty Longer Life

Only a metal roof can be both fire and lightning proof. Only a metal roof can be permanently leakproof, because it is the only roofing material which doesn't warp, crack or break.

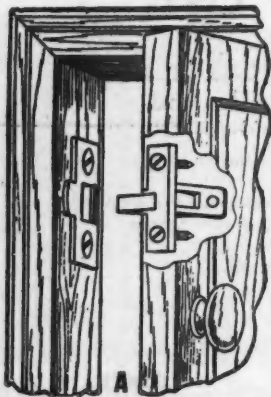
Leadclad metal Spanish Tiles have all the beauty of heavy, expensive clay tiles, but are lighter, stronger, non-breakable and less costly. Lead surpasses copper in weather resisting qualities. "Leadclad" is an improvement on both, consisting of a heavy jacket of everlasting lead fused on a copper-bearing steel base, which gives maximum strength with light weight. Regardless of what you pay, you cannot get a better, safer, stronger, more permanent and beautiful roof than Leadclad. Write for free catalog of Leadclad roofings, gutters, downspouts, flashings, etc.



**LEADCLAD**  
REG. U.S. PAT. OFFICE 1923

**Wheeling Metal & Mfg. Co.**  
Dept. 1-C Wheeling, W. Va.

SPANISH TILES ♦ METAL SHINGLES



Patented

## HAGSTROM'S

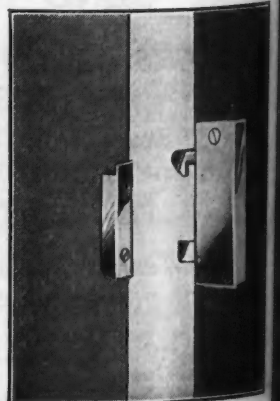
### FRICITION CATCH SECRET DOOR LATCH

Has met with splendid approval from Builders and Architects. This catch prevents warping of new doors. Doors warped will by its action be drawn back to normal. Prevents rattling and entrance of dust by holding doors tight. Remains effective even after the door has shrunk considerably. Automatically adapts itself to the "go and come" of wood. Made in three sizes. Literature free or this ad with 35c will bring you a sample postpaid.

A BRAND NEW Hagstrom product designed especially for concealed panels. May also be used on doors, instead of ordinary latch. When door is closed no hardware is visible. To close push lightly on door—to open push hard. Door moves less than 1/4". Shrinking or swelling of door will not affect this latch as long as door swings free. Latch may be screwed right on door jamb. Strike screwed on door without cutting. Built in five sizes. Anyone can apply this latch in less than ten minutes. Literature free or this ad with \$3.50 will bring you a mounted sample postpaid.

If your dealer cannot supply you, address Dept. A for further particulars and prices.

**Hagstrom Mfg. Co., Glen Cove, N. Y.**



Patent Applied For



**COLORED  
PORCELAIN ENAMELED  
SURFACE AND SEMI RECESS  
BATHROOM  
ACCESSORIES**

MANUFACTURED BY  
**CENTRAL SPEC. MFG. CO.**  
CHICAGO, ILL.

*Write For Catalog*

## Can You Use Extra Money? HAS WORK BEEN SLACK?

*Here's spare time work that will turn idle hours into welcome dollars*

### BUILD A GRANDFATHER'S CLOCK

**A** CLOCK pleasing in appearance is a useful piece of furniture. It is a center of attraction about which revolve the movements of the household. With an open countenance, it invites attention, and with a musical voice it speaks a kindly reminder of the hour and minute for life's pleasures and duties. It soon holds a charm and finds a place in our sentiments and affections, becoming one of the "familiar faces" about the home. The building of such a clock is attended with loving thoughts and a certain pride in craftsmanship. To help you realize your ambition in building the clock of your dreams, is our desire; whether a stately Grandfather's Clock, a simple little Banjo Clock, or a desk clock. We furnish you blueprints on a plan so the prints are free of charge.

Ask for a free copy of "How to Build Your Own Grandfather's Clock," or send a quarter and receive sixteen attractive working drawings.

**AMERICAN  
CHIME CLOCK COMPANY**

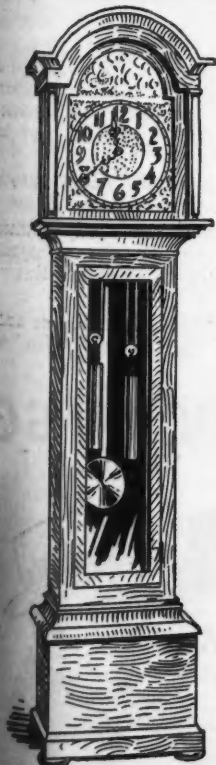
*Manufacturers and Importers of*  
**FINE CHIMING CLOCKS FOR THE HOME**  
1643-F Ruffner Street  
Philadelphia, Pennsylvania

**BLUEPRINTS of 16 ATTRACTIVE SMALL  
MANTEL and BANJO CLOCKS for 25c postage**

Name.....  
Position.....  
St. and No.....  
City and State.....

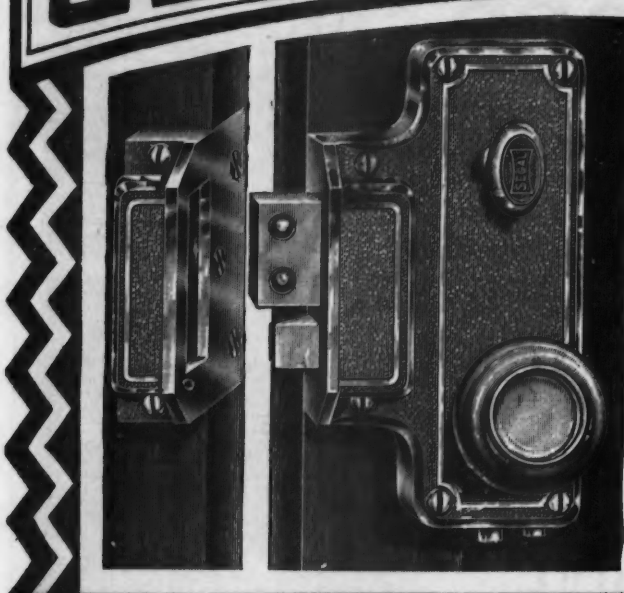
Fill in blanks and mail with 25c in postage to  
**AMERICAN CHIME CLOCK CO.**  
1643-F Ruffner Street, Philadelphia, Pa.

Check here for a catalog.



When you build a clock you have that keen satisfaction which comes with having built something that endures a lifetime.

# SEGAL FOR SAFETY



## BURGLARY PROTECTION

Is Vitally Important in Today's

Building Specifications



## SEGAL "JIMMY-PROOF" LOCKS

are chosen by Leading Builders and Architects because they provide Maximum Security and forestall the mutilation of doors by tenants

Write for Catalog "AB"

### The Segal Lock Meets Every Demand for Safety

DEAD LOCKS LATCHES RIM LOCKS KNOB SETS MORTISE LOCKS WINDOW LOCKS  
CLOSET LOCKS BOLTS CHAIN BOLTS PADLOCKS KEY DUPLICATING MACHINES BATH HOUSE LOCKS

SEGAL LOCK & HARDWARE CO., - 159 Leonard St., New York

## Nine Years of Continuous Trucking Over These "ANTI-HYDRO" Hardened Concrete Floors Have Shown No Wear.

The concrete floors and loading platform in this soap factory are hardened in the one inch topping with "ANTI-HYDRO." The strong caustic soda and other soap ingredients in their raw state are harmful to ordinary concrete and would soon disintegrate it. Added to this condition is the continuous trucking of heavily loaded, metal wheel trucks over the floors.

In spite of this severe usage these "ANTI-HYDRO" hardened floors have shown no appreciable sign of wear during the nine years they have been in use.

"ANTI-HYDRO" is a liquid integral compound which mixes easily—without the aid of skilled labor—with the water used in wetting down the cement topping. It hardens, dustproofs and waterproofs concrete in one operation and makes it alkali and oil proof.

For 24 years "ANTI-HYDRO" has been used by architects, engineers and contractors. This unbroken record is your assurance of satisfaction. Use "ANTI-HYDRO" on your next job.

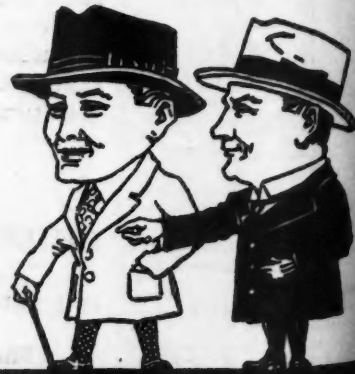
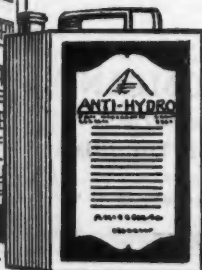
## ANTI-HYDRO WATERPROOFING G.

265-269 Badger Ave.

Newark, N. J.



COLGATE & CO., BUILDING, JERSEY CITY, N. J.



WARREN DAVEY, Engineer - TURNER CONSTRUCTION CO.



# CLASSIFIED DIRECTORY AND BUYERS' GUIDE

Listing Reliable, Responsible Manufacturers of All Kinds of Materials, Equipment, Machinery, Fixtures, Home Conveniences and Furnishings, Hardware, Tools, Etc., Used in the Building and Related Fields

And the Page Numbers on Which Their Advertisements Appear

THIS Classified Index and Buyers' Guide is arranged from A to Z according to NOUN names; that is, all kinds of Roofing are in one section in the proper alphabetical place. In the section devoted to Doors you will find lists of over thirty different kinds. Do not look for Screen Doors, but for Doors—Screen; if you want to find metal lath, look for Lath—Metal, etc.

Under each classification the names of manufacturers appear alphabetically, followed by page number on which their advertisement appears in this issue of the AMERICAN BUILDER.

The manufacturers listed below will be pleased to furnish complete information on any product that appears in connection with their names, although they may not be advertising those particular products in this April number. Do not hesitate to write them to forward catalogues, prices and the names and locations of their nearest dealers.

To find the manufacturer of an article under a special Trade Name or brand look for the Trade Name desired in the alphabetical list immediately following this Classified Index, which is also printed on this green paper.

**ABRASIVES**  
 American Floor Surfacing Machine Co. 235  
 Bark Sanding Machine Company 20-21  
 Electric Rotary Machine Company 272  
 Manning Abrasive Co., Inc. 275  
 Porter-Cable Machine Company 247

**ACCELERATORS—CEMENT**  
 Anti-Hydro Waterproofing Co. 296-318  
 Centre Steel Company 80  
 Lincoln-Schleuter Machinery Company 252  
 Sherwin-Williams Company 213  
 Watney Sales Corporation 110  
 Tech Brothers 91  
 Truscon Laboratories 72  
 Truscon Steel Company 5-90

**ACCORDION DOOR HANGERS—See Hardware**

**ACID RESISTANTS—See Resistant**

**ACOUSTICS—Architectural**  
 Asbestos Shingle Slate & Sheathing Co. 50  
 Cabot, Inc. 218  
 Philip Carey Company 106  
 General Insulating & Mfg. Co. 307  
 Insull Company 57  
 Johns-Manville Company, Inc. 195  
 Johns Fibre Company 47  
 Kroy-Flake Insulating Co. 32  
 United States Gypsum Co. 67  
 U. S. Mineral Wool Co. 187  
 Weyerhaeuser Forest Products 44

**ADJUSTERS—CASEMENT WINDOW—See Hardware**

**AIR BRUSHES—See Brushes**

**AIR COMPRESSORS—See Compressors**

**AIR GRATES—See Grates**

**ANCHORS—BUILDING**  
 Cincinnati Iron Fence Company 366  
 Donley Bros. Company 298  
 Lincoln Steel Company 70  
 Geo. L. Mesker & Co. 315  
 Joseph T. Ryerson & Son 220

**ANCHORS—JOIST**  
 Donley Bros. Company 298  
 International Steel & Iron Co. 304  
 Geo. L. Mesker & Co. 315  
 Joseph T. Ryerson & Son 220  
 Truscon Steel Company 5-90

**ANCHORS—SCREW (Expansive)**  
 Ackerman-Johnson Co. 290  
 Allmetal Weatherstrip Co. 367  
 Richards-Wilcox Mfg. Co. 6-7  
 Syntrol Co. 267

**ANCHORS—WALL**  
 Ackerman-Johnson Company 290  
 Donley Bros. Co. 298  
 International Steel & Iron Co. 304  
 Kalman Steel Company 70  
 Geo. L. Mesker & Co. 315  
 Syntrol Company 267

**ANCHOR BOLTS—See Bolts**

**ANEMOMETERS**  
 A. S. Aloe Company 277  
 Keuffel & Esser Co. 268  
 Warren-Knight Co. 282

**ANGLE IRON—See Irons**

**ANTI-FREEZE COMPOUNDS—See Compounds**

**ARBORS—SAW**  
 Huther Bros. Saw Mfg. Co. 274

**ARBORS—SAW**  
 American Sawmill Machinery Co. 255  
 Combination Woodworking Machine Co. 236  
 Henry Diston & Sons, Inc. 199  
 Heston & Anderson 273  
 Hutchinson Mfg. Co., Inc. 281  
 Jones Superior Machine Co. 284  
 Leach Company 267  
 Oliver Machinery Co. 282  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 261-276

**ARCHES—CORRUGATED**  
 Edwards Mfg. Co. 359  
 International Steel & Iron Co. 304  
 Joseph T. Ryerson & Son 220  
 Wheeling Corrugating Co. 104

**ARCHES—DRIVEWAY**  
 Cincinnati Iron Fence Co. 366  
 Fred J. Meyers Mfg. Co. 387

**ARCHITECTURAL ACOUSTICS—See Acoustics**

**ARCHITECTURAL IRON—See Iron**

**AREA GRATES—See Grates**

**ART GLASS—See Glass**

**ASBESTOS CEMENT—See Cement**

**ASBESTOS CURTAINS—See Curtains**

**ASBESTOS DOORS—See Doors**

**ASBESTOS LUMBER—See Lumber**

**ASBESTOS PAPER—See Paper**

**ASBESTOS SHINGLES—See Roofing**

**ASBESTOS SHINGLE CUTTERS—See Cutters**

**ASH DUMPS—See Dumps**

**ASH LIFTS—See Hoists, Ash**

**ASHPIT DOORS—See Doors**

**ASPHALT CEMENT—See Cement**

**ASPHALT FELTS—See Felts**

**ASPHALT SHINGLES—See Roofing**

**AUGER BITS—See Bits**

**AUGERS—BORING MACHINE**  
 A. S. Aloe Company 277  
 Combination Woodworking Machine Co. 236  
 Forest City Bit & Tool Co. 236  
 Jones Superior Machine Co. 284  
 20th Century Sales Agency 253

**AUGERS—HOLLOW**  
 Combination Woodworking Machine Co. 236  
 Forest City Bit & Tool Co. 236

**AUTOMATIC WATER HEATERS—See Heaters**

**AUTOMOBILES—PASSENGER**  
 Chevrolet Motor Co. .... 243  
**AWLS—BEAD AND SCRATCH**  
 Stanley Works. .... 87  
 L. S. Starrett Co. .... 271  
**AWNINGS—COBBUCATED STEEL**  
 Geo. L. Mesker & Co. .... 315  
 Milwaukee Corrugating Co. .... 374-375  
 Wheeling Corrugating Co. .... 104  
 Willis Mfg. Co. .... 109  
**AWNINGS—COTTON, DUOK, ETC.**  
 John Boyle & Co., Inc. .... 358  
**AWNING COED—See Cord**  
**AWNING FIXTURES—See Hardware, Awnings**  
**AWNING HARDWARE—See Hardware**  
**AWNING ROPE—See Rope**  
**BACKFILLERS**  
 Construction Machinery Co. .... 237  
**BACKING BOARDS—See Boards**  
**BACKING STONE—See Stone**  
**BAGS—TOOL**  
 John Boyle & Co., Inc. .... 358  
**BAGS—CEMENT**  
 Bates Valve Bag Corp. .... 38  
 Textile Bag Mfrs. Ass'n. .... 303  
**BALANCES—CASH**  
 Pullman Manufacturing Co. .... 305  
**BANDSAWS—See Saws**  
**BANDSAW MACHINERY—See Machinery**  
**BANK SCREENS—See Screens**  
**BAR BENDERS—See Benders**  
**BAR CUTTERS—See Cutters**  
**BARB—REINFORCING**  
 Genfire Steel Co. .... 80  
 International Steel & Iron Co. .... 304  
 Kalman Steel Co. .... 70  
 Macomber Steel Co. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Joseph T. Ryerson & Son. .... 220  
 Trucon Steel Co. .... 5-90  
**BARB—WRECKING**  
 Henry Diston & Sons. .... 199  
 Stanley Works. .... 87  
**BARB EQUIPMENT—See Equipment**  
**BARB VENTILATORS—See Ventilators**  
**BARNDOR HANGERS—See Hardware**  
**BARNDOR RAILS—See Rails**  
**BARNDOR ROLLERS—See Rollers**  
**BASE—COVE (Metal)**  
 Genfire Steel Company. .... 80  
 Kalman Steel Co. .... 70  
 Milwaukee Corrugating Co. .... 374-375  
 Willis Mfg. Co. .... 109  
**BASE—COVE (Rubber)**  
 Goodyear Tire & Rubber Co. .... 66  
 J. D. Strutzel Rubber Co. .... 312  
**BASE—COVE (Slate)**  
 Knickerbocker Slate Corp. .... 312  
 Marietta Mfg. Co. .... 304  
 Slatington Slate Co. .... 352  
 Structural Slate Co. .... 358  
**BASE—INSULATING**  
 Insulite Co. .... 57  
 Mason Fibre Co. .... 47  
 U. S. Gypsum Co. .... 67  
 Weyerhaeuser Forest Product. .... 44  
**BASE—PLASTER**  
 Genfire Steel Co. .... 80  
 Insulite Co. .... 57  
 Kalman Steel Co. .... 70  
 Mason Fibre Co. .... 47  
 Milwaukee Corrugating Co. .... 374-375  
 National Steel Fabric Co. .... 28-29  
 Northwestern Expanded Metal Co. .... 372  
 Joseph T. Ryerson & Son. .... 220  
 Trucon Laboratories. .... 72  
 Trucon Steel Co. .... 5-90  
 U. S. Gypsum Co. .... 67  
 Weyerhaeuser Forest Products. .... 44  
**BASE—STUCCO**  
 Genfire Steel Co. .... 80  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 Kalman Steel Co. .... 70  
 Mason Fibre Co. .... 47  
 Milwaukee Corrugating Co. .... 374-375  
 National Steel Fabric Co. .... 28-29  
 North Western Expanded Metal Co. .... 372  
 Jos. T. Ryerson & Son. .... 220  
 Trucon Steel Co. .... 5-90  
 U. S. Gypsum Co. .... 67  
 Weyerhaeuser Forest Products. .... 44  
**BASES—COLUMN**  
 S. Cheney & Sons. .... 282  
 Donley Bros. Co. .... 298  
 International Steel & Iron Co. .... 304  
 Majestic Co. .... 58  
 Ohio Foundry & Mfg. Co. .... 311  
 Paine Lumber Co. .... 93  
**BASES—PORCH**  
 Donley Bros. Co. .... 298  
 Majestic Co. .... 58  
 National Steel Fabric Co. .... 28-29  
**BASES—POST**  
 Cincinnati Iron Fence Co. .... 366  
 Donley Bros. Co. .... 298  
 International Steel & Iron Co. .... 304  
 Geo. L. Mesker & Co. .... 315  
**BASE BEAD—See Bead**  
**BASEBOARD—SLATE**  
 Knickerbocker Slate Corp. .... 312  
 Slatington Slate Co. .... 352  
 Slatington-Bangor Slate Syndicate, Inc. .... 368  
 Structural Slate Co. .... 358  
**BASEBOARD—STONE—See Stone**  
**BASE MOULDING—See Moulding**  
**BASE SCREEDS—See Screeds**

**BATHS—BUILT-IN**  
 Andrews Heating Co. .... 367  
 Crane Co. .... 52  
 Fiat Metal Mfg. Co. .... 297  
 Hardin-Lavin Co. .... 89  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Co. .... 308  
 Standard Sanitary Mfg. Co. .... 18-19  
 Stanley Plumbing & Supply Co. .... 358  
 Wheeling Sanitary Mfg. Co. .... 215  
**BATHS—FOOT**  
 Crane Co. .... 52  
 Standard Sanitary Mfg. Co. .... 18-19  
 Wheeling Sanitary Mfg. Co. .... 215  
**BATHS—SHOWER**  
 Crane Co. .... 52  
 Fiat Metal Mfg. Co. .... 297  
 Hardin-Lavin Co. .... 89  
 Hays Manufacturing Co. .... 292  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Co. .... 308  
 Marietta Mfg. Co. .... 304  
 Standard Sanitary Mfg. Co. .... 18-19  
 Stanley Plumbing & Supply Co. .... 358  
 Wheeling Sanitary Mfg. Co. .... 215  
**BATHS—SITZ**  
 Crane Co. .... 52  
 Standard Sanitary Mfg. Co. .... 18-19  
 Wheeling Sanitary Mfg. Co. .... 215  
**BATH TRAPS—See Traps**  
**BATH TUBS—See Tubs**  
**BATHROOM BRACKETS—See Brackets**  
**BATHROOM CABINETS—See Cabinets**  
**BATHROOM FIXTURES—See Fixtures**  
**BATTENS—METAL**  
 Edwards Manufacturing Co. .... 359  
 F. D. Kees Mfg. Co. .... 356  
 Milwaukee Corrugating Co. .... 374-375  
 Wheeling Corrugating Co. .... 104  
 Willis Mfg. Co. .... 109  
**BATTENS—WOOD**  
 Curtis Companies. .... 61  
 Shevlin, Carpenter & Clarke Co. .... 174-175  
 W. J. Dennis & Co. .... 349  
 West Coast Lumber Trade Extension Bureau. .... 58  
 Weyerhaeuser Forest Products. .... 44  
**BEAD—BASE**  
 Kalman Steel Company. .... 70  
 Macomber Steel Company. .... 310  
 Milwaukee Corrugating Co. .... 374-375  
 Trimpak Corporation. .... 26-27  
 Trucon Steel Co. .... 5-90  
 Willis Mfg. Co. .... 109  
**BEADS—CORNER (Metal)**  
 Edwards Mfg. Co. .... 359  
 Genfire Steel Co. .... 80  
 Gibbs Boardtile Corp. .... 30  
 International Steel & Iron Co. .... 304  
 Kalman Steel Co. .... 70  
 Macomber Steel Co. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Milwaukee Corrugating Co. .... 374-375  
 North Western Expanded Metal Co. .... 372  
 Joseph T. Ryerson & Son. .... 220  
 Trucon Steel Co. .... 5-90  
 Wheeling Corrugating Co. .... 104  
 Willis Mfg. Co. .... 109  
**BEAMS—PRESSED STEEL**  
 Walter Bates Steel Corp. .... 309  
 International Steel & Iron Co. .... 304  
 Geo. L. Mesker & Co. .... 315  
 Jos. T. Ryerson & Son. .... 220  
 Trucon Steel Co. .... 5-90  
**BEAMS—STEEL**  
 Walter Bates Steel Corp. .... 309  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 International Steel & Iron Co. .... 304  
 Macomber Steel Co. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Joseph T. Ryerson & Son. .... 220  
 Trucon Steel Co. .... 5-90  
**BEDS—DISAPPEARING**  
 Concealed Bed Corp. .... 297  
**BEDS—DOOR**  
 Concealed Bed Corp. .... 297  
**BENCHES—MANUAL TRAINING**  
 A. S. Aloe Co. .... 277  
 Oliver Machinery Co. .... 282  
 Frederick Post Co. .... 264  
 Richards-Wilcox Mfg. Co. .... 6-7  
 J. D. Wallace & Co. .... 251-276  
**BENCHES—SAW—See Sawrags**  
**BENCH DRILLS—See Drills**  
**BENCH STOPS—See Stops**  
**BENCH VISES—See Vises**  
**BENDERS—BAR**  
 Gray Iron Foundry Co. .... 284  
 Koehring Co. .... 255  
 Ransome Concrete Machinery Co. .... 263  
 Joseph T. Ryerson & Son. .... 220  
**BEVELS**  
 Henry Diston & Sons. .... 199  
 Stanley Works. .... 87  
 L. S. Starrett Co. .... 271  
**BEVEL SQUARES—See Squares**  
**BINS—CONCRETE**  
 Ransome Concrete Machinery Co. .... 263  
**BINS—GRAIN**  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 National Fireproofing Co. .... 74  
**BINS—STORAGE**  
 Heltsel Steel Form & Iron Co. .... 236  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 David Lupton's Sons Co. .... 76  
 National Fireproofing Co. .... 74  
 Trucon Steel Co. .... 5-90

**BIN GATES—See Gates**  
**BIT BRACES—See Braces**  
**BITS—AUGER**  
 A. S. Aloe Company. .... 277  
 Combination Woodworking Machine Co. .... 278  
 Forest City Bit & Tool Co. .... 286  
 Jones Superior Machine Co. .... 284  
 Progressive Mfg. Co. .... 284  
 Joseph T. Ryerson & Son. .... 220  
 20th Century Sales Agency. .... 223  
**BITS—SCREWDRIVER**  
 Black & Decker Mfg. Co. .... 254  
 Henry Diston & Sons, Inc. .... 199  
 North Bros. Mfg. Co. .... 119  
 Stanley Works. .... 87  
**BLACKBOARDS—ASBESTOS**  
 Asbestos Shingle, Slate & Sheathing Co. .... 361  
 National Sheet Metal Roofing Co. .... 361  
**BLACKBOARDS—COMPOSITION**  
 R. W. A. Rowles Co. .... 365  
**BLACKBOARDS—MANUFACTURED**  
 Marietta Mfg. Co. .... 304  
**BLACKBOARDS—SLATE**  
 Knickerbocker Slate Corp. .... 312  
 E. W. A. Rowles Co. .... 365  
 Slatington Slate Co. .... 352  
 Slatington-Bangor Slate Syndicate, Inc. .... 368  
 Structural Slate Co. .... 358  
**BLADES—COPING SAW**  
 Heston & Anderson. .... 271  
 F. L. Rogers & Co. .... 255  
 20th Century Sales Agency. .... 223  
**BLADES—FLOOR SCRAPER**  
 A. S. Aloe Company. .... 277  
 Clarke Sanding Machine Co. .... 29-31  
 Stanley Works. .... 87  
 L. S. Starrett Co. .... 271  
**BLINDS**  
 Curtis Companies, Inc. .... 61  
 Paine Lumber Co. .... 93  
**BLOCKS—HOLLOW BUILDING—CERAMIC**  
 Common Brick Mfrs. Ass'n. .... 36  
 Finser Bros. Clay Co. .... 163  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 National Fireproofing Co. .... 74  
**BLOCKS—HOLLOW BUILDING (Concrete)**  
 Concrete Equipment Co. .... 281-282  
 Consolidated Concrete Machinery Corp. .... 279  
 Miles Mfg. Co. .... 372  
**BLOCKS—HOLLOW BUILDING (Gypsum)**  
 U. S. Gypsum Co. .... 67  
**BLOCKS—SILO (Concrete)**  
 Common Brick Manufacturers Ass'n. .... 36  
 Consolidated Concrete Machy. Corp. .... 279  
**BLOCKS—SILO (Tile)**  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 National Fireproofing Co. .... 74  
**BLUEPRINT FRAMES—See Frames**  
**BLUEPRINT MACHINES—See Machines**  
**BLUEPRINT PAPER—See Paper**  
**BOARDS—BACKING**  
 Mason Fibre Company. .... 47  
**BOARDS—BULLETIN**  
 Mason Fibre Company. .... 47  
 E. W. A. Rowles Co. .... 365  
 Slatington Slate Co. .... 352  
**BOARDS—DEADENING**  
 Curtis Companies. .... 61  
 General Insulating & Mfg. Co. .... 361  
 Mason Fibre Company. .... 47  
**BOARDS—DRAIN**  
 Concealed Bed Corp. .... 297  
 Hardin-Lavin Co. .... 89  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Co. .... 308  
 Paine Lumber Co., Ltd. .... 93  
 Stanley Plumbing & Supply Co. .... 358  
 Wheeling Sanitary Mfg. Co. .... 215  
**BOARDS—DRAWING**  
 A. S. Aloe Co. .... 277  
 W. & L. E. Gurley. .... 271  
 Keuffel & Esser Co. .... 264  
 Frederick Post Co. .... 264  
 Warren-Knight Co. .... 264  
 David White Co. .... 271  
**BOARDS—FIBRE**  
 Insulite Co. .... 57  
 Mason Fibre Company. .... 47  
 Weyerhaeuser Forest Products. .... 44  
**BOARDS—INSULATING**  
 Asbestos Shingle, Slate & Sheathing Co. .... 361  
 Samuel Cabot, Inc. .... 254  
 Phillip Carey Co. .... 271  
 Eternit, Inc. .... 254  
 General Insulating & Mfg. Co. .... 361  
 Insulite Co. .... 57  
 Johns-Manville, Inc. .... 255  
 Mason Fibre Company. .... 47  
 National Sheet Metal Roofing Co. .... 361  
 Ruberoid Co. .... 271  
 U. S. Gypsum Co. .... 67  
 U. S. Mineral Wool Co. .... 271  
 Weyerhaeuser Forest Products. .... 44  
**BOARDS—IRONING (Attachable)**  
 Redybord, Inc. .... 271  
**BOARDS—IRONING (Built-In)**  
 Hugo M. Carlson Co. .... 271  
 Concealed Bed Corp. .... 297  
 Curtis Companies, Inc. .... 61  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 Majestic Steel Cabinet Co. .... 58  
 Miami Cabinet Co. .... 271  
 Paine Lumber Co., Ltd. .... 93  
 Premier Standardized Woodwork. .... 271  
 Trimpak Corp. .... 271

**BOARDS—MORTAR (Steel)**  
 Donley Bros. Co. 298  
 Helzel Steel Form & Iron Co. 296  
 Macomber Steel Co. 310

**BOARDS—PLASTER**  
 Mason Fibre Co. 47  
 Herold Co. 101  
 U. S. Gypsum Co. 67

**BOARDS—SHEATHING**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Rich Mfrs. 353  
 Philip Carey Co. 106  
 General Insulating & Mfg. Co. 307  
 Mason Fibre Co. 47  
 U. S. Gypsum Co. 67  
 Weyerhaeuser Forest Products 44

**BOARDS—WALL**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Philip Carey Co. 106  
 Edwards Mfg. Co. 359  
 Gibbs Boardville Corp. 30  
 Insulite Co. 57  
 Mason Fibre Co. 47  
 U. S. Gypsum Co. 67  
 Weyerhaeuser Forest Products 44

**BOILER CEMENT—See Cement**

**BOILER COVERINGS—See Coverings**

**BOILERS—HEATING PLANT**  
 American Radiator Co. 192-193  
 Andrews Heating Co. 367  
 Burnham Boiler Corp. 82  
 Crane Company 57  
 Hardin-Lavin Co. 89  
 Johnson Plumbing Supply Co. 352  
 K. Karol & Sons Co. 308  
 National Radiator Corp. 86  
 Standard Sanitary Mfg. Co. 18-19  
 Stanley Plumbing & Supply Co. 358  
 Thatcher Co. 201  
 United States Radiator Corp. 40

**BOILERS—HOT WATER SUPPLY**  
 Andrews Heating Co. 367  
 Hardin-Lavin Co. 89  
 Johnson Plumbing Supply Co. 352  
 K. Karol & Sons Co. 308  
 National Radiator Corp. 86  
 Stanley Plumbing & Supply Co. 358  
 Thatcher Co. 201  
 U. S. Radiator Corp. 40

**BOILERS—RANGE**  
 Hardin-Lavin Co. 89  
 Johnson Plumbing Supply Co. 352  
 K. Karol & Sons Co. 308  
 P. W. Shepler Stove Co. 316  
 Standard Sanitary Mfg. Co. 18-19  
 Stanley Plumbing Supply Co. 358  
 Thatcher Co. 201

**BOLTS—ANCHOR**  
 Ackerman-Johnson Co. 290  
 Cincinnati Iron Fence Co. 366  
 Donley Bros. Co. 298  
 International Steel & Iron Co. 304  
 Geo. L. Mesker & Co. 315  
 Fred J. Meyers Mfg. Co. 367  
 Richards-Wilcox Mfg. Co. 6-7  
 Systron Company 267

**BOLTS—DOOR—See Hardware, Door**

**BOLTS—EXPANDED METAL LATH**  
 Consolidated Expanded Metal Co. 270  
 Jos. T. Ryerson & Son 220

**BOLTS—EXPANSION**  
 Ackerman-Johnson Co. 290  
 Chicago Expansion Bolt Co. 362  
 International Steel & Iron Co. 304  
 Richards-Wilcox Mfg. Co. 6-7  
 Systron Co. 267  
 Jos. T. Ryerson & Son 220

**BOLTS—GARAGE DOOR**  
 Colonial Hardware Manufacturers 364  
 Frantz Mfg. Co. 3  
 Hunt, Helm, Ferris & Co. 108  
 National Mfg. Co. 376  
 Phenix Mfg. Co. 354  
 Richards-Wilcox Mfg. Co. 6-7  
 Stanley Works 87

**BOLTS—SURFACE**  
 Chicago Spring Hinge Co. 370  
 McKinney Manufacturing Co. 114  
 Richards-Wilcox Mfg. Co. 6-7  
 Segal Lock & Hardware Co., Inc. 318  
 The Stanley Works 57

**BOLTS—TOGGLE**  
 John Boyle & Co., Inc. 358  
 Richards-Wilcox Mfg. Co. 6-7

**BOLTS—WINDOW—See Hardware, Wash.**

**BOND—BRICK**  
 Milwaukee Corrugating Co. 374-375  
 Truscon Steel Co. 5-90

**BOND—CEMENT**  
 Anti-Hydro Waterproofing Co. 296-318  
 Barber Asphalt Co. 113  
 Gendro Steel Co. 80  
 Living-Stone Co. 362  
 Tech Bros. 91  
 Truscon Laboratories 72  
 Truscon Steel Co. 5-90

**BOND—PLASTER (Damp-proofing Coat)**  
 Philip Carey Co. 106  
 Sherwin-Williams Co. 213  
 Truscon Laboratories 72  
 Truscon Steel Co. 5-90  
 U. S. Gypsum Co. 67

**BOND—STUCCO**

**BOOKS—BUILDING**  
 A. S. Aloe Co. 277  
 Frederick H. Gowling 366  
 Holt-Bid Co. 205-206-207-208-221  
 McGraw-Hill Book Co., Inc. 359  
 Radford Architectural Co. 95-96-97-98

**BOOKS—PLAN**  
 Frederick H. Gowling 366  
 Radford Architectural Co. 95-96-97-98

**BOOTHES—MOVING PICTURE**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Edwards Mfg. Co. 359  
 Johns-Manville, Inc. 195

**BOOTHES—TELEPHONE**  
 Edwards Mfg. Co. 359  
 Majestic Steel Cabinet Co. 369  
 Paine Lumber Co., Ltd. 93

**BORERS—VERTICAL**  
 American Sawmill Machinery Co. 262  
 Crescent Machine Co. 260  
 Gallmeyer & Livingston Co. 280  
 Jones Superior Machine Co. 284  
 Kornau Machine Co. 284  
 Oliver Machinery Co. 282  
 J. D. Wallace & Co. 251-276

**BORING MACHINES—See Machines**

**BORING MACHINE AUGERS—See Augers**

**BOWLS—CLOSET**  
 Hardin-Lavin Co. 89  
 Johnson Plumbing Supply Co. 352  
 B. Karol & Sons Co. 308  
 Stanley Plumbing & Supply Co. 358

**BOXES—MAIL (Built-in)**  
 A. S. Aloe Co. 277  
 Colonial Hardware Mfrs. 364  
 Donley Bros. Co. 298  
 Penn-Greg Mfg. Co. 361

**BOXES—METER**  
 Donley Bros. Co. 298

**BOXES—MITER**  
 A. S. Aloe Co. 277  
 Hutchinson Mfg. Co., Inc. 281  
 Milwaukee Corrugating Co. 374-375  
 Stanley Works 87  
 Safe Tool Mfg. Co. 285

**BOXES—MIXING**  
 A. S. Aloe Co. 277  
 Donley Bros. Co. 298  
 Truscon Steel Co. 5-90

**BOXES—MORTAR (Steel)**  
 A. S. Aloe Co. 277  
 Donley Bros. Co. 298  
 Genfire Steel Co. 80  
 Helzel Steel Form & Iron Co. 296  
 Lansing Co. 256  
 Macomber Steel Co. 310  
 Truscon Steel Co. 5-90

**BOXES—OUTLET**  
 General Electric Co. 9-10-11-12-13-14-15

**BOXES—SWITCH**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Hart & Hegeman Mfg. Co. 42  
 Midwest Metal Products Co. 364  
 Paramount Electric Co. 359  
 Segal Lock & Hdwa. Co., Inc. 318

**BOXES—TOOL**  
 Helzel Steel Form & Iron Co. 296  
 Stanley Works 87  
 Wedell & Boers 362

**BOXES—WALL**  
 American Radiator Co. 192-193  
 Morton Mfg. Co. 50

**BRACES—BIT**  
 Forest City Bit & Tool Co. 286  
 North Bros. Mfg. Co. 280  
 Stanley Works 87

**BRACES—CORNER**  
 W. J. Dennis & Co. 369  
 Frantz Mfg. Co. 3  
 Richards-Wilcox Mfg. Co. 6-7  
 Stanley Works 87

**BRACES—PUSH**  
 North Bros. Mfg. Co. 280

**BRACKETS—BATHROOM (Porcelain)**  
 Paramount Electric Co. 359  
 Pass & Seymour, Inc. 366

**BRACKETS—LADDER**  
 A. S. Aloe Co. 277  
 Elite Mfg. Co. 276  
 Richards-Wilcox Mfg. Co. 6-7  
 Steel Scaffolding Co. 261

**BRACKETS—ORNAMENTAL**  
 Cincinnati Iron Fence Co. 366  
 Curtis Companies 61  
 International Steel & Iron Co. 304  
 Milwaukee Corrugating Co. 374-375  
 Fred J. Meyers Mfg. Co. 367  
 Velguth Metal Parts, Inc. 369

**BRACKETS—RAIL OR TRACK**  
 Cincinnati Iron Fence Co. 366  
 Hunt, Helm, Ferris & Co. 108  
 J. E. Porter Corp. 8  
 Richards-Wilcox Mfg. Co. 6-7

**BRACKETS—ROOFING**  
 Ajax Building Bracket Co. 278  
 Elite Mfg. Co. 276  
 Insulite Co. 57  
 Knickerbocker Slate Corp. 312  
 Milwaukee Corrugating Co. 374-375  
 Richards-Wilcox Mfg. Co. 6-7  
 Stanley Works 87  
 Steel Scaffolding Co. 261

**BRACKETS—SCAFFOLD**  
 A. S. Aloe Co. 277  
 Donley Bros. Co. 298  
 Elite Manufacturing Co. 276  
 Insulite Co. 57  
 Richards-Wilcox Mfg. Co. 6-7  
 Steel Scaffolding Co. 261

**BRACKETS—SHEATHING**  
 Elite Mfg. Co. 276  
 Insulite Co. 57  
 Steel Scaffolding Co. 261

**BRACKETS—Shelf**  
 Knappe & Vogt Mfg. Co. 293  
 Stanley Works 87  
 Steel Scaffolding Co. 261

**BRACKETS—SHINGLING**  
 Elite Manufacturing Co. 276  
 Insulite Co. 57  
 Stanley Works 87  
 Steel Scaffolding Co. 261

**BRACKETS—WALL**  
 American Radiator Co. 192-193  
 S. Cheney & Son 282  
 Crane Co. 62  
 Davis Tool & Eng. Co. 314  
 Fairland Co. 366  
 McKinney Mfg. Co. 114  
 Paramount Electric Co. 359  
 Pass & Seymour, Inc. 366  
 Steel Scaffolding Co. 261

**BRACKETS—WINDOW**  
 Perfection Co. 363

**BRAD and SCRATCH AWLS—See Awls**

**BRANDING IRONS—See Irons**

**BREAKFAST NOOKS or Rooms**  
 Hugo M. Carlson Co. 301  
 Concealed Bed Corp. 297  
 Curtis Companies, Inc. 61  
 Paine Lumber Co. 98  
 Premier Standardised Woodwork 294  
 Trippak Corp. 26-27

**BREAST DRILLS—See Drills**

**BRICK—COMMON**  
 Common Brick Manufacturers Ass'n. 79  
 Concrete Equipment Co. 281-282  
 National Fireproofing Co. 74

**BRICK—ENAMELED**  
 American Face Brick Assn. 102

**BRICK—FACE**  
 American Face Brick Assn. 102  
 Common Brick Mfrs. Assn. 74  
 Concrete Equipment Co. 281-282  
 Finzer Bros. Clay Co. 103  
 Hoosier Bldg. Tile & Silo Co. 369

**BRICK—FIRE**  
 Common Brick Mfrs. Assn. 74

**BRICK—RUBBER**  
 Goodyear Tire & Rubber Co. 66  
 Wright Rubber Products Co. 360

**BRICK CARRIERS—See Carriers**

**BRICK CLAMPS—See Carriers, Brick**

**BRICK COLORS—See Colors**

**BRICK WATERPROOFING—See Waterproofing**

**BRICKLAYERS CEMENT—See Cement, Masons.**

**BRIDGING—FLOOR (Steel)**  
 Concrete Form Tie Corp. 362  
 Genfire Steel Co. 80  
 Mid-West Metal Products Co. 364  
 Jos. T. Ryerson & Son 220  
 Truscon Steel Co. 5-90

**BRONZE DOORS—See Doors**

**BRUSHES—AIR**  
 Binks Spray Equipment Co. 265  
 Clarke Sanding Machine Co. 20-21  
 DeVilbiss Co. 242  
 Mellish-Hayward Co. 288

**BRUSHES—PAINT**  
 Johnson Plumbing Supply Co. 352

**BRUSHES—POLISHING**  
 S. C. Johnson & Son 173  
 Kent Company 270

**BUBBLING FOUNTAINS—See Fountains.**

**BUCKETS—ELEVATOR**  
 Chain Belt Co. 2  
 R. & L. Concrete Machinery Co. 273

**BUCKETS—HOISTING & DUMPING**  
 Chain Belt Co. 2  
 Novo Engine Co. 245  
 Ransome Concrete Machinery Co. 263  
 Richards-Wilcox Mfg. Co. 6-7

**BUILDERS HARDWARE—See Hardware, Various Kinds.**

**BUILDINGS—PORTABLE**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Edwards Mfg. Co. 359  
 Hoosier Bldg. Tile & Silo Co. 369  
 International Steel & Iron Co. 304  
 Milwaukee Corrugating Co. 374-375  
 Truscon Steel Co. 5-90  
 West Coast Lbr. Trade Extension Bur. 58

**BUILDINGS—STEEL**  
 Edwards Mfg. Co. 359  
 International Steel & Iron Co. 304  
 Macomber Steel Co. 310  
 Geo. L. Mesker & Co. 315  
 Milwaukee Corrugating Co. 374-375  
 Truscon Steel Co. 5-90

**BUILDING ANCHORS—See Anchors.**

**BUILDING MATERIAL ELEVATORS—See Hoists.**

**BULLETIN BOARDS—See Boards**

**BURNERS—GARBAGE—See Inclinerators.**

**BURNERS—RUBBISH**  
Majestic Company ..... 56  
Wheeling Corrugating Co. .... 104

**BUTT GAUGES—See Ganges.**  
**BUTT HINGES—See Hinges.**  
**BUTTS—DOOR—See Hinges, Butt**

**CABINETS—BATHROOM AND MEDICINE**  
Carlson Co., Hugo M. .... 301  
Concealed Bed Corp. .... 297  
Crane Co. .... 52  
Curtis Cos. .... 61  
Edwards Mfg. Co. .... 359  
Hardin-Lavin Co. .... 89  
Hess Warming & Ventilating Co. .... 296-314  
Ingram-Richardson Mfg. Co. .... 45  
Lloyd Floor & Wall Tile Co. .... 364  
Majestic Steel Cabinet Co. .... 369  
Miami Cabinet Co. .... 313  
Morton Mfg. Co. .... 59  
Paine Lumber Co. .... 95  
Premier Standardized Woodwork. .... 294  
Standard Sanitary Mfg. Co. .... 18-19  
Stanley Plumbing & Supply Co. .... 358  
Trico, Inc. .... 214  
Trippack Corporation ..... 26-27

**CABINETS—DRESSING ROOM**  
Curtis Companies Service Bureau. .... 61  
Fiat Metal Mfg. Co. .... 297  
Majestic Steel Cabinet Co. .... 369  
Trippack Corporation ..... 26-27  
R. M. Morriss & Co. .... 365

**CABINETS—FILING**  
Frederick Post Co. .... 264  
Warren-Knight Co. .... 282  
Weber-Busse Co. .... 352

**CABINETS—KITCHEN**  
A. S. Aloe ..... 277  
Hugo M. Carlson Co. .... 301  
Concealed Bed Corp. .... 297  
Coppes Brothers & Zook. .... 111  
Curtis Cos. .... 61  
Majestic Steel Cabinet Co. .... 369  
Maxwell-Burke, Inc. .... 315  
Paine Lumber Co. .... 95  
Premier Standardized Woodwork. .... 294  
G. I. Sellers & Sons Co. .... 117  
Trico, Inc. .... 214  
Trippack Corp. .... 26-27  
Variable Unit Cabinet Co. .... 34

**CABINETS—STORAGE**  
Concealed Bed Corp. .... 297  
Majestic Steel Cabinet Co. .... 369  
Premier Standardized Woodwork. .... 294  
G. I. Sellers & Sons Co. .... 117  
Weber-Busse Co. .... 352

**CABINET DOOR CATCHES—See Hardware**  
**CABINET HARDWARE—See Hardware**  
**CABINET HEATERS—See Heaters**  
**CABINET SCRAPERS—See Scrapers**

**CABLE—ARMORED**  
American Steel & Wire Co. .... 292  
General Electric Co. .... 9-10-11-12-13-14-15

**CABLES—ELEVATOR**  
American Steel & Wire Co. .... 292  
Sedgwick Machine Works. .... 289

**CABLES—HOISTING**  
American Steel & Wire Co. .... 292

**CABLES—STEEL**  
American Steel & Wire Co. .... 292  
Hoosier Bldg. Tile & Silo Co. .... 369

**CAFETERIA EQUIPMENT—See Equipment**

**CALCIUM CHLORIDE**  
Solvay Sales Corp. .... 110  
Truscon Laboratories ..... 72

**CALIFERS**  
A. S. Aloe Co. .... 277  
Lufkin Rule Co. .... 278  
L. S. Starratt Co. .... 271

**CAPITALS—METAL**  
Milwaukee Corrugating Co. .... 374-375

**CAPITALS—WOOD**  
Ornamental Products Co. .... 364

**CAPS—POST**  
American Steel & Wire Co. .... 292  
Cincinnati Iron Fence Co. .... 366  
Donley Bros. Co. .... 295  
International Steel & Iron Co. .... 304  
Geo. L. Mesker & Co. .... 315

**CAPSTANS—HOUSE MOVING**  
Stimmel Winch & Machine Works. .... 284

**CARPENTERS SAWS—See Saws, Hand**

**CARRIERS—BRICK**  
A. S. Aloe Co. .... 277  
Donley Bros. Co. .... 295

**CARRIERS—BUILDING TILE**  
Donley Bros. Co. .... 295

**CARRIERS—CLAMP**  
Donley Bros. Co. .... 295  
Jas. L. Taylor Mfg. Co. .... 285

**CARRIERS—CLOTHES—(See Fixtures, Wardrobe)**

**CARRIERS—OVERHEAD**  
Hunt-Helm-Ferris & Co. .... 108  
Hoosier Bldg. Tile & Silo Co. .... 369  
F. E. Myers & Bros. Co. .... 221  
J. E. Porter Corp. .... 8  
Richards-Wilcox Mfg. Co. .... 6-7

**CARRIERS—TILE**  
Donley Bros. Co. .... 295  
Lloyd Floor & Wall Tile Co. .... 364

**CARS—ELEVATOR**  
Fred J. Meyers Mfg. Co. .... 367  
Sedgwick Machine Works. .... 289

**CARS—INDUSTRIAL**  
Concrete Equipment Co. .... 281-282  
Ransome Concrete Machy. Co. .... 263

**CARTS—CONCRETE**  
Gray Iron Foundry Co. .... 284  
Lansing Company ..... 256  
Ransome Concrete Machy. Co. .... 263  
Sterling Wheelbarrow Co. .... 236

**CARTS—DUMP**  
Lansing Company ..... 256  
Sterling Wheelbarrow Co. .... 236

**CARTS—HAND**  
Lansing Company ..... 256  
Sterling Wheelbarrow Co. .... 236

**CARVINGS—WOOD**  
Ornamental Products Co. .... 364

**CASEMENT WINDOWS—See Windows**

**CASEMENT WINDOW ADJUSTERS**  
—See Hardware, Casement Window

**CASEMENT WINDOW FASTENERS**  
—See Hardware, Casement

**CASINGS—WINDOW (Metal)**  
Edwards Mfg. Co. .... 359  
Genfire Steel Co. .... 80  
Kawneer Co. .... 95  
Milwaukee Corrugating Co. .... 374-375  
Morton Mfg. Co. .... 59  
Richards-Wilcox Mfg. Co. .... 6-7  
Jos. T. Ryerson & Son. .... 220  
Truscon Steel Co. .... 5-90

**CASINGS—WINDOW (Vitreous)**  
Marble  
Marietta Mfg. Co. .... 304

**CASINGS—WINDOW (WOOD)**  
Curtis Cos. .... 61  
Trippack Corporation ..... 26-27

**CASTINGS TO ORDER**  
American Sawmill Machinery Co. .... 255  
Chain Bolt Co. .... 2  
Gray Iron Foundry Co. .... 284  
Kwik-Mix Concrete Mixer Co. .... 269  
Geo. L. Mesker & Co. .... 315  
Morton Mfg. Co. .... 59  
Oliver Machinery Co. .... 282  
T. L. Smith Co. .... 232-233

**CATCHES, CABINET—See Hardware, Cabinet**  
**CATCHES, DOOR—See Hardware**  
**CATCH BASIN FORMS—See Forms and Molds**  
**CATTLE STANCHIONS—See Stanchions**  
**CAULKING MATERIALS—See Compounds, Caulking; also Oakum**  
**CEDAR CHESTS—See Chests, Cedar**

**CEILINGS—ASBESTOS WOOD**  
Asbestos Shingle, Slate & Sheathing Co. 50  
Philip Carey Co. .... 106

**CEILINGS—MARBLE**  
Lloyd Floor & Wall Tile Co. .... 364  
Marietta Mfg. Co. .... 304

**CEILINGS—METAL**  
Edwards Mfg. Co. .... 359  
W. C. Hopson Co. .... 369  
International Steel & Iron Co. .... 304  
Geo. L. Mesker & Co. .... 315  
Milwaukee Corrugating Co. .... 374-375  
Jos. T. Ryerson & Son. .... 220  
Wheeling Corrugating Co. .... 104  
Wheeling Metal & Mfg. Co. .... 316  
Willis Mfg. Co. .... 109

**CEILINGS—SUSPENDED**  
Genfire Steel Co. .... 80  
International Steel & Iron Co. .... 304  
Kalman Steel Co. .... 70  
Milwaukee Corrugating Co. .... 374-375  
Truscon Steel Co. .... 5-90  
United States Gypsum Co. .... 67

**CEILINGS—TILE**  
Gibbs Boardtile Corp. .... 30  
Lloyd Floor & Wall Tile Co. .... 364

**CEILINGS—WOOD**  
Shevlin, Carpenter & Clarke Co. .... 174-175  
West Coast Lumber Trade Extension Bureau ..... 58  
Weyerhaeuser Forest Products. .... 44

**CEILING CLIPS—See Clips**  
**CEILING HOOKS—See Hooks**  
**CEILING PLATES—See Plates**  
**CEILING PULLEYS—See Pulleys**  
**CELLAR DOORS—See Doors**  
**CELLAR DRAINERS—See Drainers**  
**CELLAR SASH FRAMES—See Frames**  
**CELLAR HOISTS—See Hoists**  
**CELLAR WALL GRATINGS—See Gratings**  
**CELLAR WINDOWS—See Frames, Cellar**  
**CELLAR WINDOW SETS—See Sets**

**CEMENT—ASBESTOS**  
Asbestos Shingle, Slate & Sheathing Co. 50  
Philip Carey Co. .... 106  
Clinton Metallic Paint Co. .... 300  
Crane Company ..... 52  
General Insulating & Mfg. Co. .... 307  
Hardin-Lavin Co. .... 89  
Johns-Manville, Inc. .... 195  
Johnson Plumbing Supply Co. .... 352  
B. Karol & Sons Co. .... 308  
National Radiator Co. .... 86  
Ruberoid Co. .... 101  
Stanley Plumbing & Supply Co. .... 358  
U. S. Radiator Corp. .... 40

**CEMENT—ASPHALT**  
Barber Asphalt Co. .... 119  
Beckman-Dawson Roofing Co. .... 82  
Philip Carey Co. .... 106  
Clinton Metallic Paint Co. .... 300  
Johns-Manville, Inc. .... 195  
Ruberoid Co. .... 101

**CEMENT—BOILER**  
Burnham Boiler Corp. .... 82  
Philip Carey Co. .... 106  
Clinton Metallic Paint Co. .... 300  
Crane Co. .... 52  
General Insulating & Mfg. Co. .... 307  
Hardin-Lavin Co. .... 89  
Johns-Manville, Inc. .... 195  
Johnson Plumbing Supply Co. .... 352  
B. Karol & Sons Co. .... 308  
National Radiator Co. .... 86  
Stanley Plumbing & Supply Co. .... 358  
Thatcher Co. .... 281  
U. S. Radiator Corp. .... 40

**CEMENT—HIGH TEMPERATURE**  
Asbestos Shingle, Slate & Sheathing Co. 50  
Philip Carey Co. .... 106  
Clinton Metallic Paint Co. .... 300  
General Insulating & Mfg. Co. .... 307  
Johns-Manville, Inc. .... 195

**CEMENT—MASON'S**  
Louisville Cement Co. .... 119  
U. S. Gypsum Co. .... 67

**CEMENT—PLASTER**  
U. S. Gypsum Co. .... 67

**CEMENT—PORTLAND**  
Alpha Portland Cement Co. .... 69  
Louisville Cement Co. .... 119  
Universal Portland Cement Co. .... 119

**CEMENT—ROOFING**  
Asbestos Shingle, Slate & Sheathing Co. 50  
Beckman-Dawson Roofing Co. .... 82  
Philip Carey Co. .... 106  
Clinton Metallic Paint Co. .... 300  
Johns-Manville, Inc. .... 195  
Milwaukee Corrugating Co. .... 374-375  
Ruberoid Co. .... 101  
Sherwin-Williams Co. .... 212  
Toch Brothers ..... 91  
Truscon Steel Co. .... 5-90

**CEMENT—SLATE**  
Asbestos Shingle, Slate & Sheathing Co. 50  
Clinton Metallic Paint Co. .... 300  
Knickerbocker Slate Corp. .... 212

**CEMENT—TILE SETTING**  
Clinton Metallic Paint Co. .... 300  
J. D. Strusel Rubber Co. .... 212

**CEMENT ACCELERATORS—See Accelerators**  
**CEMENT BAGS—See Bags**  
**CEMENT BRICK MACHINES—See Machines**  
**CEMENT COATINGS—See Coatings**  
**CEMENT COLORS—See Colors**  
**CEMENT FILLERS—See Fillers**  
**CEMENT BRICK MOLDS—See Forms and Molds**  
**CEMENT GROUTERS—See Grouters**  
**CEMENT HARDENERS—See Accelerators, Cement**  
**CEMENT MIXERS—See Mixers**  
**CEMENT REINFORCING—See Reinforcing**  
**CEMENT STAINS—See Stains**  
**CEMENT WATERPROOFING—See Waterproofing**  
**CESSPOOL TRAPS—See Traps**

**CHAINS—Door**  
American Chain Co. .... 106  
Segal Lock & Hardware Co., Inc. .... 119

**CHAINS—HOISTING**  
American Chain Co., Inc. .... 106  
Joseph T. Ryerson & Son. .... 220

**CHAINS—SASH**  
American Chain Co., Inc. .... 106  
Chain Products Co., The. .... 106

**CHAINS—TRANSOM**  
American Chain Co., Inc. .... 106

**CHAIN CLAMPS—See Clamps**  
**CHAIN DRILLS—See Drills**  
**CHAIN HOISTS—See Hoists**

**CHANNELS—PRESSED STEEL**  
Genfire Steel Co. .... 80  
International Steel & Iron Co. .... 304  
Kalman Steel Co. .... 70  
Geo. L. Mesker & Co. .... 315  
Milwaukee Corrugating Co. .... 374-375  
Morton Mfg. Co. .... 59  
Jos. T. Ryerson & Son. .... 220  
Truscon Steel Co. .... 5-90  
Wheeling Corrugating Co. .... 104

**CHANNELS—STEEL**  
Bates Expanded Steel Truss Co. .... 82  
Cincinnati Iron Fence Co. .... 366  
Heltzel Steel Form & Iron Co. .... 106  
International Steel & Iron Co. .... 304  
Kalman Steel Co. .... 70  
Macomber Steel Co. .... 106  
Geo. L. Mesker & Co. .... 315  
Milwaukee Corrugating Co. .... 374-375  
Northfield Iron Co. .... 106  
North Western Expanded Metal Co. .... 106  
Joseph T. Ryerson & Son. .... 220  
Truscon Steel Co. .... 5-90

**CHECKS—DOOR**  
Richards-Wilcox Mfg. Co. .... 367  
Segal Lock & Hardware Co., Inc. .... 119

**CHECKS—SCREEN DOOR**  
 Higgin Mfg. Co. . . . . 301  
 Phenix Mfg. Co. . . . . 354  
 Richards-Wilcox Mfg. Co. . . . . 6-7

**CHECKS—STORM DOOR**  
 Richards-Wilcox Mfg. Co. . . . . 6-7

**CHEMICAL CLOSETS—See Closets**

**CHESTS—BURGLAR PROOF**  
 Weber-Busse Co. . . . . 352

**CHESTS—ICE—See Refrigerators**

**CHESTS—TOOL—See Boxes, Tool**

**CHIMNEY CAPS—See Caps, Chimney**

**CHIMNEY TOPS—See Tops, Chimney**

**CHIMNEY MODDS—See Forms and Molds**

**CHIMNEY PIPE—See Pipe**

**CHIMNEY THIMBLES—See Thimbles**

**CHESTS—CEDAR**  
 Weber-Busse Co. . . . . 352

**CHISELS—CARPENTERS'**  
 A. S. Aloe Co. . . . . 277  
 Stanley Works . . . . . 87

**CHISELS—FLOOR**  
 Henry Disston & Sons, Inc. . . . . 199  
 Stanley Works . . . . . 87

**CHISELS—HOLLOW MORTISING**  
 A. S. Aloe Co. . . . . 277  
 American Sawmill Machinery Co. . . . . 255  
 Crescent Machine Co. . . . . 280  
 Forest City Bit & Tool Co. . . . . 286  
 Jones Superior Machine Co. . . . . 284  
 20th Century Sales Agency. . . . . 253  
 J. D. Wallace & Co. . . . . 251-276

**CHUTES—COAL**  
 Cincinnati Iron Fence Co. . . . . 366  
 Colonial Fireplace Co. . . . . 288  
 The Donley Bros. Co. . . . . 298  
 Edwards Mfg. Co. . . . . 359  
 Holland Furnace Co. . . . . 90  
 International Steel & Iron Co. . . . . 304  
 Kalman Steel Company. . . . . 70  
 Kewanee Mfg. Co. . . . . 303  
 Majestic Company . . . . . 58  
 Geo. L. Mesker & Co. . . . . 315  
 Fred J. Meyers Mfg. Co. . . . . 367  
 Northfield Iron Co. . . . . 344  
 Peerless Mfg. Co. . . . . 81  
 Willis Mfg. Co. . . . . 109

**CHUTES—CONCRETE**  
 Jaeger Machine Co. . . . . 228-229  
 Leach Company . . . . . 267  
 Ransome Concrete Machinery Co. . . . . 263

**CHUTES—MAIL**  
 Donley Bros. Co. . . . . 298  
 Penn-Greg Mfg. Co. . . . . 361

**CIRCULAR KNIVES—See Knives**

**CIRCULAR SAWS—See Saws**

**CISTERN COVERS—See Covers**

**CLAMPS, BRICK—See Carriers, Brick**

**CLAMPS—CARPENTERS'**  
 Jas. L. Taylor Mfg. Co. . . . . 285

**CLAMPS—CHAIN**  
 Jas. L. Taylor Mfg. Co. . . . . 285

**CLAMPS—COLUMN**  
 Jas. L. Taylor Mfg. Co. . . . . 285

**CLAMPS—DOOR**  
 Jas. L. Taylor Mfg. Co. . . . . 285  
 20th Century Sales Agency. . . . . 253

**CLAMPS—FORM**  
 A. S. Aloe Co. . . . . 277  
 Cincinnati Iron Fence Co. . . . . 366

**CLAMPS—FURNITURE MAKING**  
 Oliver Machinery Co. . . . . 282  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 J. L. Taylor Mfg. Co. . . . . 285

**CLAMPS—MEASURING**  
 L. S. Starrett Co. . . . . 271

**CLAMPS—MITER**  
 A. S. Aloe Company. . . . . 277  
 Stanley Works . . . . . 87  
 Jas. L. Taylor Mfg. Co. . . . . 285

**CLAMPS—SAW**  
 Crescent Machine Co. . . . . 260  
 Henry Disston & Sons. . . . . 199  
 Ralph M. Kennedy. . . . . 282

**CLAMP NAILS—See Nails**

**CLAMSHELL BUCKETS—See Buckets**

**CLEANOUT DOORS—See Doors**

**CLEANERS—VACUUM**  
 Clarke Sanding Machine Co. . . . . 20-21  
 General Electric Co. . . . . 9-10-11-12-13-14-15

**CLIPS—CEILING (For Metal Lumber)**  
 Donley Bros. Co. . . . . 298  
 Milwaukee Corrugating Co. . . . . 374-375  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 Joseph T. Ryerson & Son. . . . . 220

**CLIPS—FLOOR**  
 Kalman Steel Co. . . . . 70  
 Geo. L. Mesker & Co. . . . . 315  
 Milwaukee Corrugating Co. . . . . 374-375

**CLIPS—GALVANIZED**  
 American Steel & Wire Co. . . . . 292  
 Milwaukee Corrugating Co. . . . . 374-375

**CLIPS—SIDING (Metal)**  
 Edwards Mfg. Co. . . . . 350  
 International Steel & Iron Co. . . . . 304  
 F. D. Kees Mfg. Co. . . . . 356  
 Truscon Steel Co. . . . . 5-90

**CLIPS—WIRE ROPE**  
 American Steel & Wire Co. . . . . 292  
 Joe. T. Ryerson & Son. . . . . 220

**CLOCKS**  
 American Clock Co. . . . . 317  
 Tillery's Little Janitor Clock Co. . . . . 362

**CLOCKS—FURNACE**  
 Hardin-Lavin Company . . . . . 89  
 Majestic Company . . . . . 56  
 Stanley Plumbing & Supply Co. . . . . 358  
 Tillery's Little Janitor Clock Co. . . . . 362

**CLOSERS—DOOR**  
 Richards-Wilcox Mfg. Co. . . . . 6-7

**CLOSETS—CHEMICAL**  
 Chemical Toilet Corp. . . . . 354-360  
 Hardin-Lavin Company . . . . . 89  
 Johnson Plumbing Supply Co. . . . . 352  
 Stanley Plumbing & Supply Co. . . . . 358  
 Trico, Inc. . . . . 214

**CLOSETS—HANGING**  
 Curtis Cos. . . . . 61  
 Paine Lumber Co. . . . . 95  
 Johnson Plumbing Supply Co. . . . . 352

**CLOSETS—WATER**  
 Andrews Heating Co. . . . . 367  
 Crane Company . . . . . 52  
 Hardin-Lavin Co. . . . . 89  
 Johnson Plumbing Supply Co. . . . . 352  
 B. Karol & Sons Co. . . . . 308  
 Standard Sanitary Mfg. Co. . . . . 18-19  
 Stanley Plumbing & Supply Co. . . . . 358  
 Wheeling Sanitary Mfg. Co. . . . . 215

**CLOSET BOWLS—See Bowls**

**CLOSET LINING, CEDAR—See Lining**

**CLOSET SEATS—See Seats**

**CLOSET TANKS—See Tanks**

**CLOSET TANK FITTINGS—See Fittings**

**CLOTH—SCREEN**  
 Gilbert & Bennett Mfg. Co. . . . . 77  
 Higgin Mfg. Co. . . . . 301  
 Reynolds Wire Co. . . . . 183

**CLOTH—SHADE**  
 E. I. Du Pont De Nemours & Co., Inc. . . . . 41

**CLOTH—TRACING**  
 A. S. Aloe Co. . . . . 277  
 Keuffel & Esser Co. . . . . 268  
 Frederick Post Co. . . . . 264  
 Warren-Knight Co. . . . . 282

**CLOTH—WIRE**  
 Gilbert & Bennett Mfg. Co. . . . . 77  
 Higgin Mfg. Co. . . . . 301  
 Fred J. Meyers Mfg. Co. . . . . 367  
 Reynolds Wire Co. . . . . 183  
 Joseph T. Ryerson & Son. . . . . 220

**CLOTHES CARRIERS—See Fixtures, Wardrobe**

**CLOTHES DRYERS—See Dyers, Laundry**

**CLOTHES POSTS—See Posts**

**CLOTHES CLOSET FIXTURES—See Fixtures, Wardrobe**

**CLUTCHES—FRICTION**  
 Chain Belt Co. . . . . 2  
 O. K. Clutch & Machy. Co. . . . . 263  
 Hagstrom Mfg. Co. . . . . 318  
 Johns-Manville, Inc. . . . . 195

**COAL CHUTES—See Chutes**

**COAL DOORS—See Doors**

**COAL HOLE COVERS—See Covers**

**COAL STOVES—See Ranges**

**COATINGS—CEMENT**  
 Anti-Hydro Waterproofing Co. . . . . 296-318  
 Beckman-Dawson Roofing Co. . . . . 92  
 Clinton Metallic Paint Co. . . . . 300  
 Lloyd Floor & Wall Tile Co. . . . . 364  
 Reardon Co. . . . . 81  
 Ruberoid Co. . . . . 101  
 Standard Varnish Works. . . . . 91  
 Toch Brothers . . . . . 91  
 Truscon Laboratories . . . . . 72  
 Truscon Steel Company. . . . . 5-90

**COATINGS—ROOF**  
 Barber Asphalt Co. . . . . 113  
 Beckman-Dawson Roofing Co. . . . . 92  
 Philip Carey Co. . . . . 106  
 Clinton Metallic Paint Co. . . . . 300  
 Johns-Manville, Inc. . . . . 195  
 Ruberoid Co. . . . . 101  
 Sherwin-Williams Co. . . . . 213  
 Toch Brothers . . . . . 91  
 Truscon Steel Co. . . . . 5-90

**COLONIAL HARDWARE—See Hardware**

**COLONNADES**  
 Stephen Bilek Co. . . . . 362  
 Curtis Cos. . . . . 61  
 Edwards Mfg. Co. . . . . 359  
 Paine Lumber Co. . . . . 93

**COLORS—BRICK**  
 Samuel Cabot, Inc. . . . . 218  
 Clinton Metallic Paint Co. . . . . 300  
 Toch Brothers . . . . . 91  
 C. K. Williams & Co. . . . . 360

**COLORS—CEMENT**  
 Samuel Cabot, Inc. . . . . 218  
 Clinton Metallic Paint Co. . . . . 300  
 Concrete Equipment Co. . . . . 281-282  
 Genfire Steel Co. . . . . 80  
 Hoosier Bldg. Tile & Silo Co. . . . . 369  
 Lloyd Floor & Wall Tile Co. . . . . 364  
 Sherwin-Williams Co. . . . . 213  
 Standard Varnish Works. . . . . 91  
 Toch Brothers . . . . . 91  
 Truscon Laboratories . . . . . 91  
 Truscon Steel Co. . . . . 5-90  
 C. K. Williams & Co. . . . . 360

**COLORS—MAGNESITE**  
 Samuel Cabot, Inc. . . . . 218  
 Clinton Metallic Paint Co. . . . . 300  
 Toch Brothers . . . . . 91  
 C. K. Williams & Co. . . . . 360

**COLORS—MORTAR**  
 Samuel Cabot, Inc. . . . . 218  
 Clinton Metallic Paint Co. . . . . 300  
 Genfire Steel Co. . . . . 80  
 Hoosier Bldg. Tile & Silo Co. . . . . 369  
 Toch Brothers . . . . . 91  
 Truscon Laboratories . . . . . 72  
 C. K. Williams & Co. . . . . 360

**COLORS—STUCCO**  
 Samuel Cabot, Inc. . . . . 218  
 Clinton Metallic Paint Co. . . . . 300  
 Genfire Steel Co. . . . . 80  
 Toch Brothers . . . . . 91  
 Truscon Laboratories . . . . . 72  
 Truscon Steel Co. . . . . 5-90  
 U. S. Gypsum Co. . . . . 67  
 C. K. Williams & Co. . . . . 360

**COLUMN BASES—See Bases**

**COLUMN COVERINGS—See Coverings**

**COLUMN FORMS—See Forms and Molds**

**COLUMN STANCHIONS—See Stanchions**

**COLUMNS—METAL**  
 Donley Bros. Co. . . . . 298  
 Edwards Mfg. Co. . . . . 359  
 Kawneer Co. . . . . 65  
 Geo. L. Mesker & Co. . . . . 315  
 Truscon Steel Co. . . . . 5-90  
 Willis Mfg. Co. . . . . 109

**COLUMNS—PIPE**  
 Donley Bros. Co. . . . . 298  
 International Steel & Iron Co. . . . . 304  
 Geo. L. Mesker & Co. . . . . 315

**COLUMNS—WOOD**  
 Curtis Cos. . . . . 61  
 Paine Lumber Co. . . . . 95  
 West Coast Lumber Trade Extension Bureau . . . . . 58

**COMBINATION SQUARES—See Squares**

**COMPASSES—See Instruments, Drawing**

**COMPOUNDS—ANTI-FREEZE**  
 Anti-Hydro Waterproofing Co. . . . . 296-318  
 Genfire Steel Co. . . . . 80  
 H. B. Fred Kuhls. . . . . 94  
 Solvay Sales Corp. . . . . 110  
 Toch Brothers . . . . . 91  
 Truscon Laboratories . . . . . 72  
 Truscon Steel Co. . . . . 5-90

**COMPOUNDS—CAULKING**  
 Bique Weatherstripping and Caulking. . . . . 362  
 Diamond Metal Weatherstrip Co. . . . . 259  
 Federal Metal Weatherstrip Co. . . . . 369  
 Genfire Steel Co. . . . . 80  
 Hardin-Lavin Co. . . . . 89  
 Kuhlman Metal Weatherstrip Co. . . . . 365  
 H. B. Fred Kuhls. . . . . 94  
 Stanley Plumbing & Supply Co. . . . . 358  
 Toch Brothers . . . . . 91  
 Truscon Laboratories . . . . . 72  
 Truscon Steel Co. . . . . 5-90

**COMPOUNDS—GLAZING**  
 Bique Weatherstripping and Caulking. . . . . 362  
 Philip Carey Co. . . . . 106  
 Diamond Metal Weatherstrip Co. . . . . 259  
 W. E. Dunn Mfg. Co. . . . . 222-223  
 H. B. Fred Kuhls. . . . . 94  
 Sherwin-Williams Co. . . . . 213  
 Toch Brothers . . . . . 91  
 Truscon Laboratories . . . . . 72  
 Truscon Steel Co. . . . . 5-90

**COMPOUNDS—SOLDERING**  
 General Electric Co. . . . . 9-10-11-12-13-14-15  
 Hardin-Lavin Company . . . . . 89  
 Milwaukee Corrugating Co. . . . . 374-375  
 Stanley Plumbing & Supply Co. . . . . 358

**COMPRESSORS—AIR**  
 Binks Spray Equipment Co. . . . . 265  
 The DeVilbiss Co. . . . . 242  
 Mellish-Hayward Co. . . . . 283  
 Milwaukee Air Power Pump Co. . . . . 316  
 O. K. Clutch & Machy. Co. . . . . 263  
 Joseph T. Ryerson & Son. . . . . 220

**CONCRETE BINS—See Bins**

**CONCRETE BLOCK MOLDS—See Forms and Molds**

**CONCRETE BLOCK MACHINES—See Machines**

**CONCRETE CHUTES—See Chutes**

**CONCRETE CONSTRUCTION FORMS—See Forms and Molds**

**CONCRETE HEATERS—See Heaters**

**CONCRETE INSERTS—See Inserts**

**CONCRETE MIXERS—See Mixers**

**CONDUCTOR PIPE—See Pipe**

**CONDUITS—ELECTRICAL**  
 General Electric Co. . . . . 9-10-11-12-13-14-15  
 Johns-Manville, Inc. . . . . 195  
 Paramount Electric Co. . . . . 359

**CONDUITS—UNDERGROUND**  
 American Steel & Wire Co. . . . . 292  
 Johns-Manville, Inc. . . . . 195  
 National Fireproofing Co. . . . . 74

**CONSERVATORIES—See Greenhouses**

**CONTRACTION JOINTS—See Joints**

**CONTRACTORS' HOISTS—See Hoists, Building Material**

**CONTROLS—GAS WATER HEATER**  
 Gas Gard Co. . . . . 314

**CONVEYING MACHINERY—See Machinery**

**CONVEYERS—BELT**  
Chain Belt Co. .... 2  
Goodyear Tire & Rubber Co. .... 66  
Northfield Iron Co. .... 364

**CONVEYERS—GRAVITY SPIRAL**  
Chain Belt Co. .... 2

**CONVEYERS—PORTABLE**  
Northfield Iron Co. .... 364

**CONVENIENCE OUTLETS—See Outlets, Electric**

**CONVERTIBLE LEVELS—See Levels**

**COPING—WALL**  
Clay Products Assn. .... 294  
Hoonier Bldg. Tile & Silo Co. .... 369  
Milwaukee Corrugating Co. .... 374-375  
Zouri Drawn Metals Co. .... 48

**COPPER COVERED DOORS—See Doors**

**COPPER MITERS—See Miters**

**COPPER SHINGLES—See Roofing**

**CORD—AWNING**  
John Boyle & Co., Inc. .... 358  
Samson Cordage Works .... 353  
Silver Lake Co. .... 371

**CORD—DUMDBAITER**  
International Steel & Iron Co. .... 304  
Samson Cordage Works .... 353  
Sedgwick Machine Works .... 289  
Silver Lake Co. .... 371

**CORD—SASH**  
American Steel & Wire Co. .... 292  
Samson Cordage Works .... 353  
Silver Lake Co. .... 371

**CORD—SHADE**  
Samson Cordage Works .... 353  
Silver Lake Co. .... 371

**CORNERIES—HOLLOW TILE**  
Hoonier Bldg. Tile & Silo Co. .... 369  
National Fireproofing Co. .... 74

**CORNERIES—METAL**  
Edwards Mfg. Co. .... 359  
Northfield Iron Co. .... 364

**CORNER BEAD—See Bead**

**CORNER BRACES—See Braces**

**CORNER GUARDS—See Guards**

**CORNERS—METAL**  
Donley Bros. Co. .... 298  
Edwards Mfg. Co. .... 359  
Gibbs Boardtile Corp. .... 30  
Kawneer Co. .... 65  
F. D. Kees Mfg. Co. .... 356  
Milwaukee Corrugating Co. .... 374-375  
National Sheet Metal Roofing Co. .... 364  
National Steel Fabric Co. .... 28-29  
Jos. T. Ryerson & Son. .... 220  
Trucon Steel Co. .... 5-80  
Wheeling Corrugating Co. .... 104  
Willis Mfg. Co. .... 109

**CORNICES—METAL**  
Edwards Mfg. Co. .... 359  
International Steel & Iron Co. .... 304  
Geo. L. Mesker & Co. .... 315  
Milwaukee Corrugating Co. .... 374-375  
National Sheet Metal Roofing Co. .... 364  
Jos. T. Ryerson & Son. .... 220  
Wheeling Metal & Mfg. Co. .... 316  
Willis Mfg. Co. .... 109

**CORRESPONDENCE SCHOOLS—See Schools**

**CORRUGATED IRON ARCHES—See Arches**

**COUNTER SCREENS—See Screens**

**COUNTERSINKS**  
North Bros. Mfg. Co. .... 280  
Stanley Works .... 87  
L. S. Starratt Co. .... 271

**COVE BASE—See Base**

**COVERINGS—BOILER AND PIPE**  
Asbestos Shingle, Slate & Sheathing Co. 50  
Burnham Boiler Corp. .... 82  
Philip Carey Co. .... 106  
General Insulating & Mfg. Co. .... 307  
Hardin-Lavin Co. .... 89  
Johns-Manville, Inc. .... 195  
Johnson Plumbing Supply Co. .... 352  
B. Karol & Sons Co. .... 308  
National Radiator Co. .... 86  
F. L. Rogers & Co. .... 285  
Stanley Plumbing & Supply Co. .... 358  
U. S. Radiator Corp. .... 40

**COVERINGS—COLUMN AND GIRDER**  
Consolidated Expanded Metal Co. .... 270  
National Fireproofing Co. .... 74

**COVERINGS—FLOOR (RUBBER)**  
Goodyear Tire & Rubber Co. .... 66  
J. D. Strutsel Rubber Co. .... 312  
Wright Rubber Products Co. .... 360

**COVERINGS—FLOOR (TILE)**  
Marietta Mfg. Co. .... 304

**COVERINGS—WALL**  
Asbestos Shingle, Slate & Sheathing Co. 50  
Columbus Union Oil Cloth Company .... 310  
Edwards Mfg. Co. .... 359  
Gibbs Boardtile Corp. .... 30  
Lincrusta-Walton Company .... 216  
Marietta Mfg. Co. .... 304  
Standard Textile Products Co. .... 39

**COVERINGS—WATERPROOF**  
Beckman-Dawson Roofing Co. .... 92  
John Boyle & Co., Inc. .... 358  
Genfire Steel Co. .... 80  
Gibbs Boardtile Corp. .... 30  
Johns-Manville, Inc. .... 195  
E. I. Du Pont De Nemours & Co., Inc. .... 41  
Ruberoid Co. .... 101  
Sisalcraft Co. .... 306  
Standard Varnish Works .... 91

**COVERS—CISTERN**  
Colonial Fireplace Co. .... 288  
Donley Bros. Company .... 298  
Edwards Mfg. Company .... 359  
Hardin-Lavin Company .... 89  
International Steel & Iron Co. .... 304  
The Majestic Company .... 56  
Stanley Plumbing & Supply Co. .... 358

**COVERS—COAL HOLE**  
Donley Bros. Co. .... 298  
Edwards Mfg. Company .... 359  
Hardin-Lavin Company .... 89  
International Steel & Iron Co. .... 304  
Geo. L. Mesker & Co. .... 315  
Oliver Machinery Company .... 282

**COVERS—MANHOLE**  
S. Cheney & Son. .... 282  
Donley Bros. Co. .... 298  
Edwards Mfg. Company .... 359  
International Steel & Iron Co. .... 304  
Fred J. Meyers Mfg. Co. .... 367  
Oliver Machinery Company .... 282  
Joseph T. Ryerson & Son. .... 220  
Stanley Plumbing & Supply Co. .... 358

**COVERS—RADIATOR**  
American Radiator Company .... 192-193  
Standard Sanitary Mfg. Co. .... 18-19

**CRANES—GASOLINE**  
Koehring Company .... 255  
Sasgen Derrick Company .... 284

**CRANES—HAND**  
Richards-Wilcox Mfg. Company .... 6-7  
Sasgen Derrick Company .... 284  
Sedgwick Machine Works .... 289

**CRAYONS—LUMBER**  
A. S. Aloe Company .... 277  
Kenfel & Esser Company .... 268  
Warren-Knight Company .... 282

**CRUSHED GRANITE—See Granite**

**CULVERT FORMS—See Forms and Molds**

**CULVERT PIPE—See Pipe**

**CUPOLAS—BAEN (See Ventilators, Roof)**

**CURB AND GUTTER FORMS—See Forms and Molds**

**CURTAINS—ASBESTOS**  
Asbestos Shingle, Slate & Sheathing Co. 50  
Philip Carey Company .... 106  
Johns-Manville, Inc. .... 195

**CURTAINS—METAL**  
Cornell Iron Works, Inc. .... 368  
Edwards Mfg. Co. .... 359  
Joseph T. Ryerson & Son. .... 220

**CUT-OUTS—ELECTRICAL**  
General Electric Co. .... 9-10-11-12-13-14-15  
Hart & Hegeman Mfg. Company .... 42

**CUTTER HEADS—See Heads**

**CUTTERS—ASBESTOS SHINGLE**  
Ajax Building Bracket Company .... 278  
Asbestos Shingle, Slate & Sheathing Co. 50  
Eternit, Incorporated .... 6-17  
Ruberoid Company .... 101  
Safe Tool Mfg. Company .... 285

**CUTTERS—BAR**  
Koehring Company .... 255  
Ransome Concrete Machinery Co. .... 263  
Joseph T. Ryerson & Son. .... 220  
Safe Tool Mfg. Co. .... 285

**CUTTERS—DADO**  
W. B. & J. E. Boice. .... 266  
Crescent Machine Company .... 260  
Henry Disston & Sons, Inc. .... 199  
Esakay Manufacturing Company .... 279  
Heston & Anderson. .... 273  
Hutchinson Mfg. Co., Inc. .... 281  
Huther Bros. Saw Mfg. Co. .... 274  
John Superior Machine Company .... 284  
Ralph M. Kennedy. .... 282  
Porter-Cable Machine Co. .... 247  
Safe Tool Mfg. Co. .... 285  
20th Century Sales Agency .... 253

**CUTTERS—MITER**  
Henry Disston & Sons, Inc. .... 199  
Heston & Anderson. .... 273  
Milwaukee Corrugating Company .... 374-375  
Safe Tool Mfg. Company .... 285  
Stanley Works .... 87  
20th Century Sales Agency .... 253

**CUTTERS—MOULDING**  
Crescent Machine Co. .... 260  
DeWalt Products Company .... 259  
Henry Disston & Sons, Inc. .... 199  
Heston & Anderson. .... 273  
Hutchinson Mfg. Co., Inc. .... 281  
Huther Bros. Saw Mfg. Co., Inc. .... 274  
Ralph M. Kennedy. .... 284  
Oliver Machinery Company .... 282  
Safe Tool Mfg. Company .... 285  
20th Century Sales Co. .... 253

**CUTTERS—SASH**  
DeWalt Products Company .... 259  
Hutchinson Mfg. Co., Inc. .... 281  
Huther Bros. Saw Mfg. Co. .... 274  
Safe Tool Company .... 285  
20th Century Sales Agency .... 253

**CUTTERS—SLATE**  
Ajax Building Bracket Company .... 278  
Asbestos Shingle, Slate & Sheathing Co. 50  
Ralph M. Kennedy. .... 282  
Knickerbocker Slate Corporation .... 312  
Slatington Slate Company .... 282  
Safe Tool Mfg. Company .... 285  
20th Century Sales Agency .... 253

**DADO CUTTERS—See Cutters**

**DADO HEADS—See Heads**

**DAMPERS—FIREPLACE**  
Colonial Fireplace Company .... 288  
Donley Bros. Co. .... 298  
Heattilator Company .... 186  
International Steel & Iron Company .... 304  
Kalman Steel Company .... 79  
Lloyd Floor & Wall Tile Company .... 84  
Majestic Company .... 56  
Geo. L. Mesker & Co. .... 315  
Ohio Foundry & Mfg. Company .... 311  
Peerless Manufacturing Company .... 61  
Readybuilt Pdts. Co. .... 357  
Willis Mfg. Co. .... 109

**DAMP-PROOFING**  
Anti-Hydro Waterproofing Co. .... 296-315  
Beckman-Dawson Roofing Company .... 92  
Samuel Cabot, Inc. .... 218  
Philip Carey Co. .... 106  
Donley Brothers Co. .... 298  
Genfire Steel Company .... 80  
Johns-Manville, Inc. .... 195  
Lincoln-Schleuter Machinery Company .... 282  
Reardon Company .... 81  
Ruberoid Company .... 101  
Johns-Manville, Inc. .... 195  
Toch Brothers .... 61  
Trucon Laboratories .... 71  
Trucon Steel Company .... 5-80

**DASH—PERRLE**  
C. K. Williams & Company. .... 360

**DASH—STUCCO**  
C. K. Williams & Company. .... 360

**DEADENERS—SOUND**  
General Insulating & Mfg. Co. .... 307  
Ruberoid Company .... 101  
Weyerhaeuser Forest Products .... 44

**DEADENING BOARDS—See Boards**

**DEADENING FELTS—See Felts**

**DECORATIONS—GARDEN AND LAWN**  
Concrete Equipment Company .... 251-262  
Fairlyland Company .... 260

**DERRICKS**  
A. S. Aloe Company .... 277  
Ransome Concrete Machinery Co. .... 263  
Sasgen Derrick Company .... 284  
Stimmel Winch & Machine Works .... 284

**DIMENSION STOCK—See Stock**

**DISAPPEARING BEDS—See Beds**

**DIAPHRAGM STAIRS—See Stairs**

**DISHWASHING MACHINES—See Machines**

**DISK GRINDERS—See Grinders**

**DIVIDERS—See Instruments, Drawing**

**DOVE DAMPERS—See Dampers, Fireplace**

**DOORS—ASBESTOS**  
Asbestos Shingle, Slate & Sheathing Co. 50

**DOORS—ASHFIT**  
Colonial Fireplace Co. .... 288  
Donley Brothers Company .... 298  
International Steel & Iron Company .... 304  
Kalman Steel Company .... 79  
Majestic Company .... 56  
Geo. L. Mesker & Company .... 315  
Ohio Foundry & Mfg. Company .... 311  
Peerless Mfg. Co. .... 61  
Pioneer Fireplace & Supply Co. .... 285

**DOORS—BRONZE**  
Edwards Mfg. Company .... 359  
Kawneer Company .... 65  
Leonard Sheet Metal Works .... 285

**DOORS—CELLAR (Metal)**  
Cincinnati Iron Fence Company .... 280  
Edwards Mfg. Company .... 359  
International Steel & Iron Company .... 304  
Geo. L. Mesker & Company .... 315  
Trucon Steel Company .... 5-80

**DOORS—CLEANOUT**  
Colonial Fireplace Company .... 288  
Donley Brothers Company .... 298  
International Steel & Iron Co. .... 304  
Johnson Plumbing Supply Company .... 352  
Kalman Steel Company .... 79  
Majestic Company .... 56  
Geo. L. Mesker & Company .... 315  
Ohio Foundry & Mfg. Company .... 311  
Peerless Manufacturing Company .... 61  
Pioneer Fireplace & Supply Co. .... 285  
Willis Manufacturing Company .... 109

**DOORS-COAL**  
 Cincinnati Iron Fence Company.....366  
 Donley Brothers Company.....298  
 Edwards Mfg. Company.....359  
 International Steel & Iron Company.....304  
 Kalman Steel Company.....76  
 Kewanee Manufacturing Company.....303  
 Majestic Company.....58  
 Geo. L. Mesker & Mfg. Company.....315  
 Ohio Foundry & Mfg. Company.....311  
 Willis Manufacturing Company.....109

**DOORS-COPPER COVERED**  
 Edwards Manufacturing Company.....359  
 Kawneer Company.....65  
 Leonard Sheet Metal Works.....356  
 Zouri Drawn Metals Company.....46

**DOORS-ELEVATOR**  
 Cincinnati Iron Fence Co.....366  
 Cornell Iron Works, Inc.....368  
 Leonard Sheet Metal Works.....356  
 Overhead Door Corporation.....75  
 Truscon Steel Company.....5-90

**DOORS-FIRE**  
 Cheney & Son.....282  
 Cincinnati Iron Fence Co.....366  
 Cornell Iron Works, Inc.....368  
 Edwards Mfg. Company.....359  
 Genfre Steel Co.....80  
 International Steel & Iron Co.....304  
 David Lupton's Sons Co.....76  
 Leonard Sheet Metal Works.....356  
 Geo. L. Mesker & Co.....315  
 Milwaukee Corrugating Co.....374-375  
 Richards-Wilcox Mfg. Company.....6-7  
 Truscon Steel Company.....5-90  
 Willis Manufacturing Co.....109

**DOORS-FIREPROOF (Metal Covered)**  
 Edwards Mfg. Co.....359  
 International Steel & Iron Company.....304  
 Kawneer Company.....65  
 Leonard Sheet Metal Works.....356  
 Geo. L. Mesker & Company.....315  
 Milwaukee Corrugating Company.....374-375  
 Peerless Manufacturing Co.....81  
 Richards-Wilcox Manufacturing Co.....6-7  
 Willis Manufacturing Company.....109

**DOORS-FOLDING**  
 Wm. Bayley Company.....314  
 Cincinnati Iron Fence Company.....366  
 Overhead Door Corporation.....75  
 Paine Lumber Co., Inc.....93  
 Richards-Wilcox Mfg. Co.....6-7  
 Truscon Steel Company.....5-90

**DOORS-GARAGE (Metal)**  
 William Bayley Company.....314  
 Edwards Mfg. Company.....359  
 Genfre Steel Company.....80  
 International Steel & Iron Company.....304  
 David Lupton's Sons Company.....76  
 Geo. L. Mesker & Co.....315  
 Overhead Door Corporation.....75  
 Richards-Wilcox Mfg. Co.....6-7  
 Truscon Steel Company.....5-90

**DOORS-GARAGE (Wood)**  
 Curtis Companies.....61  
 Edwards Manufacturing Co.....359  
 Hoosier Bldg. Tile & Silo Co.....369  
 International Steel & Iron Co.....304  
 Overhead Door Corp.....75  
 Paine Lumber Co.....93  
 Richards-Wilcox Mfg. Co.....6-7  
 West Coast Lumber Trade Extension Bureau.....58  
 Wheeler-Osgood Company.....35-36

**DOORS-HARDWOOD AND VENEERED**  
 Birch Mfrs.....353  
 Curtis Companies, Inc.....61  
 Paine Lumber Co.....93  
 Wheeler-Osgood Company.....35-36

**DOORS-HOLLOW METAL**  
 Edwards Manufacturing Co.....359  
 International Steel & Iron Company.....304  
 Kawneer Company.....65  
 Leonard Sheet Metal Works.....356  
 Geo. L. Mesker & Company.....315  
 Truscon Steel Company.....5-90

**DOORS-IRON**  
 Wm. Bayley Company.....314  
 Cincinnati Iron Fence Co.....366  
 Edwards Mfg. Company.....359  
 International Steel & Iron Co.....304  
 Leonard Sheet Metal Works.....356  
 David Lupton's Sons Co.....76  
 Geo. L. Mesker & Company.....315  
 Fred J. Meyers Mfg. Company.....367  
 Morton Mfg. Co.....59  
 Truscon Steel Company.....5-90

**DOORS-KALAMEN**  
 Edwards Mfg. Company.....359  
 Leonard Sheet Metal Works.....356  
 Geo. L. Mesker & Company.....315

**DOORS-OVERHEAD**  
 Overhead Door Corp.....75  
 Richards-Wilcox Mfg. Company.....6-7

**DOORS-ROLLING (Steel)**  
 Cornell Iron Works, Inc.....368  
 Edwards Manufacturing Company.....359  
 International Steel & Iron Company.....304  
 Geo. L. Mesker & Company.....315  
 Overhead Door Corp.....75  
 Truscon Steel Company.....5-90

**DOORS-SCREEN**  
 Curtis Companies.....61  
 W. J. Dennis & Company.....369  
 Higgin Mfg. Company.....301  
 Paine Lumber Co.....93  
 West Coast Lbr. Tr. Extension Bureau.....68

**DOORS-SHOW CASE**  
 Kawneer Company.....65  
 Knappe & Vogt Mfg. Company.....298  
 Zouri Drawn Metals Company.....46

**DOORS-SHOWER STALL**  
 Flat Metal Mfg. Co.....297  
 Kawneer Company.....65  
 Marietta Mfg. Co.....304

**DOORS-SIDEWALK**  
 Cincinnati Iron Fence Co.....366  
 International Steel & Iron Co.....304  
 Geo. L. Mesker & Co.....315  
 Fred J. Meyers Mfg. Co.....367

**DOORS-SILO**  
 Hoosier Bldg. Tile & Silo Co.....369  
 West Coast Lbr. Trade Extension Bureau.....58

**DOORS-SLIDING**  
 Wm. Bayley Company.....314  
 Cincinnati Iron Fence Company.....366  
 Overhead Door Corp.....75  
 Paine Lumber Company.....93  
 Richards-Wilcox Mfg. Co.....6-7  
 Truscon Steel Company.....5-90  
 Willis Mfg. Co.....109

**DOORS-SOFTWOOD**  
 Curtis Companies.....61  
 Paine Lumber Company.....93  
 Premier Standardized Woodwork.....294  
 Wheeler-Osgood Company.....35-36

**DOORS-STEEL**  
 Wm. Bayley Company.....314  
 Edwards Mfg. Company.....359  
 Genfre Steel Company.....80  
 International Steel & Iron Co.....304  
 David Lupton's Sons Co.....76  
 Geo. L. Mesker & Co.....315  
 Fred J. Meyers Mfg. Co.....367  
 Truscon Steel Company.....5-90

**DOORS-STORM**  
 Curtis Companies.....61  
 Hoosier Bldg. Tile & Silo Co.....369  
 Paine Lumber Company.....93

**DOORS-STORM AND SCREEN COMBINED**  
 Curtis Companies, Inc.....61  
 Paine Lumber Co.....93  
 Premier Standardized Woodwork.....294

**DOORS-TINCLAD**  
 Edwards Manufacturing Co.....359  
 International Steel & Iron Co.....304  
 Leonard Sheet Metal Works.....356  
 Geo. L. Mesker & Co.....315  
 Milwaukee Corrugating Co.....374-375  
 Richards-Wilcox Mfg. Company.....6-7  
 Willis Manufacturing Company.....109

**DOORS-VAULT**  
 Weber-Busse Company.....352

**DOORS-WIRE**  
 International Steel & Iron Co.....304  
 Fred J. Meyers Mfg. Co.....367

**DOOR BEDS-See Beds, Disappearing**  
**DOOR BOLTS-See Hardware, Door**  
**DOOR BUTTS-See Hinges, Butt**  
**DOOR CATCHES-See Hardware, Door**  
**DOOR CHAINS-See Chains**  
**DOOR CHECKS-See Checks**  
**DOOR CHECK HOLDERS-See Holders**  
**DOOR CLAMPS-See Clamps**  
**DOOR CLOSERS-See Checks-Door**  
**DOOR FRAMES-See Frames**  
**DOOR GUARDS-See Guards**  
**DOOR HARDWARE-See Hardware**  
**DOOR HOLDERS-See Holders**  
**DOOR JAMBS-See Jambs**  
**DOOR KNOCKERS-See Hardware, Door**  
**DOOR LOCKS-See Locks**  
**DOOR LOCK MORTISES-See Mortisers**  
**DOOR OPENERS (Electric)-See Openers**  
**DOOR PLATES-See Hardware, Door**  
**DOOR PULLS-See Hardware, Door**  
**DOOR ROLLERS-See Rollers**  
**DOOR SPRINGS-See Springs**  
**DOOR STOPS-See Stops**  
**DOOR TRIM-See Trim**  
**DRAFTING ROOM FURNITURE-See Furniture**  
**DRAFTING TABLES-See Furniture, Drafting Boom**  
**DRAFTSMEN'S SCALES-See Instruments, Drawing**  
**DRAG LINES-See Lines**  
**DRAG SAWS-See Saws**  
**DRAINERS-DELLAR**  
 Hardin-Lavin Company.....89  
 Johnson Plumbing Supply Company.....352  
 B. Karol & Sons Company.....306  
 Standard Sanitary Mfg. Company.....18-19  
 Stanley Plumbing & Supply Company.....358

**DRAINS-FLOOR**  
 Donley Brothers Company.....298  
 Hardin-Lavin Company.....89  
 Johnson Plumbing Supply Company.....352  
 B. Karol & Sons Company.....306  
 Standard Sanitary Mfg. Company.....18-19  
 Stanley Plumbing & Supply Company.....358

**DRAIN BOARDS-See Boards**  
**DRAIN TILE-See Tile**  
**DRAIN TILE MACHINES-See Machines**  
**DRAIN TILE MOLDS-See Forms and Molds**  
**DRAIN PIPE-See Pipe**  
**DRAIN PUMPS-See Pumps**  
**DRAPEY AND SHADE HOLDERS-See Holders**  
**DRAWING BOARDS-See Boards**  
**DRAWING BOARD PASTE-See Paste**  
**DRAWING INKS-See Inks**  
**DRAWING INSTRUMENTS-See Instruments**  
**DRAWING PAPER-See Paper**  
**DRAWING PENCILS-See Instruments, Drawing**  
**DREDGING BUCKETS-See Buckets**  
**DRILLS-PUNCH**  
 A. S. Aloe Company.....277  
 W. B. & J. E. Bolice.....296  
 National Sanding Machine Co.....283  
 North Bros. Mfg. Co.....280  
 Joseph T. Ryerson & Son.....220

**DRILLS-BREAST**  
 North Bros. Mfg. Company.....280  
 Stanley Works.....87

**DRILLS-CHAIN**  
 North Bros. Mfg. Company.....280

**DRILLS-ELECTRIC**  
 A. S. Aloe Company.....277  
 Black & Decker Mfg. Co.....254  
 Joseph T. Ryerson & Son.....220  
 Stanley Works.....87  
 Syntro Company.....267

**DRILLS-HAND**  
 North Bros. Mfg. Co.....280  
 Stanley Works.....87

**DRILLS-STONE**  
 Ackerman-Johnson Company.....260  
 North Bros. Mfg. Company.....280  
 Syntro Company.....267

**DRILLS-TWIST**  
 Jos. T. Ryerson & Son.....220  
 20th Century Sales Agency.....263

**DRILLING MACHINERY-See Machinery**  
**DRIVEWAY ARCHES-See Arches**  
**DUCK-COTTON**  
 John Boyle & Co., Inc.....358

**DUMBWAITERS**  
 International Steel & Iron Company.....304  
 Kimball Brothers Company.....302  
 D. A. Matot Company.....357  
 Sedgwick Machine Works.....289  
 Sidney Elevator Mfg. Company.....286

**DUMBWAITER CORD-See Cord**  
**DUMBWAITER ROPE-See Rope**  
**DUMPS-ASH**  
 Colonial Fireplace Co.....288  
 Donley Brothers Co.....298  
 International Steel & Iron Co.....304  
 Kalman Steel Co.....70  
 Majestic Company.....58  
 Geo. L. Mesker & Co.....315  
 Ohio Foundry & Mfg. Co.....311  
 Pioneer Fireplace & Supply Co.....305  
 Sidney Elevator Mfg. Co.....286  
 Willis Mfg. Company.....109

**DUMP BUCKETS-See Buckets**  
**DUMP CARTS-See Carts**  
**DUMP DOORS-See Doors**  
**EAVES TROUGH**  
 Edwards Mfg. Company.....359  
 International Steel & Iron Co.....304  
 David Lupton's Sons Co.....76  
 Milwaukee Corrugating Co.....374-375  
 Superior Sheet Steel Co.....49  
 Wheeling Corrugating Company.....104  
 Wheeling Metal & Mfg. Co.....316  
 Willis Manufacturing Co.....109

**EAVES TROUGH HANGERS-See Hangers**  
**EAVES TROUGH OUTLETS-See Outlets**  
**EDGE PROTECTORS-See Protectors**  
**EDGES-GANGSAW**  
 American Saw Mill Machinery Co.....255  
 Henry Disston & Sons, Inc.....199

**ELBOWS-COPPER**  
 Edwards Mfg. Company.....359  
 David Lupton's Sons Co.....76  
 Milwaukee Corrugating Company.....374-375  
 Wheeling Metal & Mfg. Co.....316  
 Willis Manufacturing Company.....109

**ELBOWS-SHEET METAL**  
 Edwards Mfg. Co.....359  
 International Steel & Iron Co.....304  
 David Lupton's Sons Co.....76  
 Milwaukee Corrugating Co.....374-375  
 Jos. T. Ryerson & Son.....220  
 Superior Sheet Steel Co.....49  
 Wheeling Corrugating Co.....104  
 Wheeling Metal & Mfg. Co.....316  
 Willis Manufacturing Company.....109

**ELECTRIC CUTOUTS**—See Cutouts  
**ELECTRIC DRILLS**—See Drills  
**ELECTRIC GLUEPOTS**—See Gluepots  
**ELECTRIC GRATES**—See Furnishings, Fireplaces.  
**ELECTRIC HAMMERS**—See Hammers  
**ELECTRIC HOISTS**—See Hoists  
**ELECTRIC MOTORS**—See Motors  
**ELECTRIC OUTLETS**—See Outlets  
**ELECTRIC PUMPS**—See Pumps  
**ELECTRIC REFRIGERATORS**—See Refrigerators  
**ELECTRIC SAWS**—See Saws  
**ELECTRIC SCREWDRIVERS**—See Screwdrivers  
**ELECTRIC SOCKETS**—See Sockets  
**ELEVATORS—BUILDING MATERIAL**—(See Hoists, Building Material)  
**ELEVATORS—ELECTRIC**  
 International Steel & Iron Co. .... 304  
 Kimball Brothers Co. .... 302  
 O. K. Clutch & Machinery Co. .... 283  
 Sidney Elevator Mfg. Co. .... 286  
**ELEVATORS—FREIGHT AND PASSENGER**  
 International Steel & Iron Co. .... 304  
 Kimball Brothers Company. .... 302  
 Sedgwick Machine Works. .... 289  
 Sidney Elevator Mfg. Co. .... 286  
**ELEVATORS—GARAGE**  
 International Steel & Iron Co. .... 304  
 Kimball Brothers Company. .... 302  
 Sedgwick Machine Works. .... 289  
 Sidney Elevator Mfg. Co. .... 286  
**ELEVATORS—HAND**  
 International Steel & Iron Co. .... 304  
 Kimball Brothers Company. .... 302  
 D. A. Matot Company. .... 357  
 Sedgwick Machine Works. .... 289  
 Sidney Elevator Mfg. Co. .... 286  
**ELEVATORS—PORTABLE**  
 Chain Belt Company. .... 2  
**ELEVATORS—PUSH BUTTON**  
 Kimball Brothers. .... 302  
 Sidney Elevator Mfg. Co. .... 286  
**ELEVATORS—SIDEWALK**  
 International Steel & Iron Co. .... 304  
 Kimball Brothers Co. .... 302  
 Sedgwick Machine Works. .... 289  
 Sidney Elevator Mfg. Co. .... 286  
**ELEVATOR BUCKETS**—See Buckets  
**ELEVATOR CARS**—See Cars  
**ELEVATOR DOORS**—See Doors  
**ELEVATOR DOOR HANGERS**—See Hardware  
**ELEVATOR DOOR HARDWARE**—See Hardware  
**ELEVATOR ENCLOSURES**—See Enclosures  
**ELEVATOR FIXTURES**—See Fixtures  
**ELEVATOR GATES**—See Gates  
**ELEVATING MACHINERY**—See Machinery  
**ELEXITS**  
 General Electric Company. 9-10-11-12-13-14-15  
 Hart & Hegeman Mfg. Co. .... 42  
 Pass & Seymour, Inc. .... 366  
**EMERY PAPER**—See Paper  
**ENAMELS**  
 S. C. Johnson & Son. .... 173  
 Sherwin-Williams Co. .... 213  
 Standard Varnish Works. .... 91  
 Truscon Laboratories. .... 72  
 Truscon Steel Company. .... 5-90  
**ENCLOSURES—ELEVATOR**  
 Asbestos Shingle, Slate & Sheathing Co. .... 50  
 Cincinnati Iron Fence Co. .... 366  
 Fred J. Meyers Mfg. Co. .... 367  
**ENCLOSURES—PORCH (Screen)**  
 Concealed Bed Corp. .... 297  
 Curtis Companies. .... 61  
 W. J. Dennis & Co. .... 369  
 Gilbert & Bennett Mfg. Co. .... 77  
**ENCLOSURES—RADIATOR**  
 American Radiator Company. .... 192-193  
 Burnham Boiler Corporation. .... 82  
 Edwards Mfg. Company. .... 359  
 Hardin-Lavin Mfg. Co. .... 89  
 Majestic Company. .... 56  
 Marietta Mfg. Co. .... 304  
 Mellish-Hayward Co. .... 283  
 Stanley Plumbing & Mfg. Co. .... 358  
 Trio, Inc. .... 214  
 U. S. Radiator Corporation. .... 40  
 Winchester Radiator Cabinet Company. 356  
**ENGINES—GAS**  
 A. S. Aloe Company. .... 277  
 Combination Woodworking Machine Co. 286  
 Construction Machinery Company. .... 237  
 Fairbanks, Morse & Company. .... 107  
 Mellish-Hayward Company. .... 283  
 Novo Engine Co. .... 245  
**ENGINES—KEROSENE**  
 International Harvester Co. .... 241  
 Novo Engine Co. .... 245

**EQUIPMENT—BARN**  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 Hunt-Helm-Ferris & Company. .... 198  
 Milwaukee Corrugating Company. 374-375  
 F. E. Myers & Bros. Co. .... 221  
 J. E. Porter Corp. .... 8  
 Richards-Wilcox Mfg. Co. .... 6-7  
**EQUIPMENT—CAFETERIA**  
 Marietta Manufacturing Co. .... 304  
**EQUIPMENT—CLOTHES CLOSET**  
 Chas. Fischer Spring Co. .... 302  
**EQUIPMENT—HOME GYMNASIUM**  
 Gym Junior Company. .... 357  
**EQUIPMENT—HOTEL**  
 Marietta Mfg. Company. .... 304  
**EQUIPMENT—LUNCH ROOM**  
 Marietta Manufacturing Company. .... 304  
**EQUIPMENT—RESTAURANT**  
 Marietta Manufacturing Company. .... 304  
**EQUIPMENT—SCHOOL**  
 A. S. Aloe Company. .... 277  
 Heston & Anderson. .... 273  
 Kliegel Bros. Universal Electric Stage Lighting Co. .... 306  
 Milwaukee Corrugating Co. .... 374-375  
 Richards-Wilcox Mfg. Company. .... 6-7  
 Safe Tool Manufacturing Co. .... 285  
 J. D. Wallace & Company. .... 251-276  
 Warren-Knight Company. .... 282  
**EQUIPMENT—SPRAY PAINTING**  
 Binks Spray Equipment Co. .... 265  
 DeVilbiss Company. .... 242  
 Mellish-Hayward Company. .... 283  
 20th Century Sales Agency. .... 253  
**ESCALATORS**  
 Chain Belt Company. .... 2  
**EXCAVATING BUCKETS**—See Buckets  
**EXPANDED METAL**—See Metal  
**EXPANDED METAL LATH BOLTS**—See Bolts  
**EXPANSION BOLTS**—See Bolts  
**EXPANSION JOINTS**—See Joints  
**EXPANSION SHIELDS**—See Shields  
**EXPANSION SHELLS**—See Shells  
**EXPANSION SCREW ANCHORS**—See ANCHORS  
**EXTINGUISHERS—FIRE**  
 Johns-Manville, Inc. .... 195  
**FABRICATED STEEL**—See Steel  
**FACE BRICK**—See Brick  
**FACTORY WINDOWS (Steel)**—See Windows  
**FACING CONCRETE**  
 W. E. Dunn Mfg. Company. .... 248-249  
**FAIENCE—TILE**  
 Lloyd Floor & Wall Tile Co. .... 364  
 Pioneer Fireplace & Supply Co. .... 305  
**FANS—ELECTRIC**  
 Century Electric Company. .... 271  
 General Electric Company. 9-10-11-12-13-14-15  
**FANS—FURNACE**  
 Ilg Electric Ventilating Co. .... 71  
 The Majestic Company. .... 56  
**FANS—KITCHEN (See Ventilators, Kitchen)**  
**FARM LEVELS**—See Levels  
**FAUCETS**  
 Crane Company. .... 52  
 Hardin-Lavin Company. .... 89  
 Hays Manufacturing Co. .... 292  
 Johnson Plumbing Supply Co. .... 352  
 Standard Sanitary Mfg. Co. .... 18-19  
 Stanley Plumbing & Supply Co. .... 358  
**FEED CARRIERS**—See Carriers, Overhead  
**FELTS—ASPHALT**  
 The Barber Asphalt Co. .... 113  
 Beckman-Dawson Roofing Co. .... 92  
 Philip Carey Company. .... 106  
 Johns-Manville, Inc. .... 195  
 Ruberoid Company. .... 101  
**FELTS—ASPHALT (Saturated)**  
 The Barber Asphalt Company. .... 113  
 Beckman-Dawson Roofing Co. .... 92  
 Philip Carey Company. .... 106  
 Johns-Manville, Inc. .... 195  
 Ruberoid Co. .... 101  
**FELTS—DEADENING**  
 Barber Asphalt Co. .... 113  
 Beckman-Dawson Roofing Co. .... 92  
 Samuel Cabot, Inc. .... 218  
 Philip Carey Company. .... 106  
 General Insulating & Mfg. Co. .... 307  
 Johns-Manville, Inc. .... 195  
 Mason Fibre Company. .... 47  
 Ruberoid Company. .... 101  
 Weyerhaeuser Forest Products. .... 44  
**FELTS—INSULATING**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Barber Asphalt Company. .... 113  
 Beckman-Dawson Roofing Co. .... 92  
 Samuel Cabot, Inc. .... 218  
 Philip Carey Company. .... 106  
 General Insulating & Mfg. Co. .... 307  
 Johns-Manville, Inc. .... 195  
 Mason Fibre Company. .... 47  
 D. A. Matot Company. .... 357  
 Ruberoid Company. .... 101

**FELTS—TARRED**  
 Beckman-Dawson Roofing Co. .... 92  
 Philip Carey Company. .... 106  
 Ruberoid Company. .... 101  
**FENCES—IRON AND STEEL**  
 American Chain Company. .... 186  
 American Steel & Wire Co. .... 232  
 Cincinnati Iron Fence Co. .... 366  
 Edwards Manufacturing Co. .... 369  
 International Steel & Iron Company. .... 304  
 Kwik-Mix Concrete Mixer Company. .... 366  
 Fred J. Meyers Mfg. Co. .... 367  
 Wheeling Metal & Mfg. Co. .... 347  
**FENCES—WOVEN WIRE**  
 American Chain Co., Inc. .... 186  
 American Steel & Wire Co. .... 232  
 Cincinnati Iron Fence Co. .... 366  
 Northfield Iron Company. .... 366  
 Joseph T. Ryerson & Son. .... 284  
 Superior Sheet Steel Company. .... 6  
 Wheeling Corrugating Company. .... 366  
 Wheeling Metal & Mfg. Co. .... 347  
**FENCE POSTS**—See Posts  
**FENCE POST MACHINES**—See Machines  
**FENCE POST MOLDS**—See Forms and Molds  
**FIBRE BOARDS**—See Boards  
**FIBRE TILE**—See Tile  
**FILES AND RASPS**  
 A. S. Aloe Co. .... 277  
 Henry Disston & Sons, Inc. .... 199  
 Huther Bros. Saw Mfg. Co. .... 271  
 Ralph M. Kennedy. .... 361  
 Stanley Works. .... 67  
**FILES—SAW**—See Machines, Saw Filing  
**FILING CABINETS**—See Cabinets  
**FILLERS—CEMENT**  
 Clinton Metallic Paint Co. .... 360  
 Lloyd Floor & Wall Tile Co. .... 364  
 Ruberoid Company. .... 101  
 Toch Brothers. .... 61  
 Truscon Laboratories. .... 72  
 C. K. Williams & Company. .... 300  
**FILLERS—JOINT**  
 Kalman Steel Company. .... 79  
 Ruberoid Company. .... 101  
 Toch Brothers. .... 61  
**FILLERS—PAINT**  
 Clinton Metallic Paint Co. .... 360  
 Sherwin-Williams Co. .... 213  
 Toch Brothers. .... 61  
 Truscon Laboratories. .... 72  
**FILLERS—TRENCH**  
 Construction Machinery Co. .... 237  
**FILLERS—WOOD**  
 S. C. Johnson & Son. .... 173  
 Sherwin-Williams Co. .... 213  
 Standard Varnish Works. .... 91  
 Truscon Laboratories. .... 72  
**FILLETS—STAIR RAIL**—(See Millwork, Wholesale)  
**FILTERS—WATER**  
 Duro Company. .... 6  
**FINISH—FLOOR**  
 S. C. Johnson & Son. .... 173  
 Sherwin-Williams Co. .... 213  
 Toch Brothers. .... 61  
 Truscon Laboratories. .... 72  
 Truscon Steel Company. .... 5-90  
**FINISH—WALL**  
 Gibbs Boardtile Corp. .... 89  
 S. C. Johnson & Son. .... 173  
 Lincrusta-Walton Company. .... 47  
 Mason Fibre Company. .... 47  
 Reardon Company. .... 239  
 Sherwin-Williams Co. .... 213  
 Truscon Steel Company. .... 5-90  
 U. S. Gypsum Company. .... 6  
**FIRE DOORS**—See Doors  
**FIREDOOR HARDWARE**—See Hardware  
**FIREDOOR STOCK**—See Stock  
**FIRE ESCAPES**  
 International Steel & Iron Co. .... 304  
 Geo. L. Mesker & Co. .... 315  
 Fred J. Meyers Mfg. Co. .... 367  
**FIRE EXTINGUISHERS**—See Extinguishers  
**FIREPLACES**  
 Chemical Toilet Corp. .... 554-559  
 Colonial Fireplace Co. .... 237  
 Donley Bros. Co. .... 237  
 General Gas Light Company. .... 107  
 Heatilator Company. .... 107  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 Lloyd Floor & Wall Tile Co. .... 364  
 National Fireplace Supply Co. .... 237  
 Ohio Foundry & Mfg. Co. .... 311  
 Pioneer Fireplace & Supply Co. .... 305  
 Readybuilt Products Co. .... 305  
**FIREPLACE DAMPERS**—See Dampers  
**FIREPLACE GRATES**—See Furnishings, Fireplace  
**FIREPLACE FURNISHINGS**—See Furnishings



**FIREPROOFING—HOLLOW TILE**

Hooder Bldg. Tile & Silo Co. .... 360  
 National Fireproofing Co. .... 74  
 Truscon Steel Co. .... 5-90  
 U. S. Gypsum Company ..... 67

**FIREPROOFING—METAL LATH**

Edwards Mfg. Co. .... 359  
 Genfre Steel Co. .... 80  
 Kalman Steel Co. .... 70  
 Macomber Steel Co. .... 310  
 Milwaukee Corrugating Co. .... 374-375  
 North Western Expanded Metal Co. .... 372  
 Jos. T. Ryerson & Son ..... 220  
 Truscon Steel Company ..... 5-90  
 Wheeling Corrugating Co. .... 104

**FITTINGS—CLOSET TANK**

Crane Company ..... 52  
 Hardin-Lavin Company ..... 89  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Co. .... 308  
 Standard Sanitary Mfg. Co. .... 18-19  
 Stanley Plumbing & Supply Co. .... 358

**FITTINGS—ELECTRICAL CONDUIT**

General Electric Co. .... 9-10-11-12-13-14-15  
 Johns-Manville, Inc. .... 195  
 Mid-West Metal Products Co. .... 364  
 Pass & Seymour, Inc. .... 366

**FITTINGS—PIPE**

Cincinnati Iron Fence Co. .... 366  
 Crane Company ..... 52  
 Hardin-Lavin Co. .... 89  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Co. .... 308  
 Milwaukee Corrugating Co. .... 374-375  
 National Radiator Company ..... 86  
 Joseph T. Ryerson & Son ..... 220  
 Standard Sanitary Mfg. Company ..... 18-19  
 Stanley Plumbing & Supply Co. .... 358

**FITTINGS—TANK**

Crane Company ..... 52  
 Hardin-Lavin Company ..... 89  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Co. .... 308  
 Jos. T. Ryerson & Son ..... 220  
 Stanley Plumbing & Supply Co. .... 358

**FITTINGS—TOILET**

Crane Company ..... 52  
 Hardin-Lavin Company ..... 89  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Co. .... 308  
 Standard Sanitary Mfg. Co. .... 18-19  
 Stanley Plumbing & Supply Co. .... 358

**FIXTURES—BATHROOM**

Andrews Heating Company ..... 367  
 Central Specialty Mfg. Co. .... 317  
 Crane Company ..... 52  
 Flat Metal Mfg. Co. .... 297  
 Hardin-Lavin Company ..... 89  
 Hays Mfg. Company ..... 292  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Co. .... 308  
 Lloyd Floor & Wall Tile Co. .... 364  
 Paramount Electric Co. .... 359  
 Standard Sanitary Mfg. Co. .... 18-19  
 Stanley Plumbing & Supply Co. .... 358  
 Trumpak Corp. .... 26-27  
 Wheeling Sanitary Mfg. Co. .... 215

**FIXTURES—ELEVATOR**

Richards-Wilcox Mfg. Co. .... 6-7  
 Sedgwick Machine Works ..... 289

**FIXTURES—LIGHTING**

Babe Lighting Fixture Mfg. Co. .... 369  
 Brie Fixture Supply Co. .... 362  
 Kliegl Bros. Universal Electric Stage Lighting Co. .... 306  
 Paramount Electric Co. .... 359  
 Pass & Seymour, Inc. .... 366  
 United Lighting Fixture Co. .... 368

**FIXTURES—MIRROR**

Fairland Company ..... 366

**FIXTURES—PLUMBING**

Andrews Heating Co. .... 367  
 A. Cheney & Son ..... 282  
 Crane Company ..... 52  
 Flat Metal Mfg. Co. .... 297  
 Hardin-Lavin Company ..... 89  
 Hays Manufacturing Co. .... 292  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Co. .... 308  
 Standard Sanitary Mfg. Co. .... 18-19  
 Stanley Plumbing & Supply Co. .... 358  
 Wheeling Sanitary Mfg. Co. .... 215

**FIXTURES—SCAFFOLD BRACKET**

Elite Mfg. Co. .... 276  
 Fairbanks, Morse & Co. .... 107  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Steel Scaffolding Co. .... 261

**FIXTURES—STABLE**

J. E. Porter Corp. .... 8

**FIXTURES—STORE**

David Lupton's Sons Co. .... 76  
 Weber-Busse Co. .... 362

**FIXTURES—WARDROBE**

Davis Tool & Eng. Co. .... 314  
 Chas. Fischer Spring Co. .... 302  
 Knapp & Vogt Mfg. Co. .... 293

**FLAGGING—SLATE**

Knickerbocker Slate Corp. .... 312  
 Lloyd Floor & Wall Tile Co. .... 364  
 Slatington Slate Co. .... 352  
 Slatington-Bangor Slate Syndicate, Inc. .... 368  
 Structural Slate Co. .... 353  
 Vendor Slate Co. .... 85

**FLAGPOLES**

Banks Steel Post Co. .... 368  
 Cincinnati Iron Fence Co. .... 366  
 International Steel & Iron Co. .... 304  
 Geo. L. Meaker & Co. .... 315  
 Fred J. Meyers Mfg. Co. .... 367  
 E. W. A. Rowles Co. .... 305

**FLOODLIGHTS**

Kliegl Bros. Universal Electric Stage Lighting Co. .... 306

**FLOORING—ASBESTOS**

Asbestos Shingle, Slate & Sheathing Co. 50  
 Johns-Manville, Inc. .... 195  
 National Sheet Metal Roofing Co. .... 364

**FLOORING—ASPHALT MASTIC**

Barber Asphalt Co. .... 113  
 Philip Carey Co. .... 106  
 Johns-Manville, Inc. .... 195

**FLOORING—CANVAS**

John Boyle & Co., Inc. .... 358  
 Ruberoid Co. .... 101

**FLOORING—COMPOSITION**

Philip Carey Co. .... 106  
 H. B. Fred Kuhls ..... 34  
 Ruberoid Co. .... 101

**FLOORING—FIREPROOF**

Genfre Steel Co. .... 80  
 Macomber Steel Co. .... 310  
 National Fireproofing Co. .... 74  
 Jos. T. Ryerson & Son ..... 220  
 Truscon Steel Co. .... 5-90  
 U. S. Gypsum Co. .... 67

**FLOORING—HARDWOOD**

Arkansas Oak Flooring Co. .... 298  
 Birch Manufacturers ..... 353  
 E. L. Bruce Co. .... 190  
 Cromar Company ..... 92  
 Maple Flooring Mfrs. Assn. .... 189  
 Oak Flooring Bureau ..... 73

**FLOORING—HOLLOW TILE**

National Fireproofing Co. .... 74  
 U. S. Gypsum Co. .... 67

**FLOORING—MAGNESITE**

Lloyd Floor & Wall Tile Co. .... 364

**FLOORING—OAK (Factory Finished)**

Cromar Co. .... 92

**FLOORING—RUBBERTILE**

Goodyear Tire & Rubber Co. .... 64  
 Wright Rubber Products Co. .... 360

**FLOORING—SLATE**

Knickerbocker Slate Corp. .... 300  
 Lloyd Floor & Wall Tile Co. .... 364  
 Marietta Mfg. Co. .... 304  
 Slatington Slate Co. .... 352  
 Slatington-Bangor Slate Syndicate, Inc. .... 368  
 Structural Slate Co. .... 358  
 Vendor Slate Co., Inc. .... 85

**FLOORING—STEEL**

International Steel & Iron Co. .... 304  
 Fred J. Meyers Mfg. Co. .... 367  
 Morton Mfg. Co. .... 59  
 Joseph T. Ryerson & Son ..... 220  
 Truscon Steel Co. .... 5-90

**FLOORING—TERRAZZO**

C. K. Williams & Co. .... 360

**FLOORING—TILE**

Colonial Fireplace Co. .... 288  
 Lloyd Floor & Wall Tile Co. .... 364

**FLOORING—WOOD**

Arkansas Oak Flooring Co. .... 298  
 Birch Manufacturers ..... 353  
 E. L. Bruce Co. .... 190  
 Maple Flooring Mfrs. Assn. .... 189  
 Oak Flooring Bureau ..... 73  
 Paine Lumber Co. .... 93  
 West Coast Lumber Trade Ext. Bureau. 58  
 Weyerhaeuser Forest Products ..... 44

**FLOORING—WOOD BLOCK**

Arkansas Oak Flooring Co. .... 298  
 E. L. Bruce Co. .... 190  
 West Coast Lumber Trade Ext. Bureau. 58

**FLOOR BRIDGING—See Bridging**

**FLOOR CHISELS—See Chisels**

**FLOOR CLIPS—See Clips**

**FLOOR COVERINGS—See Coverings**

**FLOOR DRAINS—See Drains**

**FLOOR FINISH—See Finish**

**FLOOR GRINDERS—See Grinders**

**FLOOR HARDENERS—See Accelerators, Cement**

**FLOOR HINGES—See Hinges**

**FLOOR PLATES—See Plates**

**FLOOR POLISHING MACHINES—See Machines**

**FLOOR REGISTERS—See Registers**

**FLOOR SANDERS—See Machines, Floor Surfacing**

**FLOOR SCRAPERS—See Machines, Floor Surfacing**

**FLOOR SURFACING MACHINES—See Machines**

**FLOOR TILE—See Tile**

**FLOOR WAX—See Wax**

**FLUE LINING—See Lining**

**FLUE PIPE—See Pipe**

**FLUE THIMBLES—See Thimbles**

**FOLDING DOORS—See Doors**

**FOLDING GATES—See Gates**

**FOLDING PARTITIONS—See Partitions**

**FOOT BATHS—See Baths**

**FORKS—HAY**

American Sawmill Machinery Co. .... 255  
 S. Cheney & Son ..... 282  
 Hunt-Helm-Ferris & Co. .... 108  
 F. E. Myers & Bros. Co. .... 221  
 Novo Engine Co. .... 245  
 J. E. Porter Corp. .... 8  
 Sedgwick Machine Works ..... 280  
 Stimmel Winch & Machine Works ..... 284  
 Universal Hoist & Mfg. Co. .... 284

**FORM CLAMPS—See Clamps**

**FORMS AND MOLDS—CATCHBASIN**  
 Concrete Equipment Co. .... 281-282  
 Heitzel Steel Form & Iron Co. .... 286  
 Metal Forms Corp. .... 258

**FORMS AND MOLDS—CEMENT BRICK**

Concrete Equipment Co. .... 281-282  
 Consolidated Concrete Machy. Corp. .... 270  
 Miles Mfg. Co. .... 272  
 Pioneer Fireplace & Supply Co. .... 305  
 R. & L. Concrete Machinery Co. .... 273

**FORMS AND MOLDS—CHIMNEY**

Concrete Equipment Co. .... 281-282

**FORMS AND MOLDS—COLUMN**

Heitzel Steel Form & Iron Co. .... 286  
 Kalman Steel Co. .... 70  
 Ruberoid Company ..... 101

**FORMS AND MOLDS—CONCRETE BLOCK**

A. S. Aloe Co. .... 277  
 Concrete Equipment Co. .... 281-282  
 Consolidated Concrete Machy. Corp. .... 270  
 Kwik-Mix Concrete Mixer Co. .... 289  
 Miles Mfg. Co. .... 272  
 R. & L. Concrete Machinery Co. .... 273

**FORMS AND MOLDS—CONCRETE CONSTRUCTION**

Concrete Form Tile Corp. .... 362  
 Heitzel Steel Form & Iron Co. .... 286  
 Kalman Steel Co. .... 70  
 Metal Forms Corp. .... 258  
 Ruberoid Co. .... 101  
 Truscon Steel Co. .... 5-90

**FORMS AND MOLDS—CULVERT**

Concrete Equipment Co. .... 281-282  
 Heitzel Steel Form & Iron Co. .... 286  
 Metal Forms Corp. .... 258  
 Northfield Iron Co. .... 364  
 R. & L. Concrete Machinery Co. .... 273  
 Truscon Steel Co. .... 5-90

**FORMS AND MOLDS—CURB AND GUTTER**

Heitzel Steel Form & Iron Co. .... 286  
 Metal Forms Corp. .... 258

**FORMS AND MOLDS—DRAIN TILE**

Concrete Equipment Co. .... 281-228  
 R. & L. Concrete Machinery Co. .... 273

**FORMS AND MOLDS—FENCE POST**

Concrete Equipment Co. .... 281-282  
 Kwik-Mix Concrete Mixer Co. .... 269  
 R. & L. Concrete Machinery Co. .... 273

**FORMS AND MOLDS—ORNAMENTS**

Concrete Equipment Co. .... 281-282  
 Pioneer Fireplace & Supply Co. .... 305

**FORMS AND MOLDS—SEPTIC TANK**

Heitzel Steel Form & Iron Co. .... 286  
 Metal Forms Corp. .... 258  
 B. & L. Concrete Machinery Co. .... 273

**FORMS AND MOLDS—SEWER-PIPE**

Concrete Equipment Co. .... 281-282  
 Heitzel Steel Form & Iron Co. .... 286  
 Metal Forms Corp. .... 258  
 R. & L. Concrete Machinery Co. .... 273

**FORMS AND MOLDS—SIDEWALK**

Heitzel Steel Form & Iron Co. .... 286  
 Metal Forms Corp. .... 258

**FORMS AND MOLDS—SILO**

W. E. Dunn Mfg. Co. .... 222-223  
 Metal Forms Corp. .... 258  
 Truscon Steel Co. .... 5-90

**FORMS AND MOLDS—STEP**

Concrete Equipment Co. .... 281-282  
 Metal Forms Corp. .... 258

**FORMS AND MOLDS—WALL**

Greene's Steel Molds ..... 286  
 Metal Forms Corp. .... 258  
 Ruberoid Co. .... 101

**FOUNDATION WALL CHUTES—See Chutes, Coal**

**FOUNTAINS—BUBBLING**

Crane Company ..... 52  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Co. .... 308  
 Kliegl Bros. Universal Electric Stage Ltg. Co. .... 306  
 Mellish-Hayward Co. .... 283  
 Standard Sanitary Mfg. Co. .... 18-19  
 Wheeling Sanitary Mfg. Co. .... 215

**FOUNTAINS—ELECTRIC**

Kliegl Bros. Universal Electric Stage Ltg. Co. .... 306

**FRAMES—BARN**

Anderson Lumber Co. .... 179  
 Curtis Cos. .... 61

**FRAMES—BLUEPRINT**

A. S. Aloe Co. .... 277  
 W. & L. E. Gurley ..... 266  
 Keuffel & Esser Co. .... 268  
 Frederick Post Co. .... 264  
 Warren-Knight Co. .... 252

**FRAMES—CELLAR SASH (STEEL)**

Wm. Bayley Co. 314  
 Cincinnati Iron Fence Co. 366  
 Detroit Steel Products Co. 210-211  
 Donley Bros. Co. 298  
 Edwards Mfg. Co. 359  
 Genfre Steel Co. 80  
 Hoosier Bldg. Tile & Silo Co. 369  
 International Steel & Iron Co. 304  
 Kaiman Steel Co. 70  
 Kewanee Mfg. Co. 303  
 David Lupton's Sons Co. 76  
 Geo. L. Mesker & Co. 315  
 Milwaukee Corrugating Co. 374-375  
 Joseph T. Ryerson & Son. 220  
 Truscon Steel Co. 5-90  
 Vento Steel Sash Co. 311  
 Willis Mfg. Co. 109

**FRAMES—CELLAR SASH (WOOD)**

Andersen Lumber Co. 170  
 Bradley Miller & Co. 212  
 Curtis Cos. 61  
 Hoosier Bldg. Tile & Silo Co. 369  
 Paine Lumber Co. 93

**FRAMES—DOOR (STEEL)**

William Bayley Co. 314  
 Genfre Steel Co. 80  
 Hoosier Bldg. Tile & Silo Co. 369  
 International Steel & Iron Co. 304  
 Geo. L. Mesker & Co. 315  
 Morton Mfg. Co. 59  
 Richards-Wilcox Mfg. Co. 6-7  
 Truscon Steel Co. 5-90

**FRAMES—DOOR (NICKEL SILVER)**

Kawneer Co. 65

**FRAMES—DOOR (WOOD)**

Andersen Lumber Co. 170  
 Bradley Miller & Co. 212  
 Curtis Cos. 61  
 W. J. Dennis & Co. 369  
 Hoosier Bldg. Tile & Silo Co. 369  
 Paine Lumber Co. 93  
 West Coast Lumber Trade Extension Bureau 58

**FRAMES—HOUSE (STEEL)**

Walter Bates Steel Corp. 309

**FRAMES—SASH (NICKEL SILVER)**

Kawneer Co. 65

**FRAMES—SASH (STEEL)**

William Bayley Co. 314  
 Detroit Steel Products Co. 210-211  
 Donley Bros. Co. 298  
 Edwards Mfg. Co. 359  
 Hoosier Bldg. Tile & Silo Co. 369  
 International Steel & Iron Co. 304  
 Kewanee Mfg. Co. 303  
 David Lupton's Sons Co. 76  
 Geo. L. Mesker & Co. 315  
 Milwaukee Corrugating Co. 374-375  
 Morton Mfg. Co. 59  
 Richards-Wilcox Mfg. Co. 6-7  
 Joseph T. Ryerson & Son. 220  
 Truscon Steel Co. 5-90  
 Willis Mfg. Co. 109

**FRAMES—SASH (WOOD)**

Andersen Lumber Co. 170  
 Bradley Miller & Co. 212  
 Curtis Cos. 61  
 Hoosier Bldg. Tile & Silo Co. 369  
 Paine Lumber Co. 93  
 Trippak Corporation 26-27  
 West Coast Lumber Trade Extension Bureau 58

**FRICTION CLUTCHES—See Clutches**

**FRONTS—STORE**

Hoosier Bldg. Tile & Silo Co. 369  
 International Steel & Iron Co. 304  
 Kawneer Co. 65  
 Leonard Sheet Metal Works. 358  
 Geo. L. Mesker & Co. 315  
 Milwaukee Corrugating Co. 374-375  
 Zouri Drawn Metals Co. 46

**FURNACES—PIPELESS—See Heating Systems**

**FURNACES—WARM AIR—See Heating Systems**

**FURNACE CLOCKS—See Clocks**

**FURNACE FANS—See Fans**

**FURNACE PIPE—See Pipe**

**FURNACE REGULATORS—See Regulators**

**FURNISINGS—FIREPLACE**

Brecher Company 367  
 Chemical Toilet Corp. 354-360  
 S. Cheney & Son. 282  
 Colonial Fireplace Co. 288  
 Concealed Bed Corp. 297  
 Donley Bros. Co. 298  
 General Gas Light Company. 197  
 Klegi Bros. Universal Electric Stage Lig. Co. 306  
 Lloyd Floor & Wall Tile Co. 364  
 McKlaine Mfg. Co. 114  
 National Fireplace Supply Co. 366  
 Ohio Foundry & Mfg. Co. 311  
 Paramount Electric Co. 359  
 Pioneer Fireplace & Supply Co. 305  
 Readybuilt Products Co. 357  
 F. W. Shepler Stove Company. 316

**FURNITURE—BUILT-IN**

Hugo M. Carlson Co. 301  
 Concealed Bed Corp. 297  
 Coppes Bros. & Zook. 111  
 Maxwell-Burke, Inc. 315  
 Premier Standardized Woodwork. 294  
 G. I. Sellers & Sons Co. 117

**FURNITURE—DRAFTING ROOM**

A. S. Aloe Co. 277  
 W. & L. E. Gurley. 266  
 Keuffel & Esser Co. 268  
 Mellish-Hayward Co. 283  
 Frederick Post Co. 264  
 Warren-Knight Co. 282  
 David White & Co. 287

**FURNITURE—SCHOOL**

E. W. A. Rowles Co. 305

**FURRING—WALL**

Milwaukee Corrugating Co. 374-375  
 Morton Mfg. Co. 59  
 Truscon Steel Co. 5-90

**FURRING NAILS—See Nails**

**FUSE FLUGS—See Flugs**

**GALVANIZED NAILS—See Nails**

**GANG SAWS—See Saws**

**GANG SAW EDGERS—See Edgers**

**GARAGES—PRIVATE AND PUBLIC**

Edwards Mfg. Co. 359  
 International Steel & Iron Co. 304  
 Macomber Steel Co. 310  
 Milwaukee Corrugating Co. 374-375  
 Northfield Iron Co. 364  
 Truscon Steel Co. 5-90

**GARAGE DOORS—See Doors**

**GARAGE DOOR BOLTS—See Hardware, Garage**

**GARAGE DOOR HANGERS—See Hardware, Garage**

**GARAGE DOOR HOLDERS—See Molders**

**GARAGE DOOR OPENERS—See Openers**

**GARAGE ELEVATORS—See Elevators**

**GARAGE HARDWARE—See Hardware**

**GARAGE HEATERS—See Heaters**

**GARAGE WINDOWS—See Windows**

**GARBAGE BURNERS—See Incinerators**

**GARBAGE RECEIVERS—See Receivers**

**GARDEN AND LAWN FURNITURE—See Decorations, Garden**

**GARMENT HANGERS—See Fixtures, Wardrobe**

**GARNET PAPER—See Paper**

**GAS ENGINES—See Engines**

**GAS LOGS—See Furnishings, Fireplace**

**GAS RANGES—See Ranges**

**GAS STOVES—See Ranges, Gas**

**GASOLINE PUMPS—See Pumps**

**GATES—BIN**

Chain Belt Company. 2  
 Heltzel Steel Form & Iron Co. 286  
 Ransome Concrete Machy. Co. 249

**GATES—ELEVATOR**

Chain Belt Company. 2  
 Fred J. Meyers Mfg. Co. 367  
 Sedgwick Machine Works. 289  
 Sidney Elevator Mfg. Co. 286

**GATES—FOLDING**

Cincinnati Iron Fence Co. 366  
 Concealed Bed Corp. 297  
 International Iron & Steel Co. 304  
 Geo. L. Mesker & Co. 315

**GATES—IRON**

American Chain Company. 105  
 Cincinnati Iron Fence Co. 366  
 Edwards Mfg. Co. 359  
 International Steel & Iron Co. 304  
 Geo. L. Mesker & Co. 315  
 Fred J. Meyers Mfg. Co. 367  
 Velguth Metal Parts, Inc. 369

**GATES—WALK**

American Chain Co. 105  
 American Steel & Wire Co. 292  
 Cincinnati Iron Fence Co. 366  
 Fred J. Meyers Mfg. Co. 367  
 Superior Sheet Steel Co. 40  
 Wheeling Metal & Mfg. Co. 316

**GAUGES—BUTT**

Stanley Works 87

**GAUGES—MORTISE**

A. S. Aloe Co. 277  
 Henry Diston & Sons, Inc. 199  
 Stanley Works 87

**GAUGES—SAW**

Clarke Sanding Machine Co. 20-21  
 Henry Diston & Sons. 199  
 Huther Bros. Saw Mfg. Co. 274  
 Jones Superior Machine Co. 284  
 Ralph M. Kennedy. 282  
 20th Century Sales Agency. 253

**GAUGES—SCRATCH**

Henry Diston & Sons, Inc. 199  
 Stanley Works 87  
 L. S. Starrett Co. 271

**GAUGES—SHINGLING**

F. D. Kees Mfg. Co. 336  
 Stanley Works 87

**GAUGES—STAIR**

L. S. Starrett Co. 271

**GENERATORS—ELECTRIC**

Electric Rotary Machine Co. 272  
 General Electric Co. 9-10-11-12-13-15  
 Fairbanks, Morse & Co. 127

**GLASS—ART**

Perfection Company 300

**GLASS—LEADED**

Perfection Company 300

**GLASS—NON-SHATTERABLE**

Acetol Products, Inc. 51  
 Gibbs Boardtile Corp. 29  
 Mississippi Wire Glass Co. 181

**GLASS—ORNAMENTAL PLATE**

Mississippi Wire Glass Co. 181

**GLASS—PLATE**

International Steel & Iron Co. 304  
 Libbey-Owens Sheet Glass Co. 62  
 Mississippi Wire Glass Company. 181  
 Perfection Company 300

**GLASS—PRISM**

International Steel & Iron Company. 304  
 Geo. L. Mesker & Co. 315  
 Mississippi Wire Glass Co. 181  
 Warren-Knight Co. 282

**GLASS—ROLLED SHEET**

Mississippi Wire Glass Co. 181

**GLASS SIDEWALK**

International Steel & Iron Co. 304  
 Mississippi Wire Glass Co. 181

**GLASS—SKYLIGHT**

Mississippi Wire Glass Co. 181

**GLASS SUBSTITUTES**

Acetol Products, Inc. 51

**GLASS—ULTRA-VIOLET RAY**

Acetol Products, Inc. 51

**GLASS—WINDOW**

Adamston Flat Glass Co. 304  
 International Steel & Iron Co. 304  
 Libbey-Owens Sheet Glass Co. 62  
 Perfection Company 300

**GLASS—WIRE**

American Steel & Wire Co. 292  
 Edwards Mfg. Co. 359  
 Hoosier Bldg. Tile & Silo Co. 369  
 International Steel & Iron Co. 304  
 Mississippi Wire Glass Co. 181  
 Perfection Company 300  
 Willis Mfg. Co. 109

**GLASSES—LEVEL**

Geler & Blum, Inc. 285  
 Stanley Works 87  
 Warren-Knight Co. 282  
 David White Co. 287

**GLAZING COMPOUNDS—See Compounds**

**GLUEPOTS—ELECTRIC**

Black & Decker Mfg. Co. 254  
 General Electric Co. 9-10-11-12-13-15  
 Heston & Anderson. 275  
 Oliver Machinery Co. 282  
 J. D. Wallace & Co. 251-252

**GRAIN BINS—See Bins**

**GRAIN TANKS—See Tanks**

**GRATES—AIR**

Donley Bros. Co. 298  
 International Steel & Iron Co. 304  
 Geo. L. Mesker & Co. 315  
 Milwaukee Corrugating Co. 374-375  
 Ohio Foundry & Mfg. Co. 311

**GRATES—AREA**

Cincinnati Iron Fence Co. 366  
 Edwards Mfg. Co. 359  
 International Steel & Iron Co. 304  
 Johnson Plumbing Supply Co. 282  
 Geo. L. Mesker & Company. 315  
 Velguth Metal Parts, Inc. 369

**GRATES—CELLAR WALL**

Cincinnati Iron Fence Co. 366  
 International Steel & Iron Co. 304  
 Majestic Co. 54  
 Geo. L. Mesker & Co. 315

**GRATINGS—IRON**

Cincinnati Iron Fence Co. 366  
 Donley Bros. Co. 298  
 Edwards Mfg. Co. 359  
 International Steel & Iron Co. 304  
 Kwik-Mix Concrete Mixer Co. 284  
 Geo. L. Mesker & Co. 315  
 Fred J. Meyers Mfg. Co. 367  
 Velguth Metal Parts, Inc. 369

**GRATINGS—STEEL**

Cincinnati Iron Fence Co. 366  
 International Steel & Iron Co. 304  
 Macomber Steel Co. 310  
 Kwik-Mix Concrete Mixer Co. 284  
 Geo. L. Mesker & Co. 315  
 Fred J. Meyers Mfg. Co. 367  
 Joseph T. Ryerson & Son. 220  
 Velguth Metal Parts, Inc. 369

**GRATINGS—WIRE**

Cincinnati Iron Fence Co. 366  
 Chas. Fischer Spring Co. 284  
 Kwik-Mix Concrete Mixer Co. 284  
 Geo. L. Mesker & Co. 315  
 Fred J. Meyers Mfg. Co. 367

**GRAVEL SCREENS—See Screens**

**GREENHOUSE AND CONSERVATORY CONSTRUCTION**

Hitchings & Company. 271

**GREENHOUSE HEATERS—See Heaters**

**GRILLES—BRONZE**

Edwards Mfg. Co. . . . . 359  
 Kawneer Co. . . . . 65  
 Fred J. Meyers Mfg. Co. . . . . 315  
 Milwaukee Corrugating Co. . . . . 374-375  
 Velguth Metal Parts, Inc. . . . . 369

**GRILLES—STEEL AND WIRE**

Cincinnati Iron Fence Co. . . . . 368  
 Edwards Mfg. Co. . . . . 359  
 International Steel & Iron Co. . . . . 304  
 Kwik-Mix Concrete Mixer Co. . . . . 269  
 Geo. L. Mesker & Co. . . . . 315  
 Fred J. Meyers Mfg. Co. . . . . 367  
 Jos. T. Ryerson & Son . . . . . 220  
 Velguth Metal Parts, Inc. . . . . 369

**GRILLES—VENTILATING AND NOT AIR**

Donley Bros. Co. . . . . 298  
 Kawneer Co. . . . . 65  
 Majestic Co. . . . . 56  
 Fred J. Meyers Mfg. Co. . . . . 367  
 Milwaukee Corrugating Co. . . . . 374-375

**GRILLES—WOOD**

Stephen Bilek Co. . . . . 362  
 Milwaukee Corrugating Co. . . . . 374-375  
 Paine Lumber Co. . . . . 93

**GRINDERS—DISK**

Crescent Machine Co. . . . . 260  
 Electric Rotary Machine Co. . . . . 272  
 Husky Mfg. Co. . . . . 270  
 Galmeyer & Livingston Co. . . . . 280  
 Hitchings & Co. . . . . 286  
 Jones Superior Machine Co. . . . . 284  
 Ralph M. Kennedy . . . . . 282  
 Oliver Machinery Co. . . . . 282  
 Porter-Cable Machine Company . . . . . 247  
 Joseph T. Ryerson & Son . . . . . 220  
 Syntro Company . . . . . 267  
 20th Century Sales Agency . . . . . 253  
 J. D. Wallace & Co. . . . . 251-276

**GRINDERS—FLOOR**

American Floor Surf. Mach. Co. . . . . 235  
 A. S. Aloe Co. . . . . 277  
 Clarke Sanding Machine Co. . . . . 20-21  
 Electric Rotary Machine Co. . . . . 272  
 Lincoln-Schleuter Machinery Co. . . . . 282  
 National Sanding Machine Co., Inc. . . . . 283  
 Porter-Cable Machine Co. . . . . 247  
 Syntro Company . . . . . 267  
 20th Century Sales Agency . . . . . 253

**GRINDERS—TOOL**

A. S. Aloe Co. . . . . 277  
 Black & Decker Mfg. Co. . . . . 254  
 Carborundum Co. . . . . 279  
 Husky Mfg. Co. . . . . 270  
 Galmeyer & Livingston Co. . . . . 280  
 Heston & Anderson . . . . . 273  
 Huther Bros. Saw Mfg. Co., Inc. . . . . 274  
 National Sanding Machine Co., Inc. . . . . 283  
 Oliver Machinery Co. . . . . 282  
 Porter-Cable Machine Co. . . . . 247  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 Joseph T. Ryerson & Son . . . . . 220  
 Scott-Banbach Machinery Co. . . . . 276  
 Syntro Company . . . . . 267  
 J. D. Wallace & Co. . . . . 251-276

**GRINDSTONES**

Richards-Wilcox Mfg. Co. . . . . 5-7

**GROOVING SAWS—See Saws**

**GROUTERS—CREMENT**

Genfre Steel Co. . . . . 80  
 Ransome Concrete Machinery Co. . . . . 249  
 Standard Varnish Works . . . . . 91  
 Tech Brothers . . . . . 91

**GROUT MIXERS—See Mixers**

**GUARDS—DOOR**

Cincinnati Iron Fence Co. . . . . 366  
 Donley Bros. Co. . . . . 298  
 International Steel & Iron Co. . . . . 304  
 F. D. Kees Mfg. Co. . . . . 356  
 Geo. L. Mesker & Co. . . . . 315  
 Stanley Works . . . . . 87

**GUARDS—JAMB AND CORNER**

Donley Bros. Co. . . . . 298  
 Geo. L. Mesker & Co. . . . . 315  
 Stanley Works . . . . . 87

**GUARDS—LAMP**

Pass & Seymour, Inc. . . . . 366

**GUARDS—RADIATOR—See Enclosures, Radiator**

**GUARDS—SAFETY**

American Sawmill Machinery Co. . . . . 255  
 Crescent Machine Co. . . . . 260  
 Edwards Mfg. Co. . . . . 359  
 Huther Bros. Saw Mfg. Co. . . . . 274  
 Jones Superior Machine Co. . . . . 284  
 North Western Expanded Metal Co. . . . . 372  
 Truscon Steel Co. . . . . 5-90

**GUARDS—SAW**

American Sawmill Machinery Co. . . . . 255  
 Crescent Machine Co. . . . . 260  
 Heston & Anderson . . . . . 273  
 Huther Bros. Saw Mfg. Co. . . . . 274  
 Jones Superior Machine Co. . . . . 284  
 Oliver Machinery Co. . . . . 282  
 20th Century Sales Agency . . . . . 253

**GUARDS—SKYLIGHT**

Cincinnati Iron Fence Co. . . . . 366  
 Edwards Mfg. Co. . . . . 359  
 Geo. L. Mesker & Co. . . . . 315  
 Fred J. Meyers Mfg. Company . . . . . 367  
 Willis Mfg. Co. . . . . 109

**GUARDS—SNOW**

Edwards Mfg. Company . . . . . 359  
 Knickerbocker Slate Corp. . . . . 312  
 Wheeling Metal & Mfg. Co. . . . . 316

**GUARDS—WHEEL**

American Chain Company . . . . . 105  
 Donley Bros. Co. . . . . 298  
 Heltzel Steel Form & Iron Co. . . . . 286  
 International Steel & Iron Co. . . . . 304  
 Kwik-Mix Concrete Mixer Co. . . . . 269  
 Geo. L. Mesker & Company . . . . . 315

**GUARDS—WINDOW**

American Chain Company . . . . . 105  
 Cincinnati Iron Fence Co. . . . . 366  
 Heltzel Steel Form & Iron Co. . . . . 286  
 Higgin Mfg. Co. . . . . 301  
 International Steel & Iron Co. . . . . 304  
 Kwik-Mix Concrete Mixer Co. . . . . 269  
 Geo. L. Mesker & Company . . . . . 315  
 Fred J. Meyers Mfg. Co. . . . . 367  
 E. W. A. Bowles Co. . . . . 305  
 Superior Sheet Steel Co. . . . . 49  
 Willis Mfg. Co. . . . . 109

**GUIDES—LETTERING**

A. S. Aloe Company . . . . . 277  
 Keuffel & Esser Co. . . . . 268  
 Frederick Post Co. . . . . 264  
 Warren-Knight Co. . . . . 287

**GUTTERS—FIB**

West Coast Lumber Trade Extension Bureau . . . . . 58  
 Weyerhaeuser Forest Products . . . . . 44

**HAMMERS**

Joseph T. Ryerson & Son . . . . . 220  
 Stanley Works . . . . . 87  
 Syntro Company . . . . . 267

**HAMMERS—ELECTRIC**

A. S. Aloe Company . . . . . 277  
 Black & Decker Mfg. Co. . . . . 254  
 Joseph T. Ryerson & Son . . . . . 220  
 Syntro Company . . . . . 267

**HAND CARTS—See Carts**

**HANGERS—CLOTHES—See Fixtures, Wardrobe**

**HANGERS—EAVES TROUGH**

Edwards Mfg. Co. . . . . 359  
 David Lupton's Sons Co. . . . . 76  
 Milwaukee Corrugating Co. . . . . 374-375  
 Superior Sheet Steel Co. . . . . 49  
 Wheeling Corrugating Co. . . . . 104  
 Wheeling Metal & Mfg. Co. . . . . 316  
 Willis Mfg. Co. . . . . 109

**HANGERS—GARMENT—See Fixtures, Wardrobe**

**HANGERS—PARTITION**

Overhead Door Corp. . . . . 75  
 Richards-Wilcox Mfg. Co. . . . . 6-7

**HANGERS—PIPE**

Crane Company . . . . . 52  
 F. D. Kees Mfg. Co. . . . . 356  
 Hardin-Lavin Company . . . . . 89  
 Johnson Plumbing Supply Co. . . . . 352  
 Pass & Sons Co. . . . . 308  
 Kaiman Steel Company . . . . . 70  
 David Lupton's Sons Co. . . . . 76  
 Milwaukee Corrugating Co. . . . . 374-375  
 Pass & Seymour, Inc. . . . . 366  
 Standard Sanitary Mfg. Co. . . . . 18-19  
 Stanley Plumbing & Supply Co. . . . . 358  
 Truscon Steel Co. . . . . 5-90

**HANGERS—SCREEN**

Casement Hardware Co. . . . . 300  
 W. J. Dennis & Co. . . . . 369  
 Frantz Mfg. Co. . . . . 3  
 Higgin Mfg. Co. . . . . 301  
 F. D. Kees Mfg. Co. . . . . 356  
 McKinney Mfg. Co. . . . . 114  
 National Mfg. Co. . . . . 376  
 Phenix Mfg. Co. . . . . 354  
 J. E. Porter Corp. . . . . 8  
 Stanley Works . . . . . 87

**HANGERS—SLIDING PARTITION**

Frantz Mfg. Co. . . . . 3  
 National Mfg. Co. . . . . 376  
 Richards-Wilcox Mfg. Co. . . . . 6-7

**HANGERS—SPRINKLER-PIPE**

Truscon Steel Co. . . . . 5-90

**HANGERS—WALL**

American Radiator Co. . . . . 192-193  
 Chain Belt Co. . . . . 2  
 Crane Co. . . . . 52  
 Geo. L. Mesker & Co. . . . . 315

**HANGING CLOSETS—See Closets**

**HARDWARE—ACCORDION DOOR**

McKinney Mfg. Co. . . . . 114  
 National Mfg. Co. . . . . 376  
 Richards-Wilcox Mfg. Co. . . . . 6-7

**HARDWARE—AWNING**

John Boyle & Co., Inc. . . . . 358

**HARDWARE—BARN DOOR**

Dudley Lock Corp. . . . . 299  
 Frantz Mfg. Co. . . . . 3  
 F. E. Myers & Bros. Co. . . . . 221  
 National Mfg. Co. . . . . 376  
 J. E. Porter Corp. . . . . 8  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 Stanley Works . . . . . 87

**HARDWARE—CABINET**

Dudley Lock Corp. . . . . 299  
 Frantz Mfg. Co. . . . . 3  
 Hunt-Helm-Ferris & Co. . . . . 108  
 McKinney Mfg. Co. . . . . 114  
 F. E. Myers & Bros. Co. . . . . 221  
 National Mfg. Co. . . . . 376  
 J. E. Porter Corp. . . . . 8  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 Segal Lock & Hdwe. Co., Inc. . . . . 318  
 Stanley Works . . . . . 87

**HARDWARE—CASEMENT WINDOW**

Wm. Bayley Co. . . . . 314  
 Casement Hardware Co. . . . . 300  
 Colonial Hardware Manufacturers . . . . . 364  
 Detroit Steel Products Co. . . . . 210-211  
 Frantz Mfg. Co. . . . . 3  
 Genfre Steel Co. . . . . 80  
 Kawneer Co. . . . . 65  
 McKinney Mfg. Co. . . . . 114  
 Mallory Mfg. Co. . . . . 362  
 Macomber Steel Co. . . . . 310  
 National Mfg. Co. . . . . 376  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 Segal Lock & Hdwe. Co., Inc. . . . . 318  
 Stanley Works . . . . . 87  
 Truscon Steel Co. . . . . 5-90  
 Velguth Metal Parts, Inc. . . . . 369

**HARDWARE—COLONIAL**

Colonial Hardware Manufacturers . . . . . 364  
 McKinney Mfg. Co. . . . . 114  
 Segal Lock & Hdwe. Co., Inc. . . . . 318  
 Stanley Works . . . . . 87

**HARDWARE—DOOR**

Wm. Bayley Co. . . . . 314  
 Bommer Spring Hinge Co. . . . . 83  
 Chicago Spring Hinge Co. . . . . 370  
 Colonial Fireplace Co. . . . . 288  
 Colonial Hardware Mfrs. . . . . 364  
 W. J. Dennis & Co. . . . . 369  
 Dudley Lock Corp. . . . . 299  
 Frantz Mfg. Co. . . . . 3  
 Hunt-Helm-Ferris & Co. . . . . 108  
 F. D. Kees Mfg. Co. . . . . 356  
 McKinney Mfg. Co. . . . . 114  
 F. E. Myers & Bro. Co. . . . . 221  
 National Mfg. Co. . . . . 376  
 Overhead Door Corp. . . . . 75  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 Schlage Lock Co. . . . . 84  
 Segal Lock & Hardware Co., Inc. . . . . 318  
 Stanley Works . . . . . 87

**HARDWARE—ELEVATOR DOOR**

Richards-Wilcox Mfg. Co. . . . . 6-7

**HARDWARE—FIREDOOR**

Bommer Spring Hinge Co. . . . . 83  
 Chicago Spring Hinge Co. . . . . 370  
 Geo. L. Mesker & Co. . . . . 315  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 Segal Lock & Hdwe. Co., Inc. . . . . 318  
 Stanley Works . . . . . 87  
 Willis Mfg. Co. . . . . 109

**HARDWARE—GARAGE**

Colonial Hardware Manufacturers . . . . . 364  
 Dudley Lock Corp. . . . . 299  
 Frantz Mfg. Co. . . . . 3  
 Hunt-Helm-Ferris & Co. . . . . 108  
 F. D. Kees Mfg. Co. . . . . 356  
 McKinney Mfg. Co. . . . . 114  
 F. E. Myers & Bro. Co. . . . . 221  
 National Mfg. Co. . . . . 376  
 Phenix Mfg. Co. . . . . 354  
 J. E. Porter Corp. . . . . 8  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 Segal Lock & Hdwe. Co., Inc. . . . . 318  
 Stanley Works . . . . . 87

**HARDWARE—KITCHEN CABINET**

Concealed Bed Corp. . . . . 297  
 Dudley Lock Corp. . . . . 299  
 Frantz Mfg. Co. . . . . 3  
 Peerless Mfg. Co. . . . . 81  
 Stanley Works . . . . . 87

**HARDWARE—LAVATORY**

Bommer Spring Hinge Co. . . . . 83  
 Chicago Spring Hinge Co. . . . . 370  
 Crane Company . . . . . 52  
 Standard Sanitary Mfg. Co. . . . . 18-19

**HARDWARE—SASH**

Wm. Bayley Co. . . . . 314  
 Frantz Mfg. Co. . . . . 3  
 F. D. Kees Mfg. Co. . . . . 356  
 McKinney Mfg. Co. . . . . 114  
 National Manufacturing Co. . . . . 376  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 Segal Lock & Hdwe. Co., Inc. . . . . 318  
 Stanley Works . . . . . 87  
 Truscon Steel Co. . . . . 5-90  
 Velguth Metal Parts, Inc. . . . . 369

**HARDWARE—SCREEN DOOR**

Bommer Spring Hinge Co. . . . . 83  
 Casement Hardware Co. . . . . 300  
 Chicago Spring Hinge Co. . . . . 370  
 W. J. Dennis & Co. . . . . 369  
 Frantz Mfg. Co. . . . . 3  
 Higgin Mfg. Co. . . . . 301  
 F. D. Kees Mfg. Co. . . . . 356  
 McKinney Manufacturing Co. . . . . 114  
 National Mfg. Co. . . . . 374  
 Segal Lock & Hdwe. Co., Inc. . . . . 318  
 Stanley Works . . . . . 87

**HARDWARE—STORM SASH**

W. J. Dennis & Co. . . . . 369  
 Frantz Mfg. Co. . . . . 3  
 F. D. Kees Mfg. Co. . . . . 356  
 McKinney Mfg. Co. . . . . 114  
 National Mfg. Co. . . . . 374  
 Phenix Mfg. Co. . . . . 354  
 J. E. Porter Corp. . . . . 8  
 Stanley Works . . . . . 87

**HARDWARE—TRANSOM**

Hagstrom Mfg. Co. . . . . 316  
 Hitchings & Co. . . . . 295  
 Kawneer Co. . . . . 65  
 McKinney Mfg. Co. . . . . 114  
 Stanley Works . . . . . 87

**HARDWOOD DOORS**—See Doors  
**HAY CARRIERS**—See Carriers, Overhead  
**HAYFORKS**—See Forks  
**HAY HOISTS**—See Hoists  
**HAY TRACK**—See Carriers, Overhead  
**HEADS—CUTTER**  
 A. S. Aloe Company.....277  
 American Saw Mill Machinery Co.....255  
 Clarke Sanding Machine Co.....20-21  
 Combination Woodworking Machine Co.....286  
 Crescent Machine Co.....280  
 DeWalt Products Co.....259  
 Henry Disston & Sons, Inc.....199  
 Heston & Anderson.....273  
 Hutchinson Mfg. Co., Inc.....251  
 Huther Bros. Saw Mfg. Co.....274  
 Jones Superior Machine Co.....284  
 Ralph M. Kennedy.....282  
 Oliver Machinery Co.....282  
 Safe Tool Mfg. Co.....285  
 20th Century Sales Agency.....253  
**HEADS—DADO**  
 A. S. Aloe Co.....277  
 American Saw Mill Machinery Co.....255  
 W. B. & J. E. Boice.....206  
 Combination Woodworking Machine Co.....286  
 Crescent Machine Co.....280  
 Henry Disston & Sons, Inc.....199  
 Heston & Anderson.....273  
 Hutchinson Mfg. Co., Inc.....251  
 Huther Bros. Saw Mfg. Co.....274  
 Jones Superior Machine Co.....284  
 Ralph M. Kennedy.....282  
 Oliver Machinery Co.....282  
 Porter-Cable Machine Co.....247  
 Safe Tool Mfg. Co.....285  
 20th Century Sales Agency.....253  
**HEADS—JOINTER**  
 A. S. Aloe Co.....277  
 American Sawmill Machinery Co.....255  
 Clarke Sanding Machine Co.....20-21  
 Combination Woodworking Machine Co.....286  
 Crescent Machine Co.....280  
 Heston & Anderson.....273  
 Hutchinson Mfg. Co., Inc.....251  
 Jones Superior Machine Co.....284  
 Ralph M. Kennedy.....282  
 Oliver Machinery Co.....282  
 Safe Tool Mfg. Co.....285  
 20th Century Sales Agency.....253  
 J. D. Wallace & Co.....251-276  
**HEADS—SHAPER**  
 Combination Woodworking Machine Co.....286  
 Crescent Machine Co.....280  
 Jones Superior Machine Co.....284  
 Ralph M. Kennedy.....282  
 Oliver Machinery Co.....282  
 20th Century Sales Agency.....253  
 J. D. Wallace & Co.....251-276  
**HEATERS—CABINET**  
 American Radiator Co.....192-193  
 American Stove Co.....48  
 Automatic Electric Heater Co.....367  
 Hardin-Lavin Co.....89  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201  
 Trane Company.....43  
 Wheeling Corrugating Co.....104  
**HEATERS—CONCRETE**  
 Donley Bros. Co.....298  
**HEATERS—GARAGE**  
 American Radiator Co.....192-193  
 Automatic Electrical Heater Co.....367  
 Burnham Boiler Corp.....82  
 Frantz Mfg. Co.....3  
 Hardin-Lavin Co.....89  
 Johnson Plumbing Supply Co.....352  
 Ohio Foundry & Mfg. Co.....311  
 F. W. Shepler Stove Co.....316  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201  
**HEATERS—GAS**  
 American Radiator Co.....192-193  
 American Stove Co.....48  
 Automatic Electric Heater Co.....367  
 Crane Company.....52  
 General Gas Light Co.....197  
 Hardin-Lavin Co.....89  
 Johnson Plumbing Supply Co.....352  
 Ohio Foundry & Mfg. Co.....311  
 F. W. Shepler Stove Co.....316  
 Stanley Plumbing & Supply Co.....358  
 Wheeling Corrugating Co.....104  
**HEATERS—GREENHOUSE**  
 American Radiator Co.....192-193  
 Andrews Heating Co.....367  
 Automatic Electric Heater Co.....367  
 Hitchings & Co.....296  
 Johnson Plumbing Supply Co.....352  
 Thatcher Co.....201  
 U. S. Radiator Corp.....40  
**HEATERS—ROOM**  
 American Radiator Co.....192-193  
 American Stove Co.....48  
 Automatic Electric Heater Co.....367  
 Hardin-Lavin Co.....89  
 Johnson Plumbing Supply Co.....352  
 Ohio Foundry & Mfg. Co.....311  
 F. W. Shepler Stove Co.....316  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201  
**HEATERS—SCHOOLROOM**  
 American Radiator Co.....192-193  
 Automatic Electric Heater Co.....367  
 Johnson Plumbing Supply Co.....352  
 Thatcher Company.....201

**HEATERS—TANK**  
 American Radiator Co.....192-193  
 American Stove Co.....48  
 Andrews Heating Co.....367  
 Automatic Electric Heater Co.....367  
 Burnham Boiler Corp.....82  
 Crane Company.....52  
 Flint & Walling Mfg. Co.....364  
 Hardin-Lavin Co.....89  
 Hunt-Helm-Ferris & Co.....108  
 Johnson Plumbing Supply Co.....352  
 B. Karol & Sons Co.....308  
 Mellich-Hayward Co.....283  
 Northfield Iron Co.....364  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Company.....201  
 U. S. Radiator Corp.....40  
**HEATERS—WATER**  
 American Radiator Co.....192-193  
 American Stove Co.....48  
 Andrews Heating Co.....367  
 Automatic Electric Heater Co.....367  
 Crane Company.....52  
 Hardin-Lavin Co.....89  
 Johnson Plumbing Supply Co.....352  
 B. Karol & Sons Co.....308  
 National Radiator Co.....96  
 Northfield Iron Co.....364  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201  
**HEATERS—WATER (Automatic)**  
 American Radiator Co.....192-193  
 Automatic Electric Heater Co.....367  
 Crane Co.....52  
 Hardin-Lavin Co.....89  
 Johnson Plumbing Supply Co.....352  
 Standard Sanitary Mfg. Co.....18-19  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201  
**HEATING PLANT BOILERS**—See Boilers  
**HEATING PLANTS—HOT WATER**  
 American Radiator Co.....192-193  
 Andrews Heating Co.....367  
 Automatic Electric Heater Co.....367  
 Burnham Boiler Corp.....82  
 Crane Co.....52  
 Hardin-Lavin Co.....89  
 Johnson Plumbing & Supply Co.....352  
 E. Karol & Sons Co.....308  
 National Radiator Corp.....86  
 Standard Sanitary Mfg. Co.....18-19  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201  
 H. A. Thrush & Co.....313  
 United States Radiator Corp.....40  
**HEATING PLANTS—OIL BURNERS**  
 American Radiator Co.....192-193  
 American Stove Co.....48  
 Hardin-Lavin Co.....89  
 Hess Warming & Ventilating Co.....296-314  
 Laco Gas Burner Co.....360  
 Milwaukee Air Power Pump Co.....316  
 J. E. Porter Corp.....86  
 National Radiator Corp.....86  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201  
**HEATING PLANTS—PIPELESS**  
**FURNACE**  
 Andrews Heating Co.....367  
 Hardin-Lavin Co.....89  
 Hess Warming & Ventilating Co.....296-314  
 Johnson Plumbing Supply Co.....352  
 B. Karol & Sons Co.....308  
 Majestic Co.....56  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201  
**HEATING PLANTS—STEAM**  
 American Radiator Co.....192-193  
 Andrews Heating Co.....367  
 Burnham Boiler Corp.....82  
 Crane Company.....52  
 Hardin-Lavin Co.....89  
 Johnson Plumbing Supply Co.....352  
 National Radiator Corp.....86  
 Standard Sanitary Mfg. Co.....18-19  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201  
 Trane Company.....43  
 United States Radiator Corp.....40  
**HEATING PLANTS—VAPOR SYSTEM**  
 American Radiator Co.....192-193  
 Andrews Heating Co.....367  
 Burnham Boiler Corp.....82  
 Crane Co.....52  
 Hardin-Lavin Co.....89  
 Johnson Plumbing Supply Co.....352  
 National Radiator Corp.....86  
 Standard Sanitary Mfg. Co.....18-19  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201  
 Trane Co.....43  
 United States Radiator Corp.....40  
**HEATING PLANTS—WARM AIR**  
**FURNACE**  
 Andrews Heating Co.....367  
 S. Cheney & Son.....282  
 Hardin-Lavin Co.....89  
 Hess Warming & Ventilating Co.....296-314  
 Holland Furnace Co.....99  
 Ilg Electric Ventilating Co.....71  
 Johnson Plumbing Supply Co.....352  
 B. Karol & Sons Co.....308  
 Majestic Co.....56  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201

**HIGH TEMPERATURE CEMENT**—See Cement  
**HINGES—BLIND AND SHUTTER**  
 Frantz Mfg. Co.....3  
 McKinney Mfg. Co.....114  
 Stanley Works.....87  
**HINGES—BUTT**  
 Wm. Bayley Co.....314  
 Bommer Spring Hinge Co.....370  
 E. L. Carter Co., Inc.....274  
 Chicago Spring Hinge Co.....370  
 W. J. Dennis & Co.....3  
 Frantz Mfg. Co.....3  
 F. D. Kees Mfg. Co.....3  
 McKinney Mfg. Co.....114  
 National Mfg. Co.....3  
 Richards-Wilcox Mfg. Co.....3  
 Stanley Works.....87  
**HINGES—FLOOR**  
 Bommer Spring Hinge Co.....370  
 Chicago Spring Hinge Co.....370  
 Frantz Mfg. Co.....3  
 National Mfg. Co.....3  
**HINGES—GATE**  
 American Chain Co.....106  
 American Steel & Wire Co.....282  
 Bommer Spring Hinge Co.....370  
 Chicago Spring Hinge Co.....370  
 Cincinnati Iron Fence Co.....280  
 Frantz Mfg. Co.....3  
 McKinney Mfg. Co.....114  
 Richards-Wilcox Mfg. Co.....3  
 Stanley Works.....87  
**HINGES—PIVOT**  
 Bommer Spring Hinge Co.....370  
 Chicago Spring Hinge Co.....370  
**HINGES—SCREEN DOOR**  
 Bommer Spring Hinge Co.....370  
 Chicago Spring Hinge Co.....370  
 Frantz Mfg. Co.....3  
 Higgin Mfg. Co.....3  
 F. D. Kees Mfg. Co.....3  
 McKinney Mfg. Co.....114  
 National Mfg. Co.....3  
 Stanley Works.....87  
**HINGES—SPRING**  
 Bommer Spring Hinge Co.....370  
 Chicago Spring Hinge Co.....370  
 W. J. Dennis & Co.....3  
 Chas. Fischer Spring Co.....302  
 Frantz Mfg. Co.....3  
 F. D. Kees Mfg. Co.....3  
 Stanley Works.....87  
**HINGES—STRAP**  
 Frantz Mfg. Co.....3  
 Hunt, Helm, Ferris & Co.....108  
 McKinney Mfg. Co.....114  
 Richards-Wilcox Mfg. Co.....3  
 Stanley Works.....87  
**HINGES—SURFACE**  
 Bommer Spring Hinge Co.....370  
 Chicago Spring Hinge Co.....370  
 Frantz Mfg. Co.....3  
 McKinney Mfg. Co.....114  
 National Mfg. Co.....3  
 Richards-Wilcox Mfg. Co.....3  
 Stanley Works.....87  
**HOISTS—ASH**  
 International Steel & Iron Co.....284  
 Richards-Wilcox Mfg. Co.....3  
 Sedgwick Machine Works.....284  
 Stimmel Winch & Machine Works.....284  
**HOISTS—BUILDING MATERIAL**  
 A. S. Aloe Co.....277  
 American Cement Machine Co., Inc.....271  
 American Sawmill Machinery Co.....287  
 Construction Machinery Co.....287  
 International Steel & Iron Co.....284  
 Jaeger Machine Co.....228-229  
 Miles Mfg. Co.....274  
 Novo Engine Co.....284  
 J. E. Porter Corp.....284  
 Ransome Concrete Machinery Co.....284  
 Joseph T. Ryerson & Son.....284  
 Sagen Derrick Co.....284  
 Sidney Elevator Mfg. Co.....284  
 Stimmel Winch & Machine Works.....284  
 Universal Hoist & Mfg. Co.....284  
**HOISTS—CELLAR**  
 International Steel & Iron Co.....284  
 Richards-Wilcox Mfg. Co.....3  
 Sedgwick Machine Works.....284  
 Sidney Elevator Mfg. Co.....284  
**HOISTS—CHAIN**  
 International Steel & Iron Co.....284  
 J. E. Porter Corp.....284  
 Richards-Wilcox Mfg. Co.....3  
 Joseph T. Ryerson & Son.....284  
 Scott-Bansbach Machinery Co.....284  
 Sedgwick Machine Works.....284  
**HOISTS—ELECTRIC**  
 Novo Engine Co.....284  
 American Cement Machine Co.....271  
 Construction Machinery Co.....287  
 O. K. Clutch & Machy. Co.....284  
 Richards-Wilcox Mfg. Co.....3  
 Joseph T. Ryerson & Son.....284  
 Sagen Derrick Co.....284  
 Scott-Bansbach Machinery Co.....284  
 Sidney Elevator Mfg. Co.....284  
 Stimmel Winch & Machine Works.....284  
 Universal Hoist & Mfg. Co.....284  
**HOISTS—FRICTION**  
 Novo Engine Co.....284  
 J. E. Porter Corp.....284  
 Stimmel Winch & Machine Works.....284  
 Universal Hoist & Mfg. Co.....284

**HOISTS—FUEL**  
 American Cement Machine Co., Inc. .... 275  
 Bedgwick Machine Works. .... 280

**HOISTS—GASOLINE**  
 A. S. Aloe Co. .... 277  
 American Cement Machine Co. .... 275  
 Construction Machinery Co. .... 237  
 Fairbanks, Morse & Co. .... 107  
 Jaseer Machine Co. .... 228-229  
 Kwik-Mix Concrete Mixer Co. .... 269  
 Lansing Co. .... 256  
 Novo Engine Co. .... 245  
 Hagen Derrick Co. .... 284  
 Sidney Elevator Mfg. Co. .... 286  
 Stimmel Winch & Machine Works. .... 284  
 Universal Hoist & Mfg. Co. .... 284

**HOISTS—HAND**  
 A. S. Aloe Co. .... 277  
 Hunt, Helm, Ferris & Co. .... 108  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Joseph T. Eyerson & Son. .... 220  
 Bedgwick Machine Works. .... 280  
 Sidney Elevator Mfg. Co. .... 286  
 Stimmel Winch & Machine Works. .... 284

**HOISTS HAY—See Forks, Hay**

**HOISTS—INVALID**  
 International Steel & Iron Co. .... 304  
 Bedgwick Machine Works. .... 280  
 Sidney Elevator Mfg. Co. .... 286  
 Stimmel Winch & Machine Works. .... 284

**HOISTS—ROPE**  
 Novo Engine Co. .... 245  
 Bedgwick Machine Works. .... 280  
 Sidney Elevator Mfg. Co. .... 286  
 Stimmel Winch & Machine Works. .... 284

**HOISTING BUCKETS—See Buckets**

**HOISTING CABLES—See Cables**

**HOISTING CHAINS—See Chains**

**HOLDERS—DOOR**  
 Bommer Spring Hinge Co. .... 83  
 Frantz Mfg. Co. .... 3  
 Hunt, Helm, Ferris & Co. .... 108  
 McKinney Mfg. Co. .... 114  
 National Manufacturing Co. .... 276  
 Phenix Mfg. Co. .... 352  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Hagen Derrick Co. .... 284  
 Stanley Works. .... 87

**HOLDERS—DOOR CHECK**  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Legal Lock & Hdwe. Co., Inc. .... 318

**HOLDERS—GARAGE DOOR**  
 Frantz Mfg. Co. .... 3  
 F. D. Kees Mfg. Co. .... 256  
 McKinney Mfg. Co. .... 114  
 National Mfg. Co. .... 376  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Hagen Derrick Co. .... 284  
 Stanley Works. .... 87

**HOLDERS—SASH**  
 Austral Window Co. .... 291  
 Hardware Sales Co. .... 368  
 Safe Tool Mfg. Co. .... 285  
 Stanley Works. .... 87

**HOLLOW BUILDING BLOCKS—See Blocks**

**HOLLOW METAL DOORS—See Doors**

**HOLLOW MORTISING CHISELS—See Chisels**

**HOLLOW TILE MACHINES—See Machines**

**HORSES—MASON'S—See Trestles**

**HOT AIR GRILLES—See Grilles**

**HOT WATER HEATING SYSTEMS—See Heating**

**HOUSES—STEEL FRAME**  
 Water Bates Steel Corp. .... 309

**HOUSE MOVING CAPSTANS—See Capstans**

**HOUSE MOVING JACKS—See Jacks**

**HOUSE MOVING ROLLERS—See Rollers**

**HYDRATED LIME—See Lime**

**ICE CHESTS—See Refrigerators**

**INCINERATORS—CHIMNEY**  
 Concealed Bed Corp. .... 297  
 Economy Incinerator Co., Inc. .... 363  
 Kerner Incinerator Co. .... 55

**INCINERATORS—PORTABLE**  
 American Radiator Co. .... 192-193  
 Andrews Heating Co. .... 367  
 Burnham Boiler Corp. .... 82  
 Dunley Bros. Co. .... 298  
 Economy Incinerator Co., Inc. .... 363  
 Johnson Plumbing Supply Co. .... 352  
 R. Karol & Sons Co. .... 308  
 Kerner Incinerator Co. .... 55  
 Majestic Co. .... 56  
 Wheeling Corrugating Co. .... 104

**INKS—DRAWING**  
 A. S. Aloe Co. .... 277  
 W. & L. E. Gurley. .... 266  
 Cha. M. Higgins & Co. .... 309  
 Keuffel & Esser Co. .... 268  
 Frederick Post Co. .... 264  
 Warren-Knight Co. .... 282  
 David White Co. .... 287

**INSECTS—CONCRETE**  
 Ackerman-Johnson Co. .... 290  
 Dunley Bros. Co. .... 298  
 Genfire Steel Co. .... 80  
 Kalman Steel Co. .... 70  
 Joseph T. Eyerson & Son. .... 220  
 Truscon Steel Co. .... 5-90

**INSTRUMENTS—DRAWING**  
 A. S. Aloe Company. .... 277  
 Geier & Bluhm, Inc. .... 285  
 W. & L. E. Gurley. .... 266  
 Keuffel & Esser Co. .... 268  
 Luffkin Rule Co. .... 278  
 Frederick Post Co. .... 264  
 L. S. Starrett Co. .... 271  
 Warren-Knight Co. .... 282  
 David White Co., Inc. .... 287

**INSTRUMENTS—SURVEYING**  
 A. S. Aloe Co. .... 277  
 L. Beckmann Co. .... 283  
 Geier & Bluhm, Inc. .... 285  
 W. & L. E. Gurley. .... 266  
 Keuffel & Esser Co. .... 268  
 Frederick Post Co. .... 264  
 L. S. Starrett Co. .... 271  
 Warren-Knight Co. .... 282  
 David White Co. .... 287

**INSULATED ROOFS—See Roofs**

**INSULATING BOARDS—See Boards**

**INSULATING FELTS—See Felts**

**INSULATING LUMBER—See Lumber**

**INSULATING PAPER—See Paper**

**INSULATION—COLD STORAGE—See Boards, Insulating; also Paper, also Felt, Insulating**

**INSULATION—HEAT—See Boards, also Paper, also Felt, Insulating**

**INSULATION—SPRAYED FILLER**  
 Sprayo-Flake Insulating Co. .... 32

**INTERIOR TRIM—See Trim**

**INVALID HOISTS—See Hoists**

**IRON—ARCHITECTURAL**  
 Cincinnati Iron Fence Co. .... 366  
 Edwards Mfg. Co. .... 359  
 International Steel & Iron Co. .... 304  
 Geo. L. Mesker & Co. .... 315  
 Fred J. Meyers Mfg. Co. .... 367  
 Veilguth Metal Parts, Inc. .... 369

**IRONS—ANGLE**  
 Chain Belt Co. .... 2  
 S. Cheney & Son. .... 282  
 Donley Bros. Co. .... 298  
 International Steel & Iron Co. .... 304  
 Kalman Steel Co. .... 70  
 Kawneer Co. .... 65  
 Lloyd Floor & Wall Tile Co. .... 384  
 Macomber Steel Co. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Jos. T. Eyerson & Son. .... 220  
 Stanley Works. .... 87

**IRONS—BRANDING**  
 A. S. Aloe Co. .... 277  
 W. & L. E. Gurley. .... 266

**IRONS—PLANE**  
 Stanley Works. .... 87

**IRONS—SOLDERING**  
 A. S. Aloe Co. .... 277  
 Hardin-Lavin Co. .... 89  
 Johnson Plumbing Supply Co. .... 352  
 Milwaukee Corrugating Co. .... 374-375  
 Stanley Plumbing & Supply Co. .... 358

**IRON DOORS—See Doors**

**IRON GATES—See Gates**

**IRON GRATINGS—See Gratings**

**IRONING BOARDS—(Built-In)—See Boards, Ironing**

**JACKS—HOUSEMOVING**  
 Jos. T. Eyerson & Son. .... 220  
 Stimmel Winch & Machine Works. .... 284

**JACKS—LADDER**  
 Huther Bros. Saw Mfg. Co., Inc. .... 274  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Steel Scaffolding Co. .... 261

**JAMBS—DOOR (Steel)**  
 International Steel & Iron Co. .... 304  
 Leonard Sheet Metal Works. .... 358  
 Geo. L. Mesker & Co. .... 315  
 Truscon Steel Co. .... 5-90

**JAMBS—DOOR (Wood)**  
 Curtis Cos. .... 61  
 Paine Lumber Co. .... 93  
 Trimpak Corp. .... 26-27  
 West Coast Lbr. Trade Ext. Bureau. .... 53

**JAMB GUARDS—See Guards**

**JAMB NAILS—See Nails**

**JIG SAWS—See Saws**

**JOINTS—CONTRACTION**  
 Phillip Carey Co. .... 106  
 Genfire Steel Co. .... 80  
 Kalman Steel Co. .... 70  
 Milwaukee Corrugating Co. .... 374-375  
 National Steel Fabric Co. .... 28-29  
 Truscon Steel Co. .... 5-90

**JOINTS—EXPANSION**  
 Phillip Carey Co. .... 106  
 Crane Co. .... 82  
 Kalman Steel Co. .... 70  
 Truscon Steel Co. .... 5-90

**JOINT FILLERS—See Fillers**

**JOINTERS—WOODWORKING**  
 A. S. Aloe Co. .... 277  
 American Sawmill Machinery Co. .... 255  
 W. B. & J. E. Boice. .... 266  
 R. L. Carter Co., Inc. .... 274  
 Clarke Sanding Machine Co. .... 20-21  
 Combination Woodworking Machine Co. .... 286  
 Crescent Machine Co. .... 260  
 DeWalt Products Co. .... 269  
 Easkay Mfg. Co. .... 279  
 Gallmeyer & Livingston Co. .... 280  
 Heston & Anderson. .... 273  
 Hutchinson Mfg. Co., Inc. .... 281

Huther Bros. Saw Mfg. Co. .... 274  
 Jones Superior Machine Co. .... 284  
 Ralph M. Kennedy. .... 282  
 Oliver Machinery Co. .... 282  
 Parks Woodworking Machine Co. .... 278  
 Farson Co. .... 276  
 Safe Tool Mfg. Co. .... 285  
 Scott-Bansbach Machy. Co. .... 276  
 Stanley Works. .... 87  
 State Mfg. & Eng. Co. .... 264  
 20th Century Sales Agency. .... 253  
 J. D. Wallace & Co. .... 251-276

**JOINTER HEADS—See Heads**

**JOINTER KNIVES—See Knives**

**JOISTS—EXPANDED STEEL**  
 Bates Expanded Steel Truss Co. .... 358

**JOISTS—PRESSED STEEL**  
 International Steel & Iron Co. .... 304  
 F. D. Kees Mfg. Co. .... 356  
 Macomber Steel Co. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Truscon Steel Co. .... 5-90

**JOISTS—STEEL**  
 Bates Expanded Steel Truss Co. .... 358  
 Genfire Steel Co. .... 80  
 Macomber Steel Co. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Jos. T. Eyerson & Son. .... 220  
 Truscon Steel Co. .... 5-90

**JOIST ANCHORS—See Anchors**

**JOIST HANGERS—See Anchors, Joist**

**KALAMEIN DOORS—See Doors**

**KALSOMINE**  
 Reardon Co. .... 31  
 Sherwin-Williams Co. .... 213

**KITCHEN CABINETS—See Cabinets**

**KITCHEN CABINET HARDWARE—See Hardware**

**KITCHEN FANS—See Ventilators, Kitchen**

**KITCHEN PUMPS—See Pumps**

**KITCHEN SINKS—See Sinks**

**KITCHEN UNITS—See Cabinets, Kitchen**

**KITCHEN VENTILATORS—See Ventilators**

**KITCHENETTES**  
 Concealed Bed Corp. .... 297  
 Coppes Bros. & Zook. .... 111  
 Majestic Steel Cabinet Co. .... 369  
 G. I. Sellers & Sons Co. .... 117

**KNIVES—BAND**  
 Henry Disston & Sons, Inc. .... 199  
 Huther Bros. Saw Mfg. Co. .... 274  
 Jones Superior Machine Co. .... 284  
 Ralph M. Kennedy Co. .... 282  
 Oliver Machinery Co. .... 282  
 20th Century Sales Agency. .... 253

**KNIVES—CIRCULAR**  
 Henry Disston & Sons. .... 199  
 Huther Bros. Saw Mfg. Co., Inc. .... 274  
 Jones Superior Machine Co. .... 284  
 Ralph M. Kennedy. .... 282  
 20th Century Sales Agency. .... 253

**KNIVES—JOINTER**  
 American Sawmill Machinery Co. .... 255  
 Combination Woodworking Machine Co. .... 286  
 Crescent Machine Co. .... 260  
 Henry Disston & Sons, Inc. .... 199  
 Heston & Anderson. .... 273  
 Huther Bros. Saw Mfg. Co. .... 274  
 Ralph M. Kennedy. .... 282  
 Oliver Machinery Co. .... 282  
 Safe Tool Mfg. Co. .... 285  
 20th Century Sales Agency. .... 253

**KNIVES—MOULDING**  
 American Saw Mill Machinery Co. .... 255  
 R. L. Carter Co., Inc. .... 274  
 Combination Woodworking Machine Co. .... 286  
 Crescent Machine Co. .... 260  
 Henry Disston & Sons, Inc. .... 199  
 Hutchinson Mfg. Co., Inc. .... 281  
 Huther Bros. Saw Mfg. Co., Inc. .... 274  
 Jones Superior Machine Co. .... 284  
 Ralph M. Kennedy. .... 282  
 Oliver Machinery Co. .... 282  
 Safe Tool Mfg. Co. .... 285  
 20th Century Sales Agency. .... 253

**KNIVES—PLANER**  
 A. S. Aloe Co. .... 277  
 American Sawmill Machinery Co. .... 255  
 Combination Woodworking Machine Co. .... 286  
 Crescent Machine Co. .... 260  
 Henry Disston & Sons, Inc. .... 199  
 Heston & Anderson. .... 273  
 Hutchinson Mfg. Co., Inc. .... 281  
 Huther Bros. Saw Mfg. Co., Inc. .... 274  
 Jones Superior Machine Co. .... 284  
 Ralph M. Kennedy. .... 282  
 Oliver Machinery Co. .... 282

**LACQUERS**  
 Sherwin-Williams Co. .... 213  
 Toch Bros. .... 91  
 Truscon Laboratories. .... 72

**LADDERS—STORE**  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 Marschke Co. .... 367  
 F. E. Myers & Bro. Co. .... 221  
 Richards-Wilcox Mfg. Co. .... 6-7

**LADDERS—SWIMMING POOL**  
 Fred J. Meyers Mfg. Co. .... 367

**LADDER BRACKETS—See Brackets**

**LADDER JACKS—See Jacks**

**LAMP GUARDS—See Guards**

**LAMP LOCKS—See Guards, Lamp**

**LATCHES—See Hardware, Door**

**LATH-EXPANDED METAL**  
 Bates Expanded Steel Truss Co. .... 353  
 Edwards Mfg. Co. .... 359  
 Gendre Steel Co. .... 80  
 International Steel & Iron Co. .... 304  
 Kalman Steel Co. .... 70  
 Lloyd Floor & Wall Tile Co. .... 364  
 Macomber Steel Co. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Milwaukee Corrugating Co. .... 374-375  
 North Western Expanded Metal Co. .... 372  
 Joseph T. Ryerson & Son. .... 220  
 Truscon Steel Co. .... 5-90  
 Wheeling Corrugating Co. .... 215  
 Willis Mfg. Co. .... 109

**LATH-FLOOR**  
 International Steel & Iron Co. .... 304  
 Milwaukee Corrugating Co. .... 374-375

**LATH-GYPSUM**  
 U. S. Gypsum Co. .... 67

**LATH-METAL**  
 Edwards Mfg. Co. .... 359  
 Gendre Steel Co. .... 80  
 International Steel & Iron Co. .... 304  
 Kalman Steel Co. .... 70  
 Macomber Steel Co. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Milwaukee Corrugating Co. .... 374-375  
 Northfield Iron Co. .... 364  
 North Western Expanded Metal Co. .... 372  
 Joseph T. Ryerson & Son. .... 220  
 Truscon Steel Co. .... 5-90  
 Wheeling Corrugating Co. .... 215  
 Willis Mfg. Co. .... 109

**LATH-REINFORCING**  
 Cincinnati Iron Fence Co. .... 366  
 Gendre Steel Co. .... 80  
 International Steel & Iron Co. .... 304  
 Kalman Steel Co. .... 70  
 Milwaukee Corrugating Co. .... 374-375  
 National Steel Fabric Co. .... 28-29  
 North Western Expanded Metal Co. .... 372  
 Joseph T. Ryerson & Son. .... 220  
 Truscon Steel Co. .... 5-90

**LATH-SHEATHING**  
 Shevlin, Carpenter & Clarke Co. .... 174-175  
 United States Gypsum Co. .... 67

**LATH-WIRE**  
 National Steel Fabric Co. .... 28-29

**LATH-WOOD**  
 Birch Mfrs. .... 353  
 Mason Fibre Co. .... 47  
 Shevlin, Carpenter & Clarke Co. .... 174-175  
 Trippak Corporation .... 26-27  
 West Coast Lumber Trade Ext. Bureau 58  
 Weyerhaeuser Forest Products. .... 44

**LATHES-WOODWORKING**  
 American Sawmill Machinery Co. .... 255  
 W. B. & J. E. Bolce. .... 266  
 DeWalt Products Co. .... 259  
 Heston & Anderson. .... 273  
 Jones Superior Machine Co. .... 284  
 Ralph M. Kennedy. .... 282  
 Oliver Machinery Co. .... 282  
 J. D. Wallace & Co. .... 251-276

**LAVATORIES**  
 Crane Co. .... 52  
 Hardin-Lavin Co. .... 89  
 Johnson Plumbing Supply Co. .... 352  
 Standard Sanitary Mfg. Co. .... 18-19  
 Stanley Plumbing & Supply Co. .... 358  
 Wheeling Sanitary Mfg. Co. .... 215

**LAVATORY HARDWARE-See Hardware**

**LAUNDRY DRYERS-See Dryers**

**LAUNDRY TRAYS-See Trays**

**LEADED GLASS-See Glass**

**LETTERING GUIDES-See Guides**

**LETTERS AND NUMBERS-METAL**  
 Chain Products Co. .... 365  
 Colonial Hardware Mfrs. .... 364  
 Edwards Mfg. Co. .... 359  
 Milwaukee Corrugating Co. .... 374-375  
 Northfield Iron Co. .... 364  
 Willis Mfg. Co. .... 109

**LEVELS-CARPENTERS**  
 A. S. Aloe Co. .... 277  
 Geler & Blum, Inc. .... 285  
 Stanley Works .... 87  
 L. S. Starrett Co. .... 271  
 Warren-Knight Co. .... 282  
 David White Co., Inc. .... 257

**LEVELS-CONVERTIBLE**  
 A. S. Aloe Co. .... 277  
 L. Beckmann Co. .... 283  
 Charles Bruning Co., Inc. .... 268  
 Geler & Blum, Inc. .... 285  
 W. & L. E. Gurley. .... 266  
 Keuffel & Esser Co. .... 268  
 L. S. Starrett Co. .... 271  
 Warren-Knight Co. .... 282

**LEVELS-FARM**  
 A. S. Aloe Co. .... 277  
 L. Beckmann Co. .... 283  
 Geler & Blum, Inc. .... 285  
 W. & L. E. Gurley. .... 266  
 Keuffel & Esser Co. .... 268  
 Frederick Post Co. .... 264  
 Stanley Works .... 87  
 L. S. Starrett Co. .... 271  
 Warren-Knight Co. .... 282  
 David White Co., Inc. .... 257

**LEVELS-LINE**  
 A. S. Aloe Co. .... 277  
 L. Beckmann Co. .... 283  
 Geler & Blum, Inc. .... 285  
 W. & L. E. Gurley. .... 266  
 Frederick Post Co. .... 264

Stanley Works ..... 87  
 L. S. Starrett Co. .... 271  
 Warren-Knight Co. .... 282  
 David White Co., Inc. .... 257

**LEVELS-MASONS**  
 A. S. Aloe Co. .... 277  
 Geler & Blum, Inc. .... 285  
 Stanley Works .... 87  
 Warren-Knight Co. .... 282  
 David White Co., Inc. .... 257

**LEVEL SIGHTS-See Sights**

**LIFTS-SASH (See Hardware, Sash)**

**LIFTS-SCREEN DOOR (See Hardware, Screen Door)**

**LIFTS-TRANSOM (See Hardware Transom)**

**LIGHTING FIXTURES-See Fixtures**

**LIGHTING SYSTEMS-ELECTRIC**  
 Deleo-Light Co. .... 263  
 Fairbanks, Morse & Co. .... 107  
 Milwaukee Air Power Pump Co. .... 316

**LIGHTS-PRISM**  
 International Steel & Iron Co. .... 304  
 Geo. L. Mesker & Co. .... 315  
 Mississippi Wire Glass Co. .... 181

**LIGHTS-SIDEWALK**  
 Bligne Weatherstripping & Caulking Co. 362  
 International Steel & Iron Co. .... 304  
 Fred J. Meyers Mfg. Co. .... 367

**LIME-FINISHING**  
 Gibsonburg Lime Products Co. .... 54  
 U. S. Gypsum Co. .... 67

**LIME-HYDRATED**  
 Gibsonburg Lime Products Co. .... 54  
 U. S. Gypsum Co. .... 67

**LIME-LUMP**  
 Louisville Cement Co. .... 116  
 U. S. Gypsum Co. .... 67

**LIME-PREPARED**  
 Louisville Cement Co. .... 116

**LIMESTONE**  
 Indiana Limestone Co. .... 22-23

**LIME WATERPROOFING-See Waterproofing**

**LINE LEVELS-See Levels**

**LINES-CLOTHES**  
 American Steel & Wire Co. .... 292  
 Samson Cordage Works. .... 353  
 Silver Lake Co. .... 371

**LINES-DRAG**  
 Koehring Co. .... 255

**LINES-MASONS**  
 Silver Lake Co. .... 371

**LINING-FLUE**  
 Clay Products Ass'n. .... 294  
 Johns-Manville, Inc. .... 195

**LINING-WALL**  
 Barber Asphalt Co. .... 113  
 Philip Carey Co. .... 106  
 Columbus-Union Oil Cloth Co. .... 310  
 General Insulating & Mfg. Co. .... 307  
 Lincrusta-Walton Co. .... 216  
 Ruberoid Co. .... 101  
 Standard Textile Products Co. .... 39

**LINOLEUM-See Coverings, Floor**

**LINTELS-STEEL**  
 Donley Bros. Co. .... 298  
 International Steel & Iron Co. .... 304  
 David Lupton's Sons Co. .... 76  
 Macomber Steel Co. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Fred J. Meyers Mfg. Co. .... 367  
 Truscon Steel Co. .... 5-90

**LOCKERS-METAL**  
 Concealed Bed Corp. .... 297

**LOCKS-DOOR**  
 A. S. Aloe Co. .... 277  
 Dudley Lock Corp. .... 299  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Schlage Lock Company. .... 84  
 Segal Lock & Hdw. Co., Inc. .... 318

**LOCKS-SASH**  
 Frantz Mfg. Company. .... 8  
 Hagstrom Mfg. Co. .... 316  
 Hardware Sales Co. .... 368  
 McKinney Mfg. Co. .... 114  
 National Manufacturing Co. .... 376  
 Segal Lock & Hdw. Co., Inc. .... 318

**LUGS-SILO AND TANK**  
 Flint & Walling Mfg. Co. .... 364  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 International Steel & Iron Co. .... 304  
 Joseph T. Ryerson & Son. .... 220

**LUMBER-ASBESTOS**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Philip Carey Company. .... 106  
 Eternit, Inc. .... 16-17  
 Johns-Manville, Inc. .... 195

**LUMBER-METAL**  
 Genfire Steel Company. .... 80  
 International Steel & Iron Co. .... 304  
 Macomber Steel Company. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Milwaukee Corrugating Co. .... 374-375  
 Joseph T. Ryerson & Son. .... 220  
 Truscon Steel Co. .... 5-90

**LUMBER-WHOLESALE**  
 Birch Manufacturers. .... 353  
 Bradley, Miller & Company. .... 212  
 E. L. Bruce Co. .... 190  
 Louisiana Red Cypress Bureau. .... 357  
 Paine Lumber Company. .... 93  
 Shevlin, Carpenter & Clarke Co. .... 174-175  
 Trippak Corporation .... 26-27  
 West Coast Lbr. Trade Ex. Bureau. .... 58  
 Weyerhaeuser Forest Products. .... 44

**LUMBER CRAYONS-See Crayons**

**MACHINES-BLUEPRINTING**  
 A. S. Aloe Co. .... 277  
 Keuffel & Esser Company. .... 268  
 Frederick Post Co. .... 264  
 Warren-Knight Company. .... 282

**MACHINES-BOILING**  
 American Saw Mill Machinery Co. .... 255  
 Wm. B. & John E. Bolce. .... 266  
 Combination Woodworking Machine Co. 260  
 Crescent Machine Co. .... 260  
 Esskay Mfg. Co. .... 270  
 Gallmeyer & Livingston Company. .... 260  
 Grand Rapids Hdw. Co. .... 260  
 Hutchinson Mfg. Co., Inc. .... 260  
 Jones Superior Machine Co. .... 260  
 Oliver Machinery Co. .... 260  
 Jos. T. Ryerson & Son. .... 220  
 Safe Tool Mfg. Co. .... 260  
 20th Century Sales Agency. .... 260  
 J. D. Wallace & Co. .... 251-276

**MACHINES-BUILDING WASHING**  
 Neilsen Industries, Inc. .... 260

**MACHINES-CEMENT BRICK**  
 Concrete Equipment Co. .... 281-282  
 Jaeger Machine Co. .... 228-229  
 Miles Manufacturing Co. .... 272  
 R. & L. Concrete Machinery Co. .... 270  
 Zagelmeyer Cast Stone Block Mch. Co. 280

**MACHINES-CLOTHES WASHING**  
 Standard Sanitary Mfg. Co. .... 18-19

**MACHINES-CONCRETE BLOCK**  
 A. S. Aloe Co. .... 277  
 Concrete Equipment Co. .... 281-282  
 Consolidated Concrete Machinery Corp. 28  
 Jaeger Machine Co. .... 228-229  
 Kwik-Mix Concrete Mixer Co. .... 270  
 Miles Manufacturing Company. .... 272  
 R. & L. Concrete Machinery Co. .... 270  
 Zagelmeyer Cast Stone Block Mch. Co. 280

**MACHINES-DISHWASHING**  
 Standard Sanitary Mfg. Co. .... 18-19

**MACHINES-DRAIN TILE**  
 Concrete Equipment Co. .... 281-282  
 Consolidated Concrete Mch. Corp. .... 28  
 W. B. Dunn Mfg. Co. .... 222-223  
 R. & L. Concrete Machinery Co. .... 270

**MACHINES-FENCE POST**  
 Concrete Equipment Co. .... 281-282  
 R. & L. Concrete Machinery Co. .... 270

**MACHINES-FLOOR POLISHING**  
 A. S. Aloe Company. .... 277  
 American Floor Surfacing Machine Co. 28  
 Clarke Sanding Machine Co. .... 28  
 Electric Rotary Machine Co. .... 272  
 S. C. Johnson & Son. .... 272  
 Kent Company. .... 272  
 Lincoln-Schleuter Machinery Co. .... 272  
 Lloyd Floor & Wall Tile Co. .... 364  
 National Sanding Machine Co. .... 28  
 20th Century Sales Agency. .... 260

**MACHINES-FLOOR SURFACING (Electric)**  
 A. S. Aloe Co. .... 277  
 American Floor Surfacing Machine Co. 28  
 Wayvell Chappell & Co. .... 28  
 Clarke Sanding Machine Co. .... 28  
 Electric Rotary Machine Co. .... 272  
 Kent Company. .... 272  
 Lincoln-Schleuter Machinery Co. .... 272  
 Mellish-Hayward Co. .... 28  
 National Sanding Machine Co. .... 28  
 Porter-Cable Machine Co. .... 28  
 Reid-Way Co. .... 28  
 F. L. Rogers & Co. .... 28  
 20th Century Sales Agency. .... 260

**MACHINES-FLOOR SURFACING (Hand)**  
 A. S. Aloe Co. .... 277  
 Clarke Sanding Machine Co. .... 28  
 Porter-Cable Machine Co. .... 28

**MACHINES-HOLLOW TILE (Cement)**  
 A. S. Aloe Co. .... 277  
 Concrete Equipment Co. .... 281-282  
 W. B. Dunn Mfg. Co. .... 222  
 Miles Mfg. Co. .... 272  
 Northfield Iron Co. .... 376  
 Zagelmeyer Cast Stone Block Mch. Co. 280

**MACHINES-MITERING**  
 W. B. & J. E. Bolce. .... 266  
 Combination Woodworking Mch. Co. .... 260  
 DeWalt Products Co. .... 259  
 Esskay Mfg. Co. .... 270  
 Heston & Anderson. .... 273  
 Hutchinson Mfg. Co., Inc. .... 260  
 Jones Superior Machine Co. .... 284  
 Milwaukee Corrugating Co. .... 374-375  
 Safe Tool Mfg. Co. .... 260  
 20th Century Sales Agency. .... 260  
 J. D. Wallace & Co. .... 251-276

**MACHINES-MORTISING**  
 A. S. Aloe Co. .... 277  
 American Sawmill Mch. Co. .... 255  
 W. B. & J. E. Bolce. .... 266  
 E. L. Carter Co., Inc. .... 260  
 Combination Woodworking Mch. Co. .... 260  
 Crescent Machine Co. .... 260  
 DeWalt Products Co. .... 259  
 Esskay Mfg. Co. .... 270  
 Gallmeyer & Livingston Co. .... 260  
 Grand Rapids Hdw. Co. .... 260  
 Hutchinson Mfg. Co., Inc. .... 260  
 Kornau Machine Co., Inc. .... 260  
 Paxon Co. .... 260  
 20th Century Sales Agency. .... 260  
 J. D. Wallace & Co. .... 251-276

**MACHINES—PAINT SPRAYING**  
 Blanks Spray Equipment Co. 265  
 DeVilbiss Co. 242  
 Mellish-Hayward Co. 263  
 F. E. Myers & Bros. Co. 221  
 20th Century Sales Agency 253

**MACHINES—RESAW**  
 American Sawmill Mch. Co. 255  
 DeWalt Products Co. 250  
 Jones Superior Machine Co. 284  
 Oliver Machinery Co. 282

**MACHINES—ROOFING TILE**  
 Concrete Equipment Co. 261-262  
 W. E. Dunn Mfg. Co. 222-223  
 L. Hansen Company 366

**MACHINES—SANDPAPERING**  
 American Floor Surfacing Machine Co. 235  
 American Sawmill Mch. Co. 255  
 Clarke Sanding Machine Co. 20-21  
 Combination Woodworking Mch. Co. 286  
 Electric Rotary Mach. Co. 272  
 Bankay Mfg. Co. 279  
 Hinchings & Co. 295  
 Jones Superior Machine Co. 284  
 Kent Company 270  
 Lincoln-Schleuter Mch. Co. 252  
 National Sanding Machine Co. 283  
 Porter-Cable Machine Co. 247  
 Reid-Way Mfg. Co. 177  
 Safe Tool Mfg. Co. 285  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 251-276

**MACHINES—SASH PULLEY**  
 Grand Rapids Hdw. Co. 355

**MACHINES—SAW FILING**  
 A. S. Aloe Co. 277  
 Henry Diston & Sons, Inc. 199  
 Foley Saw Tool Co. 269  
 Heston & Anderson 273  
 Oliver Machinery Co. 282  
 Scott-Bansbach Machinery Co. 276

**MACHINES—SCRUBBING**  
 American Floor Surfacing Mach. Co. 235  
 Electric Rotary Mach. Co. 272  
 Kent Company 272  
 Lincoln-Schleuter Mch. Co. 252  
 National Sanding Mach. Co. 283

**MACHINES—SEWER PIPE (Cement)**  
 Concrete Equipment Co. 281-282  
 W. E. Dunn Mfg. Co. 222-223  
 Kwik-Mix Concrete Mixer Co. 269  
 R. & L. Concrete Mch. Co. 273

**MACHINES—SHAPING**  
 American Sawmill Mch. Co. 255  
 R. L. Carter Co., Inc. 274  
 Combination Woodworking Mch. Co. 286  
 Crescent Machine Co. 260  
 DeWalt Products Co. 259  
 Gallmeyer & Livingston Co. 280  
 Jones Superior Machine Co. 284  
 Oliver Machinery Co. 282  
 Jos. T. Ryerson & Son 220  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 251-276

**MACHINES—SILO**  
 Hoosier Bldg. Tile & Silo Co. 369  
 Metal Forms Corporation 258

**MACHINES—STUCCO**  
 Jaeger Machine Co. 228-229

**MACHINES—SURFACING (Desk and Table)**  
 A. S. Aloe Company 277  
 American Floor Surfacing Mch. Co. 235  
 American Sawmill Mch. Co. 255  
 Wayvell Chappell & Co. 285  
 Clarke Sanding Machine Co. 20-21  
 Combination Woodworking Mch. Co. 286  
 Crescent Machine Co. 260  
 Jones Superior Machine Co. 284  
 National Sanding Machine Co., Inc. 285

**MACHINES—TACKING**  
 J. B. Crofoot Co. 282

**MACHINES—TAMPING**  
 Concrete Equipment Co. 281-282  
 Consolidated Conc. Mch. Corp. 270  
 Miles Mfg. Co. 272  
 Sybron Company 267

**MACHINES—TERRAZZO RUBBING**  
 American Floor Surfacing Machine Co. 235  
 Electric Rotary Machine Co. 272

**MACHINES—WALL (Cement)**  
 A. S. Aloe Co. 277  
 American Floor Surfacing Mch. Co. 235  
 Consolidated Conc. Mch. Corp. 270  
 Electric Rotary Mach. Co. 272

**MACHINES—WAXING**  
 A. S. Aloe Co. 277  
 American Floor Surfacing Mch. Co. 235  
 Clarke Sanding Machine Co. 20-21  
 Electric Rotary Machine Co. 272  
 S. C. Johnson & Son 173  
 Kent Co. 270  
 Lincoln-Schleuter Mch. Co. 252  
 National Sanding Machine Co. 283

**MACHINERY—BANDSAW**  
 American Sawmill Machinery Co. 255  
 W. B. & J. E. Boice 266  
 Combination Woodworking Mach. Co. 286  
 Crescent Machine Co. 260  
 Gallmeyer & Livingston Co. 280  
 Heston & Anderson 273  
 Hutchinson Mfg. Co., Inc. 281  
 Huther Bros. Saw Mfg. Co. 274  
 Jones Superior Machine Co. 284  
 Oliver Machinery Co. 282  
 Parks Woodworking Mch. Co. 278

Porter-Cable Mch. Co. 247  
 Jos. T. Ryerson & Son 220  
 Scott-Bansbach Mch. Co. 276  
 Sidney Machine Tool Co. 276  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 251-276

**MACHINERY—COAL HANDLING**  
 Chain Belt Company 2

**MACHINERY—CONVEYING**  
 Chain Belt Co. 2  
 Concrete Equipment Co. 281-282  
 Miles Mfg. Co. 272  
 Northfield Iron Co. 364

**MACHINERY—DRILLING**  
 W. B. & J. E. Boice 266  
 Jones Superior Mch. Co. 284  
 National Sanding Mch. Co. 283  
 Jos. T. Ryerson & Son 220  
 Scott-Bansbach Mch. Co. 276  
 Sybron Company 267  
 J. D. Wallace & Co. 251-276

**MACHINERY—ELEVATING**  
 Chain Belt Co. 2  
 Kimball Brothers Co. 302  
 Sedgwick Machine Works 289  
 Sidney Elevator Mfg. Co. 286  
 Stimmel Winch & Mch. Works 284

**MACHINERY—SAWMILL**  
 A. S. Aloe Co. 277  
 American Sawmill Mch. Co. 255  
 Hutchinson Mfg. Co., Inc. 281  
 Ralph M. Kennedy 282  
 Porter-Cable Machine Co. 247  
 Sidney Machine Tool Co. 276  
 J. D. Wallace & Co. 251-276

**MACHINERY—TRANSMISSION**  
 Chain Belt Co. 2

**MACHINERY—WOODWORKING (Foot and Hand Power)**  
 A. S. Aloe Co. 277  
 Crescent Machine Co. 260  
 DeWalt Products Co. 259  
 Heston & Anderson 273  
 Hutchinson Mfg. Co., Inc. 281  
 Jones Superior Mach. Co. 284  
 Parks Woodworking Mch. Co. 278

**MACHINERY—WOODWORKING—Power Driven**  
 A. S. Aloe Co. 277  
 American Sawmill Mch. Co. 255  
 Wm. E. & John E. Boice 266  
 R. L. Carter Co., Inc. 274  
 Clarke Sanding Machine Co. 20-21  
 Combination Woodworking Mach. Co. 286  
 Crescent Machine Co. 260  
 DeWalt Products Co. 259  
 Essaky Mfg. Co. 279  
 Gallmeyer & Livingston Co. 280  
 Heston & Anderson 273  
 Hutchinson Mfg. Co. 281  
 International Stamping Co. 284  
 Jones Superior Machine Co. 282  
 Ralph M. Kennedy 282  
 Knickerbocker Co. 277  
 Leach Company 267  
 Master Woodworker Mfg. Co. 287  
 Oliver Machinery Co. 282  
 D. W. Onan & Sons 280  
 Parks Woodworking Mach. Co. 278  
 Paxson Co. 276  
 Porter-Cable Mach. Co. 247  
 Safe Tool Mfg. Co. 285  
 Scott-Bansbach Mch. Co. 276  
 Sidney Machine Tool Co. 276  
 Sybron Corp. 267  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 251-276

**MACHINERY—WOODWORKING—Second Hand**  
 Hutchinson Mfg. Co., Inc. 281  
 Jones Superior Machine Co. 284  
 Oliver Machinery Co. 282  
 Sidney Machine Tool Co. 276  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 251-276

**MACHINERY—WOODWORKING—Universal**  
 Clarke Sanding Mach. Co. 20-21  
 Crescent Machine Co. 260  
 DeWalt Products Co. 259  
 Essaky Mfg. Co. 279  
 Hutchinson Mfg. Co. 281  
 Jones Superior Machine Co. 284  
 Leach Company 267  
 Master Woodworker Mfg. Co. 287  
 Parks Woodworking Machine Co. 278  
 Safe Tool Mfg. Co. 285  
 Scott-Bansbach Mch. Co. 276  
 State Mfg. & Eng. Co. 264  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 251-276

**MAGNESITE COLOES—See Colors**  
**MAIL BOXES—Built-In—See Boxes**  
**MAIL CHUTES—See Chutes**  
**MANHOLE COVERS—See Covers**

**MANTELS—BRICK**  
 Colonial Fireplace Company 288  
 Pioneer Fireplace & Sup. Co. 305

**MANTELS—CONCRETE**  
 Pioneer Fireplace & Sup. Co. 305  
 Readybuilt Products Co. 357

**MANTELS—MARBLE**  
 Colonial Fireplace Company 288  
 Lloyd Floor & Wall Tile Co. 364  
 Pioneer Fireplace & Sup. Co. 305

**MANTELS—SLATE**  
 Lloyd Floor & Wall Tile Co. 364  
 Pioneer Fireplace & Sup. Co. 305  
 Slatington Slate Co. 352  
 Slatington Bangor Slate Synd., Inc. 368  
 Structural Slate Co. 358  
 Vendor Slate Co. 85

**MANTELS—TILE**  
 Colonial Fireplace Co. 288  
 Lloyd Floor & Wall Tile Co. 364  
 Pioneer Fireplace & Sup. Co. 305

**MANTELS—WOOD**  
 Brecher Co. 367  
 Colonial Fireplaces Co. 288  
 Concealed Bed Corp. 297  
 Curtis Cos. 61  
 Paine Lumber Co. 93  
 Pioneer Fireplace & Supply Co. 305  
 Premier Standardized Woodwork 294

**MANUAL TRAINING BENCHES—See Benches**

**MARBLE**  
 International Steel & Iron Co. 304

**MARBLE—VITREOUS**  
 Marietta Mfg. Co. 304

**MARBLE CEILINGS—See Ceilings**

**MARQUEES**  
 Edwards Mfg. Co. 359  
 International Steel & Iron Co. 304  
 Kawneer Company 65  
 Geo. L. Mesker & Co. 315  
 Fred J. Meyers Mfg. Co. 307  
 Milwaukee Corrugating Co. 374-375  
 Wheeling Metal & Mfg. Co. 316  
 Willis Mfg. Co. 109

**MASONS CEMENT—See Cement**  
**MASONS HORSES—See Trestles**  
**MASONS LEVELS—See Levels**  
**MASONRY NAILS—See Nails**  
**MAST HOISTS—See Derricks**  
**MEASURING CLAMPS—See Clamps**  
**MEDICINE CABINETS—See Cabinets, Bathroom**

**METAL—EXPANDED**  
 Bates Expanded Steel Truss Co. 358  
 Edwards Mfg. Co. 359  
 Genfire Steel Co. 80  
 International Steel & Iron Co. 304  
 Kalman Steel Co. 70  
 Macomber Steel Co. 310  
 Geo. L. Mesker & Co. 315  
 Milwaukee Corrugating Co. 374-375  
 North Western Expanded Metal Co. 372  
 Jos. T. Ryerson & Son 220  
 Truseon Steel Co. 5-90  
 Wheeling Metal & Mfg. Co. 316  
 Willis Mfg. Co. 109

**METAL—FABRICATED**  
 Flat Metal Mfg. Co. 207  
 International Steel & Iron Co. 304  
 Macomber Steel Co. 310  
 Mellish-Hayward Co. 283  
 Geo. L. Mesker & Co. 315  
 Truseon Steel Co. 5-90

**METAL CEILINGS—See Ceilings**  
**METAL COLUMNS—See Columns**  
**METAL CORNERS—See Corners**  
**METAL CURTAINS—See Curtains**  
**METAL LATH—See Lath**  
**METAL LOCKERS—See Lockers**  
**METAL LUMBER—See Lumber**

**MILLWORK—STEEL**  
 Majestic Steel Cabinet Co. 369  
 Mellish-Hayward Co. 283

**MILLWORK—WHOLESALE**  
 Curtis Cos. 61  
 Paine Lumber Co. 93  
 Premier Standardized Woodwork 294  
 Shevlin, Carpenter & Clarke Co. 174-175  
 Trippak Corporation 20-27  
 West Coast Lumber Trade Extension Bureau 58

**MINERAL WOOL—See Wool**  
**MIRROR FIXTURES—See Fixtures**  
**MITER BOXES—See Boxes**  
**MITER CLAMPS—See Clamps**  
**MITER CUTTERS—See Cutters**  
**MITERING MACHINES—See Machines**

**MITERS—Copper**  
 Edwards Mfg. Co. 359  
 Milwaukee Corrugating Co. 374-375  
 Wheeling Metal & Mfg. Co. 316

**MIXERS—CONCRETE (Batch)**  
 A. S. Aloe Co. 277  
 American Cement Machine Co. 275  
 Chain Belt Co. 2  
 Concrete Equipment Co. 281-282  
 Consolidated Concrete Mch. Corp. 270  
 Construction Machy. Co. 237  
 W. E. Dunn Mfg. Co. 222-223  
 Gray Iron Foundry Co. 284  
 Jaeger Machine Co. 228-229  
 Knickerbocker Co. 277  
 Koehring Co. 262  
 Kwik-Mix Concrete Mixer Co. 269  
 Lansing Company 256  
 Leach Company 267  
 Miles Mfg. Co. 272  
 Northfield Iron Co. 364  
 R. & L. Concrete Machinery Co. 273  
 Ransome Concrete Machy. Co. 249  
 Republic Iron Works 278  
 T. L. Smith Co. 232-233

**MIXERS—CONCRETE (Continuous)**

Chain Belt Co. 2  
Lansing Company 256  
Leach Company 267  
Miles Mfg. Co. 272  
Northfield Iron Co. 364

**MIXERS—GROUT (Pneumatic)**

Knickerbocker Co. 277  
Ransome Concrete Machy. Co. 249

**MIXERS—MORTAR AND PLASTER**

A. S. Aloe Co. 277  
Chain Belt Co. 2  
Concrete Equipment Co. 281-282  
Construction Machinery Co. 237  
W. E. Dunn Mfg. Co. 222-223  
Jaeger Machine Co. 228-229  
Knickerbocker Co. 277  
Kwik-Mix Concrete Mixer Co. 269  
Lansing Company 256  
Leach Company 267  
Northfield Iron Co. 364  
Ransome Concrete Machy. Co. 249  
T. L. Smith Co. 232-233

**MIXING BOXES—See Boxes**

**MORTAR—HOLLOW TILE**

Hoosier Bldg. Tile & Silo Co. 369  
Louisville Cement Co. 116

**MORTAR BOARDS—See Boards**

**MORTAR BOXES (STEEL)—See Boxes**

**MORTAR COLORS—See Colors**

**MORTAR PLASTER MIXERS—See Mixers**

**MORTISERS—DOOR LOCK**

A. S. Aloe Co. 277  
William B. & John E. Bolce. 266  
E. L. Carter Co., Inc. 274  
Colgan Machy. & Supply Co. 288  
Essaky Mfg. Co. 279  
Hutchinson Mfg. Co. 281  
F. L. Rogers & Co. 285  
Segal Lock & Hdwe. Co., Inc. 318  
20th Century Sales Agency. 253

**MORTISE GAUGES—See Gauges**

**MORTISING MACHINES—See Machines**

**MOTORS—ELECTRIC**

A. S. Aloe Co. 277  
William B. & John E. Bolce. 266  
Century Electric Co. 271  
Crescent Machine Co. 260  
Duro Co. 63  
Fairbanks, Morse & Co. 107  
General Electric Co. 9-10-11-12-13-14-15  
Ralph M. Kennedy. 282  
Joseph T. Ryerson & Son. 220  
Sasgen Derriek Co. 284  
20th Century Sales Agency. 253

**MOTOR TRUCKS—See Trucks**

**MOULDINGS—BASE (Metal)**

Edwards Mfg. Co. 359  
Genfre Steel Co. 80  
Kawneer Co. 65  
Lloyd Floor & Wall Tile Co. 364  
Milwaukee Corrugating Co. 374-375  
Joseph T. Ryerson & Son. 220  
Truscon Steel Co. 5-90  
Wheeling Corrugating Co. 104  
Willis Mfg. Co. 109

**MOULDINGS—BASE (Wood)**

Bradley, Miller & Co. 212  
Curtis Co. 61  
W. J. Dennis & Co. 369  
Paine Lumber Co. 93  
Shevlin, Carpenter & Clarke Co. 174-175  
Trimpak Corp. 26-27  
West Coast Lbr. Trade Extension Bureau 58  
Weyerhaeuser Forest Products. 44

**MOULDING—METAL**

Edwards Mfg. Co. 359  
Genfre Steel Co. 80  
Gibbs Boardtile Corp. 30  
Kalman Steel Co. 70  
Kawneer Company 65  
Milwaukee Corrugating Co. 374-375  
Joseph T. Ryerson & Son. 220  
Truscon Steel Co. 5-90  
Wheeling Corrugating Co. 104  
Zouri Drawa Metals Co. 46

**MOULDINGS—PICTURE**

Curtis Companies, Inc. 61  
Genfre Steel Co. 80  
Gibbs Boardtile Corp. 30  
Milwaukee Corrugating Co. 374-375  
Paine Lumber Co. 93  
Joseph T. Ryerson & Son. 220  
Trimpak Corporation 26-27  
Truscon Steel Co. 5-90  
Wheeling Corrugating Co. 104  
Willis Mfg. Co. 109

**MOULDINGS—TILE**

Gibbs Boardtile Corp. 30

**MOULDINGS—WOOD**

Arkansas Oak Flooring Co. 296  
Bradley, Miller & Co. 212  
Curtis Co. 61  
Gibbs Boardtile Corp. 30  
Ornamental Products Co. 364  
Paine Lumber Co. 93  
Shevlin, Carpenter & Clarke Co. 174-175  
Trimpak Corporation 26-27  
West Coast Lumber Trade Extension Bureau 58  
Weyerhaeuser Forest Products. 44

**MOULDING CUTTERS—See Cutters**

**MOULDING KNIVES—See Knives**

**MOVABLE STAIRS—See Stairs**

**MOVING PICTURE BOOTHS—See Booths**

**NAILS—CLAMP**

American Steel & Wire Co. 292  
Clamp Nail Co. 366  
Superior Sheet Steel Co. 49  
Wheeling Corrugating Co. 104

**NAILS—CUT**

Reading Iron Co. 268

**NAILS—FURRING**

National Steel Fabric Co. 28-29  
Superior Sheet Steel Co. 49  
Truscon Steel Co. 5-90  
Wheeling Corrugating Co. 104

**NAILS—GALVANIZED**

American Steel & Wire Co. 292  
Beckman-Dawson Roofing Co. 92  
Edwards Mfg. Co. 359  
Milwaukee Corrugating Co. 374-375  
Joseph T. Ryerson & Son. 220  
Superior Sheet Steel Co. 49  
Wheeling Corrugating Co. 104  
Wheeling Metal & Mfg. Co. 316

**NAILS—JAMB**

Strand Mfg. Co. 365  
Superior Sheet Steel Co. 49  
Wheeling Corrugating Co. 104

**NAILS—MASONRY**

American Steel & Wire Co. 292  
Milwaukee Corrugating Co. 374-375  
Superior Sheet Steel Co. 49  
Wheeling Corrugating Co. 104

**NAILS—LEAD HEADED**

Deniston Co. 363

**NAILS—ROOFING**

American Steel & Wire Co. 292  
Beckman-Dawson Roofing Co. 92  
Deniston Co. 363  
Edwards Mfg. Co. 359  
Milwaukee Corrugating Co. 374-375  
Ruberoid Co. 101  
Joseph T. Ryerson & Son. 220  
Superior Sheet Steel Co. 49  
Weatherbest Stained Shingle Co., Inc. 293  
Wheeling Corrugating Co. 104  
Wheeling Metal & Mfg. Co. 316

**NAILS—ZINC (See Nails, Roofing)**

**NAILS SETS—See Sets**

**NETTING—WIRE**

American Steel & Wire Co. 292  
Gilbert & Bennett Mfg. Co. 77  
Superior Sheet Steel Co. 49

**NEWELLS—METAL**

Geo. L. Meaker & Co. 315  
Fred J. Meyers Mfg. Co. 367

**NUMBERS—HOUSE (See Letters and Numbers)**

**OAKUM**

Hardin-Lavin Company 89  
B. Karol & Sons Co. 308  
Standard Sanitary Mfg. Co. 18-19  
Stanley Plumbing & Supply Co. 358

**OIL BURNERS—See Heating Systems**

**OPENERS—DOOR (Electric)**

Overhead Door Corp. 75  
Richards-Wilcox Mfg. Co. 6-7  
Segal Lock & Hdwe. Co., Inc. 318

**OPENERS—GARAGE DOOR**

Overhead Door Corp. 75  
Richards-Wilcox Mfg. Co. 6-7

**OPERATORS—SASH**

William Bayley Co. 314  
Casement Hardware Co. 300  
Genfre Steel Co. 80  
Hitchings & Co. 295  
International Steel & Iron Co. 304  
Kawneer Co. 65  
David Lupton's Sons Co. 76  
Macomber Steel Co. 510  
Richards-Wilcox Mfg. Co. 6-7  
Joseph T. Ryerson & Son. 220  
Truscon Steel Co. 5-90

**ORNAMENTS—ROOF (Metal)**

Edwards Mfg. Co. 359  
Milwaukee Corrugating Co. 374-375

**ORNAMENTS—SHEET METAL**

Edwards Mfg. Co. 359  
Milwaukee Corrugating Co. 374-375  
Trico, Inc. 214

**ORNAMENTS—ZINC**

Edwards Mfg. Co. 359  
Milwaukee Corrugating Co. 374-375

**ORNAMENTAL BRACKETS—See Brackets**

**ORNAMENTAL MOLDS—See Forms and Molds**

**OUTLETS—EAVES TROUGH**

Edwards Mfg. Co. 359  
David Lupton's Sons Co. 76  
Milwaukee Corrugating Co. 374-375  
Superior Sheet Steel Co. 49  
Wheeling Corrugating Co. 104  
Wheeling Metal & Mfg. Co. 316  
Willis Mfg. Co. 109

**OUTLETS—ELECTRIC**

General Electric Co. 9-10-11-12-13-14-15  
Hart & Hegeman Mfg. Co. 42  
Pass & Seymour, Inc. 366

**OUTLET BOXES—See Boxes**

**OVEN HEAT REGULATORS—See Regulators**

**OVERHEAD CARRIERS—See Carriers**

**OVERHEAD DOORS—See Doors**

**PACKAGE RECEIVERS—See Receivers**

**PAINTS—ASPHALT**

Barber Asphalt Co. 113  
Beckman-Dawson Roofing Co. 92  
Phillip Carey Company. 106  
Ruberoid Co. 101  
Sherwin-Williams Co. 213

Standard Varnish Works. 91  
Toch Brothers. 91  
Truscon Laboratories. 72  
Truscon Steel Co. 5-90

**PAINTS—BARN**

Samuel Cabot, Inc. 216  
Clinton Metallic Paint Co. 200  
Edwards Mfg. Co. 359  
Hoosier Bldg. Tile & Silo Co. 369  
Sherwin-Williams Co. 213  
Toch Brothers. 91  
Truscon Laboratories. 72  
Truscon Steel Co. 5-90

**PAINTS—CEMENT & STUCCO**

Anti-Hydro Waterproofing Co. 296-310  
Beckman-Dawson Roofing Co. 92  
Samuel Cabot, Inc. 216  
Clinton Metallic Paint Co. 200  
Hoosier Bldg. Tile & Silo Co. 369  
Lloyd Floor & Wall Tile Co. 364  
Reardon Co. 211  
Ruberoid Co. 101  
Sherwin-Williams Co. 213  
Toch Brothers. 91  
Truscon Laboratories. 72  
Truscon Steel Co. 5-90

**PAINTS—HOUSE**

Samuel Cabot, Inc. 216  
Edwards Mfg. Co. 359  
Hoosier Bldg. Tile & Silo Co. 369  
Sherwin-Williams Co. 213  
Toch Brothers. 91  
Truscon Laboratories. 72  
Truscon Steel Co. 5-90

**PAINTS—METAL**

Barber Asphalt Co. 113  
Beckman-Dawson Roofing Co. 92  
Samuel Cabot, Inc. 216  
Clinton Metallic Paint Co. 200  
Hoosier Bldg. Tile & Silo Co. 369  
S. C. Johnson & Son. 173  
Ruberoid Co. 101  
Sherwin-Williams Co. 213  
Standard Varnish Works. 91  
Toch Brothers. 91  
Truscon Laboratories. 72  
Truscon Steel Co. 5-90

**PAINTS—WATER**

Reardon Co. 211  
Sherwin-Williams Co. 213  
Standard Varnish Works. 91  
Toch Brothers. 91  
Truscon Laboratories. 72  
Truscon Steel Co. 5-90

**PAINTS—WATERPROOFING**

Anti-Hydro Waterproofing Co. 296-310  
Barber Asphalt Co. 113  
Beckman-Dawson Roofing Co. 92  
Donley Bros. Co. 21  
Reardon Co. 211  
Ruberoid Co. 101  
Sherwin-Williams Co. 213  
Toch Brothers. 91  
Truscon Laboratories. 72  
Truscon Steel Co. 5-90

**PAINT BRUSHES—See Brushes**

**PAINT FILLERS—See Fillers**

**PAINT REMOVERS—See Removers**

**PAINT SPRAYING MACHINES—See Machines**

**PANELS—PLYWOOD**

Gibbs Boardtile Corp. 30  
Paine Lumber Co. 93  
Wheeler-Osgood Co. 35-36

**PANEL BOARDS—Electric**

Frank Adam Electric Co. 361

**PANIC BOLTS—See Bolts**

**PAPER—ALOXITE**

Carborundum Co. 270

**PAPER—ASBESTOS**

Asbestos Shingle, Slate & Sheathing Co. 99  
Phillip Carey Co. 106  
Hardin-Lavin Co. 89  
Johns-Manville, Inc. 195  
B. Karol & Sons Co. 308  
Milwaukee Corrugating Co. 374-375  
Standard Sanitary Mfg. Co. 18-19  
Stanley Plumbing & Supply Co. 358

**PAPER—BLUEPRINT**

A. S. Aloe Co. 277  
Charles Bruning Co., Inc. 266  
W. & L. E. Gurley. 266  
Kenfell & Esser Co. 266  
Frederick Post Co. 264  
Warren-Knight Co. 262  
David White Co. 261

**PAPER—DRAWING**

A. S. Aloe Co. 277  
W. & L. E. Gurley. 266  
Kenfell & Esser Co. 266  
Frederick Post Co. 264  
Warren-Knight Co. 262  
David White Co. 261

**PAPER—EMERY**

Carborundum Co. 270  
Manning Abrasive Co., Inc. 270  
National Sanding Machine Co. 268  
Safe Tool Mfg. Co. 265

**PAPER—FLINT**

Carborundum Co. 270

**PAPER—GARNET**

American Floor Surfacing Machine Co. 263  
Carborundum Co. 270  
Electric Rotary Machine Co. 267  
National Sanding Machine Co. 268  
Safe Tool Mfg. Co. 265



1, 1922

**PAPER-INSULATING**  
 Barber Asphalt Co. 113  
 Beckman-Dawson Roofing Co. 92  
 Samuel Cabot, Inc. 215  
 Philip Carey Co. 106  
 Johns-Manville, Inc. 195  
 Mason Fibre Company 47  
 Huberoid Co. 101  
 Mealkraft Co. 306

**PAPER-ROOFING AND SHEATHING**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Barber Asphalt Co. 113  
 Beckman-Dawson Roofing Co. 92  
 Philip Carey Co. 106  
 Johns-Manville, Inc. 195  
 Paine Lumber Co. 93  
 Huberoid Co. 101  
 Mealkraft Co. 306

**PAPER-SAND**  
 American Floor Surfacing Machine Co. 235  
 Carborundum Co. 279  
 Clarke Sanding Machine Co. 20-21  
 Combination Woodworking Machine Co. 286  
 Electric Rotary Machine Co. 272  
 Lincoln-Schleuter Machy. Co. 252  
 Manning Abrasive Co., Inc. 275  
 National Sanding Machine Co. 283  
 Parks Woodworking Machine Co. 273  
 Porter-Cable Machine Co. 247  
 Safe Tool Mfg. Co. 285

**PAPER-WALL**  
 Columbia Union Oil Cloth Co. 310  
 Luperusta-Walton Co. 216

**PARTITIONS-ASBESTOS WOOD**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Johns-Manville, Inc. 195  
 National Sheet Metal Roofing Co. 364

**PARTITIONS-EXPANDED METAL**  
 Kalmann Steel Co. 70  
 Milwaukee Corrugating Co. 374-375  
 Jos. T. Ryerson & Son. 220  
 Truscon Steel Co. 5-90

**PARTITIONS-HOLLOW TILE**  
 Hoosier Bldg. Tile & Silo Co. 369  
 National Fireproofing Co. 74

**PARTITIONS-METAL**  
 Cincinnati Iron Fence Co. 366  
 Flat Metal Mfg. Co. 297  
 David Lupton's Sons Co. 76  
 Milwaukee Corrugating Co. 374-375  
 Trico, Inc. 214  
 Truscon Steel Co. 5-90

**PARTITIONS-METAL LATH**  
 Edwards Mfg. Co. 359  
 Genfire Steel Co. 80  
 Kalmann Steel Co. 70  
 Macomber Steel Co. 310  
 Milwaukee Corrugating Co. 374-375  
 North Western Expanded Metal Co. 372  
 Truscon Steel Co. 5-90

**PARTITIONS-ROLLING AND FOLDING**  
 Edwards Mfg. Co. 359  
 Overhead Door Corp. 75  
 Richards-Wilcox Mfg. Co. 6-7

**PARTITIONS-SLATE**  
 Knickerbocker Slate Corp. 290  
 Lloyd Floor & Wall Tile Co. 364  
 Marietta Mfg. Co. 304  
 Slatington Slate Co. 352  
 Slatington-Bangor Syndicate, Inc. 306  
 Structural Slate Co. 358

**PARTITIONS-WIRE**  
 American Chain Co., Inc. 105  
 Cincinnati Iron Fence Co. 366  
 International Steel & Iron Co. 304  
 Fred J. Meyers Mfg. Co. 367  
 National Steel Fabric Co. 28-29

**PARTITIONS-WOOD**  
 Mason Fibre Co. 47  
 West Coast Lumber Trade Extension Bureau 58  
 Weyerhaeuser Forest Products 44

**PARTITION HANGERS-See Hangers**  
**PARTITION TILE-See Tile**  
**PASTE-DRAWING BOARD**  
 W. & L. E. Gurley 266  
 Frederick Post Co. 264

**PASTE-ZINC PAINT**  
 Sherwin-Williams Co. 213  
 Toch Brothers 91  
 Truscon Laboratories 72

**PAVERS-CONCRETE**  
 A. S. Aloe Co. 277  
 Chain Cement Machine Co., Inc. 275  
 Chain Belt Co. 2  
 Construction Machinery Co. 237  
 Jaeger Machine Co. 228-229  
 Keohring Co. 255  
 Leach Company 267  
 Ransome Concrete Machinery Co. 243  
 T. L. Smith Co. 232-239

**PAVING-TILE**  
 Lloyd Floor & Wall Tile Co. 364

**PEBBLE DASH MACHINES-See Machines**  
**PENCILS-DRAWING-See Instruments, Drawing**  
**PERGOLAS**  
 Edwards Mfg. Co. 350

**PICTURE MOULDINGS-See Mouldings**  
**PIPE-CHIMNEY (VITRIFIED CLAY)**  
 Clay Products Ass'n. 294  
 Common Brick Manufacturers Ass'n. 79  
 Hoosier Bldg. Tile & Silo Co. 369

**PIPE-CONDUCTOR (COPPER)**  
 Chase Metal Works 112  
 Edwards Mfg. Co. 359  
 International Steel & Iron Co. 304  
 David Lupton's Sons Co. 76  
 Milwaukee Corrugating Co. 374-375  
 Wheeling Corrugating Co. 104  
 Wheeling Metal & Mfg. Co. 316  
 Willis Mfg. Co. 109

**PIPE-CONDUCTOR (SHEET METAL)**  
 Edwards Mfg. Co. 359  
 International Steel & Iron Co. 304  
 David Lupton's Sons Co. 76  
 Mellish-Hayward Co. 283  
 Milwaukee Corrugating Co. 374-375  
 Jos. T. Ryerson & Son. 220  
 Wheeling Corrugating Co. 104  
 Wheeling Metal & Mfg. Co. 316  
 Willis Mfg. Co. 109

**PIPE-CONDUCTOR (ZINC)**  
 Edwards Mfg. Co. 359  
 David Lupton's Sons Co. 76  
 Milwaukee Corrugating Co. 374-375  
 Wheeling Corrugating Co. 104

**PIPE-CULVERT**  
 Clay Products Ass'n. 294  
 Common Brick Mfrs. Ass'n. 79  
 Hoosier Bldg. Tile & Silo Co. 369  
 Northfield Iron Co. 364  
 Wheeling Corrugating Co. 104

**PIPE-FLUE**  
 Jos. T. Ryerson & Son. 220

**PIPE-FURNACE**  
 American Radiator Co. 192-193  
 Hardin-Lavin Co. 89  
 Hess Warming & Ventilating Co. 26-514  
 Johnson Plumbing Supply Co. 352  
 B. Karol & Sons Co. 308  
 Majestic Co. 56  
 Milwaukee Corrugating Co. 374-375  
 Stanley Plumbing & Supply Co. 358  
 Wheeling Metal & Mfg. Co. 316

**PIPE-PLUMBING-BRASS AND COPPER**  
 Chase Metal Works 112  
 Crane Co. 52  
 Hardin-Lavin Co. 89  
 Johnson Plumbing Supply Co. 352  
 B. Karol & Sons Co. 308  
 Stanley Plumbing & Supply Co. 358

**PIPE-SEWER**  
 Clay Products Ass'n. 294  
 Crane Company 52  
 Hardin-Lavin Co. 89  
 Hoosier Bldg. Tile & Silo Co. 369  
 National Fireproofing Co. 74  
 Stanley Plumbing & Supply Co. 358

**PIPE-STOVE**  
 American Stove Co. 46  
 Edwards Mfg. Co. 359  
 Hardin-Lavin Co. 89  
 Milwaukee Corrugating Co. 374-375  
 Stanley Plumbing & Supply Co. 358  
 Wheeling Corrugating Co. 104

**PIPE-WELL (VITRIFIED CLAY)**  
 Clay Products Ass'n. 294  
 Hoosier Bldg. Tile & Silo Co. 369

**PIPE COLUMNS-See Columns**  
**PIPE COVERINGS-See Coverings, Boiler and Pipe**  
**PIPE FITTINGS-See Fittings**  
**PIPE HANGERS-See Hangers**  
**PIPE RAILINGS-See Railings**  
**PIPELESS FURNACES-See Heating Systems**  
**PIVOT HINGES-See Hinges**  
**PLANE IRONS-See Irons**  
**PLANERS-WOOD (POWER)**  
 American Sawmill Machinery Co. 255  
 W. B. & J. E. Boice 266  
 Clarke Sanding Machine Co. 20-21  
 Crescent Machine Co. 260  
 Heston & Anderson 273  
 Hutchinson Mfg. Co., Inc. 281  
 Jones Superior Machine Co. 284  
 Ralph M. Kennedy 282  
 Oliver Machinery Co. 282  
 Porter-Cable Machine Co. 247  
 Scott-Bansbach Machinery Co. 276  
 J. D. Wallace & Co. 251-276

**PLANE KNIVES-See Knives**  
**PLASTER-ASBESTOS**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Philip Carey Co. 106  
 Johns-Manville, Inc. 195

**PLASTER-GYPSUM**  
 U. S. Gypsum Co. 67  
 C. K. Williams & Co. 360

**PLASTER-INTERIOR**  
 U. S. Gypsum Co. 67

**PLASTER-WALL**  
 U. S. Gypsum Co. 67

**PLASTER BOARDS-See Boards**  
**PLASTER CEMENT-See Cement**  
**PLATE GLASS-See Glass**  
**PLATES-CEILING**  
 American Radiator Co. 192-193  
 Crane Company 52  
 Edwards Mfg. Co. 359  
 Johnson Plumbing Supply Co. 352  
 Milwaukee Corrugating Co. 374-375  
 National Radiator Co. 86  
 Jos. T. Ryerson & Son. 220  
 U. S. Radiator Corp. 40  
 Wheeling Metal & Mfg. Co. 316

**PLATES-DOOR-See Hardware, Door**

**PLATES-FLOOR (STEEL)**  
 Crane Company 52  
 Heltzel Steel Form & Iron Co. 286  
 International Steel & Iron Co. 304  
 Fred J. Meyers Mfg. Co. 367  
 Morton Mfg. Co. 59  
 National Radiator Co. 86  
 Joseph T. Ryerson & Son. 220  
 U. S. Radiator Corp. 40

**PLATES-STACK (STEEL)**  
 Heltzel Steel Form & Iron Co. 286  
 International Steel & Iron Co. 304

**PLATES-SWITCH**  
 General Electric Co. 9-10-11-12-13-14-15  
 Hart & Hegeman Mfg. Co. 42  
 Paramount Electric Co. 359  
 Segal Lock & Hdw. Co., Inc. 318

**PLATES-TANK (STEEL)**  
 Heltzel Steel Form & Iron Co. 286  
 International Steel & Iron Co. 304  
 Joseph T. Ryerson & Son. 220

**PLATES-WALL**  
 Crane Company 52  
 National Radiator Co. 86  
 Pass & Seymour, Inc. 366

**PLUGS-FUSE**  
 General Electric Co. 9-10-11-12-13-14-15  
 Hart & Hegeman Mfg. Co. 42  
 Johnson Plumbing Supply Co. 352

**PLUGS-SCREW**  
 Crane Company 52  
 General Electric Co. 9-10-11-12-13-14-15  
 Hart & Hegeman Mfg. Co. 42

**PLUGS-WALL**  
 Donley Bros. Co. 298  
 Hart & Hegeman Mfg. Co. 42  
 Kalmann Steel Co. 70  
 F. D. Kees Mfg. Co. 356  
 Kliegl Bros. Universal Electric Stage Lighting Company 306

**PLUMBING FIXTURES-See Fixtures**  
**PLUMBING PIPE-See Pipe**  
**PLUMBS**  
 Henry Diston & Sons 190  
 Geier & Bluhm, Inc. 285  
 Keuffel & Esser Co. 286  
 Stanley Works 87  
 L. S. Starrett Co. 271

**PLYWOOD PANELS-See Panels**  
**POLISHING BRUSHES-See Brushes**  
**PORCH BASES-See Bases**  
**PORCH ENCLOSURES-See Enclosures**  
**PORCH RAILS-See Millwork, Wholesale**  
**PORCH SCREENS-See Enclosures**  
 Porch  
**PORCH SPINDLES-See Millwork, Wholesale**  
**PORTABLE BUILDINGS-See Buildings**  
**PORTABLE CONVEYORS-See Conveyors**  
**PORTABLE ELEVATORS-See Elevators**  
**PORTABLE SAWS (POWER)-See Saws**  
**PORTLAND CEMENT-See Cement**  
**POSTS-CLOTHES**  
 Banks Steel Post Co. 368  
 Cincinnati Iron Fence Co. 366  
 Donley Bros. 298

**POSTS-FENCE**  
 American Chain Company 105  
 American Steel & Wire Co. 292  
 Cincinnati Iron Fence Co. 366  
 Concrete Equipment Co. 281-282  
 Superior Sheet Steel Co. 49  
 West Coast Lbr. Trade Extension Bureau 58

**POST BASES-See Bases**  
**POST CAPS-See Caps**  
**POST MACHINES-CEMENT (See Machines)**  
**PRESERVATIVES-WOOD**  
 Philip Carey Co. 106  
 Genfire Steel Co. 80  
 Sherwin-Williams Co. 213  
 Standard Varnish Works 91  
 Toch Brothers 91  
 Truscon Laboratories 72  
 Truscon Steel Co. 5-90

**PRISM GLASS-See Glass**  
**PRISM LIGHTS-See Lights**  
**PROTECTORS-EDGE**  
 Genfire Steel Co. 80  
 Gibbs Boardtile Corp. 30  
 Truscon Steel Company 5-90

**PROTRACTORS-See Instruments, Drawing**  
**PULLERS-STUMP**  
 Stimmel Winch & Machine Works 284

**PULLEYS-SASH**  
 Grand Rapids Hdw. Co. 355  
 Stanley Works 87  
 Velgrath Metal Parts, Inc. 369

**PUMPS-CONTRACTORS**  
 Chain Belt Co. 2  
 Construction Machinery Co. 237  
 Jaeger Machine Co. 228-229  
 Mast, Foss & Co. 367  
 F. E. Myers & Bros. Co. 221  
 Novo Engine Co. 245

**PUMPS-DRAIN**  
 Duro Company 63  
 Fairbanks, Morse Co. 107  
 Hardin-Lavin Co. 89  
 Johnson Plumbing Supply Co. 352  
 Kwik-Mix Concrete Mixer Co. 260  
 Standard Sanitary Mfg. Co. 18-19  
 Stanley Plumbing & Supply Co. 358

**PUMPS—ELECTRIC**  
 Delco-Light Company.....263  
 Duro Company.....63  
 Flint & Walling Mfg. Co.....364  
 Ft. Wayne Eng. & Mfg. Co.....354  
 Mast, Foos & Co.....367  
 F. E. Myers & Bros. Co.....221  
 Trane Co.....43

**PUMPS—FORCE**  
 Flint & Walling Mfg. Co.....364  
 Fort Wayne Eng. & Mfg. Co.....354  
 Jaeger Machine Co.....228-229  
 Mast, Foos & Co.....367  
 F. E. Myers & Bros. Co.....221  
 Novo Engine Co.....245  
 Standard Sanitary Mfg. Co.....18-19

**PUMPS—GASOLINE**  
 Construction Machinery Co.....237  
 Fairbanks, Morse & Co.....107  
 Flint & Walling Mfg. Co.....364  
 Ft. Wayne Eng. & Mfg. Co.....354  
 Johnson Plumbing Supply Co.....352  
 F. E. Myers & Bros. Co.....221  
 Novo Engine Co.....245

**PUMPS—HOUSE**  
 Duro Company.....63  
 Flint & Walling Mfg. Co.....364  
 Ft. Wayne Eng. & Mfg. Co.....354  
 Hardin-Lavin Company.....89  
 Mast, Foos & Co.....367  
 F. E. Myers & Bros. Co.....221  
 Stanley Plumbing & Supply Co.....358

**PUMPS—STEAM**  
 Fairbanks, Morse & Co.....107  
 Trane Company.....43

**PUSH BRACES—See Braces**

**PUTTY—METAL SASH**  
 Wm. Bayley Company.....314  
 Donley Bros. Co.....298  
 Edwards Mfg. Co.....359  
 Genfire Steel Co.....80  
 International Steel & Iron Co.....304  
 H. B. Fred Kuhls.....69  
 Geo. L. Mesker & Co.....315  
 Sherwin-Williams Co.....213  
 Standard Varnish Works.....91  
 Truscon Laboratories.....72  
 Truscon Steel Co.....5-90

**PUTTY—ROOFING**  
 Asbestos, Shingle, Slate & Sheathing Co. 50  
 Barber Asphalt Co.....113  
 Philip Carey Co.....106  
 Edwards Mfg. Co.....359  
 Johns-Manville, Inc.....195  
 H. B. Fred Kuhls.....34  
 Ruberoid Co.....101  
 Sherwin-Williams Co.....213  
 Truscon Laboratories.....72

**PUTTYLESS WINDOWS—See Windows**

**RADIATORS—ELECTRIC STEAM**  
 American Radiator Co.....192-193

**RADIATORS—GAS**  
 American Radiator Co.....192-193  
 Ohio Foundry & Mfg. Co.....311

**RADIATORS—HOT WATER AND STEAM**  
 American Radiator Co.....192-193  
 Burnham Boiler Corp.....82  
 Crane Company.....52  
 Hardin-Lavin Company.....89  
 B. Karol & Sons Co.....308  
 National Radiator Corp.....86  
 Stanley Plumbing & Supply Co.....358  
 Thatcher Co.....201  
 U. S. Radiator Corp.....40

**RADIATOR COVERS—See Enclosures**

**RADIATOR ENCLOSURES—See Enclosures**

**RADIATOR GRILLES—See Enclosures**

**RADIATOR GUARDS—See Enclosures**

**RADIATOR SHIELDS—See Enclosures**

**RADIATOR VALVES—See Valves**

**RAILINGS—BRASS**  
 Crane Company.....52  
 International Steel & Iron Co.....304  
 Fred J. Meyers Mfg. Co.....367

**RAILINGS—IRON**  
 Cincinnati Iron Fence Co.....366  
 Crane Company.....52  
 International Steel & Iron Co.....304  
 Kwik-Mix Concrete Mixer Co.....269  
 Geo. L. Mesker & Co.....315  
 Fred J. Meyers Mfg. Co.....367

**RAILINGS—PIPE**  
 Cincinnati Iron Fence Co.....366  
 Crane Company.....52  
 International Steel & Iron Co.....304  
 Johnson Plumbing Supply Co.....352  
 B. Karol & Sons Co.....308  
 Geo. L. Mesker & Co.....315  
 Fred J. Meyers Mfg. Co.....367

**RAILINGS—WIRE**  
 Cincinnati Iron Fence Co.....366  
 International Steel & Iron Co.....304  
 Geo. L. Mesker & Co.....315  
 Fred J. Meyers Mfg. Co.....367

**RAILS—BARNDOOR**  
 Frantz Mfg. Co.....3  
 Hunt, Helm, Ferris Co.....108  
 McKinney Mfg. Co.....114  
 National Mfg. Co.....376  
 J. E. Porter Corp.....8  
 Richards-Wilcox Mfg. Co.....6-7  
 Stanley Works.....87

**RAILS—PORCH**  
 Cincinnati Iron Fence Co.....366  
 Curtis Co.....61

**RAIL BRACKETS—See Brackets**

**RANGES—COAL**  
 The American Stove Co.....48  
 S. Cheney & Son.....282  
 F. W. Shepler Stove Co.....316  
 Thatcher Co.....201

**RANGES—ELECTRIC**  
 Automatic Electric Heater Co.....367

**RANGES—GAS**  
 American Stove Co.....48  
 Concealed Bed Corp.....297  
 Peerless Mfg. Co.....81  
 Thatcher Company.....201

**RANGE BOILERS—See Boilers**

**RASPS—See Files**

**REAMERS**  
 Crane Company.....52  
 Hardin-Lavin Company.....89  
 Joseph T. Ryerson & Son.....220  
 Stanley Plumbing & Supply Co.....358

**RECEIVERS—GABGAGE**  
 Donley Bros. Co.....298  
 International Steel & Iron Co.....304  
 Majestic Company.....56  
 Geo. L. Mesker & Co.....315  
 Peerless Mfg. Co.....81  
 Wheeling Corrugating Co.....104  
 Willis Mfg. Co.....109

**RECEIVERS—PACKAGE**  
 Donley Bros. Co.....298  
 Majestic Company.....56  
 Geo. L. Mesker & Co.....315  
 Willis Mfg. Co.....109

**RECEPTACLES—OUTLET BOX**  
 Hart & Hegeman Mfg. Co.....42  
 Pass & Seymour, Inc.....366

**RECEPTACLES—CONDUIT BOX**  
 General Electric Co.....9-10-11-12-13-14-15  
 Hart & Hegeman Mfg. Co.....42

**RECEPTACLES—FLOOR**  
 General Electric Co.....9-10-11-12-13-14-15  
 Hart & Hegeman Mfg. Co.....42

**RECEPTORS—SHOWER**  
 Crane Company.....52  
 Fiat Metal Mfg. Co.....297  
 Standard Sanitary Mfg. Co.....18-19  
 Wheeling Sanitary Mfg. Co.....215

**REFRIGERATORS**  
 Concealed Bed Corp.....297  
 D. A. Matot Co.....357  
 Mellish-Hayward Co.....283  
 G. I. Sellers & Sons Co.....117

**REFRIGERATORS—ELECTRIC**  
 Barber Asphalt Co.....113  
 Concealed Bed Corp.....297  
 Delco Light Co.....263  
 Sedgwick Machine Works.....289

**REFRIGERATOR TRAPS—See Traps**

**REGISTERS—FLOOR**  
 Hardin-Lavin Company.....89  
 Hess Warming & Vent. Co.....296-314  
 B. Karol & Sons Co.....308  
 Majestic Co.....86  
 Milwaukee Corrugating Co.....374-375  
 Stanley Plumbing & Supply Co.....358

**REGISTERS—WALL**  
 Hess Warming & Vent. Co.....296-314  
 B. Karol & Sons Co.....308  
 Majestic Co.....86  
 Milwaukee Corrugating Co.....374-375  
 Stanley Plumbing & Supply Co.....358

**REGULATORS—FURNACE**  
 Hardin-Lavin Co.....89  
 F. D. Kees Mfg. Co.....366  
 Majestic Co.....86  
 Milwaukee Corrugating Co.....374-375  
 Stanley Plumbing & Supply Co.....358

**REGULATORS—TEMPERATURE**  
 American Radiator Co.....192-193  
 American Stove Co.....48  
 Burnham Boiler Corp.....82  
 Majestic Co.....86  
 U. S. Radiator Corp.....40

**REGULATORS—WATER**  
 American Radiator Co.....192-193  
 Crane Company.....52  
 H. A. Thrush & Co.....813  
 U. S. Radiator Corp.....40

**REINFORCING—BANK VAULT**  
 Macomber Steel Co.....310

**REINFORCING—CEMENT AND STUCCO**  
 American Steel & Wire Co.....292  
 Genfire Steel Co.....80  
 International Steel & Iron Co.....304  
 Kalman Steel Co.....70  
 Milwaukee Corrugating Co.....374-375  
 National Steel Fabric Co.....28-29  
 Northwestern Expanded Metal Co.....372  
 Joseph T. Ryerson & Son.....220  
 Truscon Steel Co.....5-90  
 Wheeling Corrugating Co.....104

**REINFORCING BARS—See Bars**

**REINFORCING LATH—See Lath**

**REMOVERS—PAINT AND VARNISH**  
 S. C. Johnson & Son.....173  
 Sherwin-Williams Co.....213  
 Standard Varnish Works.....91  
 Toch Brothers.....91  
 Truscon Laboratories.....72

**RESAW MACHINES—See Machines**

**RESISTANTS—ACID (for concrete)**  
 Anti-Hydro Waterproofing Co.....296-318  
 Standard Sanitary Mfg. Co.....18-19  
 Standard Varnish Works.....91  
 Toch Brothers.....91  
 Truscon Laboratories.....72  
 Truscon Steel Co.....5-90

**REVERSIBLE WINDOWS—See Windows**

**RIDGING—ASBESTOS**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Ruberoid Co.....101

**RIDGING—SHEET METAL**  
 Edwards Mfg. Co.....367  
 Milwaukee Corrugating Co.....374-375  
 Superior Sheet Steel Co.....46

**RIVETS—COPPER**  
 Progressive Mfg. Co.....294

**RIVETS—STEEL**  
 International Steel & Iron Co.....304  
 Progressive Mfg. Co.....294  
 Joseph T. Ryerson & Son.....220

**ROAD SCRAPERS—See Scrapers**

**RODS—BRASS**  
 Chase Metal Works.....112

**RODS—HANGER—See Fixtures, Wardrobe**

**RODS—LEVELLING**  
 A. S. Aloe Co.....277  
 Kenfel & Esser Co.....286  
 Warren-Knight Co.....284  
 David White Co.....287

**RODS—LIGHTNING**  
 Geler & Blum, Inc.....285

**RODS—SILO**  
 Hoosier Bldg. Tile & Silo Co.....369

**ROLLERS—BARNDOOR**  
 Frantz Mfg. Co.....3  
 Hunt-Helm-Ferris & Co.....108  
 McKinney Mfg. Co.....114  
 F. E. Meyers & Bros. Co.....221  
 National Mfg. Co.....376  
 J. E. Porter Corp.....8  
 Richards-Wilcox Mfg. Co.....6-7  
 Stanley Works.....87

**ROLLERS—HOUSE DOOR**  
 Frantz Mfg. Co.....3  
 McKinney Mfg. Co.....114  
 National Mfg. Co.....376  
 Richards-Wilcox Mfg. Co.....6-7

**ROLLERS—HOUSE MOVING**  
 Stimmel Winch & Machine Works.....284

**ROLLING DOORS—See Doors**

**ROLLING PARTITIONS—See Partitions**

**ROLLING SHUTTERS—See Shutters**

**ROOFING—ASBESTOS**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Philip Carey Co.....106  
 Eternit, Inc.....16-17  
 Johns-Manville, Inc.....195  
 National Sheet Metal Roofing Co.....384  
 Ruberoid Co.....101

**ROOFING—ASBESTOS SHINGLES**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Philip Carey Co.....106  
 Eternit, Inc.....16-17  
 Johns-Manville, Inc.....195  
 National Sheet Metal Roofing Co.....384  
 Ruberoid Company.....101

**ROOFING—ASPHALT (READY)**  
 Barber Asphalt Co.....113  
 Beckmann-Dawson Roofing Co.....112  
 Philip Carey Co.....106  
 Johns-Manville, Inc.....195  
 National Sheet Metal Roofing Co.....384  
 Ruberoid Co.....101

**ROOFING—ASPHALT SHINGLES**  
 Barber Asphalt Co.....113  
 Beckmann-Dawson Roofing Co.....112  
 Philip Carey Co.....106  
 Johns-Manville, Inc.....195  
 National Sheet Metal Roofing Co.....384  
 Ruberoid Co.....101

**ROOFING—BLENDED SHINGLES**  
 Barber Asphalt Co.....113  
 Beckmann-Dawson Roofing Co.....112  
 Philip Carey Co.....106  
 Ruberoid Co.....101  
 Weatherbest Stained Shingle Co., Inc.....288  
 West Coast Lumber Trade Extension Bureau.....46

**ROOFING—BUILT-UP**  
 Barber Asphalt Co.....113  
 Beckmann-Dawson Roofing Co.....112  
 Philip Carey Co.....106  
 Johns-Manville, Inc.....195  
 Ruberoid Co.....101  
 Slatington-Bangor Slate Syndicate, Inc. 666

**ROOFING—CANVAS**  
 John Boyle & Co., Inc.....282  
 Ruberoid Co.....101

**ROOFING—COMPOSITION**  
 Barber Asphalt Co.....113  
 Beckmann-Dawson Roofing Co.....112  
 Philip Carey Co.....106  
 Ruberoid Co.....101  
 Slatington-Bangor Slate Syndicate, Inc. 666

**ROOFING—COFFER SHINGLES**  
 Edwards Mfg. Co.....367  
 International Steel & Iron Co.....304  
 Milwaukee Corrugating Co.....374-375  
 National Sheet Metal Roofing Co.....384

**ROOFING—DRIP EDGE**  
 Miller & Gleason.....268  
 Milwaukee Corrugating Co.....374-375

**ROOFING—METAL (Corrugated)**  
 Edwards Mfg. Co.....367  
 International Steel & Iron Co.....304  
 Milwaukee Corrugating Co.....374-375  
 Joseph T. Ryerson & Son.....220  
 Superior Sheet Steel Co.....46  
 Wheeling Corrugating Co.....104  
 Wheeling Metal & Mfg. Co.....216  
 Willis Mfg. Co.....109

**ROOFING—METAL (SHEETS)**  
 Edwards Mfg. Co. 359  
 International Steel & Iron Co. 304  
 Milwaukee Corrugating Co. 374-375  
 Northfield Iron Co. 364  
 Jos. T. Ryerson & Son. 220  
 Superior Sheet Steel Co. 49  
 Truscon Steel Co. 5-90  
 Wheeling Corrugating Co. 104  
 Wheeling Metal & Mfg. Co. 316  
 Willis Mfg. Co. 109

**ROOFING—METAL SHINGLES**  
 Edwards Mfg. Co. 359  
 International Steel & Iron Co. 304  
 Milwaukee Corrugating Co. 374-375  
 National Sheet Metal Roofing Co. 364  
 Northfield Iron Co. 364  
 Wheeling Corrugating Co. 104  
 Wheeling Metal & Mfg. Co. 316  
 Willis Mfg. Co. 109

**ROOFING—ROLL**  
 Barber Asphalt Co. 113  
 Beckman-Dawson Roofing Co. 92  
 Philip Carey Co. 106  
 Edwards Mfg. Co. 359  
 Milwaukee Corrugating Co. 374-375  
 National Sheet Metal Roofing Co. 364  
 Ruberoid Co. 101  
 Jos. T. Ryerson & Son. 220  
 Superior Sheet Steel Co. 49  
 Wheeling Corrugating Co. 104  
 Wheeling Metal & Mfg. Co. 316  
 Willis Mfg. Co. 109

**ROOFING—SLAB SHINGLES**  
 Barber Asphalt Co. 113  
 Beckman Dawson Roofing Co. 92  
 Philip Carey Co. 106  
 Ruberoid Co. 101  
 West Coast Lumber Trade Extension Bureau 58

**ROOFING—SLATE**  
 Knickerbocker Slate Corp. 290  
 Ruberoid Co. 101  
 Slatington Slate Co. 352  
 Slatington-Bangor Slate Syndicate, Inc. 368  
 Structural Slate Co. 358  
 Vendor Slate Co., Inc. 85

**ROOFING—SLATE SURFACED**  
 Barber Asphalt Co. 113  
 Beckman-Dawson Roofing Co. 92  
 Philip Carey Co. 106  
 Johns-Manville, Inc. 195  
 Ruberoid Co. 101  
 Slatington Slate Co. 352  
 Slatington-Bangor Slate Syndicate, Inc. 368  
 Structural Slate Co. 358

**ROOFING—STAINED SHINGLES**  
 Samuel Cabot, Inc. 218  
 Weatherbest Stained Shingle Co., Inc. 293  
 Weyerhaeuser Forest Products. 44

**ROOFING—THATCHED**  
 Slatington-Bangor Slate Syndicate, Inc. 368  
 Weatherbest Stained Shingle Co., Inc. 293

**ROOFING—TILE (ASBESTOS)**  
 Asbestos, Shingle, Slate & Sheathing Co. 50  
 Philip Carey Co. 106  
 Johns-Manville, Inc. 195  
 National Sheet Metal Roofing Co. 364  
 Ruberoid Co. 101

**ROOFING—TILE (CEMENT)**  
 W. E. Dunn Mfg. Co. 222-223  
 L. Hansen Company. 366  
 Truscon Steel Co. 5-90

**ROOFING—TILE (GYPSUM)**  
 U. S. Gypsum Co. 67

**ROOFING—TILE (METAL)**  
 Edwards Mfg. Co. 359  
 Milwaukee Corrugating Co. 374-375  
 National Sheet Metal Roofing Co. 364  
 Truscon Steel Co. 5-90  
 Wheeling Corrugating Co. 104  
 Wheeling Metal & Mfg. Co. 316

**ROOFING—TIN**  
 Edwards Mfg. Co. 359  
 Milwaukee Corrugating Co. 374-375  
 Wheeling Corrugating Co. 104  
 Wheeling Metal & Mfg. Co. 316  
 Willis Mfg. Co. 109

**ROOFING—WOOD SHINGLES**  
 Birch Manufacturers 353  
 Samuel Cabot, Inc. 218  
 Shevlin, Carpenter & Clarke Co. 174-175  
 Weatherbest Stained Shingle Co., Inc. 293  
 West Coast Lbr. Trade Extension Bureau 58  
 Weyerhaeuser Forest Products. 44

**ROOFING—ZINC**  
 Edwards Mfg. Co. 359  
 Milwaukee Corrugating Co. 374-375  
 National Sheet Metal Roofing Co. 364

**ROOFING BRACKETS—See Brackets**  
**ROOFING CEMENT—See Cement**  
**ROOFING NAILS—See Nails**  
**ROOFING PAPER—See Paper**  
**ROOFING PUTTY—See Putty**  
**ROOFING TILE—See Roofing**  
**ROOFING TILE MACHINES—See Machines**

**ROOFS—INSULATED**  
 Samuel Cabot, Inc. 218  
 Philip Carey Co. 106  
 General Insulating & Mfg. Co. 307  
 Johns-Manville, Inc. 195  
 Mason Fibre Co. 47  
 Ruberoid Co. 101  
 Truscon Steel Co. 5-90  
 U. S. Gypsum Co. 67  
 Weyerhaeuser Forest Products. 44

**ROOFS—SILO**  
 Hoosier Bldg. Tile & Silo Co. 369  
 Northfield Iron Co. 364  
 Ruberoid Co. 101  
 Truscon Steel Co. 5-90

**ROOF COATINGS—See Coatings**  
**ROOF CONSTRUCTION**  
 Lamella Roof Syndicate. 308

**ROOF ORNAMENTS (METAL)—See Ornaments**  
**ROOF TRUSSES—See Trusses**  
**ROOF VENTILATORS—See Ventilators**  
**ROOF WINDOWS—See Windows**  
**ROOM HEATERS—See Heaters**  
**ROPE—AWNING (COTTON)**  
 John Boyle & Co., Inc. 358  
 Samson Cordage Works. 353  
 Silver Lake Co. 371

**ROPE—DUMBWAITE**  
 International Steel & Iron Co. 304  
 Samson Cordage Works. 353  
 Sedgwick Machine Works. 289  
 Sidney Elevator Mfg. Co. 286  
 Silver Lake Co. 371

**ROPE—MANILA AND SISAL**  
 Sedgwick Machine Works. 289  
 Sidney Elevator Mfg. Co. 286

**ROPE—WIRE**  
 American Chain Co., Inc. 105  
 American Steel & Wire Co. 292  
 Northfield Iron Co. 364  
 Joseph T. Ryerson & Son. 220  
 Sedgwick Machine Works. 289  
 Sidney Elevator Mfg. Co. 286

**ROUTERS**  
 R. L. Carter Co., Inc. 274  
 Clarke Sanding Machine Co. 20-21  
 Combination Woodworking Machine Co. 286  
 Gallmeyer & Livingston Co. 280  
 F. L. Rogers & Co. 265  
 Stanley Works. 87  
 20th Century Sales Agency. 253  
 J. D. Wallace & Co. 251-276

**ROUTERS—STAIR**  
 R. L. Carter Co., Inc. 274

**ROUTERS—HINGE BUTT**  
 R. L. Carter Co., Inc. 274

**RUBBISH BURNERS—See Burners**  
**RULES—CALIFEB**  
 Keuffel & Esser Co. 268  
 Lufkin Rule Co. 278  
 Stanley Works. 87  
 L. S. Starrett Co. 271  
 Warren Knight Co. 282

**RULES—EXTENSION**  
 Farrand Sales Corp. 280  
 Geler & Bluhm, Inc. 285  
 W. & L. E. Gurley. 266  
 Keuffel & Esser Co. 268  
 Lufkin Rule Co. 278  
 Master Rule Mfg. Co., Inc. 281  
 Stanley Works. 87  
 L. S. Starrett Co. 271  
 Warren-Knight Co. 282

**RULES—INSIDE MEASURE**  
 Farrand Sales Corp. 280  
 Keuffel & Esser Co. 268  
 Lufkin Rule Co. 278  
 Master Rule Mfg. Co., Inc. 281  
 Stanley Works. 87  
 Warren-Knight Co. 282

**RULES—LUMBERMEN'S**  
 A. S. Aloe Co. 277  
 Farrand Sales Corp. 280  
 W. & L. E. Gurley. 266  
 Lufkin Rule Co. 278  
 Stanley Works. 87  
 Warren-Knight Co. 282

**RULES—SLIDE SCALES**  
 W. & L. E. Gurley. 266  
 Keuffel & Esser Co. 268  
 Frederick Post Co. 264  
 L. S. Starrett Co. 271  
 Warren-Knight Co. 282

**RULES—SPRING JOINT**  
 W. & L. E. Gurley. 266  
 Keuffel & Esser Co. 268  
 Lufkin Rule Co. 278  
 Master Rule Mfg. Co. 281  
 Stanley Works. 87  
 Warren-Knight Co. 282

**RULES—STEEL**  
 A. S. Aloe Co. 277  
 Farrand Sales Corp. 280  
 W. & L. E. Gurley. 266  
 Keuffel & Esser Co. 268  
 Lufkin Rule Co. 278  
 L. S. Starrett Co. 271  
 Warren-Knight Co. 282

**SAFES**  
 Weber-Busse Co. 352

**SAFES—WALL**  
 Dudley Lock Corp. 299  
 Weber-Busse Co. 352

**SAFETY GUARDS—See Guards**  
**SALAMANDERS**  
 Donley Bros. Co. 298

**SANDERS—FLOOR—See Machines, Floor Surfacing**

**SANDERS—WOODWORKING**  
 A. S. Aloe Co. 277  
 Clarke Sanding Machine Co. 20-21  
 Combination Woodworking Machine Co. 286  
 De Walt Products Co. 259  
 Jones Superior Machine Co. 284  
 National Sanding Machine Co. 283  
 Oliver Machinery Co. 282  
 Parks Woodworking Machine Co. 278  
 Paxson Co. 276  
 F. L. Rogers & Co. 265  
 Safe Tool Mfg. Co. 285  
 20th Century Sales Agency. 253  
 J. D. Wallace & Co. 251-276

**SANDPAPER—See Paper**  
**SANDPAPERING MACHINES—See Machines**  
**SAND SCREENS—See Screens**  
**SANITARY CLOSETS—See Closets, Chemical**  
**SASH—HOLLOW METAL**  
 Edwards Mfg. Co. 359  
 Kawneer Company 65  
 International Steel & Iron Co. 304  
 David Lupton's Sons Co. 76  
 Milwaukee Corrugating Co. 374-375  
 Richards-Wilcox Mfg. Co. 6-7  
 Jos. T. Ryerson & Son. 220  
 Truscon Steel Co. 5-90  
 Willis Mfg. Co. 109  
 Zouri Drawn Metals Co. 46

**SASH—STORM**  
 Wm. Bayley Co. 314  
 Curtis Cos. 61  
 Paine Lumber Co. 93  
 Premier Standardized Woodwork. 294  
 Vento Steel Sash Co. 311

**SASH—ARBORS—See Arbors**  
**SASH BALANCES—See Balances**  
**SASH CHAINS—See Chains**  
**SASH CORDS—See Cord**  
**SASH CUTTERS—See Cutters**  
**SASH FRAMES—See Frames**  
**SASH HANGERS—See Hardware, Sash**  
**SASH HARDWARE—See Hardware**  
**SASH HOLDERS—See Holders**  
**SASH LIFTS—See Hardware, Sash**  
**SASH LOCKS—See Locks**  
**SASH OPERATORS—See Operators**  
**SASH OPERATING MACHINERY—See Operators, Sash**  
**SASH PULLEYS—See Pulleys**  
**SASH SUPPORTERS—See Supporters**  
**SASH WEIGHTS—See Weights**  
**SASH—BASEMENT—See Frames, Cellar Sash**  
**SASH—WINDOW—See Frames**

**SAWS—BAND**  
 A. S. Aloe Co. 277  
 American Sawmill Machy. Co. 255  
 W. B. & J. E. Botee. 266  
 Combination Woodworking Mach. Co. 286  
 Crescent Machine Co. 260  
 Henry Daston & Sons. 199  
 Gallmeyer & Livingston Co. 280  
 Heston & Anderson. 273  
 Horn Device Mfg. Co. 305  
 Hutchinson Mfg. Co., Inc. 281  
 Huther Bros. Saw Mfg. Co. 274  
 Jones Superior Machine Co. 284  
 Ralph M. Kennedy. 282  
 Kornau Machine Co. 284  
 Leach Co. 267  
 Oliver Machinery Co. 282  
 Parks Woodworking Machine Co. 278  
 Porter-Cable Machine Co. 247  
 Joseph T. Ryerson & Son. 220  
 Safe Tool Mfg. Co. 285  
 Scott-Bansbach Machy. Co. 276  
 20th Century Sales Agency. 253  
 J. D. Wallace & Co. 251-276

**SAWS—CIRCULAR**  
 A. S. Aloe Co. 277  
 American Sawmill Machy. Co. 255  
 W. B. & J. E. Botee. 266  
 Crescent Machine Co. 260  
 DeWalt Products Co. 259  
 Henry Daston & Sons. 199  
 Gallmeyer & Livingston Co. 280  
 Heston & Anderson. 273  
 Hutchinson Mfg. Co., Inc. 281  
 Huther Bros. Saw Mfg. Co. 274  
 Jones Superior Machine Co. 284  
 Ralph M. Kennedy. 282  
 Kornau Machine Co. 284  
 Oliver Machinery Co. 282  
 D. W. Onan & Sons. 280  
 Parks Woodworking Machine Co. 278  
 Porter-Cable Machine Co. 247  
 Joseph T. Ryerson & Son. 220  
 Safe Tool Mfg. Co. 285  
 Scott-Bansbach Machinery Co. 276  
 State Mfg. & Eng. Co. 264  
 20th Century Sales Agency. 253  
 J. D. Wallace & Co. 251-276

**SAWS—DRAG**  
 American Sawmill Machinery Co. 255  
 Henry Daston & Sons. 199  
 Ralph M. Kennedy. 282

**SAWS—ELECTRIC**

A. S. Aloe Co. 277  
 American Sawmill Machinery Co. 255  
 Black & Decker Mfg. Co. 254  
 W. B. & J. E. Boice 266  
 Clarke Sanding Machine Co. 20-21  
 Combination Woodworking Machine Co. 286  
 Crescent Machine Co. 260  
 DeWalt Products Co. 259  
 Esskay Mfg. Co. 279  
 Gallmeyer & Livingston Co. 280  
 Heston & Anderson 273  
 Hutchinson Mfg. Co., Inc. 281  
 International Stamping Co. 284  
 Jones Superior Machine Co. 284  
 Ralph M. Kennedy 282  
 National Sanding Machine Co., Inc. 283  
 D. W. Onan & Sons 280  
 Paxson Co. 278  
 F. L. Rogers & Co. 265  
 Joseph T. Ryerson & Son 220  
 Safe Tool Mfg. Co. 285  
 Scott-Bansbach Machinery Co. 276  
 Skilaw, Inc. 250  
 State Mfg. & Eng. Co. 284  
 Syntro Co. 267  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 251-276

**SAWS—GANG**

American Sawmill Machinery Co. 255  
 Henry Disston & Sons 199  
 Huther Bros. Saw Mfg. Co. 274  
 Ralph M. Kennedy 282

**SAWS—GROOVING**

A. S. Aloe Co. 277  
 American Sawmill Machinery Co. 255  
 W. B. & J. E. Boice 266  
 Combination Woodworking Machine Co. 286  
 Crescent Machine Co. 260  
 DeWalt Products Co. 259  
 Henry Disston & Sons 199  
 Esskay Mfg. Co. 279  
 Heston & Anderson 273  
 Hutchinson Mfg. Co., Inc. 281  
 Huther Bros. Saw Mfg. Co. 274  
 Jones Superior Machine Co. 284  
 Ralph M. Kennedy 282  
 Parks Woodworking Machine Co. 278  
 F. L. Rogers & Co. 265  
 Safe Tool Mfg. Co. 285  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 251-276

**SAWS—HAND**

A. S. Aloe Co. 277  
 Henry Disston & Sons 199  
 F. L. Rogers & Co. 265  
 Skilaw, Inc. 250  
 J. D. Wallace & Co. 251-276

**SAWS—JIG**

A. S. Aloe Co. 277  
 W. B. & J. E. Boice 266  
 Henry Disston & Sons, Inc. 199  
 Heston & Anderson 273  
 Huther Bros. Saw Mfg. Co. 274  
 International Stamping Co. 284  
 Jones Superior Machine Co. 284  
 Ralph M. Kennedy 282  
 Oliver Machinery Co. 282  
 Scott-Bansbach Machinery Co. 276  
 20th Century Sales Agency 253

**SAWS—PORTABLE POWER**

A. S. Aloe Co. 277  
 American Sawmill Machinery Co. 255  
 W. B. & J. E. Boice 266  
 Clarke Sanding Machine Co. 20-21  
 Combination Woodworking Machine Co. 286  
 Crescent Machine Co. 260  
 DeWalt Products Co. 259  
 Esskay Mfg. Co. 279  
 Gallmeyer & Livingston Co. 280  
 Heston & Anderson 273  
 Horn Device Mfg. Co. 365  
 Hutchinson Mfg. Co., Inc. 281  
 International Stamping Co. 284  
 Jones Superior Machine Co. 284  
 Ralph M. Kennedy 282  
 Knickerbocker Co. 277  
 Kornau Machine Co. 284  
 Oliver Machinery Co. 282  
 D. W. Onan & Sons 280  
 Parks Woodworking Machine Co. 278  
 Paxson Co. 278  
 F. L. Rogers & Co. 265  
 Joseph T. Ryerson & Son 220  
 Safe Tool Mfg. Co. 285  
 Scott-Bansbach Machinery Co. 276  
 Skilaw, Inc. 250  
 State Mfg. & Eng. Co. 284  
 Syntro Co. 267  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 251-276

**SAWS—SPECIAL**

A. S. Aloe Co. 277  
 American Sawmill Machinery Co. 255  
 DeWalt Products Co. 259  
 Henry Disston & Sons, Inc. 199  
 Hutchinson Mfg. Co., Inc. 281  
 Huther Bros. Saw Mfg. Co. 274  
 Jones Superior Machine Co. 284  
 Ralph M. Kennedy 282  
 D. W. Onan & Sons 280  
 Joseph T. Ryerson & Son 220  
 20th Century Sales Agency 253

**SAWS—SWING**

A. S. Aloe Co. 277  
 American Sawmill Machinery Co. 255  
 Crescent Machine Co. 260  
 DeWalt Products Co. 259  
 Gallmeyer & Livingston Co. 280  
 Heston & Anderson 273  
 Hutchinson Mfg. Co., Inc. 281  
 Jones Superior Machine Co. 284  
 Ralph M. Kennedy 282  
 Kornau Machine Co. 284  
 Leach Company 267  
 Oliver Machinery Co. 282  
 D. W. Onan & Sons 280  
 Parks Woodworking Machine Co. 278  
 Paxson Co. 278  
 Safe Tool Mfg. Co. 285  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 251-276

**SAW ARBORS—See Arbors**  
**SAW BENCHES—See Sawrigs**  
**SAW CLAMPS—See Clamps**  
**SAW FILERS—See Machines, Saw Filing**  
**SAW FILING MACHINES—See Machines**  
**SAW GAUGES—See Gauges**  
**SAW GUARDS—See Guards**  
**SAWIGS**

A. S. Aloe Co. 277  
 American Sawmill Machinery Co. 255  
 W. B. & J. E. Boice 266  
 Chain Belt Co. 2  
 Clarke Sanding Machine Co. 20-21  
 Combination Woodworking Machine Co. 286  
 Crescent Machine Co. 260  
 DeWalt Products Co. 259  
 Esskay Mfg. Co. 279  
 Gallmeyer & Livingston Co. 280  
 Heston & Anderson 273  
 Hutchinson Mfg. Co. 281  
 Jones Superior Machine Co. 284  
 Ralph M. Kennedy 282  
 Knickerbocker Co. 277  
 Kornau Machine Co. 284  
 Leach Company 267  
 Master Woodworker Mfg. Co. 287  
 Oliver Machinery Co. 282  
 D. W. Onan & Sons 280  
 Parks Woodworking Machine Co. 278  
 Paxson Co. 278  
 Safe Tool Mfg. Co. 285  
 Sidney Machine Tool Co. 278  
 Skilaw, Inc. 250  
 20th Century Sales Agency 253  
 J. D. Wallace & Co. 251-276

**SAW SETS—See Sets**  
**SAW TABLES—See Sawrigs**  
**SAW SWAGES—See Swages**  
**SAW VISES—See Vises**  
**SAWMILL MACHINERY—See Machinery**

**SCAFFOLDS—STEEL**

International Steel & Iron Co. 304  
 Richards-Wilcox Mfg. Co. 6-7  
 Steel Scaffolding Co. 261

**SCAFFOLD BRACKETS—See Brackets**  
**SCAFFOLD BRACKET FIXTURES—See Fixtures**

**SCALES—DRAFTSMEN'S—See Instruments, Drawing**

**SCHOOLS—CORRESPONDENCE**

Chicago Technical College 203  
 International Correspondence Schools 295

**SCHOOLROOM HEATERS—See Heaters**

**SCRAPERS—CABINET**

Henry Disston & Sons 199  
 Stanley Works 87  
 L. S. Starrett Co. 271

**SCRAPERS—FLOOR—See Machines, Floor Surfacing**  
**SCRAPERS—ROAD**

Lansing Company 256  
 Novo Engine Co. 245

**SCRATCH GAUGES—See Gauges**

**SCREENS—BASE**

Genfre Steel Co. 80  
 Kalman Steel Co. 70  
 Macomber Steel Co. 310  
 Milwaukee Corrugating Co. 374-375  
 Joseph T. Ryerson & Son 220  
 Trucon Steel Co. 5-90  
 Wheeling Corrugating Co. 104

**SCREENS—BANK AND COUNTER**

Cincinnati Iron Fence Co. 366  
 International Steel & Iron Co. 304

**SCREENS—PORCH**

Curtis Cos. 61  
 Higgin Mfg. Co. 301  
 Paine Lumber Co. 93  
 Reynolds Wire Co. 183

**SCREENS—SAND AND GRAVEL**

Chain Belt Co. 2

**SCREENS—WINDOW AND DOOR**

Ceco Weatherstrip Co. 364  
 Cincinnati Iron Fence Co. 366  
 Curtis Cos. 61  
 W. J. Dennis & Co. 369  
 Gilbert & Bennett Mfg. Co. 77  
 Higgin Mfg. Co. 301  
 Reynolds Wire Co. 183  
 Vento Steel Sash Co. 311

**SCREENS—WINDOW (Rolling)**

Higgin Mfg. Co. 301  
 Rolscreen Co. 299

**SCREEN CLOTH—See Cloth**  
**SCREEN DOORS—See Doors**

**SCREEN DOOR CHECKS—See Checks**  
**SCREEN DOOR HARDWARE—See Hardware**  
**SCREEN DOOR HINGES—See Hinges**  
**SCREEN DOOR SETS—See Hardware**  
**SCREEN HANGERS—See Hangers**  
**SCREEN HARDWARE—See Hardware**  
**SCREENING—WIRE (See Cloth, Screen; also Cloth, Wire)**

**SCREWDRIVERS**

Black & Decker Mfg. Co. 284  
 Henry Disston & Sons 199  
 North Bros. Mfg. Co. 280  
 Joseph T. Ryerson & Son 220  
 Stanley Works 87  
 L. S. Starrett Co. 271  
 Syntro Co. 267

**SCREWDRIVERS—ELECTRIC**

Black & Decker Mfg. Co. 284  
 Joseph T. Ryerson & Son 220

**SCREWDRIVER BITS—See Bits**  
**SCREW PLUGS—See Plugs**  
**SCREW PULLEYS—See Pulleys**  
**SCRUBBING MACHINES—See Machines**

**SEATS—CLOSET**

Crane Company 83  
 Hardin-Lavin Co. 89  
 Johnson Plumbing Supply Co. 289  
 B. Karol & Sons Co. 288  
 Trico, Inc. 304  
 Standard Sanitary Mfg. Co. 18-19  
 Stanley Plumbing & Supply Co. 289

**SEPTIC TANKS—See Tanks**  
**SEPTIC TANK MOLDS—See Forms and Molds**

**SETS—CELLAR WINDOW**

Frants Mfg. Co. 3  
 Hoosier Bldg. Tile & Silo Co. 369  
 F. D. Kees Mfg. Co. 280  
 National Mfg. Co. 370  
 Stanley Works 87

**SETS—NAIL**

Stanley Works 87  
 L. S. Starrett Co. 271

**SETS—SAW**

A. S. Aloe Co. 277  
 Black & Decker Mfg. Co. 284  
 Henry Disston & Sons 199  
 Foley Saw Tool Co. 280  
 Huther Bros. Saw Mfg. Co. 274  
 Ralph M. Kennedy 282  
 Stanley Works 87

**SEWAGE DISPOSAL PLANTS**

Andrews Heating Co. 267  
 Chemical Toilet Corp. 354-360  
 Duro Co. 6  
 Standard Sanitary Mfg. Co. 18-19

**SEWER PIPE—See Pipe**  
**SEWER PIPE MACHINES—See Machines**

**SEWER PIPE MOLDS—See Forms and Molds**

**SEWER PIPE STRAINERS—See Strainers**

**SEWER TILE—See Tile, Drain**  
**SEWER TILE MACHINES—See Machines, Drain Tile**

**SHADES—WINDOW**

E. I. DuPont DeNemours & Co., Inc. 41  
 E. W. A. Rowles Co. 365

**SHADE CLOTH—See Cloth**  
**SHADE CORD—See Cord**  
**SHAPER HEADS—See Heads**  
**SHAPING MACHINES—See Machines**

**SHEATHING—ASBESTOS**

Asbestos Shingle, Slate & Sheathing Co. 59  
 Philip Carey Co. 199  
 Eternit, Inc. 16-17  
 Johns-Manville, Inc. 185

**SHEATHING—GYPSUM**

U. S. Gypsum Co. 67

**SHEATHING BOARDS—See Boards**  
**SHEATHING BRACKETS—See Brackets**

**SHEATHING PAPER—See Paper**

**SHEETS—ASBESTOS**

Asbestos Shingle, Slate & Sheathing Co. 59  
 Philip Carey Co. 199  
 Johns-Manville, Inc. 185  
 Johnson Plumbing Supply Co. 289  
 National Sheet Metal Roofing Co. 364

**SHEETS—BOX ANNEALED**

Edwards Mfg. Co. 289  
 Milwaukee Corrugating Co. 374-375  
 Jos. T. Ryerson & Son 220  
 Superior Sheet Steel Co. 9  
 Wheeling Corrugating Co. 104

**SHEETS—BRASS AND COPPER**

Chase Metal Works 113  
 Edwards Mfg. Co. 289  
 Milwaukee Corrugating Co. 374-375  
 Wheeling Metal & Mfg. Co. 218  
 Zouri Drawn Metals Co. 48

**SHEETS—COPPER ALLOY**

Chase Metal Works 113  
 Edwards Mfg. Co. 289  
 Milwaukee Corrugating Co. 374-375  
 Jos. T. Ryerson & Son 220  
 Superior Sheet Steel Co. 9  
 Wheeling Corrugating Co. 104  
 Wheeling Metal & Mfg. Co. 218  
 Willis Mfg. Co. 189

**SHEETS—GALVANIZED**  
 Edwards Mfg. Co. 350  
 Heltzel Steel Form & Iron Co. 286  
 International Steel & Iron Co. 304  
 Milwaukee Corrugating Co. 374-375  
 Northfield Iron Co. 364  
 Jos. T. Ryerson & Son 220  
 Superior Sheet Steel Co. 49  
 Wheeling Corrugating Co. 104  
 Wheeling Metal & Mfg. Co. 316  
 Willis Mfg. Co. 109

**SHEETS—IRON AND STEEL**  
 Edwards Mfg. Co. 350  
 Heltzel Steel Form & Iron Co. 286  
 International Steel & Iron Co. 304  
 Milwaukee Corrugating Co. 374-375  
 Northfield Iron Co. 364  
 Jos. T. Ryerson & Son 220  
 Superior Sheet Steel Co. 49  
 Wheeling Corrugating Co. 104  
 Wheeling Metal & Mfg. Co. 316  
 Willis Mfg. Co. 109

**SHEETS—LEADCLAD**  
 Edwards Mfg. Co. 350  
 Milwaukee Corrugating Co. 374-375  
 Jos. T. Ryerson & Son 220  
 Wheeling Metal & Mfg. Co. 316

**SELF BRACKETS—See Brackets**

**SHELLS—EXPANSION**  
 Ackerman-Johnson Co. 290

**SHELVING—SLATE**  
 Slatington-Bangor Slate Syndicate, Inc. 368  
 Structural Slate Co. 358

**SHELVING—STEEL**  
 Heltzel Steel Form & Iron Co. 286  
 David Lupton's Sons Co. 76  
 Trico, Inc. 214

**SHIELDS—EXPANSION**  
 Ackerman-Johnson Co. 290  
 Richards-Wilcox Mfg. Co. 6-7  
 Joseph T. Ryerson & Son 220  
 Syntron Co. 267

**SHIELDS—RADIATOR—See Enclosures, Radiator**

**SHINGLES—See Roofing**

**SHINGLE NAILS—See Nails, Roofing**

**SHINGLE STAINS—See Stains**

**SHINGLING BRACKETS—See Brackets**

**SHINGLING GAUGES—See Gauges**

**SHOVELS—GASOLINE**  
 Koehring Co. 235

**SHOWCASE DOORS—See Doors**

**SNOWER BATHS—See Baths**

**SNOWER STALLS—See Stalls**

**SHOWER STALL DOORS—See Doors**

**SHOWER RECEPTORS—See Receptors**

**SHUTTERS—ROLLING (Steel)**  
 Cornell Iron Works, Inc. 368  
 Edwards Mfg. Co. 350  
 International Steel & Iron Co. 304  
 Geo. L. Mesker & Co. 315

**SHUTTERS—STEEL**  
 Cincinnati Iron Fence Co. 366  
 Cornell Iron Works, Inc. 368  
 Edwards Mfg. Co. 350  
 International Steel & Iron Co. 304  
 Geo. L. Mesker & Co. 315  
 Fred J. Meyers Mfg. Co. 367  
 Richards-Wilcox Mfg. Co. 6-7  
 Willis Mfg. Co. 109

**SHUTTERS—WOOD**  
 Curtis Co. 61  
 West Coast Lbr. Trade Extension Bureau 58

**SHUTTER WORKERS**  
 Mallory Mfg. Co. 362

**SIDEWALK DOORS—See Doors**

**SIDEWALK ELEVATORS—See Elevators**

**SIDEWALK FORMS—See Forms and Molds**

**SIDEWALK GLASS—See Glass**

**SIDEWALK LIGHTS—See Lights**

**SIDEWALK VENTILATORS—See Ventilators**

**SIDING CLIPS—See Clips**

**SIGHTS—LEVEL**  
 A. & Alce Co. 277  
 Geler & Blumh, Inc. 255  
 Frederick Post Co. 264  
 Stanley Works 87  
 L. S. Starrett Co. 271  
 Warren-Knight Co. 282

**SILOS—CEMENT**  
 Hoosier Bldg. Tile & Silo Co. 360  
 Truscon Steel Co. 5-90

**SILOS—HOLLOW TILE**  
 Hoosier Bldg. Tile & Silo Co. 360  
 National Fireproofing Co. 74

**SILOS—WOOD**  
 Hoosier Bldg. Tile & Silo Co. 360

**SILO BLOCKS—See Blocks**

**SILO DOORS—See Doors**

**SILO LUGS—See Lugs**

**SILO MACHINES—See Machines**

**SILO MOLDS—See Forms and Molds**

**SILO BOOMS—See Roofs**

**SINKS—KITCHEN**  
 Concealed Bed Corp. 297  
 Crane Company 52  
 Hardin-Lavin Co. 89  
 Johnson Plumbing Supply Co. 352  
 B. Karol & Sons Co. 308  
 Mellich-Hayward Co. 283  
 Slatington Slate Co. 352  
 Slatington-Bangor Slate Syndicate, Inc. 368

Standard Sanitary Mfg. Co. 18-19  
 Stanley Plumbing & Supply Co. 358  
 Structural Slate Co. 358  
 Wheeling Sanitary Mfg. Co. 215

**SITZ BATHS—See Baths**

**SKYLIGHTS**  
 Edwards Mfg. Co. 350  
 International Steel & Iron Co. 304  
 David Lupton's Sons Co. 76  
 Milwaukee Corrugating Co. 374-375  
 National Sheet Metal Roofing Co. 364  
 Wheeling Metal & Mfg. Co. 316  
 Willis Mfg. Co. 109

**SKYLIGHT GUARDS—See Guards**

**SLABS—CONCRETE (REINFORCED)**  
 International Steel & Iron Co. 304  
 Truscon Steel Co. 5-90

**SLABS—GYPSUM**  
 U. S. Gypsum Co. 67

**SLATE—STRUCTURAL**  
 Knickerbocker Slate Corp. 290  
 Slatington Slate Co. 352  
 Slatington-Bangor Slate Syndicate, Inc. 368  
 Structural Slate Co. 358

**SLATE CEMENT—See Cement**

**SLATE CUTTERS—See Cutters**

**SLIDING DOORS—See Doors**

**SLIDING DOOR TRACK—See Track**

**SLIDING PARTITION HANGERS—See Mangers**

**SNOW GUARDS—See Guards**

**SOCKETS—ELECTRIC**  
 General Electric Co. 9-10-11-12-13-14-15  
 Hart & Hegeman Mfg. Co. 42  
 Pass & Seymour, Inc. 366

**SOCKETS—WIRE ROPE**  
 American Steel & Wire Co. 292

**SOFTENERS—WATER**  
 Bazark Corp. 217  
 Crane Company 52  
 Duro Company 63  
 Fort Wayne Eng. & Mfg. Co. 354  
 Hardin-Lavin Co. 89  
 B. Karol & Sons Co. 308  
 Johnson Plumbing Supply Co. 352  
 Mellich-Hayward Co. 283  
 Standard Sanitary Mfg. Co. 18-19  
 Stanley Plumbing & Supply Co. 358

**SOLDERING COMPOUNDS—See Compounds**

**SOLDERING IRONS—See Irons**

**SOUND CONTROL—See Acoustics**

**SPINDLES—PORCH—See Millwork**

**Wholesale**

**SPOUTING—CONCRETE**  
 Jaeger Machine Co. 228-229  
 Leach Company 267  
 Ransome Concrete Machine Co. 249

**SPRINGS—DOOR**  
 American Steel & Wire Co. 292  
 Bommer Spring Hinge Co. 83  
 Chicago Spring Hinge Co. 370  
 W. J. Dennis & Co. 369  
 Chas. Fischer Spring Co. 302  
 F. D. Kees Mfg. Co. 356  
 National Mfg. Co. 376  
 Overhead Door Corp. 75

**SPRING HINGES—See Hinges**

**SPRINKLER PIPE HANGERS—See Hangers**

**SQUARES—BEVEL**  
 Henry Diston & Sons 190  
 Lufkin Rule Co. 278  
 Stanley Works 87  
 L. S. Starrett Co. 271

**SQUARES—COMBINATION**  
 Lufkin Rule Co. 278  
 Stanley Works 87  
 L. S. Starrett Co. 271

**SQUARES—STEEL**  
 Jos. T. Ryerson & Son 220  
 Stanley Works 87  
 L. S. Starrett Co. 271  
 Warren-Knight Co. 282

**SQUARES, "T"—See Instruments, Drawing**

**SQUARES—TAKEDOWN**  
 Stanley Works 87  
 L. S. Starrett Co. 271

**SQUARES—TRY AND MITER**  
 Henry Diston & Sons 190  
 Lufkin Rule Co. 278  
 L. S. Starrett Co. 271  
 Stanley Works 87

**STABLE FIXTURES—See Fixtures**

**STACK PLATES—See Plates**

**STAINED SHINGLES—See Roofing**

**STAINS—CEMENT**  
 Samuel Cabot, Inc. 218  
 Clinton Metallic Paint Co. 300  
 Standard Varnish Works 91  
 Toch Brothers 91  
 Truscon Laboratories 72

**STAINS—SHINGLE**  
 Samuel Cabot, Inc. 218  
 Clinton Metallic Paint Co. 300  
 Ruberoid Co. 101  
 Sherwin-Williams Co. 213  
 Toch Brothers, Inc. 91  
 Truscon Laboratories 72  
 Wetherhead Stained Shingles Co., Inc. 298  
 Weyerhaeuser Forest Products 44

**STAINS—WOOD**  
 Samuel Cabot, Inc. 218  
 S. C. Johnson & Son 173  
 Sherwin-Williams Co. 213  
 Standard Varnish Works 91  
 Toch Brothers 91  
 Truscon Laboratories 72

**STAIRS—DISAPPEARING AND MOVABLE**  
 The Bessler Disappearing Stairway Co. 24-25  
 Disappearing Stairway Co. 362  
 Frasier Stair Co. 352  
 Marschke Co. 367  
 Stairway Mfg. Co. 369

**STAIRS—STEEL**  
 Bessler Disappearing Stairway Co. 24-25  
 International Steel & Iron Co. 304  
 Fred J. Meyers Mfg. Co. 367  
 Morton Mfg. Co. 59  
 Joseph T. Ryerson & Son 220

**STAIRS—WOOD**  
 Bessler Disappearing Stairway Co. 24-25  
 Curtis Co. 61  
 Paine Lumber Co. 93  
 West Coast Lbr. Trade Extension Bureau 58

**STAIR GAUGES—See Gauges**

**STAIR RAIL FILLETS—See Millwork, Wholesale**

**STAIR TREADS—See Treads**

**STAIRWAYS—METAL**  
 International Steel & Iron Co. 304  
 Geo. L. Mesker & Co. 315  
 Fred J. Meyers Mfg. Co. 367  
 Oliver Machinery Co. 282

**STAIRWAYS—SLATE**  
 Knickerbocker Slate Corp. 290  
 Slatington Slate Co. 352  
 Slatington-Bangor Slate Syndicate, Inc. 368  
 Structural Slate Co. 358

**STAIRWAYS—WOOD**  
 Bessler Movable Stairway Co. 24-25  
 Curtis Co. 61  
 Paine Lumber Co. 93  
 West Coast Lbr. Trade Extension Bureau 58

**STALLS—SHOWER**  
 Crane Company 52  
 Fiat Metal Mfg. Co. 297  
 Structural Slate Co. 358

**STALLS—TOILET**  
 Crane Company 52  
 Fiat Metal Mfg. Co. 297  
 Johnson Plumbing Supply Co. 352  
 Knickerbocker Slate Corp. 290  
 Marietta Mfg. Co. 304  
 Slatington Slate Co. 352  
 Structural Slate Co. 358

**STALLS—URINAL**  
 Crane Company 52  
 Fiat Metal Mfg. Co. 297  
 Johnson Plumbing Supply Co. 352  
 Knickerbocker Slate Corp. 290  
 Marietta Mfg. Co. 304  
 Slatington Slate Co. 352  
 Structural Slate Co. 358

**STAL GUARDS—See Equipment, Barn**

**STANCHIONS—CATTLE**  
 Hunt-Helm-Ferris & Co. 108  
 J. E. Porter Corp. 8

**STANCHIONS—COLUMN**  
 Donley Bros. Co. 298

**STANDS—BOILER**  
 Donley Bros. Co. 298  
 National Radiator Co. 86

**STEAM HEATING PLANTS—See Heating Systems**

**STEAM HOISTS—See Hoists**

**STEEL—FABRICATED**  
 Heltzel Steel Form & Iron Co. 286  
 Macomber Steel Co. 310  
 Mellich-Hayward Co. 283  
 Geo. L. Mesker & Co. 315  
 Milwaukee Corrugating Co. 374-375  
 Morton Mfg. Co. 59  
 Northfield Iron Co. 364  
 Jos. T. Ryerson & Son 220  
 Truscon Steel Co. 5-90

**STEEL—STRUCTURAL**  
 Heltzel Steel Form & Iron Co. 286  
 International Steel & Iron Co. 304  
 Macomber Steel Co. 310  
 Geo. L. Mesker & Co. 315  
 Fred J. Meyers Mfg. Co. 367  
 Northfield Iron Co. 364  
 Jos. T. Ryerson & Son 220  
 Truscon Steel Co. 5-90

**STEEL AWNINGS—See Awnings**

**STEEL CABLES—See Cables**

**STEEL DOORS—See Doors**

**STEEL GRATINGS—See Gratings**

**STEEL KITCHENS—See Cabinets, Kitchen**

**STEEL SASH VENTILATORS—See Ventilators**

**STEEL SQUARES—See Squares**

**STOCK—DIMENSION**  
 E. L. Bruce Co. 190  
 Shevlin, Carpenter & Clarke Co. 174-175

**STOCK—FIREDOOR**  
 Richards-Wilcox Mfg. Co. 6-7  
 Wheeling Corrugating Co. 104

**STOCK—TANK**  
 Milwaukee Corrugating Co. 374-375  
 Jos. T. Ryerson & Son 220

**STONE—BACKING**  
 Johns-Manville, Inc. 195  
 Truscon Laboratories 72

**STONE—BUILDING**  
 Indiana Limestone Co. 22-23

**STONES—SHARPENING**  
 Carborundum Co. .... 270  
**STONE DRILLS—See Drills**  
**STOPS—BENCH**  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Stanley Works ..... 87  
**STOPS—DOOR**  
 Wm. Bayley Co. .... 314  
 Curtis Co. .... 61  
 W. J. Dennis & Co. .... 369  
 Frantz Mfg. Co. .... 3  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Saggan Derrick Co. .... 284  
 Segal Lock & Hardware Co., Inc. .... 318  
 Stanley Works ..... 87  
 Trimpak Corp. .... 26-27  
**STORAGE BINS—See Bins**  
**STORAGE CABINETS—See Cabinets**  
**STORE FIXTURES—See Fixtures**  
**STORE FRONTS—See Fronts**  
**STORE FRONT VENTILATORS—See Ventilators**  
**STORE LADDERS—See Ladders**  
**STORM DOORS—See Doors**  
**STORM DOOR CHECKS—See Checks**  
**STORM AND SCREEN DOORS, COMBINED—See Doors**  
**STORM SASH—See Sash**  
**STORM SASH FASTENERS—See Hardware, Storm Sash**  
**STORM SASH HANGERS—See Hardware, Storm Sash**  
**STOVES—COAL—See Ranges, Coal**  
**STOVES, GAS—See Ranges, Gas**  
**STONE PIPE—See Pipe**  
**STRAIGHT EDGES**  
 Henry Disston & Sons ..... 199  
 Keuffel & Esser Co. .... 268  
**STEAINERS—SEWER PIPE**  
 Clay Products Assn. .... 294  
 Crane Company ..... 62  
 Donley Bros. Co. .... 298  
 Johnson Plumbing Supply Co. .... 352  
**STEEL HINGES—See Hinges**  
**STRUCTURAL SLATE—See Slate**  
**STRUCTURAL STEEL—See Steel**  
**STUCCO**  
 Johns-Manville, Inc. .... 195  
 U. S. Gypsum Co. .... 67  
**STUCCO—WATERPROOFED**  
 Anti-Hydro Waterproofing Co. .... 296-318  
 Samuel Cabot, Inc. .... 218  
 Ruberoid Co. .... 101  
 Standard Varnish Works ..... 91  
 Toch Brothers ..... 72  
 Truscon Laboratories ..... 72  
 Truscon Steel Co. .... 5-90  
 U. S. Gypsum Co. .... 67  
**STUCCO COLORS—See Colors**  
**STUCCO DASH—See Dash**  
**STUCCO MACHINES—See Machines**  
**STUCCO PAINTS—See Paints**  
**STUCCO REINFORCING—See Reinforcing**  
**STUDS—STEEL**  
 Jos. T. Ryerson & Son ..... 220  
 Truscon Steel Co. .... 5-90  
**STUMP PULLERS—See Pullers**  
**SUN DIALS**  
 A. S. Aloe Co. .... 277  
 Concrete Equipment Co. .... 281-282  
 Geler & Bluhm, Inc. .... 285  
 Warren-Knight Co. .... 282  
**SUPPORTERS—SASH**  
 Austral Window Co. .... 291  
**SURFACE BOLTS—See Bolts**  
**SURFACE HINGES—See Hinges**  
**SURVEYING INSTRUMENTS—See Instruments**  
**SUSPENDED CEILINGS—See Ceilings**  
**SWAGES—SAW**  
 Henry Disston & Sons ..... 199  
 Huther Bros. Saw Mfg. Co. .... 274  
 Ralph M. Kennedy Co. .... 282  
 Oliver Machinery Co. .... 282  
**SWIMMING POOL LADDERS—See Ladders**  
**SWING SAWS—See Saws**  
**SWITCHES—ELECTRIC**  
 Frank Adam Electric Co. .... 361  
 Flint & Walling Mfg. Co. .... 364  
 General Electric Co. .... 9-10-11-12-13-14-15  
 Hart & Hegeman Mfg. Co. .... 42  
 Paramount Electric Co. .... 359  
 Pass & Seymour, Inc. .... 366  
 Syntro Company ..... 267  
**SWITCHES—STAIR TREAD**  
 Stairway Switch Co. ....  
**SWITCH BOXES—See Boxes**  
**SWITCH PLATES—See Plates**  
**"T" SQUARES—See Instruments, Drawing**  
**TABLES, DRAFTING—See Furniture Drafting Room**  
**TABLES, SAW—See Sawrigns**  
**TACKERS, SCREEN AND SHADE**  
 J. B. Crofoot Co. .... 282  
**TAKEDOWN SQUARES—See Squares**  
**TAMPERS, CONCRETE (Hand) See Tools, Cement Workers**  
**TAMPERS, CONCRETE (Machine) See Machines, Tamping**  
**TANKS—CLOSET**  
 Crane Company ..... 52  
 Hardin-Lavin Co. .... 89  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Mfg. Co. .... 308  
 Standard Sanitary Mfg. Co. .... 18-19  
 Stanley Plumbing & Supply Co. .... 358  
 Wheeling Sanitary Mfg. Co. .... 315

**TANKS—GRAIN (Vitrified Clay)**  
 Crane Company ..... 52  
 Edwards Mfg. Co. .... 359  
 Hoosier Bldg. Tile & Silo Co. .... 300  
**TANKS—SEPTIC**  
 Andrews Heating Co. .... 367  
 Chemical Toilet Corp. .... 354-360  
 Crane Company ..... 52  
 Duro Co. .... 63  
 Edwards Mfg. Co. .... 359  
 Hardin-Lavin Co. .... 89  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Mfg. Co. .... 308  
 Structural Slate Co. .... 358  
 Stanley Plumbing & Supply Co. .... 358  
**TANKS—SLATE**  
 Knickerbocker Slate Corp. .... 290  
 Slatington Slate Co. .... 352  
 Slatington-Bangor Slate Syndicate, Inc. .... 368  
 Structural Slate Co. .... 358  
**TANKS—STEEL & IRON**  
 Andrews Heating Co. .... 367  
 Duro Co. .... 63  
 Edwards Mfg. Co. .... 359  
 Flint & Walling Mfg. Co. .... 364  
 Heltzel Steel Form & Iron Co. .... 286  
 Mellish-Hayward Co. .... 283  
 Milwaukee Corrugating Co. .... 374-375  
 Morton Mfg. Co. .... 59  
 National Sheet Metal Roofing Co. .... 364  
 Northfield Iron Co. .... 364  
**TANKS—WATER**  
 American Stove Co. .... 45  
 Andrews Heating Co. .... 367  
 Automatic Electric Heater Co. .... 367  
 Duro Co. .... 63  
 Flint & Walling Mfg. Co. .... 364  
 Hardin-Lavin Co. .... 89  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Mfg. Co. .... 308  
 Mast, Poo & Co. .... 367  
 Mellish-Hayward Co. .... 283  
 Milwaukee Corrugating Co. .... 374-375  
 Ransome Concrete Machinery Co. .... 240  
 Stanley Plumbing & Supply Co. .... 358  
**TANKS—WOOD**  
 Flint & Walling Mfg. Co. .... 364  
 Hoosier Bldg. Tile & Silo Co. .... 300  
**TANK FITTINGS—See Fittings**  
**TANK HEATERS—See Heaters**  
**TANK LUGS—See Lugs**  
**TANK PLATES—See Plates**  
**TANK STOCK—See Stock**  
**TAPES—MEASURING**  
 A. S. Aloe Co. .... 277  
 W. & L. E. Gurley ..... 286  
 Keuffel & Esser Co. .... 268  
 Lufkin Rule Co. .... 278  
 Frederick Post Co. .... 264  
 L. S. Starrett Co. .... 271  
 Warren-Knight Co. .... 282  
**TABBED FELTS—See Felts**  
**TELEPHONE BOOTHS—See Booths**  
**TEMPERATURE REGULATORS—See Thermostats**  
**TENONERS**  
 American Sawmill Machinery Co. .... 255  
 E. L. Carter Co., Inc. .... 274  
 Combination Woodworking Machine Co. .... 286  
 Crescent Machine Co. .... 260  
 De Walt Products Co. .... 259  
 Hutchinson Mfg. Co., Inc. .... 281  
 J. D. Wallace & Co. .... 251-276  
**TERRAZZO RUBBING MACHINES—See Machines**  
**THERMOSTATS**  
 American Radiator Co. .... 192-193  
 Burnham Boiler Corp. .... 82  
 Crane Co. .... 52  
 Majestic Co. .... 56  
 U. S. Radiator Corp. .... 40  
**THIMBLES—CHIMNEY**  
 Clay Products Assn. .... 294  
 Donley Bros. Co. .... 298  
 F. D. Kees Mfg. Co. .... 356  
 Majestic Co. .... 56  
**THIMBLES—FLUE**  
 Clay Products Assn. .... 294  
 Donley Bros. Co. .... 298  
 International Steel & Iron Co. .... 304  
 F. D. Kees Mfg. Co. .... 356  
 Majestic Co. .... 56  
 Milwaukee Corrugating Co. .... 374-375  
**THRESHOLDS—METAL**  
 Donley Brothers Co. .... 298  
 International Steel & Iron Co. .... 304  
 Kawneer Co. .... 65  
 Kuhlman Metal Weatherstrip Co. .... 365  
 Geo. L. Mesker & Co. .... 315  
 Fred J. Meyers Mfg. Co. .... 367  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Jos. T. Ryerson & Son ..... 220  
 Vento Steel Sash Co. .... 311  
 Zouri Drawn Metals Co. .... 46  
**THRESHOLDS—SLATE**  
 Knickerbocker Slate Corp. .... 290  
 Lloyd Floor & Wall Tile Co. .... 364  
 Slatington Slate Co. .... 352  
 Slatington-Bangor Slate Syn., Inc. .... 368  
 Structural Slate Co. .... 358  
**THRESHOLDS—WOOD**  
 Arkansas Oak Flooring Co. .... 296  
 Paine Lumber Co. .... 93  
**TIES—WALL**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 Concrete Form Tile Corp. .... 362  
 Donley Bros. Co. .... 286  
 F. D. Kees Mfg. Co. .... 356

Geo. L. Mesker & Co. .... 315  
 Milwaukee Corrugating Co. .... 374-375  
 Pioneer Fireplace & Supply Co. .... 368  
 Wheeling Metal & Mfg. Co. .... 316  
 Willis Mfg. Co. .... 189  
**TILE—DRAIN (Clay)**  
 Clay Products Assn. .... 294  
 Common Brick Mfrs. Assn. .... 70  
 Hoosier Bldg. Tile & Silo Co. .... 300  
**TILE—DRAIN (Cement)**  
 Consolidated Concrete Mch. Corp. .... 270  
 W. E. Dunn Mfg. Co. .... 222-223  
**TILE—FIBRE**  
 Gibbs Boardtile Corp. .... 30  
 Mason Fibre Company ..... 4  
**TILE—FIREPROOF**  
 Asbestos Shingle, Slate & Sheathing Co. 50  
 National Fireproofing Co. .... 74  
 U. S. Gypsum Co. .... 67  
**TILE—FLOOR AND WALL**  
 Colonial Fireplace Co. .... 289  
 Consolidated Concrete Mch. Corp. .... 270  
 Gibbs Boardtile Co. .... 30  
 Hoosier Bldg. Tile & Silo Co. .... 300  
 Lloyd Floor & Wall Tile Co. .... 364  
 Marietta Mfg. Co. .... 304  
 Miami Cabinet Co. .... 313  
 National Fireproofing Co. .... 74  
 J. D. Strutzell Rubber Co. .... 312  
 Truscon Steel Co. .... 5-90  
 Wright Rubber Products ..... 269  
**TILE—GYPSUM**  
 U. S. Gypsum Company ..... 67  
**TILE—HOLLOW (Clay)**  
 Common Brick Mfrs. Assn. .... 70  
 Hoosier Bldg. Tile & Silo Co. .... 300  
 National Fireproofing Co. .... 74  
**TILE—HOLLOW (Concrete)**  
 W. E. Dunn Mfg. Co. .... 222-223  
**TILE—INTERLOCKING**  
 Edwards Mfg. Co. .... 359  
 Milwaukee Corrugating Co. .... 374-375  
**TILE—PARTITION**  
 Hoosier Bldg. Tile & Silo Co. .... 300  
 National Fireproofing Co. .... 74  
 U. S. Gypsum Co. .... 67  
**TILE—ROOFING—See Roofing**  
**TILE—RUBBER**  
 Goodyear Tile & Rubber Co. .... 61  
 J. D. Strutzell Rubber Co. .... 312  
 Wright Rubber Products ..... 269  
**TILE—SEWER**  
 Clay Products Assn. .... 294  
 Hoosier Bldg. Tile & Silo Co. .... 300  
 National Fireproofing Co. .... 74  
**TILE—SILO**  
 W. E. Dunn Mfg. Co. .... 222-223  
 Hoosier Bldg. Tile & Silo Co. .... 300  
 National Fireproofing Co. .... 74  
**TILE—SLATE**  
 Knickerbocker Slate Corp. .... 290  
 Lloyd Floor & Wall Tile Co. .... 364  
 Slatington Slate Co. .... 352  
 Slatington-Bangor Slate Syn., Inc. .... 368  
 Structural Slate Co. .... 358  
**TILE—STEEL**  
 Edwards Mfg. Co. .... 359  
 Gendre Steel Co. .... 81  
 Milwaukee Corrugating Co. .... 374-375  
 Truscon Steel Co. .... 5-90  
 Wheeling Corrugating Co. .... 304  
 Wheeling Metal & Mfg. Co. .... 316  
**TILE—VITREOUS MARBLE**  
 Marietta Mfg. Co. .... 304  
**TILE PLANTS**  
 Concrete Equipment Co. .... 281-282  
 W. E. Dunn Mfg. Co. .... 222-223  
**TILE CEILINGS—See Ceilings**  
**TILE—FALIENCE—See Falience**  
**TILE HOOKS—See Carriers**  
**TILE SETTING CEMENT—See Cement**  
**TIMBERS—See Lumber, Wholesale**  
**TINCLAD DOORS—See Doors**  
**TINTS—WALL**  
 Clinton Metallic Paint Company ..... 360  
 Gibbs Boardtile Corp. .... 30  
 Lincrusta-Walton Co. .... 310  
 Reardon Company ..... 31  
 Sherwin-Williams Co. .... 298  
 Standard Varnish Works ..... 91  
 U. S. Gypsum Company ..... 67  
**TIRES—AUTO AND TRUCK**  
 Goodyear Tire & Rubber Co. .... 6  
**TOGGLE BOLTS—See Bolts**  
**TOILET STALLS—See Stalls**  
**TOOLS—CARPENTERS**  
 E. L. Carter Co., Inc. .... 274  
 Clarke Sanding Machine Co. .... 30-31  
 Lufkin Rule Co. .... 278  
 North Bros. Mfg. Co. .... 367  
 Stanley Works ..... 87  
 L. S. Starrett Co. .... 271  
**TOOLS—CEMENT WORKERS**  
 A. S. Aloe Company ..... 277  
 Consolidated Concrete Mch. Corp. .... 270  
 Henry Disston & Sons ..... 199  
**TOOLS—MASONS**  
 Henry Disston & Sons, Inc. .... 199  
 Stanley Works ..... 87  
**TOOLS—WEATHERSTRIP**  
 Allmetal Weatherstrip Co. .... 367  
 B. L. Carter Co., Inc. .... 274  
 Diamond Metal Weatherstrip Co. .... 365  
 Federal Metal Weatherstrip Co. .... 365  
 F. L. Rogers & Co. .... 365  
 L. S. Starrett Co. .... 271  
**TOOL BAGS—See Bags**  
**TOOL BOXES—See Boxes**

**TOOL CASES**—See Boxes, Tool  
**TOOL GRINDERS**—See Grinders  
**TOOL SHARPENERS**—See Grinders, Tool  
**TOPS—CHIMNEY**  
 Clay Products Assn. . . . . 294  
 Colonial Fireplace Co. . . . . 285  
 Edwards Mfg. Co. . . . . 359  
 Hoosier Bldg. Tile & Silo Co. . . . . 369  
 International Steel & Iron Co. . . . . 304  
 Milwaukee Corrugating Co. . . . . 374-375  
 Slatington Slate Co. . . . . 352  
**TOWERS—CONCRETE PLACING**  
 Leach Company . . . . . 267  
 Ransome Concrete Machy. Co. . . . . 249  
**TOWERS—STEEL**  
 Flint & Walling Mfg. Co. . . . . 364  
 International Steel & Iron Co. . . . . 304  
 Leach Co. . . . . 267  
 Ransome Concrete Machy. Co. . . . . 249  
 Truscon Steel Co. . . . . 5-90  
**TRACING CLOTH**—See Cloth  
**TRACK, RAY**—See Carriers, Overhead  
**TRACK—SLIDING DOOR**  
 Frantz Mfg. Co. . . . . 3  
 Hunt-Helm-Ferris & Co. . . . . 108  
 Kawneer Company . . . . . 65  
 Knape & Vogt Mfg. Co. . . . . 293  
 McKinney Manufacturing Co. . . . . 114  
 National Mfg. Co. . . . . 376  
 Overhead Door Corp. . . . . 75  
 J. E. Porter Corp. . . . . 8  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 Stanley Works . . . . . 87  
 Willis Mfg. Co. . . . . 109  
**TRACK BRACKETS**—See Brackets  
**TRAMMELS**  
 Stanley Works . . . . . 87  
 L. S. Starrett Co. . . . . 271  
**TRANSITS**  
 A. S. Aloe Company . . . . . 277  
 L. Beckmann Co. . . . . 283  
 Charles Brunning Co., Inc. . . . . 368  
 Geier & Blum, Inc. . . . . 285  
 W. & L. E. Gurley . . . . . 266  
 Keufel & Esser Co. . . . . 268  
 Frederick Post Co. . . . . 264  
 L. S. Starrett Co. . . . . 271  
 Warren-Knight Co. . . . . 282  
 David White Co. . . . . 357  
**TRANSMISSION MACHINERY**—  
 See Machinery  
**TRANSOM CHAINS**—See Chains  
**TRANSOM HARDWARE**—See Hardware  
**TRANSOM LIFTS**—See Hardware, Transom  
**TRANSOM VENTILATORS**—See Ventilators  
**TRAPS—BATH**  
 Crane Co. . . . . 52  
 Donley Bros. Co. . . . . 298  
 Hardin-Lavin Co. . . . . 89  
 Johnson Plumbing Supply Co. . . . . 352  
 B. Karol & Sons Co. . . . . 308  
 Standard Sanitary Mfg. Co. . . . . 18-19  
 Stanley Plumbing & Supply Co. . . . . 358  
**TRAPS—CESSPOOL**  
 Crane Co. . . . . 52  
 Donley Bros. Co. . . . . 298  
 Hardin-Lavin Co. . . . . 89  
 Johnson Plumbing Supply Co. . . . . 352  
 B. Karol & Sons Co. . . . . 308  
 Stanley Plumbing & Supply Co. . . . . 358  
**TRAPS—REFRIGERATOR**  
 Donley Bros. Co. . . . . 298  
 Hardin-Lavin Co. . . . . 89  
 Johnson Plumbing Supply Co. . . . . 352  
 B. Karol & Sons Co. . . . . 308  
 Stanley Plumbing & Supply Co. . . . . 358  
**TRAYS—LAUNDRY**  
 A. Cheney & Son . . . . . 282  
 Crane Co. . . . . 52  
 Hardin-Lavin Co. . . . . 89  
 Ingram-Richardson Mfg. Co. . . . . 45  
 Johnson Plumbing Supply Co. . . . . 352  
 B. Karol & Sons Co. . . . . 308  
 Slatington Slate Co. . . . . 352  
 Standard Sanitary Mfg. Co. . . . . 18-19  
 Stanley Plumbing & Supply Co. . . . . 358  
 Structural Slate Co. . . . . 358  
 Wheeling Sanitary Mfg. Co. . . . . 215  
**TREADS—STAIR**  
 Curtis Companies . . . . . 61  
 International Steel & Iron Co. . . . . 304  
 Geo. L. Mesker & Co. . . . . 315  
 Morton Mfg. Co. . . . . 59  
 Paine Lumber Co. . . . . 93  
 Jos. T. Ryerson & Son . . . . . 220  
 Structural Slate Co. . . . . 358  
 Weyerhaeuser Forest Products . . . . . 44  
 Wright Rubber Products Co. . . . . 380  
**TRENCH FILLERS**—See Fillers  
**TRESTLES**  
 International Steel & Iron Co. . . . . 304  
 Steel Scaffolding Co. . . . . 261  
 Taylor Collapsible Horse Co. . . . . 286  
 Warren-Knight Co. . . . . 282  
**TRIANGLES**—See Instruments, Drawing  
**TRIM—DOOR**  
 Colonial Hardware Mfrs. . . . . 364  
 Curtis Companies . . . . . 61  
 Genfire Steel Co. . . . . 80  
 Kalman Steel Co. . . . . 70  
 Kawneer Company . . . . . 65  
 Milwaukee Corrugating Co. . . . . 374-375

Paine Lumber Co. . . . . 93  
 Segal Lock & Hdwe. Co. . . . . 318  
 Trimpak Corporation . . . . . 26-27  
 Vitrolite Co. . . . .  
**TRIM—INTERIOR (Hardwood)**  
 Arkansas Oak Flooring Co. . . . . 293  
 Birch Manufacturers . . . . . 353  
 E. L. Bruce Company . . . . . 190  
 Curtis Companies . . . . . 61  
 Paine Lumber Company . . . . . 93  
 Trimpak Corporation . . . . . 26-27  
**TRIM—INTERIOR (Metal)**  
 Edwards Mfg. Co. . . . . 359  
 Genfire Steel Co. . . . . 80  
 Kalman Steel Co. . . . . 70  
 Kawneer Company . . . . . 65  
 Milwaukee Corrugating Co. . . . . 374-375  
 Truscon Steel Co. . . . . 5-90  
 Wheeling Corrugating Co. . . . . 104  
**TRIM—INTERIOR (Pine)**  
 Curtis Companies . . . . . 61  
 Paine Lumber Co. . . . . 93  
 Shevlin, Carpenter & Clarke Co. . . . . 174-175  
 Trimpak Corporation . . . . . 26-27  
 Weyerhaeuser Forest Products . . . . . 44  
**TRIM—INTERIOR (Slate)**  
 Knickerbocker Slate Corp. . . . . 290  
 Slatington Slate Company . . . . . 352  
 Structural Slate Co. . . . . 358  
**TRIM—INTERIOR (Tile)**  
 Asbestos Shingle, Slate & Sheathing Co. . . . . 50  
 Gibbs Boardtile Corp. . . . . 30  
 Hoosier Bldg. Tile & Silo Co. . . . . 369  
 Marietta Mfg. Co. . . . . 304  
 J. D. Strutzel Rubber Co. . . . . 312  
**TRIM—WINDOW**  
 Curtis Companies, Inc. . . . . 61  
 Genfire Steel Company . . . . . 80  
 Kalman Steel Company . . . . . 70  
 Marietta Mfg. Co. . . . . 304  
 Milwaukee Corrugating Co. . . . . 374-375  
 Paine Lumber Co., Ltd. . . . . 93  
 Trimpak Corporation . . . . . 26-27  
 Truscon Steel Co. . . . . 5-90  
**TROLLEYS AND TRAMWAYS**  
 American Steel & Wire Co. . . . . 292  
 Hunt-Helm-Ferris & Co. . . . . 108  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
**TRUCKS—BAG**  
 Bates Valve Bag Corp. . . . . 38  
**TRUCKS—HAND**  
 Lansing Company . . . . . 256  
 McKinney Manufacturing Co. . . . . 114  
**TRUCKS—MOTOR**  
 Chevrolet Motor Co. . . . . 243  
 Federal Motor Truck Co. . . . . 246  
 Graham Brothers . . . . . 244  
 International Harvester Co. of America . . . . . 241  
**TRUSSES—ROOF (Steel)**  
 Hoosier Bldg. Tile & Silo Co. . . . . 369  
 International Steel & Iron Co. . . . . 304  
 Macomber Steel Co. . . . . 310  
 Geo. L. Mesker & Co. . . . . 315  
 Jos. T. Ryerson & Son . . . . . 220  
**TRUSSES—ROOF (Wood)**  
 West Coast Lbr. Tr. Ext. Bureau . . . . . 58  
**TEY AND MITER SQUARES**—See Squares  
**TUBS—BATH**  
 Andrews Heating Co. . . . . 367  
 Crane Co. . . . . 52  
 Hardin-Lavin Co. . . . . 89  
 Johnson Plumbing Supply Co. . . . . 352  
 B. Karol & Sons Co. . . . . 308  
 Roberts Metallic Bathing Co. . . . . 350  
 Standard Sanitary Mfg. Co. . . . . 18-19  
 Stanley Plumbing & Supply Co. . . . . 358  
 Wheeling Sanitary Mfg. Co. . . . . 215  
**TUBS—LAUNDRY**  
 Crane Company . . . . . 52  
 Slatington Slate Company . . . . . 352  
 Standard Sanitary Mfg. Co. . . . . 18-19  
 Structural Slate Co. . . . . 358  
 Wheeling Sanitary Mfg. Co. . . . . 215  
**TUBENTABLES—AUTO**  
 Northfield Iron Co. . . . . 364  
**TWIST DRILLS**—See Drills  
**UNBREAKABLE GLASS**—See Glass  
**URINALS**  
 Crane Company . . . . . 52  
 Johnson Plumbing Supply Co. . . . . 352  
 B. Karol & Sons Co. . . . . 308  
 Slatington Slate Company . . . . . 352  
 Standard Sanitary Mfg. Co. . . . . 18-19  
 Structural Slate Co. . . . . 358  
 Wheeling Sanitary Mfg. Co. . . . . 215  
**URINAL STALLS**—See Stalls  
**VAPOR SYSTEM HEATING PLANTS**  
 —See Heating Systems  
**VALVES—RADIATOR**  
 American Chain Co. . . . . 105  
 American Radiator Co. . . . . 192-193  
 Burnham Boiler Corp. . . . . 82  
 Crane Company . . . . . 89  
 Hardin-Lavin Co. . . . . 89  
 Johnson Plumbing Supply Co. . . . . 352  
 B. Karol & Sons Co. . . . . 308  
 National Radiator Co. . . . . 98  
 Stanley Plumbing & Supply Co. . . . . 358  
 Trans Company . . . . . 43  
 United States Radiator Corp. . . . . 40  
**VALVES—WATER MIXING**  
 Crane Company . . . . . 52  
 Hardin-Lavin Company . . . . . 89  
 Johnson Plumbing Supply Co. . . . . 352  
 Standard Sanitary Mfg. Co. . . . . 18-19  
 Stanley Plumbing & Supply Co. . . . . 358

**VARNISHES**  
 S. C. Johnson & Son . . . . . 178  
 Sherwin-Williams Co. . . . . 213  
 Standard Varnish Works . . . . . 91  
 Toch Brothers, Inc. . . . . 92  
 Truscon Laboratories . . . . . 78  
**VARNISH REMOVERS**—See Removers  
**VAULTS—SEPTIC CLOSET**—See Tanks, Septic  
**VENEERS—WOOD**  
 Birch Manufacturers . . . . . 353  
 Mason Fibre Company . . . . . 47  
 Paine Lumber Co. . . . . 93  
 West Coast Lbr. Tr. Ext. Bureau . . . . . 58  
**VENTILATING GRILLES**—See Grilles  
**VENTILATION LOCKS**—See Locks  
**VENTILATORS—KITCHEN**  
 Ilg Electric Ventilating Co. . . . . 71  
 Mellish-Hayward Company . . . . . 283  
**VENTILATORS—ROOF**  
 Wm. Bayley Co. . . . . 314  
 Edwards Mfg. Co. . . . . 359  
 Globe Ventilator Co. . . . . 355  
 Hoosier Bldg. Tile & Silo Co. . . . . 369  
 Hunt, Helm, Ferris & Co. . . . . 108  
 Ilg Electric Ventilating Co. . . . . 71  
 International Steel & Iron Co. . . . . 304  
 Johns-Manville, Inc. . . . . 195  
 David Lupton's Sons Co. . . . . 76  
 Mellish-Hayward Co. . . . . 283  
 Geo. L. Mesker & Co. . . . . 315  
 Milwaukee Corrugating Co. . . . . 374-375  
 J. E. Porter Corp. . . . . 8  
 Wheeling Metal & Mfg. Co. . . . . 316  
 Willis Mfg. Co. . . . . 109  
**VENTILATORS—SIDEWALK**  
 Edwards Mfg. Co. . . . . 359  
 International Steel & Iron Co. . . . . 304  
**VENTILATORS—STEEL SASH**  
 Wm. Bayley Co. . . . . 314  
 Detroit Steel Ptds. Co. . . . . 210-211  
 Edwards Mfg. Co. . . . . 359  
 Genfire Steel Co. . . . . 80  
 International Steel & Iron Co. . . . . 304  
 David Lupton's Sons Co. . . . . 76  
 Geo. L. Mesker & Co. . . . . 315  
 Truscon Steel Co. . . . . 5-90  
 Vento Steel Sash Co. . . . . 311  
**VENTILATORS—STORE FRONT**  
 Edwards Mfg. Co. . . . . 359  
 International Steel & Iron Co. . . . . 304  
 Kawneer Company . . . . . 65  
 David Lupton's Sons Co. . . . . 76  
 Zouri Drawn Metals Co. . . . . 46  
**VENTILATORS—TRANSOM**  
 Hitchings & Company . . . . . 295  
 Ilg Electric Ventilating Co. . . . . 71  
**VENTILATORS—WALL**  
 Wm. Bayley Co. . . . . 314  
 Donley Brothers Co. . . . . 298  
 Ilg Electric Ventilating Co. . . . . 71  
**VENTILATORS—WINDOW**  
 Allmetal Weatherstrip Co. . . . . 367  
 Wm. Bayley Co. . . . . 314  
 Ilg Electric Ventilating Co. . . . . 71  
 International Steel & Iron Co. . . . . 304  
 Kawneer Company . . . . . 65  
 Perfection Co. . . . . 363  
 Vento Steel Sash Co. . . . . 311  
**VICES—BENCH**  
 North Bros. Mfg. Co. . . . . 280  
 Oliver Mch. Co. . . . . 282  
 Richards-Wilcox Mfg. Co. . . . . 6-7  
 Jos. T. Ryerson & Son . . . . . 220  
 Stanley Works . . . . . 87  
 L. S. Starrett Company . . . . . 271  
**VICES—SAW**  
 Henry Disston & Sons, Inc. . . . . 199  
 Huther Bros. Saw Mfg. Co. . . . . 274  
 Ralph M. Kennedy . . . . . 282  
 Oliver Machinery Co. . . . . 282  
**WAINSCOTING—SLATE**  
 Knickerbocker Slate Corp. . . . . 290  
 Lloyd Floor & Wall Tile Co. . . . . 364  
 Slatington Slate Co. . . . . 352  
 Slatington-Bangor Slate Syn. Inc. . . . . 368  
 Structural Slate Co. . . . . 358  
**WAINSCOTING—TILE**  
 Asbestos Shingle, Slate & Sheathing Co. . . . . 50  
 Gibbs Boardtile Corp. . . . . 30  
 Hoosier Bldg. Tile & Silo Co. . . . . 369  
 Lloyd Floor & Wall Tile Co. . . . . 364  
 J. D. Strutzel Rubber Co. . . . . 312  
**WAINSCOTING—VITREOUS**  
**MARBLE**  
 Marietta Manufacturing Co. . . . . 304  
**WALK GATES**—See Gates  
**WALL ANCHORS**—See Anchors  
**WALL BOARD**—See Boards, Wall  
**WALL BOXES**—See Boxes  
**WALL BRACKETS**—See Brackets  
**WALL COPING**—See Coping  
**WALL COVERINGS**—See Coverings  
**WALL FINISH**—See Finish  
**WALL FORMS**—See Forms and Molds  
**WALL FURRING**—See Furring  
**WALL HANGERS**—See Hangers  
**WALL LINING**—See Lining  
**WALL MACHINES, CONCRETE**—  
 See Machines  
**WALL ORNAMENTS**—See Orna-  
 ments  
**WALLPAPER**—See Paper  
**WALL PLASTER**—See Plaster  
**WALL PLATES**—See Plates

**WALL PLUGS**—See Plugs  
**WALL REGISTERS**—See Registers  
**WALL SAFES**—See Safes  
**WALL TIES**—See Ties  
**WALL TILE**—See Tile, Floor and Wall  
**WALL TINTS**—See Tints  
**WALL VENTILATORS**—See Ventilators  
**WALL WINDOWS**—See Windows  
**WARDROBES—BUILT-IN**  
 E. M. Morris & Co. .... 365  
**WARDROBE FIXTURES**—See Fixtures  
**WARM AIR FURNACES**—See Heating Systems  
**WASH STANDS**  
 Hardin-Lavin Co. .... 89  
 Standard Sanitary Mfg. Co. .... 18-19  
 Stanley Plumbing & Supply Co. .... 358  
 Wheeling Sanitary Mfg. Co. .... 215  
**WATER CLOSETS**—See Closets  
**WATER FILTERS**—See Filters  
**WATER HEATERS**—See Heaters  
**WATER-MIXING VALVES**—See Valves  
**WATER REGULATORS**—See Regulators  
**WATER SOFTENERS**—See Softeners  
**WATER TANKS**—See Tanks  
**WATERPROOF COVERINGS**—See Coverings  
**WATERPROOFED STUCCO**—See Stucco  
**WATERPROOFING—BRICK**  
 Anti-Hydro Waterproofing Co. .... 296-318  
 Barber Asphalt Co. .... 113  
 Samuel Cabot, Inc. .... 218  
 Philip Carey Company ..... 106  
 Donley Brothers Co. .... 298  
 Genfre Steel Co. .... 80  
 Sherwin-Williams Co. .... 213  
 Toch Brothers, Inc. .... 91  
 Truscon Laboratories ..... 72  
**WATERPROOFING—CEMENT**  
 Anti-Hydro Waterproofing Co. .... 296-318  
 Bique Weatherstripping & Caulking Co. .... 362  
 Samuel Cabot, Inc. .... 218  
 Philip Carey Co. .... 106  
 Genfre Steel Co. .... 80  
 Johns-Manville, Inc. .... 195  
 H. B. Fred Kuhls ..... 84  
 Lincoln-Schleuter Mch. Co. .... 252  
 Lloyd Floor & Wall Tile Company ..... 364  
 Reardon Company ..... 31  
 Ruberoid Co. .... 101  
 Sherwin-Williams Co. .... 213  
 Solvay Process Co. .... 110  
 Standard Varnish Works ..... 91  
 Toch Brothers ..... 91  
 Truscon Laboratories ..... 72  
**WATERPROOFING—LIME**  
 Genfre Steel Co. .... 80  
 Sherwin-Williams Co. .... 213  
 Toch Brothers ..... 91  
 Truscon Laboratories ..... 72  
**WATER SUPPLY SYSTEMS**  
 Andrews Heating Co. .... 397  
 Crane Company ..... 52  
 Delco-Light Co. .... 263  
 Duro Company ..... 63  
 Flint & Walling Mfg. Co. .... 364  
 Ft. Wayne Mfg. & Eng. Co. .... 354  
 Hardin-Lavin Co. .... 89  
 Johnson Plumbing Supply Co. .... 352  
 B. Karol & Sons Co. .... 308  
 Mast, Foss & Co. .... 397  
 Milwaukee Air Power Pump Co. .... 316  
 F. E. Myers & Bros. Co. .... 221  
 Standard Sanitary Mfg. Co. .... 18-19  
 Stanley Plumbing & Supply Co. .... 358  
**WAX—FLOOR**  
 A. S. Aloe Company ..... 277  
 Electric Rotary Mch. Co. .... 272  
 S. C. Johnson & Son ..... 173  
 Kent Company ..... 270  
 Sherwin-Williams Co. .... 213  
**WAXING MACHINES**—See Machines  
**WEATHERSTRIPS**  
 Allmetal Weatherstrip Co. .... 367  
 Athey Company ..... 368  
 Atlas Weatherstrip Co. .... 366  
 Bique Weatherstripping & Caulking Co. .... 362  
 Ceco Weatherstrip Co. .... 364  
 W. J. Dennis & Co. .... 369  
 Diamond Metal Weatherstrip Co. .... 289  
 Federal Metal W. S. Co. .... 369  
 Higgin Mfg. Co. .... 301  
 Kuhlmann Metal Weather Strip Co. .... 365  
**WEATHERSTRIP TOOLS**—See Tools  
**WELL PIPE**—See Pipe  
**WHEELBARROWS**—All Kinds  
 A. S. Aloe Co. .... 277  
 Lansing Co. .... 256  
 Sterling Wheelbarrow Co. .... 238  
**WHEELS—GRINDING**  
 Carborundum Company ..... 279  
**WHEEL GUARDS**—See Guards  
**WINCHES**  
 Chain Belt Company ..... 2  
 Elite Manufacturing Co. .... 276  
 Sagsen Derrick Co. .... 284  
 Sidney Elevator Mfg. Co. .... 286  
 Stimmell Winch & Machine Wks. .... 284  
**WINDLASSES**  
 Stimmell Winch & Machine Works. .... 284

**WINDMILLS**  
 Flint & Walling Mfg. Co. .... 364  
**WINDOWS—CASEMENT (Nickel Silver)**  
 Kawneer Company ..... 65  
**WINDOWS—CASEMENT (Steel)**  
 William Bayley Co. .... 314  
 Detroit Steel Pkts. Co. .... 210-211  
 Edwards Mfg. Co. .... 359  
 Genfre Steel Co. .... 80  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 International Casement Co. .... 53  
 International Steel & Iron Co. .... 304  
 Kawneer Co. .... 65  
 David Lupton's Sons Co. .... 76  
 Macomber Steel Co. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Richards-Wilcox Mfg. Co. .... 6-7  
 Jos. T. Ryerson & Son ..... 220  
 Truscon Steel Co. .... 5-90  
**WINDOWS—CASEMENT (Wood)**  
 Curtis Companies ..... 61  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 Paine Lbr. Company ..... 93  
 Premier Standardized Woodwork ..... 294  
 West Coast Lbr. Tr. Ex. Bureau. .... 58  
 Wheeler-Osgood Co. .... 35-36  
**WINDOWS—CELLAR**—See Frames, Cellar  
**WINDOWS—COTTAGE (Steel)**  
 Wm. Bayley Co. .... 314  
 Detroit Steel Pkts. Co. .... 210-211  
 Edwards Mfg. Co. .... 359  
 Genfre Steel Co. .... 80  
 International Steel & Iron Co. .... 304  
 Kawneer Co. .... 65  
 David Lupton's Sons Co. .... 76  
 Geo. L. Mesker & Co. .... 315  
 Truscon Steel Co. .... 5-90  
 Vento Steel Sash Co. .... 311  
**WINDOWS—COTTAGE (Wood)**  
 Curtis Companies ..... 61  
 Paine Lumber Company ..... 93  
 West Coast Lbr. Tr. Ex. Bureau. .... 58  
 Wheeler Osgood Co. .... 35-36  
**WINDOWS—DOUBLE-ACTING**  
 Wm. Bayley Co. .... 314  
 Curtis Companies, Inc. .... 61  
 Kawneer Company ..... 65  
 David Lupton's Sons Co. .... 76  
 Paine Lbr. Co., Ltd. .... 93  
 Premier Standardized Woodwork ..... 294  
 Truscon Steel Company ..... 5-90  
**WINDOWS—FACTORY (Steel)**  
 Wm. Bayley Co. .... 314  
 Detroit Steel Pkts. Co. .... 210-211  
 Edwards Mfg. Co. .... 359  
 Genfre Steel Co. .... 80  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 International Steel & Iron Co. .... 304  
 David Lupton's Sons Co. .... 76  
 Macomber Steel Co. .... 310  
 Geo. L. Mesker & Co. .... 315  
 Milwaukee Corrugating Co. .... 374-375  
 Truscon Steel Co. .... 5-90  
 Vento Steel Sash Co. .... 311  
**WINDOWS—GARAGE (Steel)**  
 Wm. Bayley Co. .... 314  
 Detroit Steel Products Co. .... 210-211  
 Edwards Mfg. Co. .... 359  
 Genfre Steel Company ..... 80  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 International Steel & Iron Co. .... 304  
 Kawneer Co. .... 65  
 David Lupton's Sons Co. .... 76  
 International Steel & Iron Co. .... 304  
 Macomber Steel Company ..... 310  
 Geo. L. Mesker & Co. .... 315  
 Jos. T. Ryerson & Son ..... 220  
 Truscon Steel Co. .... 5-90  
 Vento Steel Sash Co. .... 311  
**WINDOWS—GARAGE (Wood)**  
 Curtis Companies ..... 61  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 International Steel & Iron Co. .... 304  
 Paine Lumber Co. .... 93  
 West Coast Lbr. Tr. Ex. Bureau. .... 58  
 Wheeler, Osgood & Co. .... 35-36  
**WINDOWS—HOGHOUSE (Steel)**  
 Wm. Bayley Company ..... 314  
 Detroit Steel Products Co. .... 210-211  
 Hoosier Bldg. Tile & Silo Co. .... 369  
 International Steel & Iron Co. .... 304  
 David Lupton's Sons Co. .... 76  
 Milwaukee Corrugating Co. .... 374-375  
 J. E. Porter Corp. .... 9  
 Truscon Steel Co. .... 5-90  
 Vento Steel Sash Co. .... 311  
 Willis Mfg. Co. .... 109  
**WINDOWS—HOLLOW METAL**  
 Edwards Mfg. Co. .... 359  
 International Steel & Iron Co. .... 304  
 Kawneer Company ..... 65  
 Leonard Sheet Metal Works. .... 356  
 David Lupton's Sons Co. .... 76  
 Geo. L. Mesker & Co. .... 315  
 Milwaukee Corrugating Co. .... 374-375  
 Truscon Steel Co. .... 5-90  
 Willis Manufacturing Company ..... 109  
 Zouri Drawn Metals Co. .... 46  
**WINDOWS—PUTTYLESS**  
 Edwards Mfg. Co. .... 359  
 Vento Steel Sash Co. .... 311  
**WINDOWS—REVERSIBLE (Metal)**  
 Wm. Bayley Co. .... 314  
 Detroit Steel Products Co. .... 210-211  
 International Steel & Iron Co. .... 304  
 Kawneer Company ..... 65  
 David Lupton's Sons Co. .... 76  
 Geo. L. Mesker & Co. .... 315

Milwaukee Corrugating Co. .... 374-375  
 Truscon Steel Co. .... 5-90  
**WINDOWS—REVERSIBLE (Wood)**  
 Austral Window Co. .... 291  
 West Coast Lbr. Tr. Ex. Bureau. .... 58  
**WINDOWS—ROOF (Steel)**  
 Wm. Bayley Co. .... 314  
 Edwards Mfg. Co. .... 359  
 Genfre Steel Co. .... 80  
 David Lupton's Sons Co. .... 76  
 Milwaukee Corrugating Co. .... 374-375  
 J. E. Porter Corp. .... 9  
 Joseph T. Ryerson & Son ..... 220  
 Truscon Steel Company ..... 5-90  
 Willis Mfg. Company ..... 109  
**WINDOWS—ROOF (Wood)**  
 Curtis Companies ..... 61  
 West Coast Lbr. Tr. Ex. Bureau. .... 58  
**WINDOWS—WALL (Steel)**  
 Wm. Bayley Company ..... 314  
 International Steel & Iron Co. .... 304  
 David Lupton's Sons Co. .... 76  
 Macomber Steel Co. .... 310  
 Jos. T. Ryerson & Son ..... 220  
 Truscon Steel Co. .... 5-90  
 Vento Steel Sash Co. .... 311  
 Willis Mfg. Co. .... 109  
**WINDOWS—WIRE GLASS**  
 Wm. Bayley Co. .... 314  
 David Lupton's Sons Co. .... 76  
 Milwaukee Corrugating Co. .... 374-375  
 Mississippi Wire Glass Co. .... 181  
 Truscon Steel Co. .... 5-90  
 Willis Mfg. Co. .... 109  
**WINDOW CASINGS**—See Frames, Sash  
**WINDOW CATCHES**—See Hardware, Sash  
**WINDOW FRAMES**—See Frames, Sash  
**WINDOW GLASS**—See Glass  
**WINDOW GUARDS**—See Guards  
**WINDOW SCREENS**—See Screens  
**WINDOW SCREEN FASTENERS**—See Hangers, Screen  
**WINDOW SHADES**—See Shades  
**WINDOW TRIM**—See Trim  
**WINDOW VENTILATORS**—See Ventilators  
**WIRE—Insulated**  
 American Chain Co., Inc. .... 106  
 American Steel & Wire Co. .... 292  
 Chase Metal Works ..... 112  
 General Electric Co. .... 9-10-11-12-13-14-15  
 National Steel Fabric Co. .... 28-29  
 Paramount Electric Co. .... 359  
 Jos. T. Ryerson & Son ..... 220  
 Wheeling Corrugating Co. .... 104  
 Wheeling Metal & Mfg. Co. .... 314  
**WIRE CLOTH**—See Cloth  
**WIRE DOORS**—See Doors  
**WIRE GLASS**—See Glass  
**WIRE GRATINGS**—See Gratings  
**WIRE NETTING**—See Netting  
**WIRE ROPE**—See Rope  
**WIRE ROPE CLIPS**—See Clips  
**WIRE SCREENING**—See Cloth, Screen, Also Cloth, Wire  
**WOOD CEILINGS**—See Ceilings  
**WOOD COLUMNS**—See Columns  
**WOOD FILLERS**—See Fillers  
**WOOD PLANERS**—See Planers  
**WOOD PRESERVATIVES**—See Preservatives  
**WOOD SHINGLES**—See Roofing  
**WOOD STAINS**—See Stains  
**WOODWORK**  
 Birch Mfrs. .... 339  
 Curtis Companies ..... 61  
 Paine Lumber Co. .... 93  
 Premier Standardized Woodwork ..... 294  
 West Coast Lbr. Tr. Ex. Bureau. .... 58  
**WOODWORKERS—COMBINATION**  
 A. S. Aloe Company ..... 277  
 American Sawmill Mch. Co. .... 256  
 W. B. & J. H. Bolce ..... 296  
 Combination Woodworking Mch. Co. .... 290  
 Crescent Machine Co. .... 290  
 De Walt Products Co. .... 290  
 Baskay Mfg. Co. .... 279  
 Gallmeyer & Livingston Co. .... 281  
 Hutchinson Mfg. Co., Inc. .... 284  
 Jones Superior Machine Co. .... 292  
 Ralph M. Kennedy ..... 287  
 Kornau Machine Co. .... 287  
 Leach Company ..... 287  
 D. W. Onan & Sons ..... 278  
 Parks Woodworking Mch. Co. .... 278  
 Safe Tool Mfg. Co. .... 277  
 Scott-Bansbach Mch. Co. .... 278  
 Sidney Machine Tool Co. .... 278  
 20th Century Sales Agency ..... 278  
 J. D. Wallace & Co. .... 251-278  
**WOODWORKING JOINTERS**—See Jointers  
**WOODWORKING MACHINERY**—See Machinery  
**WOOL—MINERAL**  
 Standard Sanitary Mfg. Company ..... 18-19  
 U. S. Mineral Wool Company ..... 187  
**WRECKING BARS**—See Bars  
**WRENCHES**  
 Crane Company ..... 4  
 Hart & Hegeman Mfg. Company ..... 6  
 Joseph T. Ryerson & Son ..... 220  
 Standard Sanitary Mfg. Company ..... 18-19  
 L. S. Starrett Company ..... 271  
**ZINC NAILS**—See Nails, Roofing  
**ZINC PAINT PASTE**—See Paste



# INDEX OF TRADE NAMES

American Builder's Quick Reference List of Leading Trade Names and Special Brands of Manufacturers of Building Materials, Contractors' Equipment and Machinery, Home Conveniences, Tools, etc., Represented in This Annual Reference Number

See Advertisers' Index, Pages 371 and 373, for Advertisements of These Concerns in This Issue

- ABESTONE Felt Roofing, H. W. Johns-Manville Co., New York, N. Y.
- ACCELO Anti-Freeze Solution, Anti-Hydro Waterproofing Co., Newark, N. J.
- ACCO Sash Chain, American Chain Co., Inc., Bridgeport, Conn.
- ACKERMAN-JOHNSON Expansion Screw Anchors, Ackerman-Johnson Co., Chicago.
- ACME Clothes Lines, Samson Cordage Works, Boston, Mass.
- ADAMANT Plaster Board, U. S. Gypsum Co., Chicago, Ill.
- ADAMSTON Flat Glass, Adamston Flat Glass Co., Clarksburg, W. Va.
- ADMIRALTY Tubing, Chase Companies, Inc., Waterbury, Conn.
- ADVANCE Concrete Machines, Lansing Co., Lansing, Mich.
- ADVANCE Pumps, F. E. Myers & Bro. Co., The, Ashland, Ohio.
- AERO Radiators, National Radiator Co., Johnstown, Pa.
- ALBINA Sash Cord, Samson Cordage Works, Boston, Mass.
- AGATEX Chemical Cement Floor Hardener, The Truscon Laboratories, Detroit, Mich.
- AGLIS Quick Compression Faucets, Crane Co., Chicago, Ill.
- AGLIS JR. Quick Compression Faucets, Crane Co., Chicago, Ill.
- AIKEN Saw Sets, Sargent & Co., New Haven, Conn.
- AIR-WAY Casement Window Hardware, Richards-Wilcox Mfg. Co., Aurora, Ill.
- AJAX Sheathing and Roofing Brackets, Ajax Building Bracket Co., Cleveland Heights, O.
- AJAX High Grade Coil, Log and Dredge Chains, American Chain Co., Inc., Bridgeport, Conn.
- AJAX Insulating Compounds, Sherwin-Williams Co., Cleveland, Ohio.
- AJAX Saw Mill Dogs, American Saw Mill Machinery Co., Hackettstown, N. J.
- AJAX Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.
- ALABASTER Wall Plasters, U. S. Gypsum Co., Chicago, Ill.
- ALABAX Lighting Fixtures, Pass & Seymour, Inc., Syracuse, N. Y.
- ALBA Tracing Paper, Keuffel & Esser Co., Hoboken, N. J.
- ALBANIAN Transparent Pencil Tracing Cloth, Keuffel & Esser Co., Hoboken, N. J.
- ALCOVE Drinking Fountains, Crane Co., Chicago, Ill.
- ALEXANDRIA Baths, Crane Co., Chicago, Ill.
- ALFRESCO Dampproof Cold Water Paints, Reardon, Co., St. Louis, Mo.
- ALKABAR No-Lime-Burn Primer, Truscon Laboratories, The, Detroit, Mich.
- ALL-NITE-LITE Transformers, General Electric Co., Schenectady, N. Y.
- ALL-STEEL Locks and Sash, National Mfg. Co., Sterling, Ill.
- ALL-STEEL Portable Garages, Edwards Mfg. Co., Cincinnati, Ohio.
- ALLEGAN Road Scrapers, Lansing Company, Lansing, Mich.
- ALOE Levels, A. S. Aloe & Co., St. Louis, Mo.
- ALOKITE Cloth Grinding Wheels, Discs, Tool Sharpening Stones, etc., Carborundum Company, Niagara Falls, N. Y.
- ALPHA Brass Pipe, Condenser Tubes, Chase Companies, Inc., Waterbury, Conn.
- ALPHA Cement, Alpha Portland Cement Co., Easton, Pa.
- ALPINA Syphon Revolving Ventilators, Milwaukee Corrugating Co., Milwaukee, Wis.
- ALTRURIA Drinking Fountains, Crane Co., Chicago, Ill.
- ALUMINA Screen Cloth, Reynolds Wire Co., Dixon, Ill.
- ALVA Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- AMBLER Asbestos Building Products, Asbestos Shingle, Slate & Sheathing Co., Ambler, Pa.
- AMEROTEX Varnish, Truscon Laboratories, The, Detroit, Mich.
- AMERICAN Base and Wall Polisher, American Floor Surfacing Machine Co., Toledo, Ohio.
- AMERICAN Blue Print Paper, Eugene Dietzgen Co., Inc., Chicago, Ill.
- AMERICAN Chains, American Chain Co., Bridgeport, Conn.
- AMERICAN Cuckoo Clocks, Alarm and Hall Clocks, American Chime Clock Co., Philadelphia, Pa.
- AMERICAN Metal Tile, Milwaukee Corrugating Co., Milwaukee, Wis.
- AMERICAN Radiators, American Radiator Co., New York, N. Y.
- AMERICAN Saw Mill Machinery, American Saw Mill Machinery Co., Hackettstown, N. J.
- AMERICAN Wire Rope Tramways, Steel Fence Posts, Wire Fences, Bale Ties, Wire Hoops, Wire Springs, Poultry and Fox Netting, Carpet Tacks, Duplex Head Nails, Gates, Barbed Wire, Fur Netting, etc., American Steel & Wire Co., Chicago, Ill.
- AMERICAN HANDY Grinder, American Floor Surfacing Machine Co., Toledo, Ohio.
- AMERICAN RAPID GRINDER Tile, Marble and Terrazzo Floor Surfaces, American Floor Surfacing Machine Co., Toledo, Ohio.
- AMERICAN SPECIAL Plaster Board Nail, American Steel & Wire Co., Chicago, Ill.
- AMERICAN UNIVERSAL Wood Floor Surfacing Machine, American Floor Surfacing Machine Co., Toledo, Ohio.
- ANCHOR Drawing Instruments, Keuffel & Esser Co., Hoboken, N. J.
- ANCHOR Wall Plaster, American Gypsum Co., Cleveland, Ohio.
- ANCHOR BRAND Dry Colors and Fillers, C. K. Williams & Co., Easton, Pa.
- ANDERSEN White Pine Frames, Andersen Lumber Co., Bayport, Minn.
- ANDREWS Heaters, Furnaces, Water Supply Systems, etc., Andrews Heating Co., Minneapolis, Minn.
- ANGLO Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ANHYDRO SOL Transparent Damp-proofing Paints, Toch Bros., Inc., New York, N. Y.
- ANSBOR Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ANTHONY Wire Fence (Zinc Insulated), American Steel & Wire Co., Chicago, Ill.
- ANTI-HYDRO Waterproofing, Anti-Hydro Waterproofing Co., Newark, N. J.
- ANVIL Drawing Paper, Keuffel & Esser Co., Hoboken, N. J.
- APARTO Lavatory, Crane Co., Chicago, Ill.
- AQUA SILK Waterproof Shower Curtains, Crane Co., Chicago, Ill.
- ARCO Thermostats and Regulators, American Radiator Co., New York, N. Y.
- ARCOLA Hot Water Radiator Outfit and Boiler, American Radiator Co., New York, N. Y.
- ARCUO Drinking Fountains, Crane Co., Chicago, Ill.
- ARCUS Lavatories, Crane Co., Chicago, Ill.
- ARDEN Wall and Gauging Plasters, U. S. Gypsum Co., Chicago, Ill.
- ARDMORE Lavatories, Crane Co., Chicago, Ill.
- ARGOTILE Strip Shingles, Beckman-Dawson Roofing Co., Chicago, Ill.
- ARISTO Basin Faucets, Hays Mfg. Co., Erie, Pa.
- ARKONA Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ARMOR Tapes, Keuffel & Esser Co., Hoboken, N. J.
- ARMORTOP Concrete Floor Hardener, Anti-Hydro Waterproofing Co., Newark, N. J.
- ARMPLEX Cooler Door Closers, Chicago Spring Hinge Co., Chicago, Ill.
- ARROW TRADE MARK Red Cypress, Louisiana Red Cypress Co., New Orleans, La.
- ART ROC Coloring and Hardener for Cement, The Truscon Laboratories, Detroit, Mich.
- ASEPTICOTE Flat Wall Paint, The Truscon Laboratories, Detroit, Mich.
- ASFALSLATE Shingles, Philip Carey Mfg. Co., Lockland, Ohio.
- ASHLAND Pumps, Jacks and Swings, F. E. Myers & Bro. Co., Ashland, Ohio.
- ASYLUM Bath Tubs, Crane Co., Chicago, Ill.
- ATHA Tools, Stanley Rule & Level Co., New Britain, Conn.
- ATHEY Weather Strips, Athey Co., Chicago, Ill.
- ATLAS Cooler Door Fasteners, Garden City Plating & Mfg. Co., Chicago, Ill.
- ATLAS Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ATLAS Waterclosets, Crane Co., Chicago, Ill.
- ATLO Water Closets, Crane Co., Chicago, Ill.
- AUSTRAL Windows, Austral Window Co., New York City.
- AUT-O-DOR Electric Operator, Richards-Wilcox Mfg. Co., Aurora, Ill.
- AUTOMATIC Floor Surfacing Machine, Wayvell Chappell & Co., Waukegan, Ill.
- AVOLYN Drinking Fountains, Crane Co., Chicago, Ill.
- AVON Semi-Vitreous Porcelain, Wheeling Sanitary Mfg. Co., Wheeling, W. Va.
- BABY Bath Tubs and Closets, Crane Co., Chicago, Ill.
- BAILEY Planes, Stanley Rule & Level Co., New Britain, Conn.
- BAKER Eave Trough Hangers, W. C. Hopson Co., Grand Rapids, Mich.
- BALSAM-WOOL Insulating and Sound Deadener, Wood Conversion Co., Cloquet, Minn.
- BANKNOTE Tracing Paper, Keuffel & Esser Co., Hoboken, N. J.
- BANNER Measuring Tapes, The Lufkin Rule Company, Saginaw, Mich.
- BANTAM JUNIOR Concrete Mixers, Ransome Concrete Machinery Co., Dunellen, N. J.
- BARACIDE Acid & Alkali Proof Coating, The Truscon Laboratories, Detroit, Mich.
- BARNERT Washup Sink, Crane Co., Chicago, Ill.
- BARRACKS Lavatories, Crane Co., Chicago, Ill.
- BARSH-PAYZANT Lettering Pens, Keuffel & Esser Co., Hoboken, N. J.
- BATES Steel Poles, Bates Expanded Steel Truss Co., East Chicago, Ind.
- BATES MULTI-WALL Paper Bags, Bates Valve Bag Corp., Chicago.
- BAYLEY-SPRINGFIELD Steel Windows and Doors, Wm. Bayley Co., Springfield, Ohio.
- BAYONNE Duck and Waterproof Cloth and Roof and Deck Cloth, John Boyle & Co., Inc., New York, City.
- BEARCAT Mortiser and Borer, The Paxson Co., Dowagiac, Mich.
- BEAVER Saws, Henry Daston & Sons, Philadelphia, Pa.
- BEAVER Woodworking Machinery, Hutchinson Mfg. Co., Norristown, Pa.
- BED-ROCK Planes, Stanley Rule & Level Co., New Britain, Conn.
- BEE Clothes Lines, Samson Cordage Works, Boston 9, Mass.
- BEE HIVE Pitch and Roofing Felt, Samuel Cabot, Inc., Boston, Mass.
- BERRIMAN Built-in Wardrobes, R. M. Morriss & Co., Chicago.
- BERRIMAN Tape, Keuffel & Esser Co., Hoboken, N. J.

- BESSLER Disappearing Stairways, Bessler Disappearing Stairway Co., Akron, Ohio.
- BEVERLY Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- BIG AMERICAN Wood Floor Surfacers, American Floor Surfacing Machine Co., Toledo, Ohio.
- BIG BILL Padlocks, Sargent & Co., New Haven, Conn.
- BIG FOUR Gauging and Wall Plasters, U. S. Gypsum Co., Chicago, Ill.
- BIG FOUR Door Hangers and Track, National Mfg. Co., Sterling, Ill.
- BINKS Paint and White Washing Machines, Painting and Finishing Equipment, Blow Guns for Machine Shop, Foundry, etc., Binks Spray Equipment Co., Chicago, Ill.
- BISOPRIC Stucco and Plaster Base, The Bisopric Mfg. Co., Cincinnati, Ohio.
- BITUMAR Pitch Proof Coating, Truscon Laboratories, Detroit, Mich.
- BLACK JACK Tank Heaters, Hunt, Helm & Ferris Co., Harvard, Ill.
- BLACK & DECKER Portable Electric Tools, Black & Decker Mfg. Co., Towson, Md.
- BLACKFORD Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- BOARDTILE Wall Tile, Gibbs Boardtile Corp., Chicago, Ill.
- BOGALUSA Logs, Great Southern Lumber Co., Bogalusa, Iowa.
- BOICE-CRANE Joiners, Woodworking, Woodworking Machy., etc., W. B. & J. E. Boice, Toledo, Ohio.
- BOMMER Spring Hinges, Floor Surface Spring Hinges, Door Pivots, Lavatory Stall Hardware, Screen Door Hinges and Door Springs, Bommer Spring Hinge Co., Brooklyn, N. Y.
- BONCRETE Concrete Plaster, U. S. Gypsum Co., Chicago, Ill.
- BONDEX Waterproofing Cement Paint, Reardon Co., St. Louis, Mo.
- BOSS Mixing Machinery for Concrete and Holts, American Cement Machine Co., Inc., Keokuk, Iowa.
- BOSTON Faucets, Crane Co., Chicago, Ill.
- BOVEE Furnaces, Bovee Furnace Works, Waterloo, Iowa.
- BOYLETON Lavatories, Crane Co., Chicago, Ill.
- BRADLEY-MILLER White Pine Frames, Bradley-Miller Co., Bay City, Mich.
- BRASCO Metal Store Fronts, Brasco Mfg. Co., Chicago, Ill.
- BRILLIANT Radiant Heaters, Ohio Foundry & Mfg. Co., Steubenville, Ohio.
- BRIXTUM (for Brick and Stone Masonry), Louisville Cement Co., Louisville, Ky.
- BRONCHO Concrete Mixers, Lansing Co., Lansing, Mich.
- BROOKS Ready Roofing, Johns-Manville, Inc., New York, N. Y.
- BRUCE Oak Flooring, E. L. Bruce Co., Memphis, Tenn.
- BRUCELIZED Flooring Blocks, E. L. Bruce Co., Memphis, Tenn.
- BRUCETON Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- BUCKEYE Pumps, Hydrants, etc., Mast, Foss & Co., Springfield, O.
- BUCKHORN Wall Plaster, U. S. Gypsum Co., Chicago, Ill.
- BUENA Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- BULL DOG Adjusters, Casement Hardware Co., Chicago, Ill.
- BULL DOG Chains, Chain Products Co., Cleveland, Ohio.
- BULL DOG Concrete Mixers, R. & L. Mfg. Co., Kendallville, Ind.
- BULL DOG Lock Stove Pipe, Wheeling Corrugating Co., Wheeling, W. Va.
- BULL NOSE Corner Bead, Milwaukee Corrugating Co., Milwaukee, Wis.
- BULLDOZER Power Pumps and Working Heads, F. E. Myers & Bro. Co., The, Ashland, Ohio.
- BULLY BOY Saw Sets, Henry Disston & Sons, Philadelphia, Pa.
- BURNHAM Heating Boilers, Burnham Boiler Co., Irvington, N. Y.
- BUTLER Self-Adjusting Window Ventilators, Butler Laboratories, Inc., Brooklyn, N. Y.
- CABOT Paints, Paper, Wood Preservatives, Shingle Stains, etc., Samuel Cabot, Inc., Boston, Mass.
- CANNON BALL Door Hangers, Hunt, Helm & Ferris Co., Harvard, Ill.
- CANTGETOFF Door Hangers, J. E. Porter Corp., Ottawa, Ill.
- CAPITAL Barrows, Lansing Co., Lansing, Mich.
- CAPITOL Boilers, U. S. Radiator Corp., Detroit, Mich.
- CARBORUNDUM Grinding Wheels, Tool Sharpening Stones, Scythes, Razor Strops and Hones and Oil Stones, Discs, etc., Carborundum Co., Niagara Falls, N. Y.
- CARDINAL Toggery Racks, Chas. Fischer Spring Co., Brooklyn, N. Y.
- CARTER Woodworking Machy., R. L. Carter Co., Inc., Phoenix, N. Y.
- CECO Column Forms, Reinforcing Bars, etc., Concrete Engineering Co., Omaha, Neb.
- CEL-O-GLASS, Substitute Glass, Acetol Products, Inc., New York, N. Y.
- CEMENTICO Wall Finish, U. S. Gypsum Co., Chicago, Ill.
- CENTURY Motors, Century Electric Co., St. Louis, Mo.
- CENTURY Air and Hand Pumps, Paint and Whitewash Spraying Machines, The F. E. Myers & Bro. Co., Ashland, Ohio.
- CEPECO Chains, Chain Products Co., Cleveland, Ohio.
- CHABELCO Chains, Chain Belt Co., Milwaukee, Wis.
- CHALLENGE Finished and Gauging Plasters, U. S. Gypsum Co., Chicago, Ill.
- CHALLENGE Measuring Tapes, Lufkin Rule Co., Saginaw, Mich.
- CHAMET Bronze, Chase Companies, Inc., Waterbury, Conn.
- CHAMPION Band Chains, Keuffel & Esser Co., Hoboken, N. J.
- CHAMPION Door Lock Mortiser, Colgan Machy. & Supply Co., Columbus, Ohio.
- CHAMPION Door Springs, Sargent & Co., New Haven, Conn.
- CHAMPION Drag Saws and Saw Mill Drags, American Saw Mill Machinery Co., Hackettstown, N. J.
- CHAMPION Finishing and Gauging Plasters, U. S. Gypsum Co., Chicago, Ill.
- CHAMPION Saw Sets, Henry Disston & Sons, Philadelphia, Pa.
- CHAMPION Pipe and Boiler Covering, Johns-Manville, Inc., New York, N. Y.
- CHAMPION Windmill Regulators, Hunt, Helm & Ferris Co., Harvard, Ill.
- CHANNELDRAIN Roofing, Wheeling Corrugating Co., Wheeling, W. Va.
- CHASE Brass, Chase Companies, Inc., Waterbury, Conn.
- CHEVROLET Automobiles and Trucks, Chevrolet Motor Co., Detroit, Mich.
- CHICAGO Cabinet Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.
- CHICAGO Door Springs, Chicago Spring Butt Co., Chicago, Ill.
- CHICAGO Expansion Nail, Chicago Expansion Bolt Co., Chicago, Ill.
- CHICAGO Stevedore Truck, Lansing Co., Lansing, Mich.
- CHICAGO Unions, Crane Co., Chicago, Ill.
- CHROMOL Hack Saws, Henry Disston & Sons, Philadelphia, Pa.
- CLARKE UNIVERSAL Portable Saw, Clarke Sanding Machine Co., Chicago, Ill.
- CLARKE VAC-ALL Cleaner, Clarke Sanding Machine Co., Chicago, Ill.
- CLARKE VACUUM Portable Sander, Clarke Sanding Machine Co., Chicago, Ill.
- CLEARWAY Valves, Crane Co., Chicago, Ill.
- CLERMONT Lavatories, Crane Co., Chicago, Ill.
- CLEVELAND Chains, Chain Products Co., Cleveland, Ohio.
- CLIFTON Lavatories, Crane Co., Chicago, Ill.
- CLIMAX Barrows, Lansing Co., Lansing, Mich.
- CLIMAX Wire Netting, Gilbert & Bennett Mfg. Co., Chicago, Ill.
- CLINTON Face Brick, Finzer Bros. Clay Co., Sugar Creek, Ohio.
- CLINTON Metallic Paint, Mortar Colors and Cement Colors, Clinton Metallic Paint Co., Clinton, N. Y.
- CLIPPER Wood and Pole Saws, American Saw Mill Machinery Co., Hackettstown, N. J.
- CLOSIN Lavatories, Crane Co., Chicago, Ill.
- CLOVER LEAF Hay Carriers, The F. E. Myers & Bro. Co., Ashland, Ohio.
- COG GEAR Well House, Tank Spray and Cistern Pump, The F. E. Myers & Bro. Co., Ashland, Ohio.
- COLLOPAKES Colloidal Paints and Stains, Samuel Cabot, Inc., Boston, Mass.
- COLON Barrows, Lansing Company, Lansing, Mich.
- COLONIAL Dampers, Colonial Fireplace Co., Chicago, Ill.
- COLONIAL Lavatories, Crane Co., Chicago, Ill.
- COLUMBIA Baths, Crane Co., Chicago, Ill.
- COLUMBIA Blue Print Paper, Cloth, Indelible Ink and Tapes, Keuffel & Esser Co., Hoboken, N. J.
- COLUMBIAN Hay Tracks, J. E. Porter Corp., Ottawa, Ill.
- COLUMBUS Leather Cloth and Table Covers, Columbus Union Oil Cloth Co., Columbus, Ohio.
- COMBINATION Hay Unloaders, F. E. Myers & Bro. Co., Ashland, Ohio.
- COMBINO Drawing Instruments, Frederick Post Co., Chicago, Ill.
- COMMERCIAL Blue Print Paper, Frederick Post Co., Chicago, Ill.
- COMMERCIAL Blue Print Paper, Eugene Dietzgen Co., Inc., Chicago, Ill.
- CONCAVE Moulding Cutters, S. R. M. Orum, Inc., Philadelphia, Pa.
- CONCRETE Water Closets, Crane Co., Chicago, Ill.
- CONDUO BASE Conduit Base, Dahlstrom Metallic Door Co., Jamestown, N. Y.
- CONRED Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- CONSERVO Wood Preservatives, Samuel Cabot, Inc., Boston, Mass.
- COOPER'S Metallic Shingles, National Sheet Metal Roofing Co., Jersey City, N. J.
- COPLEY Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- COPPERED Metal, Milwaukee Corrugating Co., Milwaukee, Wis.
- COPTIC Lavatories, Crane Co., Chicago, Ill.
- CORINTH Baths, Crane Co., Chicago, Ill.
- CORNA-LATH, A Cornerite, North Western Expanded Metal Co., Chicago, Ill.
- CORNELL Tapes, Keuffel & Esser Co., Hoboken, N. J.
- CORNER-WISE Garage Door Hardware, Richards-Wilcox Mfg. Co., Aurora, Ill.
- CORONA Drawing Instruments and Blue Print Paper, Frederick Post Co., Chicago, Ill.
- CORONET Baths, Crane Co., Chicago, Ill.
- CORRECTO URINALS, Crane Co., Chicago, Ill.
- CORRUGATED KNO-BURN Self-Furring Metal Lath, North Western Expanded Metal Co., Chicago, Ill.
- CORSYN Water Closets and Tanks, Crane Co., Chicago, Ill.
- CORTO Radiators, American Radiator Co., New York, N. Y.
- CORWITH Baths, Crane Co., Chicago, Ill.
- COTTAGE Fencing, Gilbert & Bennett Mfg. Co., Chicago, Ill.
- COUGAR Saws, Henry Disston & Sons, Philadelphia, Pa.
- CRACO Closet Tanks, Crane Co., Chicago, Ill.
- CRANE Steam Specialties and Plumbing Supplies, Crane Co., Chicago, Ill.
- CRANE HARD METAL Valves and Valve Trimmings, Crane Co., Chicago, Ill.
- CRANE LAP Flanged Pipe Joints, Crane Co., Chicago, Ill.
- CRANETILT Steam Traps, Crane Co., Chicago, Ill.
- CREOLEUM Dampproofing for Wood, Truscon Laboratories, The, Detroit, Mich.
- CRESCENT Band Saws and Woodworking Machinery and Sawing Saws, Crescent Machine Co., Leontonia, Ohio.
- CRESCENT Brick and Sewer Pipe, Machines, Concrete Mixers, Moulds, Tampers, R. & L. Concrete Machy. Co., Kendallville, Ind.
- CRESCENT Lavatories, Crane Co., Chicago, Ill.
- CRESCENT Woodworking Machinery, The Crescent Machine Co., Leontonia, Ohio.
- CRESTON Wall Finish, Reardon Co., St. Louis, Mo.
- CRETA Drinking Fountains, Crane Co., Chicago, Ill.
- CRIMPEDGE Eave Troughs, Milwaukee Corrugating Co., Milwaukee, Wis.
- CRITALL Casement Windows, Critall Casement Window Co., Detroit, Mich.
- CROFOOT Tackers and Staples, J. B. Crofoot Co., Chicago, Ill.
- CROMAR Finished Oak Flooring, Cromar Co., Williamsport, Pa.
- CROWN Shingle Machine, American Saw Mill Machy. Co., Hackettstown, N. J.
- CURTIS Woodwork, Curtis Cos., Clinton, Iowa.
- D. C. Mail Receptacles, American Device Mfg. Co., St. Louis, Mo.
- DACOR Toggery Racks, Davis Tool & Eng. Co., Detroit, Mich.
- DANDIE Concrete Mixers, Koehring Co., Milwaukee, Wis.
- DANDY Bag Truck, Lansing Co., Lansing, Mich.
- DARTMOUTH Tapes, Keuffel & Esser Co., Hoboken, N. J.
- DAYLIGHT Hog House Window, Milwaukee Corrugating Co., Milwaukee, Wis.
- DEFIANCE Pumps, Stands and Spray Pumps and Working Heads, The F. E. Myers & Bro. Co., Ashland, Ohio.
- DEFIANCE Wood Working Machinery, Sidney Tool Co., Sidney, Ohio.
- DELCO-LIGHT Incandescent Lighting Plants, Water Systems and Accessories for Same and Electric Washing Machines, Dayton Light Co., Dayton, Ohio.
- DENTAL Lavatories, Crane Co., Chicago, Ill.
- DENTUS Lavatories, Crane Co., Chicago, Ill.
- DETROIT FENESTRA Steel Factory Windows, Detroit Steel Products Co., Detroit, Mich.
- DE VILBISS Portable Painting Equipment, The DeVilbiss Co., Toledo, Ohio.
- DE VILBISS Spray-Painting Systems, The DeVilbiss Co., Toledo, Ohio.
- DEVORO Closet, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- DE WALT Woodworker, Dewalt Mfg. Co., Leola, Pa.
- DIAMOND Lawn Fence, American Steel & Wire Co., Chicago, Ill.
- DIAMOND Metal Lath, Truscon Steel Co., Youngstown, Ohio.
- DIAMOND Mills, Fairbanks, Morse & Co., Chicago, Ill.
- DIAMOND Prepared Plaster, U. S. Gypsum Co., Chicago, Ill.
- DIAMOND POINT Saws, Henry Disston & Sons, Philadelphia, Pa.
- DIAMOND WAY Metal Weather Strips, Diamond Metal Weather Strip Co., Columbus, Ohio.
- DISSTON Crucible Steel Saws, Files, Rasps, Gummers and Planes, Henry Disston & Sons, Inc., Philadelphia, Pa.
- DIXIE Metallic Shingles, Wheeling Corrugating Co., Wheeling, W. Va.

DONLEY Fireplace Equipment, Donley Bros. Co., Cleveland, Ohio.  
 DOUBLE-MESH Herringbone Metal Lath, Genfre Steel Co., Youngstown, Ohio.  
 DORIS Bath Tubs, Crane Co., Chicago, Ill.  
 DOUBLE JACK Wire Stretchers, American Steel & Wire Co., Chicago, Ill.  
 DOUBLE V Door and Track Hangers, J. E. Porter Corp., Ottawa, Ill.  
 DOUBLE-WHITE Paints, Samuel Cabot, Inc., Boston, Mass.  
 DRENDUL Sand Screens, Gilbert & Bennett Mfg. Co., Georgetown, Conn.  
 DUPLEX Door Hangers, Richards-Wilcox Co., Aurora, Ill.  
 DUL-VAR-TEX Varnish, Truscon Laboratories, The, Detroit, Mich.  
 DUMPY Saws, Henry Disston & Sons, Philadelphia, Pa.  
 DUNTLE Machinery, W. E. Dunn Mfg. Co., Holland, Mich.  
 DUO & DUO JR. Lavatory Faucets, Crane Co., Chicago, Ill.  
 DUPLEX Drawing Papers and Slide Rules, Keuffel & Esser Co., Hoboken, N. J.  
 DUPLEX Flush Valve, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 DUPLEX Pumps, F. E. Myers & Bro., Ashland, Ohio.  
 DUPLEX Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 DUPLEX Steel Bridging, Genfre Steel Co., Youngstown, Ohio.  
 DU PONT TONTINE Window Shade Material, E. I. du Pont de Nemours & Co., Inc., Fabrikoid Div., Newburgh, N. Y.  
 DURITE Abrasive Cloth, Paper, etc., Manning Abrasive Co., Inc., Troy, N. Y.  
 DURO Household Water Supply Systems, Pumps, etc., The Duro Co., Dayton, O.  
 DUROBAR Chains, Chain Belt Co., Milwaukee, Wis.  
 DUROPLATE Blackboards, E. W. A. Rowles, Chicago, Ill.  
 DURUNDUM Abrasive Cloth, Paper, etc., Manning Abrasive Co., Inc., Troy, N. Y.  
 DURUS Drinking Fountains, Crane Co., Chicago, Ill.  
 DUTCH KITCHENET Kitchen Cabinets, Coppes Bros. & Zook, Napans, Ind.  
 DWARF Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 E. T. Paper, Keuffel & Esser Co., Hoboken, N. J.  
 E. Z. Garage Fixtures, Frantz Mfg. Co., Sterling, Ill.  
 E. Z. Shingle Bunchers, American Saw Mill Machinery Co., Hackensack, N. J.  
 E. Z. KLEEN Garage Trap, A. L. Swett Iron Works, Medina, N. Y.  
 E. & T. Blue Print Paper, Keuffel & Esser Co., Hoboken, N. J.  
 EAGLE Crimping and Fluting Machines, North Bros. Mfg. Co., Philadelphia, Pa.  
 EAGLE Sash Pulley, Grand Rapids Hardware Co., Grand Rapids, Mich.  
 EAST LAKE Metallic Shingle, Crane Co., Chicago, Ill.  
 EASTERN Garden Wheelbarrows, Lansing Co., Lansing, Mich.  
 EATON Lavatories, Crane Co., Chicago, Ill.  
 EBUR Combination Drinking Fountains and Lavatories, Crane Co., Chicago, Ill.  
 ECCENTRIC Swages, Henry Disston & Sons, Philadelphia, Pa.  
 ECCENTRIC BULL DOG Wire Stretchers, American Steel & Wire Co., Chicago, Ill.  
 ECO Transparent Sketching Paper, Keuffel & Esser Co., Hoboken, N. J.  
 ECLIPSE Door Springs and Door Checks, Sargent & Co., New Haven, Conn.  
 ECLIPSE Windmills, Fairbanks, Morse & Co., Chicago, Ill.  
 ECONO Expanded Metal for Concrete Reinforcement and Machine Guards, North Western Expanded Metal Co., Chicago, Ill.  
 ECONOMY Compasses, Eugene Dietzgen Co., Chicago, Ill.  
 ECONOMY Incinerators, Economy Incinerator Co., Milwaukee, Wis.  
 ECONOMY Pumps, Stands and Door Hangers, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 ECONOMY Sketching and Drawing Paper, Keuffel & Esser Co., Hoboken, N. J.  
 ERICO Compression Faucets, Hays Mfg. Co., Erie, Pa.  
 EDDYSTONE Sash Cord, Silver Lake Co., Newtonville, Mass.  
 EDLWEISS White Enamel (Exterior), Truscon Laboratories, Detroit, Mich.  
 EDGELY Laboratories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 EDINBURGH Colors for Mortar, Toch Bros., Inc., New York, N. Y.  
 EDMANCO Metal Ceilings, Shingles, Rolling Doors, Shutters, etc., Edwards Mfg. Co., Cincinnati, Ohio.  
 EDWARDS Ceilings and Shingles, Edwards Mfg. Co., Cincinnati, O.  
 EDWARDS Portable Garages, Roofing Tiles, Rolling Doors, Shutters, etc., Edwards Mfg. Co., Cincinnati, Ohio.  
 EG-SHELL Mill White, Sherwin-Williams Co., Cleveland, Ohio.  
 EJECTO Closet, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 ELASTIC Glazing Composition, H. B. Fred Kuhla, Brooklyn, N. Y.  
 ELASTITE Expansion Joints, Philip Carey Co., Chicago, Ill.  
 ELDRADO Wall Plaster, U. S. Gypsum Co., Chicago, Ill.  
 ELECTROBESTOS Insulating Material, Inc., Johns-Manville, Inc., New York, N. Y.  
 ELEGIA Lavatories, Crane Co., Chicago, Ill.  
 ELLWOOD Wire Stretchers, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 EMPIRE Bolting Machines, American Saw Mill Machinery Co., Hackensack, N. J.  
 ENDURAROC Blackboards, E. W. A. Rowles, Chicago, Ill.  
 ENSEX Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 ETERNIT Asbestos Shingles, Lumber, Corrugated Sheets, Eternit, Inc., Philadelphia, Pa.  
 EUREKA Barrows, Lansing Co., Lansing, Mich.  
 EUREKA Chains, American Chain Co., Bridgeport, Conn.  
 EUREKA Expanded Metal Lath, North Western Expanded Metal Co., Chicago, Ill.  
 EVERDRAFT Chimney Caps, Milwaukee Corrugating Co., Milwaukee, Wis.  
 EVERETT Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 EVERLASTING Chisels, Stanley Rule & Level Co., New Britain, Conn.  
 EVERLITE KOATING Wall Paint, Toch Bros., Inc., New York, N. Y.  
 EXCELLIO Drawing Instruments, Eugene Dietzgen Co., Inc., Chicago, Ill.  
 EXCELSIOR Band Chains, Drawing Instruments, Pocket Tapes, Tracing Cloth, Keuffel & Esser Co., Hoboken, N. J.  
 EXCELSO Water Heaters, Excelsio Specialty Works, Buffalo, N. Y.  
 EXPANSION Metal Trim and Corner Bead, Milwaukee Corrugating Co., Milwaukee, Wis.  
 EXPEDIO Water Closets, Urinals and Slop Sinks, Crane Co., Chicago, Ill.  
 EXPULSO Closets, Standard Sanitary Mfg. Co., Pittsburgh, Pa.

FAIRBANKS-MORSE Gasoline, Kerosene and Diesel Engines, Air Compressors, Centrifugal, Circulating, Deep Well, Power, Railroad and Steam Pumps, Motors and Generators, Motor Cars, Motor Generator Sets, Central Station Power Plants, Railway Appliances, Farm Machinery, Lighting Plants and Water Systems, Fairbanks, Morse & Co., Chicago, Ill.  
 FAIRDAY Washing Machines, Fairbanks, Morse & Co., Chicago, Ill.  
 FAIRFAK Lavatories, Crane Co., Chicago, Ill.  
 FALCON Saws, Henry Disston & Sons, Philadelphia, Pa.  
 FAMOUS UNIVERSAL Woodworking Machines, Sidney Machine Tool Co., Sidney, Ohio.  
 FAULTLESS Spray Pumps, Carriers, Hay Fork Pulleys, Door Hangers and Pumping Jacks, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 FAVORITE Measuring Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 FAYS Saws, Henry Disston & Sons, Philadelphia, Pa.  
 FEDERAL Blue Printing Machines, Keuffel & Esser Co., Hoboken, N. J.  
 FENESTRA Steel Casements and Windows, Detroit Steel Products Co., Detroit, Mich.  
 FENWICK Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 FERRIS Hay Tracks, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 FERRITEX Roof Cement, Truscon Laboratories, Detroit, Mich.  
 FERRO Iron and Steel Filler, Cement, Johns-Manville, Inc., New York, N. Y.  
 FIAT Shower Bath Compartments, Flat Metal Mfg. Co., Chicago, Ill.  
 FIBREVOVE Insulating Paper, Philip Carey Mfg. Co., Lockland, Ohio.  
 FIBROTEX Roof Cement, Truscon Laboratories, Detroit, Mich.  
 FIBROTEX TOPPING Roof Paint, Truscon Laboratories, Detroit, Mich.  
 FIFTH AVE. Closets and Lavatory, Crane Co., Chicago, Ill.  
 FIRE FELT Pipe and Boiler Covering, Johns-Manville, Inc., New York, N. Y.  
 FIREFRAX Refractory Cement, Carborundum Co., Niagara Falls, N. Y.  
 FIREITE Furnace Cement, Johns-Manville, Inc., New York, N. Y.  
 FIRMTREAD Steel Floor Plates, Jos. T. Ryerson & Son, Inc., Chicago, Ill.  
 FITSITE Barn Door Hardware, Richards-Wilcox Mfg. Co., Aurora, Ill.  
 FLAT TONE Flat Wall Finish, Sherwin-Williams Co., Cleveland, O.  
 FLAXLINUM Insulation, Flaxinum Insulating Co., St. Paul, Minn.  
 FLEXOYL-YAC Insulating Varnish, Standard Varnish Works, New York, N. Y.  
 FLEX SICCO Ready Mixed Paints, Toch Bros., Inc., New York, N. Y.  
 FLEXIBLE Door Hangers, F. E. Myers & Bro. Co., Ashland, Ohio.  
 FLEXO Barn Door Hangers, Hunt, Helm & Ferris Co., Harvard, Ill.  
 FLEXSTONE Asbestos Roofing, Johns-Manville, Inc., New York, N. Y.  
 FLINT Cement Plaster, U. S. Gypsum Co., Chicago, Ill.  
 FLINTOX Concrete Floor Hardener, Toch Bros., Inc., New York, N. Y.  
 FLORIAN Drinking Fountains, Crane Co., Chicago, Ill.  
 FLUTED-CATCH Sockets and Receptacles, General Electric Co., Schenectady, N. Y.  
 FLYING DUTCHMAN Wood Carving Machinery, Galmeyer & Livingston Co., Grand Rapids, Mich.  
 FOLEY Clamps, Cleanouts, Hays Mfg. Co., Erie, Pa.  
 FOLEY Automatic Saw Filer, Foley Saw Tool Co., Minneapolis, Minn.  
 FORESTBLEND Face Brick, Finzer Bros. Clay Co., Sugar Creek, Ohio.  
 FOREST CITY Tools, Forest City Bit & Tool Co., Rockford, Ill.  
 FORMOCLOR QUALITY House Paint, Truscon Laboratories, The, Detroit, Mich.  
 FORSTNER Auger Bits, The Progressive Mfg. Co., Torrington, Conn.  
 FOUNTAIN Spray Pumps, The F. E. Myers & Bro. Co., Ashland, O.  
 FRANTZ Builders Hardware, Frantz Mfg. Co., Sterling, Ill.  
 FRBE-O-DUST Floor Sander, Electric Rotary Machine Co., Chicago, Ill.  
 FRAZIER Self-Balanced Stairs, Frazier Stair Co., Pittsburgh, Pa.  
 FRIGIDAIRE Iceless Refrigerators and Ice Cream Cabinets, Delco-Light Co., Dayton, Ohio.  
 FUME-SAF WHITE Enamel, The Truscon Laboratories, Detroit, Mich.  
 FYER-WAL Fire Doors, Richards-Wilcox Mfg. Co., Aurora, Ill.  
 G-F Metal Lath, Bridging, Steel Lumber, Sash, Tile Corner Beads, Trussel Channels, Casements, Wire Mesh, Lintels, Doors, Basement Windows, etc., Genfre Steel Co., Youngstown, Ohio.  
 G. & B. Levels, Geler & Bluhm, Inc., Troy, N. Y.  
 G & B Poultry Netting and Wire Cloth, Gilbert & Bennett Mfg. Co., Chicago, Ill.  
 GALVABOND Galvanized Iron Primer, Truscon Laboratories, Detroit, Mich.  
 GARCY Clothes Closet Fixtures, Garden City Plating & Mfg. Co., Chicago, Ill.  
 GAS-GARD Water Heater Control, Gas-Gard Co., Rochester, N. Y.  
 GEM UNION Drawing Instruments, Eugene Dietzgen Co., Inc., Chicago, Ill.  
 GENASCO Protective Products, The Barber Asphalt Co., Philadelphia, Pa.  
 GENASCO LATITE Shingles, The Barber Asphalt Co., Philadelphia, Pa.  
 GENASCO SEALBAC Shingles, The Barber Asphalt Co., Philadelphia, Pa.  
 GENASCO STANDARD TRINIDAD Built Up Roofs, The Barber Asphalt Co., Philadelphia, Pa.  
 GENESB Wheelbarrows, Lansing Co., Lansing, Mich.  
 GENFIRE Sheet Lath, Genfre Steel Co., Youngstown, Ohio.  
 GENUINE FRANKLIN TUNNEL Roofing Slate, Slatington Slate Co., Slatington, Pa.  
 GEYSER Pumps, F. E. Myers & Bro. Co., Ashland, Ohio.  
 GIANT Door Hangers, Tracks and Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 GIANT Door Hangers and Steel Adjustable Stanchion, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 GIANT Saw Mill Dogs, American Saw Mill Machy. Co., Hackensack, N. J.  
 GIANT Steel Adjustable Stanchions, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 GIANT METAL Sash Chains, Smith & Egge Mfg. Co., Bridgeport, Conn.  
 GIBSONBURG Finishing Lime, Gibsonburg Lime Products Co., Gibsonburg, Ohio.  
 GLIDE Door Hangers and Tracks, Frantz Mfg. Co., Sterling, Ill.  
 GLIMALAC Insulating Varnish, Standard Varnish Works, New York, N. Y.  
 GLOBE Chimney Caps, Globe Ventilator Co., Troy, N. Y.  
 GLOBE Ventilators, Globe Ventilator Co., Troy, N. Y.  
 GLOBE Wheelbarrows, Lansing Company, Lansing, Mich.

- GLO-HOT Electric Fireplaces, Colonial Fireplace Co., Chicago, Ill.  
 GLYCO Babbitt Metal, Jos. T. Ryerson & Son, Inc., Chicago, Ill.  
 GLYCO STAR Electric Switches, Hart & Hegeman Mfg. Co., Hartford, Conn.  
 GLYCO TASSEL Electric Sockets, Hart & Hegeman Mfg. Co., Hartford, Conn.  
 GOOD ROADS Paver, Ransome Concrete Machinery Co., Dunellen, N. J.  
 GOODYEAR Rubber Tiling, Goodyear Tire & Rubber Co., Akron, O.  
 GOSSETT Fasteners, Hinges, F. D. Kees, Mfg. Co., Beatrice, Neb.  
 GOULDING Saws, Henry Disston & Sons, Philadelphia, Pa.  
 GRAHAM Motor Trucks, Graham Bros. Co., Detroit, Mich.  
 GRAND Garage Door Holder, Saagen Derrick Co., Chicago, Ill.  
 GRAND PRIZE Hydrated Lime, U. S. Gypsum Co., Chicago, Ill.  
 GRAND RAPIDS Grinders, Gallmeyer & Livingston Co., Grand Rapids, Mich.  
 GRAND RAPIDS Sash Pulleys, Grand Rapids Hardware Co., Grand Rapids, Mich.  
 GRANITEX Transparent Coating for Cement Floors (Non-Staining and Dustless), Truscon Laboratories, Detroit, Mich.  
 GRANITE Wall Plaster, United States Gypsum Co., Chicago, Ill.  
 GREAT SOUTHERN Saws, Henry Disston & Sons, Philadelphia, Pa.  
 GREENLAW AMERICAN Saws, Henry Disston & Sons, Philadelphia, Pa.  
 GRIPLOCK Chains, Chain Belt Co., Milwaukee, Wis.  
 GULF STREAM Duok and Roofing Canvas, John Boyle & Co., Inc., New York City.  
 GUMMER CUTTER Grinding Machines, Henry Disston & Sons, Philadelphia, Pa.  
 GURLEY Engineering & Surveying Instruments, etc., W. & L. E. Gurley, Troy, N. Y.  
 GUSHER Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 GYP-LAP Fireproof Sheathing, U. S. Gypsum Co., Chicago, Ill.
- H. & A. Portable Electric Bench Machines, Heston & Anderson, Fairfield, Iowa.  
 H. & H. Electric Switches and Radio Products, Hart & Hegeman Mfg. Co., Hartford, Conn.  
 HAGSTROM Friction Clutches, Hagstrom Mfg. Co., Glen Cove, N. Y.  
 HAIRINSUL Hair Insulation, Johns-Manville, Inc., New York, N. Y.  
 HAMLET Dimension Gauges, E. C. Atkins & Co., Indianapolis, Ind.  
 HANDIE-BARO Wheelbarrows, Sterling Wheelbarrow Co., Milwaukee, Wis.  
 HANDY Door Pulls, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 HANDY Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 HANDY HUTCH Woodworking Machine, Hutchinson Mfg. Co., Norristown, Pa.  
 HANDY MAN Hay Hoists, American Saw Mill Machinery Co., Hackettstown, N. J.  
 HANDY SWIVEL ATTACHMENT Malleable Clevises, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 HART Electric Switches, Hart & Hegeman Mfg. Co., Hartford, Conn.  
 HARTFORD Laboratories, Crane Co., Chicago, Ill.  
 HARVARD Carriers, Hangers, Hinges, Heaters, Latches, Rails, Slings, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 HARVARD Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 HARVESTER Hay Carriers, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 HAYMAKER Carriers, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 HAYSCO Cocks and Bibbs, Hays Mfg. Co., Erie, Pa.  
 HAYSMITE Cocks and Bibbs, Hays Mfg. Co., Erie, Pa.  
 HEACOCK Saw Mill Machinery, American Saw Mill Machinery Co., Hackettstown, N. J.  
 HEATILATOR Fireplace Units, Heatilator Co., Syracuse, N. Y.  
 HEGEMITE Molded Electric Switch Plates, Hart & Hegeman Mfg. Co., Hartford, Conn.  
 HELIOS Blue Print Paper, Keuffel & Esser Co., Hoboken, N. J.  
 HELTZEL Steel Forms for Concrete, Heltzel Steel Form & Iron Works, Warren, Ohio.  
 HERALD Carts, Lansing Co., Lansing, Mich.  
 HERCULES Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 HERMITAGE Lavatories, Crane Co., Chicago, Ill.  
 HESS Steel Furnaces, Hess Warming & Ventilating Co., Chicago, Ill.  
 HIBBEN Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 HIGGINS AMERICAN Drawing Inks, Chas. M. Higgins & Co., Brooklyn, N. Y.  
 HIGH HEAT Fire Resisting Cement, Clinton Metallic Paint Co., Clinton, N. Y.  
 HILLSBORO Wall Plaster, U. S. Gypsum Co., Chicago, Ill.  
 HI-LO Door Hangers and Track, Frantz Mfg. Co., Sterling, Ill.  
 HI-LO Incandescent Lamp Dimmers, General Electric Co., Schenectady, N. Y.  
 HITCHINGS Sash Operating Devices, Hitchings & Co., Elizabeth, N. J.  
 HODELL Chains, etc., Chain Products Co., Cleveland, Ohio.  
 HOFFMAN Fuel Oil Burners, J. E. Porter Corp., Ottawa, Ill.  
 HOLDEN Boiler Stands, Crane Co., Chicago, Ill.  
 HOLLAND Furnaces, Holland Furnace Co., Holland, Mich.  
 HOLTON Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 HOOSIER Pumps, Water Systems, Jacks, Rams, Regulators, Towers, Tanks, Flint & Walling Mfg. Co., Kendallville, Ind.  
 HOOSIER GIANT HOLO BRICK, Hoosier Building Tile & Silo Co., Albany, Ind.  
 HORSESHOE Tools, Stanley Rule & Level Co., New Britain, Conn.  
 HOSPITAL Lavatories and Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 HOSPITAL Water Closets, Crane Co., Chicago, Ill.  
 HUEBER Track Scraper, American Sawmill Machinery Co., Hackettstown, N. J.  
 HUMMER Barn Door Hangers, J. E. Porter Corp., Ottawa, Ill.  
 HUSHADOOR Door Bumpers, Veiguth Metal Parts, Inc., Milwaukee, Wis.  
 HUTHER Dado Heads and Saws, Huther Bros. Saw Mfg. Co., Rochester, N. Y.  
 HY-PO-RIB Reinforcement Steel Lath, Truscon Steel Co., Youngstown, Ohio.  
 HY-RIB Metal Lath, Truscon Steel Co., Youngstown, Ohio.  
 HYPERION Blue Print Paper, Eugene Dietzgen Co., Inc., Chicago, Ill.
- I. H. C. Com'l Autos, International Harvester Co., Chicago, Ill.  
 IDEALIA Lavatories, Crane Co., Chicago, Ill.  
 IDEAL Boilers, Brackets, Cements, Water Heaters, Valves, Shields, Packless Valves, etc., American Radiator Co., New York, N. Y.  
 IDEAL Elevator Door Hangers, Door Closet and Check and Locking Devices, Richards-Wilcox Mfg. Co., Aurora, Ill.  
 IDEAL End and Corner Posts, Roofing Nails, "U" Shape Steel Fence Posts, American Steel & Wire Co., Chicago, Ill.  
 IDEAL Hoists, Universal Hoist & Mfg. Co., Cedar Falls, Iowa.  
 IDEAL Pocket Tape, Eugene Dietzgen Co., Chicago, Ill.  
 IDEAL Saw Swages, E. C. Atkins & Co., Indianapolis, Ind.  
 IDEAL Steam and Hot Water Heaters, American Radiator Co., Pittsburgh, Pa.
- ILG Self-Cooled Motor Fans, Blowers, Shutters, etc., Ilg Electric Ventilating Co., Chicago, Ill.  
 ILGAIR Air Washing Unit and Humidifier, Ilg Electric Ventilating Co., Chicago, Ill.  
 ILGAIR Heating System (Unit), Ilg Electric Ventilating Co., Chicago, Ill.  
 ILLINI Water Closets, Crane Company, Chicago, Ill.  
 ILLINOIS Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 IMPERIAL Cement Plaster and Prepared Finish, U. S. Gypsum Co., Chicago, Ill.  
 IMPERIAL Pumps and Carriers, F. E. Myers & Bro., Ashland, Ohio.  
 IMPERIAL Tracing Papers, Frederick Post Co., Chicago, Ill.  
 IMPERIAL Wall Plasters, U. S. Gypsum Co., Chicago, Ill.  
 IMPROVED AEBESTOCEL Pipe Covering Sheets, Johns-Manville, Inc., New York, N. Y.  
 IN-A-DOOR Beds, Murphy Door Bed Co., Chicago, Ill.  
 INDUSTRIAL White Enamel (Mill White), Truscon Laboratories, The, Detroit, Mich.  
 INGHAM DRAG Road Scrapers, Lansing Co., Lansing, Mich.  
 INKOFF Tracing Cloth Ink, Keuffel & Esser Co., Hoboken, N. J.  
 INSULITE Plaster Base and Wall Board, Insulite Co., Minneapolis, Minn.  
 INTERLOCK Casement Window Adjuster, The Lyons Mfg. Co., New Haven, Conn.  
 INTERLOCK Conductor Pipe, Milwaukee Corrugating Co., Milwaukee, Wis.  
 INTERLOCK Master Slide Rules, Master Rule Mfg. Co., New York, N. Y.  
 INTERNATIONAL Casements, International Casement Co., Jamestown, N. Y.  
 INTERNATIONAL Motor Trucks, International Harvester Co., Chicago, Ill.  
 INTERNATIONAL Store Front Construction, Zouri Drawn Metals Co., Chicago, Ill.  
 INVINCIBLE Chisel Tooth Saw, Henry Disston & Sons, Inc., Philadelphia, Pa.  
 INVISIBLE JOINT Steel Ceilings, Milwaukee Corrugating Co., Milwaukee, Wis.  
 INVISIBOWL, a Concealed Lavatory, Murphy Door Bed Co., Chicago, Ill.  
 IONIC Tracing Paper, Keuffel & Esser Co., Hoboken, N. J.  
 IRON KING Tank Heaters, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 IROQUOIS Road Building Machinery, Barber Asphalt Paving Co., Philadelphia, Pa.  
 IVORY Wall Plaster, Keene's Cement Pottery Plaster and Hydrated Lime, U. S. Gypsum Co., Chicago, Ill.
- J. C. M. Floor Machines, The Kent Company, Inc., Rome, N. Y.  
 JACK JUNIOR Engines, Fairbanks, Morse & Co., Chicago, Ill.  
 JACKSON Auto Trailers, The Miles Co., Jackson, Mich.  
 JACKSON Hay Forks, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 JACKSON Saws, Henry Disston & Sons, Philadelphia, Pa.  
 JAEGER Concrete Mixers, Jaeger Machine Co., Columbus, Ohio.  
 JERSEY Vises, Stanley Rule & Level Co., New Britain, Conn.  
 JESTER-SACKETT SYSTEM Plaster Boards on Metal Studs, U. S. Gypsum Co., Chicago, Ill.  
 JEWELL Planer, American Saw Mill Machinery Co., Hackettstown, N. J.  
 JIFFY Saw Rig, A. S. Aloe Co., St. Louis, Mo.  
 JOHNSON'S PATTERN Gate Latches, Sargent & Co., New Haven, Conn.  
 JOHNSON'S PERFECTONE Undercoat and Enamel, S. C. Johnson & Son, Racine, Wis.  
 JOHNSON'S SANI-SPAR Varnish Stain, S. C. Johnson & Son, Racine, Wis.  
 JOHNSON'S Wood Dye, Floor Finish and Varnish, S. C. Johnson & Son, Racine, Wis.  
 JOSEPH Barrows, Lansing Co., Lansing, Mich.  
 JUNIOR Spray Pumps and Pumping Jacks, The F. E. Myers & Bro. Co., Ashland, Ohio.
- K-V Clothes Closet Fixtures, Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 K. & E. Calculators, Transits, Levels, Compasses, etc., Keuffel & Esser Co., Hoboken, N. J.  
 K. & M. Magnesia Boiler and Pipe Coverings, Keasby & Matthews Co., Amherst, Pa.  
 KAB-RANGE Combined Range with Kitchen Cabinet Base, Ohio State Stove & Mfg. Co., Columbus, Ohio.  
 KAHN Trussed Bar, Truscon Steel Co., Youngstown, Ohio.  
 KALMANLATH for Building, Kalman Steel Co., Chicago, Ill.  
 KAWNEER Nickel Silver Windows, Kawneer Co., Niles, Mich.  
 KAWNEER Store Fronts, Copper and Bronze Covered Windows, Kawneer Mfg. Co., Niles, Mich.  
 KECO Measuring Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 KEES Building Corners, F. D. Kees Mfg. Co., Beatrice, Neb.  
 KEES-GOSSETT Screen and Storm Sash Hangers, F. D. Kees Mfg. Co., Beatrice, Neb.  
 KENNEDY-GO Saws, Henry Disston & Sons, Philadelphia, Pa.  
 KENNEDY Ball-Bearing Sawrigs, Ralph Kennedy, Philadelphia, Pa.  
 KENT Floor Machines, Kent Co., Inc., Rome, N. Y.  
 KENT Lavatories and Sinks, Crane Co., Chicago, Ill.  
 KENT Stationary Vacuum Cleaners, Bench Type Sanding, Scrubbing and Polishing Machines, The Kent Company, Inc., Rome, N. Y.  
 KERNER Incinerators, Kerner Incinerator Co., Milwaukee, Wis.  
 KERNERATOR BUILT IN THE CHIMNEY Incinerators, Kerner Incinerator Co., Milwaukee, Wis.  
 KEWANEE Steel Sash, Coal Chutes, Kewanee Mfg. Co., Kewanee, Ill.  
 KEY Expanded Metal Lath, Genfire Steel Co., Youngstown, Ohio.  
 KEY BRAND Instruments, Keuffel & Esser Co., Hoboken, N. J.  
 KEYSTONE Automatic Storage, Gas Water Heater, Crane Co., Chicago, Ill.  
 KEYSTONE Farm Trucks, International Harvester Co., Chicago, Ill.  
 KEYSTONE Files and Rasps, Saws, Henry Disston & Sons, Philadelphia, Pa.  
 KEYSTONE Hair Felt, Johns-Manville, Inc., New York, N. Y.  
 KEYSTONE Hand-Barrel, etc., Carts, Lansing Co., Lansing, Mich.  
 KEYSTONE Screen Door Sets, McKinney Mfg. Co., Pittsburgh, Pa.  
 KIMBALL Drinking Fountains, Crane Co., Chicago, Ill.  
 KIMBALL Elevators, Kimball Bros. Co., Council Bluffs, Iowa.  
 KING Blook Machines, The Miles Mfg. Co., Jackson, Mich.  
 KING'S CHARM Door Hangers and Track, McKinney Mfg. Co., Pittsburgh, Pa.  
 KING'S WINDSOR Wall Plaster, U. S. Gypsum Co., Chicago, Ill.  
 KING'S WOOD FIBRE Wall Plaster, U. S. Gypsum Co., Chicago, Ill.  
 KLEEN GLASS Window and Skylight Cleaner, Truscon Laboratories, The, Detroit, Mich.  
 KLONDYKE Barrows, Lansing Co., Lansing, Mich.  
 KNICKERBOCKER Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 KNICKERBOCKER Carts, Lansing Co., Lansing, Mich.

KNICKERBOCKER Concrete Mixers and Woodworkers, Knickerbocker Co., Jackson, Mich.  
 KNO-BURN Expanded Metal Lath, North Western Expanded Metal Co., Chicago, Ill.  
 KNOXALL Door Hangers, Tank Heaters, Wire Stretchers, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 KOEHRING Heavy Duty Concrete Mixers, Shovel and Crane Excavators, Koehring Co., Milwaukee, Wis.  
 KONKERIT Paints, Toch Bros., New York, N. Y.  
 KOVERFLOR Concrete and Cement Paints, Standard Varnish Works, New York, N. Y.  
 KROMICK Structural Steel Primer, Sherwin-Williams Co., Cleveland, Ohio.  
 KUHLMANN Weatherstrips, Kuhlmann Metal Weatherstrip Co., St. Louis, Mo.  
 K.V. Clothes Closet Fixtures, Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 KWICKSAW Power Hand Saw, Porter-Cable Machine Co., Inc., Syracuse, N. Y.  
 KWIK-MIX Concrete Mixers, Kwik-Mix Concrete Mixer Co., Port Washington, Wis.  
 L. O. Sheet Glass, Libbey-Owens Sheet Glass Co., Toledo, Ohio.  
 LABRUM Bath Tubs, Crane Co., Chicago, Ill.  
 LAMELLA Trussless Arch Roofs, Lamella Roof Syndicate, Inc., New York, N. Y.  
 LAMINEX Wooden Doors, Wheeler, Osgood Co., Tacoma, Wash.  
 LANCET Saws, Henry Disston & Sons, Philadelphia, Pa.  
 LANSING Mixers, Trucks, Scrapers and Carts, Lansing Co., Lansing, Mich.  
 LANSING COLONIAL Hand Cart, Lansing Co., Lansing, Mich.  
 LASTLE Composition Roofing, Philip Carey Mfg. Co., Lockland, O.  
 LAVA Drawing Paper, Keuffel & Esser Co., Hoboken, N. J.  
 LEACH-OSHKOSH Concrete Mixers, Leach Co., Oshkosh, Wis.  
 LEADCLAD Sheets, Roofing, Wheeling Metal & Mfg. Co., Wheeling, W. Va.  
 LEAD-SEALED Sheets, Superior Sheet Steel Co., Canton, Ohio.  
 LECTROFLATER Electric Air Compressors, The Black & Decker Mfg. Co., Towson, Md.  
 LEVER BUCKET Spray Pumps, F. E. Myers & Bro. Co., Ashland, O.  
 LIBBEY-OWENS Clear Sheet Glass, Libbey-Owens Sheet Glass Co., Toledo, Ohio.  
 LIGHTNING Sprayers, F. E. Myers & Bro. Co., Ashland, Ohio.  
 LIGNINE Wood Carvings, Ornamental Products Co., Detroit, Mich.  
 LILLIPUT Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 LINCOLN Twin Disc Waxing, Polishing and Scrubbing Machine, Lincoln-Schleuter Machinery Co., Inc., Chicago, Ill.  
 LINCOLN STABLE-ARC Welders, Joseph T. Ryerson & Son, Inc., Chicago, Ill.  
 LINCROSTA Wall Paper, Lincrosta-Walton Co., Hackensack, N. J.  
 LINOVA Bath Tubs, Crane Co., Chicago, Ill.  
 LINOVA Bath Tubs, Crane Co., Chicago, Ill.  
 LIQUID KONDERIT Cement Paints for Dampproofing, Toch Bros., Inc., New York, N. Y.  
 LISBENARD Trucks, Lansing Company, Lansing, Mich.  
 LITERA Dental Lavatories, Crane Co., Chicago, Ill.  
 LITOTEX Concrete Floor Hardeners, Living-Stone Co., Baltimore, Md.  
 LITTLE GENERAL Drill, Joseph T. Ryerson & Son, Inc., Chicago, Ill.  
 LITTLE GIANT Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 LITTLE JANITOR Furnace, Electric Poultry and Blower, System Clocks, Tillery's Little Janitor Clock Co., Newark, N. J.  
 LITTLE WONDER Brick Molds, R. & L. Mfg. Co., Kendallville, Ind.  
 LITTLE WONDER PAVER Combined Concrete Mixer and Paver, Construction Machinery Corporation, Waterloo, Iowa.  
 LIVING STONE Concrete Bond, Living-Stone Co., Baltimore, Md.  
 LOADOMETER Truck Weighing Machinery, The Black & Decker Mfg. Co., Towson, Md.  
 LOG LOG DUPLEX Slide Rules, Keuffel & Esser Co., Hoboken, N. J.  
 LONE STAR METAL SHINGLE, Edwards Mfg. Co., Cincinnati, O.  
 LONGSPAN Expanded Metal Lath, North Western Expanded Metal Co., Chicago, Ill.  
 LOTT Wire Stretchers, American Steel & Wire Co., Chicago, Ill.  
 LOW DOWN Tank Pumps, F. E. Myers & Bro. Co., Ashland, Ohio.  
 LUCERNE Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 LUFFIN Rules and Tapes, Luffin Rule Co., Saginaw, Mich.  
 LUME-TEX Waterproof Aluminum Paint, Truscon Laboratories, Detroit, Mich.  
 LUMNITE Cold Water Factory White, Reardon Co., St. Louis, Mo.  
 LUYTON Window Sash, Elbows, Conductor Pipes, etc., David Luyton's Sons Co., Philadelphia, Pa.  
 LUXTON Drinking Fountains, Crane Co., Chicago, Ill.  
 LUXURIA Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 LYDON Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 LYNDEN Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 MCHENRY Track Levels and Drills, Fairbanks, Morse & Co., Chicago, Ill.  
 MCKINNEY Hardware Specialties, etc., Hinges and Butts, Anti-Friction Butts, One Man Trucks and Steel Door Mats, McKinney Mfg. Co., Pittsburgh, Pa.  
 MADISON Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 MADURO Erasing Fluid, Keuffel & Esser Co., Hoboken, N. J.  
 MAGIC Concrete Mixers, A. S. Aloe Co., St. Louis, Mo.  
 MAIL-BOX Built-in Mail Boxes, Penn-Greg Mfg. Co., St. Paul, Minn.  
 MAINE Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 MAJESTIC Chutes, Dumps, Furnaces, Receivers, Windows, etc., Majestic Co., Huntington, Ind.  
 MAJESTIC Lavatories, Crane Co., Chicago, Ill.  
 MAJOR REMOTE Control System for Stage Lighting, Frank Adam Electric Co., St. Louis, Mo.  
 MALLORY Standard Shutter Workers, Mallory Mfg. Co., Flemington, N. J.  
 MANCO Asphalt Cement, Philip Carey Mfg. Co., Lockland, Ohio.  
 MANHATTAN Lavatories and Urinals, Crane Co., Chicago, Ill.  
 MANNING SPEEDGRITS Abrasives on Paper, Cloth and Combination Sand Paper, Manning Abrasive Co., Inc., Troy, N. Y.  
 MARCO Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 MARCOA Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 MARINE CEMENT for Damp-proofing Foundations, Toch Bros., Inc., New York, N. Y.  
 MARINERO Cotton Duck, John Boyle & Co., Inc., New York, N. Y.  
 MARMOR Lavatories, Crane Co., Chicago, Ill.  
 MAR-NOT Varnish for Floors, Sherwin-Williams Co., Cleveland, O.  
 MARVEL Gas Water Heater, Crane Co., Chicago, Ill.  
 MARVEL Terrace Grinding Machine, Lincoln-Schleuter Machinery Co., Inc., Chicago, Ill.  
 MARESTIC Pipe Joint Compound, Truscon Laboratories, The Detroit, Mich.

MASCOT Ship Range, The Thatcher Co., Newark, N. J.  
 MASON Safety Tread, Jos. T. Ryerson & Son, Inc., Chicago, Ill.  
 MASONITE Structural Insulation, Mason Fibre Co., Chicago, Ill.  
 MASSILLON Steel Building Products, The Macomber Steel Co., Canton, Ohio.  
 MASTER Pumping Jacks, The F. E. Myers & Bro. Co., Ashland, O.  
 MASTER Slide and Folding Rules and Stucco Machines, Master Rule Mfg. Co., Inc., New York, N. Y.  
 MASTER Woodworking Machinery, The Master Woodworker Mfg. Co., Detroit, Mich.  
 MATCHER Bits, Henry Disston & Sons, Philadelphia, Pa.  
 MATOT Dumbwaiters, D. A. Matot Co., Chicago, Ill.  
 MAURETANIA Water Closets, Crane Co., Chicago, Ill.  
 MEADOW KING Carriers, J. E. Porter Corp., Ottawa, Ill.  
 MEADOW LARK Carriers, J. E. Porter Corp., Ottawa, Ill.  
 MEADOW QUEEN Carriers, J. E. Porter Corp., Ottawa, Ill.  
 MEDIA Drinking Fountain, Crane Co., Chicago, Ill.  
 MEDICUS Lavatory, Crane Co., Chicago, Ill.  
 MEDIO Bath Tubs, Crane Co., Chicago, Ill.  
 MELROCK Products, Mellich-Hayward Co., Chicago, Ill.  
 MERCHANT Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 MERITUS Fuller Faucets, Crane Co., Chicago, Ill.  
 MERTENS Hydrants, Hays Mfg. Co., Erie, Pa.  
 MERTUS Drinking Fountains, Crane Co., Chicago, Ill.  
 METAFORM Concrete Forms and Molds, Metal Forms Corp., Milwaukee, Wis.  
 METALISTIC Paints and Colors, Sherwin-Williams Co., Cleveland, O.  
 METALITE Abrasive Cloth, Manning Abrasive Co., Inc., Troy, N. Y.  
 METALLIC Measuring Tapes, The Luffin Rule Co., Saginaw, Mich.  
 METRIC Closet Valves, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 MEYER Removable Steel Forms, Concrete Engineering Co., Omaha, Neb.  
 MIAMI Pure White Steel Bathroom Cabinets, Miami Cabinet Co., Middletown, Ohio.  
 MIAMI Cement and Asbestos Wall Tile, Miami Cabinet Co., Middletown, Ohio.  
 MICA KOTE Composition Roofing, Philip Carey Mfg. Co., Lockland, Ohio.  
 MICHIGAN Gauging Plasters, U. S. Gypsum Co., Chicago, Ill.  
 MICRO Adjustable Boring Heads, Porter Cable Machine Co., Syracuse, N. Y.  
 MIDGET Punches, Henry Disston & Sons, Philadelphia, Pa.  
 MILCOR Cupolas, Metal Corner Beads, Stock Tanks, Hog Troughs and Ventilating Systems, Milwaukee Corrugating Co., Milwaukee, Wis.  
 MILES Cement Block Machines, Concrete Mixing Machines, Miles Mfg. Co., Jackson, Mich.  
 MILLER DRIP EDGE Edging for Prepared Roofing, Miller & Gleason, Olean, N. Y.  
 MINIER Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 MINUSA Drawing Instrument, Keuffel & Esser Co., Hoboken, N. J.  
 MIRACLE Doors, Paine Lumber Co., Oshkosh, Wis.  
 MISSISSIPPI Wire Glass, Mississippi Wire Glass Co., New York, N. Y.  
 MODESTO Lavatories, Crane Co., Chicago, Ill.  
 MONARCHE Measuring Tapes, Eugene Dietzgen Co., Inc., Chicago, Ill.  
 MONARCHE Planer, Matcher & Moulder, American Sawmill Machinery Co., Hackettstown, N. J.  
 MONARCHE Radiators, National Radiator Co., Johnstown, Pa.  
 MONARCHE Saw Sets, Henry Disston & Sons, Philadelphia, Pa.  
 MONARCHE BRONZE Sash and Transom Chains, Bridgeport Chain Co., Bridgeport, Conn.  
 MONITOR Wire Rope, Woven Wire Fence, American Steel & Wire Co., Chicago, Ill.  
 MONROE Lavatories, Crane Co., Chicago, Ill.  
 MORSE Dust Collectors, Knickerbocker Co., Jackson, Mich.  
 MOVA Bath Faucets, Hays Mfg. Co., Erie, Pa.  
 MULTI-CATCH Sockets, General Electric Co., Schenectady, N. Y.  
 MYERS CENTURY Pumps, The F. E. Myers & Bro. Co., Ashland, O.  
 MYERS DUPLEX Painting and Spraying Machines, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 MYERS IMPROVED Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 MYERS O.K. Spray Pumps, Pulleys, Door Hangers, Tracks, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 MYERS PERFECT Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 MYERS SURE LOCK Sling Unloaders and Door Hangers, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 MYERS UNIVERSAL Hay Fork Pulley, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 NAPPANEE DUPLEX KITCHENET Kitchen Cabinets, Coppes Bros. & Zook, Nappanee, Ind.  
 NATCO Double Shell Tile, National Fire Proofing Co., Pittsburgh, Pa.  
 NATCO Slio, National Fire Proofing Co., Pittsburgh, Pa.  
 NATCO Tex Tile, National Fire Proofing Co., Pittsburgh, Pa.  
 NATCO XXX Load Bearing Tile, National Fire Proofing Co., Pittsburgh, Pa.  
 NATIONAL Fences, American Steel & Wire Co., Chicago, Ill.  
 NATIONAL Wire Fence, American Steel & Wire Co., Chicago, Ill.  
 NATIONAL AERO Radiators, National Radiator Corp., Johnstown, Pa.  
 NATIONAL ELECTRIC Floor Surfacing Machine, National Sanding Machine Co., Chicago, Ill.  
 NATIONAL NOVUS Boilers, National Radiator Corp., Johnstown, Pa.  
 NATIONAL SMOKELESS Water and Steam Boilers, National Radiator Corp., Johnstown, Pa.  
 NATWIRE Wire Goods and Bathroom Fixtures, Wickwire Spencer Steel Co., New York, N. Y.  
 NEAPOL Water Closets, Crane Co., Chicago, Ill.  
 NEDUS Drinking Fountains, Crane Co., Chicago, Ill.  
 NERWALL Water Closets, Crane Co., Chicago, Ill.  
 NETMESH Expanded Diamond Metal Lath, Milwaukee Corrugating Co., Milwaukee, Wis.  
 NEUMAR Lavatories, Crane Co., Chicago, Ill.  
 NEVADA Lavatories, Crane Co., Chicago, Ill.  
 NEVADA Saws, Henry Disston & Sons, Philadelphia, Pa.  
 NEVER BREAK Corner Beads, Milwaukee Corrugating Co., Milwaukee, Wis.  
 NEW CENTURY Power Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 NEW CRESCENT Wheelbarrows, Lansing Co., Lansing, Mich.  
 NEW CYCLONE Dust Collectors, Knickerbocker Co., Jackson, Mich.  
 NEW HARVARD Hangers, Hunt, Helm & Ferris Co., Harvard, Ill.  
 NEW MODEL Force Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 NEW STAR Hangers, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 NEW WAY Door Hangers and Tracks, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 NEW YORK Brick Trowels, Henry Disston & Sons, Philadelphia, Pa.  
 NEW YORK Tapes, Keuffel & Esser Co., Hoboken, N. J.

- NEW YORK CITY MILLS Moulding Plaster, U. S. Gypsum Co., Chicago, Ill.
- NIAGARA Insulating Materials, Inc., Johns-Manville, Inc., New York, N. Y.
- NIAGARA Pattern Chains, American Chain Co., Inc., Bridgeport, Conn.
- NICALLOY Valve Trimmings, Crane Co., Chicago, Ill.
- NICHOLSONS Hydrometers, W. & L. E. Gurley, Troy, N. Y.
- NIKROME Heat Treated Alloy Steel, Jos. T. Ryerson & Son, Inc., Chicago, Ill.
- NOAHS PITCH Roof Repair Cement, Philip Carey Mfg. Co., Lockland, Ohio.
- NORFOLK Lavatories, Crane Co., Chicago, Ill.
- NO RINKLE Tracing Cloth Color, Keuffel & Esser Co., Hoboken, N. J.
- NORMAL Drawing Paper, Keuffel & Esser Co., Hoboken, N. J.
- NORTFIELD Concrete Mixers, Graders, etc., Northfield Iron Co., Northfield, Minn.
- NORWEST Metal Lath, North Western Expanded Metal Co., Chicago, Ill.
- NORWOOD Drawing Paper, Frederick Post Co., Chicago, Ill.
- NO-SLAM Screen Door Checks, Sargent & Co., New Haven, Conn.
- NOVA Lavatories, Crane Co., Chicago, Ill.
- NOVO Kerosene and Gasoline Engines, etc., Novo Engine Co., Lansing, Mich.
- NOVUS Water and Steam Heaters, National Radiator Corp., Johnstown, Pa.
- NOWELD Chains, Chain Products Co., Cleveland, Ohio.
- NU AIR Ventilators, Milwaukee Corrugating Co., Milwaukee, Wis.
- NUTMEG Switches, Hart & Hegeman Mfg. Co., Hartford, Conn.
- NUMETAL Weatherstrips, N. J. Bique & Son, Chicago, Ill.
- O. B. Insulating Compounds, Standard Varnish Works, New York, N. Y.
- O. D. P. White Lead, Sherwin-Williams Co., Cleveland, Ohio.
- O. K. Carriers, Door Hangers and Tracks, The F. E. Myers & Bro. Co., Ashland, Ohio.
- O. K. Pulleys and Slings, Hunt, Helm, Ferris & Co., Harvard, Ill.
- OHIO Fireplace Equipment, Ohio Foundry & Mfg. Co., Steubenville, Ohio.
- OHIO Tapes, Keuffel & Esser Co., Hoboken, N. J.
- OKOLONA Water Closets, Crane Co., Chicago, Ill.
- OLD ENGLISH Paint Oil, E. I. du Pont de Nemours & Co., Inc., Paint and Varnish Division, Wilmington, Del.
- OLD VIRGINIA WHITE Paints, Samuel Cabot, Inc., Boston, Mass.
- OLIVER Lavatories and Water Closets, Crane Co., Chicago, Ill.
- OLIVER Woodworking Machinery, Engine Lathes, etc., Oliver Machinery Co., Grand Rapids, Mich.
- OLYMPIC Baths, Crane Co., Chicago, Ill.
- ONAN Power Saws, D. W. Onan & Sons, Minneapolis, Minn.
- OPEX Lacquers, Sherwin-Williams Co., Cleveland, Ohio.
- OPHIR Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- OPINE Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ORBIT Fountains, Crane Co., Chicago, Ill.
- OREGON Saws, Henry Disston & Sons, Philadelphia, Pa.
- ORIENTAL STUCCO Exterior Plaster, U. S. Gypsum Co., Chicago, Ill.
- ORIGINAL McNAMARA Hydrants, Hays Mfg. Co., Erie, Pa.
- ORIOLE Saws, Henry Disston & Sons, Philadelphia, Pa.
- ORNATUS Lavatories, Crane Co., Chicago, Ill.
- OSBORNE Closet Valves, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- OTHELLO Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- OTT'S Pumps, J. E. Porter Co., Ottawa, Ill.
- OVATUS Lavatories and Tables, Crane Co., Chicago, Ill.
- OVERHEAD Doors, Overhead Door Corp., Hartford City, Ind.
- OVER-WAY Conveying Systems, Richards-Wilcox Mfg. Co., Aurora, Ill.
- OXFORD Drinking Fountains, Crane Co., Chicago, Ill.
- OZALID Direct Red Line Development and Print Paper, Eugene Dietzgen Co., Inc., Chicago, Ill.
- P. C. Lathes, Porter-Cable Machine Co., Syracuse, N. Y.
- P. & B. Acid Resisting Paint, Ruberoid Co., New York, N. Y.
- P. & S. Receptacles, Sockets, Pass & Seymour, Inc., Solvay, N. Y.
- PAINTAIR Painting Machines, Mellish-Hayward Co., Chicago, Ill.
- PAISTE Electric Products, Hart & Hegeman Mfg. Co., Hartford, Conn.
- PANAMA Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- PARAGON Drawing Paper Instrument and Scales, Keuffel & Esser Co., Hoboken, N. J.
- PARAHX Strip Shingles, Beckman-Dawson Roofing Co., Chicago, Ill.
- PARAMOUNT Pressed Steel Clamps, L. S. Starrett Co., Athol, Mass.
- PARCHMENT Tracing Paper, Keuffel & Esser Co., Hoboken, N. J.
- PARKS Woodworking Machinery, Parks Woodworking Machine Co., Cincinnati, Ohio.
- PARKWAY Drinking Fountains, Crane Co., Chicago, Ill.
- PASSMOUR Sockets, Pass & Seymour, Inc., Solvay, N. Y.
- PAUL Pumps and Water Systems, Fort Wayne Engineering & Mfg. Co., Ft. Wayne, Ind.
- PAYZANT Lettering Pens, Keuffel & Esser Co., Hoboken, N. J.
- PEARL Wire Cloth for Doors and Windows, Gilbert & Bennett Mfg. Co., Chicago, Ill.
- PEARSON Cement Coated Nails, American Steel & Wire Co., Chicago, Ill.
- PECOFROOF Waterproofing, Philip Carey Mfg. Co., Lockland, Ohio.
- PEERLESS Carriers, Hay Fork Pulleys, Hunt, Helm, Ferris & Co., Harvard, Ill.
- PEERLESS Fireplace Furnishings and Ranges, Peerless Mfg. Co., Louisville, Ky.
- PEERLESS Hay Carriers, Hunt, Helm, Ferris & Co., Harvard, Ill.
- PEERLESS Radiators, American Radiator Co., Chicago, Ill.
- PEERLESS Roofing, Edwards Mfg. Co., Cincinnati, Ohio.
- PEERLESS Spray Pumps, The F. E. Myers & Bro. Co., Ashland, O.
- PEERLESS HEARTHYFEYR Heater, Peerless Mfg. Co., Louisville, Ky.
- PELHAM Sash Cord, Silver Lake Co., Newtonville, Mass.
- PERFECT Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- PERFECT PATTERN Door Springs, National Mfg. Co., Sterling, Ill.
- PERFECTION Brand Oak Flooring, Arkansas Oak Flooring Co., Pine Bluff, Ark.
- PERFECTION Door Springs and Gate Springs, American Steel & Wire Co., Chicago, Ill.
- PERFECTION Glass Boards, Lufkin Rule Co., Saginaw, Mich.
- PERFECTION Heaters, Hunt, Helm, Ferris & Co., Harvard, Ill.
- PERFECTION Indirect Radiators, American Radiator Co., New York, N. Y.
- PERFECTION Sanitary Closet, Chemical Toilet Mfg. Co., Syracuse, N. Y.
- PERFECTION Saw Tables, American Saw Mill Machinery Co., Hackensack, N. J.
- PERFECTION Window Ventilators, Perfection Co., Chicago, Ill.
- PERMAROC Blackboard, E. W. A. Rowles, Chicago, Ill.
- PHAETON Auxiliary Heaters, Excelso Specialty Works, Inc., Buffalo, N. Y.
- PHILADELPHIA Carts, Lansing Co., Lansing, Mich.
- PHILCO Composition Roofing, Philip Carey Mfg. Co., Lockland, O.
- PHILLIPS Slide Rule, Eugene Dietzgen Co., Inc., Chicago, Ill.
- PHOENIX Sash Cord Awning Line, Samson Cordage Works, Boston, Mass.
- PICCOLO Tapes, Keuffel & Esser Co., Hoboken, N. J.
- PIERSON Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- PILOT Drawing Instruments, Keuffel & Esser Co., Hoboken, N. J.
- PIONEER Fireplaces, Pioneer Fireplace & Supply Co., Chicago, Ill.
- PIONEER Sand Papering Machines, The Black Bro. Machinery Co., Inc., Mendota, Ill.
- PITMAN Power and Spray Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.
- PLASTA-SAVER Expanded Metal Lath, North Western Expanded Metal Co., Chicago, Ill.
- PLASTERTOK Trowel Application for Damp-proofing, Toch Bros., Inc., New York, N. Y.
- PLASTIC MARINE TOCKOLITH Marine Priming Coat Paints, Toch Bros., Inc., New York, N. Y.
- PLASTINE Colored Finish Plaster, U. S. Gypsum Co., Chicago, Ill.
- PLUG-A-LEAK Roof Paint and Compounds, Toch Bros., Inc., New York, N. Y.
- POLYPHASE Slide Rules, Keuffel & Esser Co., Hoboken, N. J.
- POND Continuous Steel Sash and Sash Operators, David Lupton's Sons Co., Philadelphia, Pa.
- POPULAR Tapes, Keuffel & Esser Co., Hoboken, N. J.
- PORCELIRON Tables, Table Tops, Refrigerator Linings, Laundry Trays and Stove Parts, Ingram-Richardson Mfg. Co., Beaver Falls, Pa.
- PORTER Forks, Hangers, Pullers, J. E. Porter Co., Ottawa, Ill.
- PORTER CABLE Machinery and Tools, Porter-Cable Machine Co., Inc., Syracuse, N. Y.
- PORTERS COLUMBIAN Carriers, J. E. Porter Corp., Ottawa, Ill.
- PORTO Electric Hand saw, Portable Power Tool Corp., Chicago, Ill.
- POSTEX Drawing Papers, Frederick Post Co., Chicago, Ill.
- PRAIRIE Zinc Insulated Woven Wire Fence, American Steel & Wire Co., Chicago, Ill.
- PRAIRIE QUEEN Carriers, J. E. Porter Corp., Ottawa, Ill.
- PREMIER Automatic Storage Gas Water Heater, Crane Co., Chicago, Ill.
- PREMIER Saws, Henry Disston & Sons, Philadelphia, Pa.
- PREMIER Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.
- PREMIER Standardized Woodwork, Premier Standardized Woodwork Co., El Paso, Tex.
- PREMO Lavatories, Crane Co., Chicago, Ill.
- PRENTICE Drill Presses, Jos. T. Ryerson & Son, Chicago, Ill.
- PRENTICE Lathes, Jos. T. Ryerson & Son, Chicago, Ill.
- PRENTISS Lavatories, Standard Sanitary Mfg. Co., Beasem Bldg., Pittsburgh, Pa.
- PRIMO Brown and Blue Print Paper and Drawing Instruments and Tables, Frederick Post Co., Chicago, Ill.
- PRINCETON Tapes, Keuffel & Esser Mfg. Co., Hoboken, N. J.
- PROGRESS House Boiler, The Thatcher Co., Newark, N. J.
- PULLMAN Sash Balances, etc., Pullman Mfg. Co., Rochester, N. Y.
- PURDUE Tapes, Keuffel & Esser Co., Hoboken, N. J.
- PURIMO Closets, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- PURUS Water Closets, Crane Co., Chicago, Ill.
- PURUS JR., Water Closets, Crane Co., Chicago, Ill.
- PYLAC Colored Lacquer, Truscon Laboratories, Detroit, Mich.
- PYRAMID Wall Plasters, U. S. Gypsum Co., Chicago, Ill.
- PYRAMID BRAND Structural Slate, The Structural Slate Co., East Pen Argy, Pa.
- PYRO-TEX Fireproof Paint, Truscon Laboratories, The, Detroit, Mich.
- PYROBAR Roof Tile, Floor Tile, Partition, etc., U. S. Gypsum Co., Chicago, Ill.
- PYROCELL Insulation and Floor Fill, U. S. Gypsum Co., Chicago, Ill.
- PYROFILL Gypsum Poured Roof and Floor System, U. S. Gypsum Co., Chicago, Ill.
- QUALITY Finishing and Gauging Plasters, U. S. Gypsum Co., Chicago, Ill.
- QUICKLOCK Door Locks, McKinney Mfg. Co., Pittsburgh, Pa.
- QUILT Sheathing and Insulating, Samuel Cabot, Inc., Boston, Mass.
- R. I. W. Paints for Damp-proofing, Protecting Cut Stone, Resin Acid Alkalies, Electrolysis and Water, Toch Bros., Inc., New York, N. Y.
- RADIANT Blue Print Paper, Eugene Dietzgen Co., Inc., Chicago, Ill.
- RADIANTFIRE Fireplaces, General Gas Light Co., Kalamazoo, Mich.
- RANDALL Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- RANSOME STANDARD Building Mixer, Ransome Concrete Machinery Co., Dunellen, N. J.
- RAPID Wood and Stone Surfacing Machines, Lincoln-Schleuter Machinery Co., Inc., Chicago, Ill.
- READING Wrought Iron Pipe and Cut Nails, Reading Iron Co., Reading, Pa.
- RECESS Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- RECONA Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- RED HOOP GALVANIZED Shingle Nails, American Steel & Wire Co., Chicago, Ill.
- RED METAL Chains, Smith & Egge Mfg. Co., Bridgeport, Conn.
- RED SEAL Tires, Goodyear Tire & Rubber Co., Akron, Ohio.
- RED TOP Wall Plaster, U. S. Gypsum Co., Chicago, Ill.
- REED Hay Forks, Pullers, The F. E. Myers & Bro. Co., Ashland, O.
- REGAL Roofing, Johns-Manville, Inc., New York, N. Y.
- REICHERT Metal Moulds for Concrete Construction, Metal Forms Corp., Milwaukee, Wis.
- REID-WAY Convertible Sander, Reid-Way Co., Cedar Rapids, Ia.
- RELAX Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.
- RELCO Concrete Molds, R. & L. Concrete Machinery Co., Kendallville, Ind.
- RELIABLE Measuring Tapes, Lufkin Rule Co., Saginaw, Mich.
- RELIABLE Scaffold Brackets, Elite Mfg. Co., Ashland, Ohio.
- RELIABLE Squares, L. S. Starrett Co., Athol, Mass.
- RELINCE Door Springs, Chicago Spring Hinge Co., Chicago, Ill.
- RELIANCE Measuring Tape, Eugene Dietzgen Co., Inc., Chicago, Ill.
- REMINDO Combined Switch and Buzzer, General Electric Co., Schenectady, N. Y.
- RENNSELAER Tapes, Keuffel & Esser Co., Hoboken, N. J.
- RENO-BESTOS Packing, Keasbey & Mattison Co., Ambler, Pa.
- RE-PEL-LO Waterproofed Duck, John Boyle & Co., New York, N. Y.
- REPUBLIC Cement Mixers, Republic Iron Works, Tecumseh, Mich.
- REVERE Lavatories, Crane Co., Chicago, Ill.
- REX Chains, Chain Belt Co., Milwaukee, Wis.
- REX Concrete Mixers and Pavers, Chain Belt Co., Milwaukee, Wis.
- REX CHABELCO Chains, Chain Belt Co., Milwaukee, Wis.
- REX LUBAR Chains, Chain Belt Co., Milwaukee, Wis.
- REX GRIPLOCK Chains, Chain Belt Co., Milwaukee, Wis.

BEK UNICAST Chains, Chain Belt Co., Milwaukee, Wis.  
 BEXPAR Varnishes, Sherwin-Williams Co., Cleveland, Ohio.  
 BIGO Drinking Fountains, Crane Co., Chicago, Ill.  
 ROCKFORD Shapers, Jos. T. Ryerson & Son, Chicago, Ill.  
 ROCKLATH Plasterboard, U. S. Gypsum Co., Chicago, Ill.  
 ROLLAWAY Door Hangers and Track, Frantz Mfg. Co., Sterling, Ill.  
 ROOLSCREENS, Rolscreen Co., Pella, Iowa.  
 ROOF SEAL Roof Paints, The Truscon Laboratories, Detroit, Mich.  
 ROOFRITE Metal Shingles, W. C. Hopson Co., Grand Rapids, Mich.  
 ROSELLE Fountains, Crane Co., Chicago, Ill.  
 ROYAL Lavatories, Crane Co., Chicago, Ill.  
 ROYAL Shingle Machines, American Saw Mill Machy. Co., Hackettstown, N. J.  
 ROYAL Wire Fences (Zinc Insulated), American Steel & Wire Co., Chicago, Ill.  
 ROYAL Wood Working Machinery, American Saw Mill Machy. Co., Hackettstown, N. J.  
 RUBBY-COAL Fireplace Grates, Electric Fireplace Mfg. Co., Inc., Chicago, Ill.  
 RUBEROID Roofing and Shingles, Ruberoid Co., New York, N. Y.  
 RUGBY Lavatories, Crane Co., Chicago, Ill.  
 RUNWEL Door Hangers and Track, Frantz Mfg. Co., Sterling, Ill.  
 RYCO Alloy Steel, Joseph T. Ryerson & Son, Inc., Chicago, Ill.  
 RYERSON High Speed Friction Saws, Joseph T. Ryerson & Son, Inc., Chicago, Ill.  
 RYOLITE Tool Steel, Joseph T. Ryerson & Son, Inc., Chicago, Ill.

R. W. P. Prepared Paint, Sherwin-Williams Co., Cleveland, Ohio.  
 SACHEM Sash Cord, Samson Cordage Works, Boston 9, Mass.  
 SACKETT Plaster Board Slabs, etc., U. S. Gypsum Co., Chicago, Ill.  
 SAFETY Panel Boards and Switchboards, Frank Adam Elec. Co., St. Louis, Mo.  
 SAGLESS Gate Spring, Pivvot Hinges, Chicago Spring Hinge Co., Chicago, Ill.  
 SAMS Wire Stretchers, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 SAMSON Chains, Chain Products Co., Cleveland, Ohio.  
 SAMSON Diggers, Saw Sets, Henry Diston & Sons, Inc., Philadelphia, Pa.  
 SAMSON Sash Cord, Shade Cord, Masons' Lines, Solid Braided Rope, Signal Cord, Bell and Register Cord, Samson Cordage Works, Boston, Mass.  
 SANDER PLANE Hand Sander, American Floor Surfacing Machine Co., Toledo, Ohio.  
 SANDO Cement (for gluing sandpaper to Metal Discs), Oliver Machinery Co., Grand Rapids, Mich.  
 SAN-EQUIP Septic Tanks, Chemical Toilet Corp., Syracuse, N. Y.  
 SANETO Water Closets, Crane Co., Chicago, Ill.  
 SANFORD Loggings, Tools, Leach Co., Oshkosh, Wis.  
 SANICOTE Wall Finish, Reardon Co., St. Louis, Mo.  
 SANI-ONYX Restaurant, Cafeteria and Soda Fountain Equipmt., Marietta Mfg. Co., Indianapolis, Ind.  
 SANI-ONYX Opal Glass, Marietta Mfg. Co., Indianapolis, Ind.  
 SANI-ONYX Wall Material, Marietta Mfg. Co., Indianapolis, Ind.  
 SANISON Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 SANITARY School Indirect Radiators, American Radiator Co., New York, N. Y.  
 SANITAS Wall Covering, Standard Textile Products Co., New York, N. Y.  
 SANITEX Sanitary Closet Seat Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.  
 SANTO Urinals, Crane Co., Chicago, Ill.  
 SANWALL Water Closets, Crane Co., Chicago, Ill.  
 SARGENT Steel Squares, Latches, Padoocks, Door Checks, etc., Sargent & Co., New Haven, Conn.  
 SARGEN Derricks, Sagen Derrick Co., Chicago, Ill.  
 SATINETTE Enamels, Standard Varnish Works, New York, N. Y.  
 SAWYER'S FAVORITE Mill Board, American Saw Mill Machinery Co., Hackettstown, N. J.  
 SCAR-NOT Varnish, Sherwin-Williams Co., Cleveland, Ohio.  
 SCHLUBSTER Rapid Floor Surfacers, Lincoln-Schluster Machy. Co., Inc., Chicago, Ill.  
 SCHOLA Drawing Paper, Keuffel & Esser Co., Hoboken, N. J.  
 SCHRODER Eaves Trough Hanger, F. D. Kees Mfg. Co., Beatrice, Neb.  
 SCOVILLE'S Pulleys, S. Cheney & Son, Manlius, N. Y.  
 SEACTO Water Closets, Crane Co., Chicago, Ill.  
 SEDGWICK Elevators, Sedgwick Machine Works, New York, N. Y.  
 SELF-SENTERING Metal Lath, Genfire Steel Co., Youngstown, Ohio.  
 SELF-LOCKING Pulleys, J. E. Porter Corp., Ottawa, Ill.  
 SELFLOCK Eavetrough Hangers, Milwaukee Corrugating Co., Milwaukee, Wis.  
 SELLERS Kitchen Cabinets, G. I. Sellers & Sons Co., Elwood, Ind.  
 SEMCO Elevators, Sidney Elevator Mfg. Co., Sidney, Ohio.  
 SEMI Milling Saws, Huther Bros. Saw Mfg. Co., Rochester, N. Y.  
 SENIOR Spray Pumps and Pumping Jacks, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 SERENO Drinking Fountains, Crane Co., Chicago, Ill.  
 SEVILLE Lavatories, Crane Co., Chicago, Ill.  
 SHRETTROCK Wall Beard and Crack Filler, U. S. Gypsum Co., Chicago, Ill.  
 SHELBAS Lavatories, Crane Co., Chicago, Ill.  
 SHIELDON Concrete Mixer and Portable Saw Rig, The Sheldon Mfg. Co., Inc., Nehawka, Neb.  
 SHEELAV Lavatories, Crane Co., Chicago, Ill.  
 SHURLOK Lamp Locking Sockets and Receptacles, Pass & Seymour, Inc., Solvay, N. Y.  
 SIDNEY Elevators, Sidney Elevator Mfg. Co., Sidney, Ohio.  
 SIDNEY Woodworking Machinery, Sidney Machine Tool Co., Sidney, Ohio.  
 SIGNALOID Lamp Coloring, Kleigl Bros. Universal Electric Stage Lighting Co., Inc., New York, N. Y.  
 SIGHT Stop and Drains, Hays Mfg. Co., Erie, Pa.  
 SILICO Wall Finish, United States Gypsum Co., Chicago, Ill.  
 SILVER Lake Awning, Dumbwater, Sash, Shade, Bail, Trolley and Ventilator Cords, Silver Lake, Newtonville, Mass.  
 SILVER STAR Electric Switches, Hart & Hegeman Mfg. Co., Hartford, Conn.  
 SIMPLEX Concrete Mixer, The Miles Mfg. Co., Jackson, Mich.  
 SIMPLEX Door Hangers, Richards-Wilcox Mfg. Co., Aurora, Ill.  
 SIMPLEX Drawing Paper, Keuffel & Esser Co., Hoboken, N. J.  
 SIMPLEX Levels, Chas. Bruning Co., Chicago, Ill.  
 SIMPLEX Single and Double Acting Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.  
 SIMPLEX Pumps, Standards, Pumps, Jacks and Door Hangers, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 SIMPLEX Saw Mill Dogs, American Saw Mill Machinery Co., Hackettstown, N. J.  
 SIMPLEX Woodworker, Combination Woodworking Machine Co., Chicago, Ill.

SINGER Block Machines, The Miles Mfg. Co., Jackson, Mich.  
 SINGLE Forks, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 SINGLE LEVER Friction Hoists, J. E. Porter Corp., Ottawa, Ill.  
 SINTON Baths, Crane Co., Chicago, Ill.  
 SISALKRAFT Sheathing and Insulating Paper, Sisalkraft Co., Chicago, Ill.  
 SITZ Baths, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 SIX-LEVER Padoocks, Sargent & Co., New Haven, Conn.  
 SKILSAW Electric Saws, Skilsaw, Inc., Chicago, Ill.  
 SLATLIE Roofing, Beckman-Dawson Roofing Co., Chicago, Ill.  
 SLYPHON Regulators, Air Brakes, Radiator Valves, American Radiator Co., Chicago, Ill.  
 SMITH Concrete Mixers, T. L. Smith Co., Milwaukee, Wis.  
 SMITH Solar Attachment, W. & L. E. Gurley, Troy, N. Y.  
 SMITH Tilting and Non-Tilting Concrete Mixers, T. L. Smith & Co., Milwaukee, Wis.  
 SMITH BATSON Sketching Case, W. & L. E. Gurley, Troy, N. Y.  
 SMITHTYPE Rebuilt Typewriters, Smith Typewriter Sales Co., Chicago, Ill.  
 SNAPCATCH Porcelain Sockets and Receptacles, General Elec. Co., Schenectady, N. Y.  
 SNO WHITE Enamel, The Truscon Laboratories, Detroit, Mich.  
 SNOVA Double Laundry Faucets, Hays Mfg. Co., Erie, Pa.  
 SNO-WHITE Enamel, Toch Bros. Co., New York, N. Y.  
 SNOW-WHITE Filler, United States Gypsum Co., Chicago, Ill.  
 SOLARITE Wall Coating, Reardon Co., St. Louis, Mo.  
 SOLID COMFORT Farm Trucks, International Harvester Co., Chicago, Ill.  
 SOLVAY Calcium Chloride, Solvay Sales Corp., New York, N. Y.  
 SOUTHERN Barrows, Lansing Co., Lansing, Mich.  
 SPECIAL Shovels and Scoops, Fairbanks, Morse & Co., Chicago, Ill.  
 SPEED MARVEL Wood Working Mach., Hutchinson Mfg. Co., Norristown, Pa.  
 SPEEDGRITS Abrasive Paper, Cloth and Combination, Manning Abrasive Co., Troy, N. Y.  
 SPEEDMATIC Floor Sander, Porter-Cable Machine Co., Syracuse, N. Y.  
 SPIRO Water Closets, Crane Co., Chicago, Ill.  
 SPRAGUE Fixtures, General Electric Co., Schenectady, N. Y.  
 SPRA-RITE Nozzles, Binks Spray Equipment Co., Chicago, Ill.  
 SPRAYO-FLAKE Insulating Compounds, Sprayo-Flake Co., Milwaukee, Wis.  
 STADIA Surveyors, W. & L. E. Gurley, Inc., Troy, N. Y.  
 STANDARD Bath Room Fixtures, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 STANDARD Roofings, Beckman-Dawson Roofing Co., Chicago, Ill.  
 STANDARD Trowels, Henry Diston & Sons, Philadelphia, Pa.  
 STANLEY Tools, Stanley Rule & Level Co., New Britain, Conn.  
 STANLEY FOUR-SQUARE HOUSEHOLD Tools, Stanley Rule & Level Co., New Britain, Conn.  
 STANVAR Wax Like Finish, Standard Varnish Co., New York, N. Y.  
 STAR Barn Equipment, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 STAR Cement, Louisville Cement Co., Louisville, Ky.  
 STAR Hoists, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 STAR Lock Stove Pipe, Wheeling Corrugating Co., Wheeling, W. Va.  
 STAR Metal Shingles, Wheeling Corrugating Co., Wheeling, W. Va.  
 STAR Miscellaneous Hardware, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 STAR Paint and White Washing Machines, Binks Spray Equipment Co., Chicago, Ill.  
 STAR Tanks, Towers and Windmills, Flint & Walling Co., Kendallville, Ind.  
 STAWARM Electric Glue Heaters, Oliver Machinery Co., Grand Rapids, Mich.  
 STAY-RIB Metal Lath, Milwaukee Corrugating Co., Milwaukee, Wis.  
 STAYON Door Hangers and Tracks, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 STEELCOTE Portable Garages, Edwards Mfg. Co., Cincinnati, Ohio.  
 STEELCRETE Expanded Metal, Consolidated Expanded Metal Co., Wheeling, W. Va.  
 STEELGRIP Clamp Nails or Splines, Clamp Nail Co., Chicago, Ill.  
 STEELHART Stucco Base, North Western Expanded Metal Co., Chicago, Ill.  
 STERLING Surveying and Engineering Instruments, Warren-Knight Co., Philadelphia, Pa.  
 STERLING INDIRECT Radiators, American Radiator Co., New York, N. Y.  
 STEVENS Measuring Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 STONETEX Exterior Dampproof Coating for Concrete and Masonry, Truscon Laboratories, Detroit, Mich.  
 STORM PROOF Hangers, National Mfg. Co., Sterling, Ill.  
 STRAIGHT-AWAY Garage Sets, J. E. Porter Corp., Ottawa, Ill.  
 STRAITOPLANE Woodworking Machine, Oliver Machy. Co., Grand Rapids, Mich.  
 STRUCTOLITE Structural Gypsum, U. S. Gypsum Co., Chicago, Ill.  
 STUCCO-TEX Hydraulic Paint, The Truscon Laboratories, Detroit, Mich.  
 STUCCO Waterproof Cement Paint, The Truscon Laboratories, Detroit, Mich.  
 STUCCOTEX Hydraulic Paint, Truscon Laboratories, The, Detroit, Mich.  
 STURDY Tapes, Drawing Table, Eugene Dietzgen Co., Inc., Chicago, Ill.  
 SUBSIDO Closets, Crane Co., Chicago, Ill.  
 SUCCESS Chemical Fire Extinguisher, Johns-Manville, Inc., New York, N. Y.  
 SUN Radiators, U. S. Radiator Corp., Detroit, Mich.  
 SUNRAY Coal Grates, Ohio Foundry & Mfg. Co., Steubenville, Ohio.  
 SUPER Culverts, Roofing, Dump Wagons, Northfield Iron Co., Northfield, Minn.  
 SUPER-POR SEAL Transparent Dampproofing for Concrete and Masonry, Truscon Laboratories, The, Detroit, Mich.  
 SUPER-RADIANT Gas Heaters, Wheeling Corrugating Co., Wheeling, W. Va.  
 SUPERIOR Metal Corner Bead, Milwaukee Corrugating Co., Milwaukee, Wis.  
 SUPERIOR Steel Sheets, Superior Sheet Steel Co., Canton, Ohio.  
 SUPERIOR Woodworking Machy., Jones Superior Machine Co., Chicago, Ill.  
 SUPREME Roofings, Beckman-Dawson Roofing Co., Chicago, Ill.  
 SURBAS Lavatories, Crane Co., Chicago, Ill.  
 SURBOL Lavatories, Crane Co., Chicago, Ill.  
 SURE GRIP Carriers, Door Hangers and Tracks, Hay Forks, Pulleys, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 SURE LOCK Carriers, Unloaders, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 SURETY Composition Roofing, Philip Carey Mfg. Co., Lockland, O.  
 SURLAV Lavatories, Crane Co., Chicago, Ill.  
 SURNANCE Saws, Henry Diston & Sons, Inc., Philadelphia, Pa.  
 SYMMETRIC Stone Crushers, The T. L. Smith Co., Milwaukee, Wis.  
 SYRACUSE Sanders, Porter-Cable Machine Co., Syracuse, N. Y.

- TAKE-ABOUT Sanding Machines, Porter-Cable Machine Co., Inc., Syracuse, N. Y.  
 TAKE DOWN Hay Rack Brackets, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 TANDEM Sash Balances, Pullman Mfg. Co., Rochester, N. Y.  
 TARBINA Baths, Crane Co., Chicago, Ill.  
 TARGON Penetrating Oil, Rust Solvent and Spring Lubricant, Samuel Cabot, Inc., Boston, Mass.  
 TASITE Paint and Varnish Remover, Sherwin-Williams Co., Cleveland, Ohio.  
 TAXITE Paint and Varnish Removers, Sherwin-Williams Co., Cleveland, Ohio.  
 TAYLOR Clamps and Clamp Carriers, James L. Taylor Mfg. Co., Poughkeepsie, N. Y.  
 TELEDURON Moulded Products, Asbestos Shingle, Slate & Sheathing Co., Ambler, Pa.  
 TELEPHONE Self Closing Cocks and Bibbs, Crane Co., Chicago, Ill.  
 TELSE Compression Cocks, Crane Co., Chicago, Ill.  
 TELSE JR., Compression Faucets, Crane Co., Chicago, Ill.  
 TEMPERITE Quick Set and Anti-Freeze for Concrete, The Truscon Laboratories, Detroit, Mich.  
 TENSO Pattern Chains, American Chain Co., Inc., Bridgeport, Conn.  
 TEXAS Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 TEXTONE Plastic Paint, U. S. Gypsum Co., Chicago, Ill.  
 THATCHER Boilers and Furnaces, The Thatcher Co., Newark, N. J.  
 THE YANKEE Jaw Pipe Wrenches, Richards-Wilcox Mfg. Co., Aurora, Ill.  
 THERMOFILL Dry Fill Insulation, U. S. Gypsum Co., Chicago, Ill.  
 THEBPIAN Drinking Fountains, Crane Co., Chicago, Ill.  
 THRU-CORD Switches, General Electric Co., Schenectady, N. Y.  
 THRUSH Hot-Water Heating Systems, H. A. Thrush & Co., Peru, Ind.  
 TIDEWATER Red Cypress, Louisiana Red Cypress Co., New Orleans, La.  
 THE SAVER Drill Tap and Wire Gauge, L. S. Starrett Co., Athol, Mass.  
 TIP TOP Tapes, Keuffel & Esser Co., Hoboken, N. J.  
 TITELOCK American and Spanish Metal Tiles and Shingles, Milwaukee Corrugating Co., Milwaukee, Wis.  
 TOCHSEDO Varnishes, Toch Bros., Inc., New York, N. Y.  
 TOCKOLITE Anti-Corrosive Priming Paints for Coatings and Preserving Iron and Steel, Toch Bros., Inc., New York, N. Y.  
 TOLEDO Saws, Henry Disston & Sons, Philadelphia, Pa.  
 TOLVA Lavatories, Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 TOP NOTCH Sash Pulleys, Grand Rapids Hardware Co., Grand Rapids, Mich.  
 TORPEDO Ventilating Skylights, Milwaukee Corrugating Co., Milwaukee, Wis.  
 TORREY Spring Door, Sargent & Co., New Haven, Conn.  
 TOURNAINE Fountains, Crane Co., Chicago, Ill.  
 TOXEMONT Integral Waterproofing and Acid Proofing Compound for Concrete, etc., Toch Bros., Inc., New York, N. Y.  
 TOXLOXPORE Colorless Damp-Proofing for Brick, etc., Toch Bros., Inc., New York, N. Y.  
 TRANE Vapor Heating Systems, Trane Co., La Crosse, Wis.  
 TRETON Radiators, U. S. Radiator Corp., Detroit, Mich.  
 TRI-COAT Insulated Cable, General Electric Co., Schenectady, N. Y.  
 TRIANGLE Wire Mesh for Concrete Reinforcement, American Steel & Wire Co., Chicago, Ill.  
 TRIMBAK for Painting Back of Wood Trim, Toch Bros., Inc., New York, N. Y.  
 TRIMPAK Interior Trim, Trimpak Corp., New York, N. Y.  
 TRIPLEX Single and Double Acting Spring Hinges, Chicago Spring Hinge Co., Chicago, Ill.  
 TRIUMPH Extension Garment Carriers, Garden City Plating & Mfg. Co., Chicago, Ill.  
 TRIUMPH Jacks, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 TRIUMPH Planer, Matcher & Moulder, American Sawmill Machy. Co., Hackettstown, N. J.  
 TRIUMPH Saw Sets, Henry Disston & Sons, Philadelphia, Pa.  
 TRIUMPH Self-Closing Faucets, Crane Co., Chicago, Ill.  
 TRIUMPH JR. Self-Closing Faucets, Crane Co., Chicago, Ill.  
 TRIUMPH STANDARDIZED Panel Boards and Cabinets, Frank Adam Elec. Co., St. Louis, Mo.  
 TROUBLE-SAVER Brackets, Jacks, Scaffolds, Masons Trestles, etc., Steel Scaffolding Co., Evansville, Ind.  
 TROYAN Loud Speakers, Geier & Bluhm, Inc., Troy, N. Y.  
 TRUCK JACK Lifting Jacks, Elite Mfg. Co., Ashland, Ohio.  
 TRUSCON Metal Lath, Expanded Metal, Post Caps, Concrete Reinforcing Materials, Steel Window Sash, Pressed Steel Sill Plates, Angles, Furring Strips, Beams, Platforms, Roofing, Steel Doors, Standard Buildings, etc., Truscon Steel Co., Youngstown Ohio.  
 TRUSCON Damp-proofing, Waterproofing, Paints, Varnishes, Enamels and Mill White Paints, Stains and Maintenance Products, The Truscon Laboratories, Detroit, Mich.  
 TRUSSIT Expanded Metal Reinforcement, Genfre Steel Co., Youngstown, Ohio.  
 TUBULAR Furnace, The Thatcher Co., Newark, N. J.  
 TUNGSTEN CHROMIUM Knives, Oliver Machinery Co., Grand Rapids, Mich.  
 TUXEDO Lavatories, Crane Co., Chicago, Ill.  
 TWENTIETH CENTURY Barn Door Hangers, Hunt, Helm Ferris & Co., Harvard, Ill.  
 TYPE A Heat Machines, American Radiator Co., New York, N. Y.  
 TYPHOON Pumps, Fairbanks, Morse & Co., Chicago, Ill.  
 TYRONE Drinking Fountains, Crane Co., Chicago, Ill.
- U. S. G. Wall and Moulding Plaster, Agricultural and Mason's Hydrate Lime, U. S. Gypsum Co., Chicago, Ill.  
 UNION Blue Print Paper, Eugene Dietzgen Co., Inc., Chicago, Ill.  
 UNION Tracing Cloth, Keuffel & Esser Co., Hoboken, N. J.  
 UNION Woodworking Machy., Gallmeyer & Livingston Co., Grand Rapids, Mich.  
 UNION LOCK Poultry Fences, American Steel & Wire Co., Chicago, Ill.  
 UNIQUE Trestles, Keuffel & Esser Co., Hoboken, N. J.  
 UNIT Sash Balances, Pullman Mfg. Co., Rochester, N. Y.  
 UNITED Fences, American Steel & Wire Co., Chicago, Ill.  
 UNITED STATES Fences, American Steel & Wire Co., Chicago, Ill.  
 U. S. Door Hangers, Hunt, Helm, Ferris & Co., Harvard, Ill.  
 U. S. Mineral Wool, U. S. Mineral Wool Co., New York, N. Y.  
 U. S. Woven Wire Fence (Zinc Insulated), American Steel & Wire Co., Chicago, Ill.  
 UNIVERSAL Drawing Paper, Keuffel & Esser Co., Hoboken, N. J.  
 UNIVERSAL Hay Slings and Pumping Jacks, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 UNIVERSAL Measuring Tapes, Try and Mitre Squares, The Lufkin Rule Co., Saginaw, Mich.  
 UNIVERSAL Prepared Finish, U. S. Gypsum Co., Chicago, Ill.
- UNIVERSAL Saw Benches, Oliver Machinery Co., Grand Rapids, Mich.  
 UNIVERSAL Saws, Henry Disston & Sons, Philadelphia, Pa.  
 UNIVERSAL Wall Finish, United States Gypsum Co., Chicago, Ill.  
 UNIVERSAL Woodworking Machinery, Sidney Tool Co., Sidney, O.  
 UPRIGHT Scrapers, National Mfg. Co., Sterling, Ill.  
 UPSON Wall Boards, Fire Strips, The Upson Co., Lockport, N. Y.  
 UP-TO-DATE Shingle Machines, American Saw Mill Machinery Co., Hackettstown, N. J.  
 U-PUT-ON Metal Weather Strips, Diamond Metal Weather Strip Co., Columbus, O.  
 UTAH Hay Slings, The F. E. Myers & Bro. Co., Ashland, Ohio.
- V. P. M. Tools, Sargent & Co., New Haven, Conn.  
 VALLEY CITY Disc Emery Surface and Tool Grinders, Polishing, Metal Grinding Machinery, Gallmeyer & Livingston Co., Grand Rapids, Mich.  
 VALLEY CITY Woodworking Machinery, Gallmeyer & Livingston Co., Grand Rapids, Mich.  
 VECTO Heaters, American Radiator Co., New York, N. Y.  
 VELVET EDGE Oak Flooring Strips, Arkansas Oak Flooring Co., Pine Bluff, Ark.  
 VENETIAN Bathroom Cabinets, Morton Mfg. Co., Chicago, Ill.  
 VENTO Radiators and Heaters, American Radiator Co., New York, N. Y.  
 VENTO Puttyless Steel Sash, Vento Steel Sash Co., Muskegon, Mich.  
 VENUS Tracing Cloth, Keuffel & Esser Co., Hoboken, N. J.  
 VENT RITE Ventilators, W. C. Hopson Co., Grand Rapids, Mich.  
 VERNA Bath Tubs, Crane Co., Chicago, Ill.  
 VERNON Lavatories, Crane Co., Chicago, Ill.  
 VERTE ANTIQUE for Corroded Copper Effect, Toch Bros., Inc., New York, N. Y.  
 VICTOR Door Springs, Sargent & Co., New Haven, Conn.  
 VICTOR Gummers, Henry Disston & Sons, Philadelphia, Pa.  
 VICTOR Pumps, The F. E. Myers & Bro. Co., Ashland, Ohio.  
 VICTOR Tools, Stanley Rule & Level Co., New Britain, Conn.  
 VICTORY Hand Saws, Henry Disston & Sons, Inc., Philadelphia, Pa.  
 VIM CHAMPION Saws, Henry Disston & Sons, Philadelphia, Pa.  
 VINCENT Sinks, Crane Co., Chicago, Ill.  
 VIRGINIAN Saws, Henry Disston & Sons, Inc., Philadelphia, Pa.  
 VITRIBESTOS Pipe and Boiler Covering, Johns-Manville, Inc., New York, N. Y.  
 VITROLITE "Better Than Marble" Vitrolite Co., Chicago, Ill.  
 VITROLITE Marble and Tile Substitute ("Better Than Marble"), The Vitrolite Co., Chicago, Ill.  
 VORCY Urinals, Crane Co., Chicago, Ill.  
 VORTEX Weatherstrips, Kuhlmann Metal Weatherstrip Co., St. Louis, Mo.  
 VORTO Urinals, Crane Co., Chicago, Ill.  
 VULCAN Electric Band Saw Brazers, Oliver Machinery Co., Grand Rapids, Mich.
- WALL-TEX Waterproof Wall, The Columbus-Union Oil Cloth Co., Columbus, Ohio.  
 WALLACE Woodworking Machinery, J. D. Wallace & Co., Chicago, Ill.  
 WAL-LITE One Coat Industrial White, Truscon Laboratories, Detroit, Mich.  
 WALL-TEX Permanent Wall Covering, Columbus-Union Oil Cloth Co., Columbus, O.  
 WALSYLO Water Closet, Crane Co., Chicago, Ill.  
 WALSYN Water Closets, Crane Co., Chicago, Ill.  
 WASHBURN Sliding Door Locks and Latches, National Mfg. Co., Sterling, Ill.  
 WATERPROOF SPEED GRITS, Manning Abrasive Co., Inc., Troy, N. Y.  
 WAUKEGAN Barbed Wire, American Steel & Wire Co., Chicago, Ill.  
 WEARPROOF Roofings, Beckman-Dawson Roofing Co., Chicago, Ill.  
 WEATHERBEST Stained Shingle, Weatherbest Stained Shingle Co., Inc., No. Tonawanda, N. Y.  
 WHITE HOUSE Clothes Vault, Weber-Busse Co., Chicago, Ill.  
 WHEELING Hand Dipped Copper Steel Conductor Pipe, Stove Pipes, Dampers and Wire Nails, Wheeling Corrugating Co., Wheeling, W. Va.  
 WHITE ROCK Gypsum Wall Board, American Gypsum Co., Port Clinton, Ohio.  
 WHITE STEEL Bathroom Medicine Cabinets, Mirrors and Toilet Fittings, White Steel Sanitary Furniture Co., Grand Rapids, Mich.  
 WHITE'S IMPROVED Instruments, David White Co., Milwaukee, Wis.  
 WILTON Lavatories, Crane Co., Chicago, Ill.  
 WINDROW Coal Chutes, Holland Furnace Co., Holland, Mich.  
 WINTHROP Asphalt Shingles, Beckman-Dawson Roofing Co., Chicago, Ill.  
 WIZARD Saws, Henry Disston & Sons, Philadelphia, Pa.  
 WOOD Doors, Wheeler Osgood Co., Tacoma, Wash.  
 WODACK Hand Power Saws, F. L. Rogers & Co., Chicago, Ill.  
 WOLVERINE Barrows, Contractors' Material, Hoists, Lansing Co., Lansing, Mich.  
 WONDER Concrete Mixers and Hoists, Backfillers and Trench Pumps, Construction Machinery Co., Waterloo, Iowa.  
 WOODMERE Bath Tubs, Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- XX CENTURY Expanded Metal Lath, Northwestern Expanded Metal Co., Chicago, Ill.  
 XXth CENTURY Metal Lath, North Western Expanded Metal Co., Chicago, Ill.
- Y. & S. Transits and Levels, Keuffel & Esser Co., Hoboken, N. J.  
 YANKEE Calipers and Dividers, L. S. Starrett Co., Athol, Mass.  
 YANKEE Tools, North Bros. Mfg. Co., Philadelphia, Pa.  
 YORK Drinking Fountains, Crane Co., Chicago, Ill.  
 YOUNG & SONS Transits and Levels, Keuffel & Esser Co., Hoboken, N. J.
- Z Gasoline Engines, Fairbanks, Morse & Co., Chicago, Ill.  
 ZIG-ZAG Rules, Stanley Rule & Level Co., New Britain, Conn.  
 ZIMMERMAN Porch Base, S. Cheney & Son, Manlius, N. Y.  
 ZIP Saws, Henry Disston & Sons, Philadelphia, Pa.  
 ZOURI Safety Key-Set Store Front Construction, Zouri Draw Metals Co., Chicago Heights, Ill.  
 NO. 1 MOULDING, Moulding Plaster, U. S. Gypsum Co., Chicago, Ill.  
 No. 2 MOULDING Plaster, U. S. Gypsum Co., Chicago, Ill.



# HoltBid Spreads Over The World

*Builders in Many Countries Adopt Modern American  
Method of Estimating Building Costs*

By JOSEPH D. EDDY

**M**EMBERS of the building industry in foreign countries are keen to adopt American methods. Builders in this country are noted for their ability to erect good buildings at a minimum of cost in money and time. Whenever a new method that saves time, labor and expense becomes generally used in the building industry in the United States, builders in other countries are quick to adopt it.

During the last few years progressive members of the building industry in the United States have in greater numbers been using the HoltBid Method of Estimating Building Costs because it is fast and accurate, saves time and eliminates the hard work from estimating. The many advantages of HoltBid quickly became known in foreign lands and now HoltBid is used to estimate building costs in countries scattered over the globe.

The increasing popularity of the Bermuda Islands with tourists during the last few years has brought considerable building activity. Besides hotel construction, there is a great deal of home building—both elaborate and modest—for the use of visitors who wish to spend some time on the islands. **J. Frederick Tucker, Esq., Middle Road, Paget East, Bermuda**, has become a HoltBidder and is using this Modern Method of Estimating building costs to good advantage in his work.

It is rather a far jump from Bermuda to South Africa, but here we find another HoltBidder, **George Hardaker, Esq., 43 Botanic Garden Road, Durban, Natal**.

In India **J. N. Gosh, Old Courthouse Street, Calcutta**, is using HoltBid to estimate the cost of the modern buildings erected there.

There are three HoltBidders in South America, **Mario Diaz, Rua Republica No. 531, Porto Alegre, Rio Grande do Sul, Brazil**; **Ossian Lindholm, Casilla Correo 64 Tucuman, Argentina**, and **V. Dipalo, Maracaibo, Venezuela**.

Some of the HoltBidders in other countries are:

**Eusebio Villaneuva, I. J. M. Basa St., Iloilo, P. I.**

**Edwardo C. Gaxiola, Box No. 4, Cajeme, Sonora, Mexico.**

**Steven T. Uemoto, 1471-10 Christley Lane, Honolulu, Hawaii.**

**R. T. Kunimoto, 1335 Pua Lane, Honolulu, Hawaii.**

**Alfonso Hilado, Taliso Occ. Neg., Philippine Islands.**

**J. H. Richardson, Kent, St. George, Barbados, B. W. I.**

It is not surprising that members of the building industry in foreign countries have adopted the HoltBid Method of Estimating Building Costs, for here in the United States there are thousands of builders who are finding this method a means of saving labor, securing accurate estimates and of making greater profits in their business. HoltBid is easy to learn and simple to use. It takes the drudgery out of estimating. There are no long columns of figures to take off and add. Consequently, the chances of making costly mistakes are eliminated.

Every member of the building industry owes it to himself to know about HoltBid. On pages 205, 206, 207, and 208 of this issue of American Builder there is an announcement telling all about HoltBid. Turn to these pages now and send the coupon to the HoltBid Service Co., 1827 Prairie Ave., Chicago.

## Helps to Sell or Rent the Building



### The WHITEHOUSE Clothes Vault

Installed in new or old buildings, the WHITEHOUSE Clothes Vault is a great sales factor. It enables you to sell or rent the home, apartment, etc., more quickly and at a higher price. WHITEHOUSE Clothes Vaults are absolutely moth and vermin-proof and make an ideal burglar-proof vault for jewelry, silverware and personal papers. Reduce insurance premiums 66 2/3 per cent. Every family is entitled to this protection. Fur Stores, Ladies' Tailor Shops, Dress Shops and Cleaners and Dyers include a partial list of the various other uses for WHITEHOUSE Clothes Vaults. The WHITEHOUSE Clothes Vault is cedar lined. Has steel walls, top, sides and bottom. Convenient roller-bearing pull hanger at top. Anti-dynamite four tumbler bank-style Yale combination lock.

Write for complete information

**WEBER-BUSSE COMPANY**  
308 North Michigan Ave., Chicago, Ill.

Burglar & Fireproof Safes & Vaults for Every Purpose.

*Genuine*  
By this Mark  
**Genuine Franklin Tunnel**



REG. U. S. PAT. OFF.

This work of excellence in Slate Roofing guarantees you to the absolute uniformity in quality found only in this roofing of the ages. Slate will outlast the building upon which they are laid. Their unexcelled beauty and quiet dignity are at once apparent in the home.

Will give you full information about

**Genuine Franklin Tunnel Slate**

Write to us for samples

**SLATINGTON SLATE COMPANY**  
SLATINGTON PENNSYLVANIA

FREE BOOK!

Write Today

**PLUMBING**  
AT WHOLESALE PRICES DIRECT

\$37<sup>50</sup>

\$22<sup>50</sup>

\$18<sup>50</sup>



\$28<sup>50</sup>



### Special Contractors' Prices

Illustration shows fixtures covered by catalog numbers E-206, E-237, E-228, E-213 at special April prices to contractors. We unconditionally guarantee these fixtures equal to the best made.

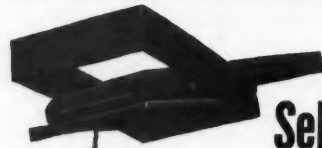
### CUT PLUMBING COSTS

Write for FREE catalog showing everything in plumbing and heating supplies at lowest wholesale prices. It shows where you can cut the high cost of plumbing. We carry a complete line of plumbers' and fitters' tools.

# JOHNSON

PLUMBING SUPPLY CO.

3640-42 So. Halsted St., Chicago



### Frazier Self-Balanced Stairs

The Simplified Disappearing  
Attic Stairway

**PRICE \$35.00**

F. O. B. Pittsburgh, Pa.

Shipped completely assembled, including Jamb, weight 125 lbs. These stairs cannot get out of order.

No Weights—Springs or Cable are used. Installed by anybody in one-half hour.

OUR GUARANTEE—In event stairs are not as represented return to us at our expense.

Attractive Specialty Salesman Arrangements



Send this Coupon for Information

**FRAZIER STAIR COMPANY**

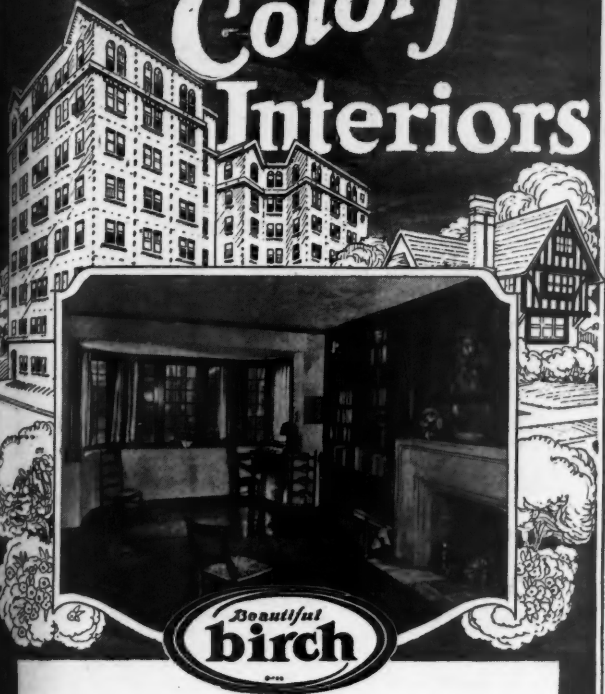
2615 West Liberty Avenue, Pittsburgh, Pa.

Gentlemen: I am an Architect  Builder  Dealer   
Please send Details on Frazier Stairs

Name.....

Address.....

# For New Colorful Interiors



Beautiful  
**birch**

**A**MAZINGLY beautiful woodwork can now be achieved through the wizardry of color upon birch trim and veneer paneling.

It is now possible to secure a different color effect for each room—from light, cool green to deep, mellow brown, from delicate orchid to a rich, rare ebony—all equally attractive.

These new transparent stains bring out the full richness of the beautifully figured birch grain. And, being "in the wood" dyes, (not several surface coats) they assure a finish that will not chip or "craze".

The close grain and nearly mar-proof hardness of Michigan-Wisconsin birch make it one of the most enduring and permanently beautiful finishes. The beauty of birch floors is only equalled by their serviceability.

Complete data upon request. May we also send you a copy of our "Beautiful Birch" brochure with our compliments? Contains valuable tables giving Physical Properties of all American Hardwoods.

THE BIRCH MANUFACTURERS  
201 F. R. A. Building  
Oshkosh Wisconsin

*Beautiful Birch for  
Beautiful Woodwork*

## SAMSON SASH

Trade Mark Reg.



## SPOT CORD

U. S. Pat. Off.

There's  
a lot of  
satisfaction  
for Builder  
and Owner  
in this  
durable  
Sash Cord

"A N ounce of prevention"—the best cord in the first place—saves a lot of time hanging and re-hanging windows. The cost of re-hanging a single window is often more than the difference in first cost between Samson Spot and the cheapest obtainable for an entire dwelling.

Solid braided cotton, round, smooth, free from imperfection of braid or finish; fully stretched, free from adulterants; a cord you can use without waste.

You'll know it by the colored spots, our trade mark, indicating this one best grade.

*"There is  
a Difference  
in Sash Cord"*

Made by  
**SAMSON CORDAGE WORKS**  
88 BROAD STREET BOSTON, MASS.

# PHENIX



## Screens and Storm Sash Hangers and Fasteners

Combine newest improvements with finest construction. Simplest, handiest, and easiest to apply. They sell readily because they are in a class by themselves.



No. 115

---

## Garage Door Bolts and Door Holders

**Phenix Garage Door Bolts are especially designed for garages, factories, warehouses, and fire doors.**



No. 57

One turn of handle locks or unlocks both doors, top and bottom bolts.

Our Holders prevent accidents, broken headlights and bent up fenders. Operate by hand or foot.



Holder No. 52



Send for Prices.

**PHENIX MFG. CO.**  
216 Center Street, Milwaukee, Wis.

# Now—Better Waterless Toilets

## sealed against odors

The cost is little more than that of detached, unsightly outhouses.

## SAN-EQUIP

### SELF-DRAIN WATERLESS TOILETS

Especially adapted for camps, public comfort stations and rural schools. All openings are liquid sealed to prevent offensive odors. No disagreeable care necessary. Complete with rust-proof storage tank and china bowl. Easily installed at a low cost. Write for complete details Today!

**CHEMICAL TOILET CORPORATION**  
731 E. Brighton Avenue  
SYRACUSE, N. Y.

Makers also of San-Equip Septic Tanks.



All Patents Pending



A new Paul Product for dependable home water service.

An added feature that will make homes easier to sell.

# New the Paul Electric Water Heater

**A NEW and better Automatic Water Heater.** Scientific construction and perfect insulation have resulted in unusually high efficiency with the lowest heat loss ever secured.

Exceptionally low price—and operating cost is no greater than the cost of burning a small light bulb continuously. May be used as automatic or semi-automatic at will.

Safety assured by pressure and temperature relief. Dependable Paul Quality.

Write for Bulletin

## FORT WAYNE ENGINEERING & MFG. COMPANY

1713 N. Harrison Street  
Fort Wayne, Indiana

# Adamston

## Vertically Drawn Flat Glass

A perfectly flat sheet of glass; UNIFORM IN THICKNESS, with a natural fire polish on both sides and of great tensile strength.

A brand you can depend upon.





**ADAMSTON FLAT GLASS COMPANY**  
CLARKSBURG, W. VA.



## Dependable Ventilation

Let us help you in securing positive and trouble proof ventilation for your next building.



"GLOBE" ventilators provide complete, continuous ventilation 365 days in the year, with absolute elimination of trouble or expense. Our experience of over fifty years insures your entire satisfaction.

Examine the construction of the "GLOBE." It is made of heavy gauges galvanized copper bearing steel, and its design is such as to induce a rapid movement of the air

outward, at the same time offering a minimum of resistance to the flow.

Write us today for full details.

**GLOBE VENTILATOR CO.**  
TROY, N. Y.

## Automatic Stair Controlled Electric Light Switch for

### BETTER AND SAFER HOMES

Install the **AUTOMATIC Stairway Switch** in the Homes You Build



Home buyers will appreciate its convenience, its Safety, and its economy in electricity.

Records prove that most Accidents happen on the Stairway. Guard the cellar and attic stairs with this new safety device. Show this feature to prospective buyers. It is easily installed in about an hour's time.

The Automatic light switch can also be attached to our Door Device, to operate from the Basement door. This is very convenient when the Garage is in the rear of the home. Write us for details and prices.

Agents Wanted

## You Can't Go Down the Cellar in the Dark And You Can't Forget to Put Lights Out

Manufactured by  
**STAIRWAY SWITCH COMPANY :: Glenide, Pa.**

## GAS-O-MATIC

**M**AKES you independent of gas mains. Generates gas for every household purpose—at a cost no more than city users pay. Mail coupon for descriptive literature and details of easy purchase plan. Read what enthusiastic owners say.

**GAS-O-MATIC CORPORATION**  
500 Fassett St.,  
TOLEDO, OHIO

Gentlemen: I am interested in GAS-O-MATIC for my home \_\_\_\_\_. I am interested in dealership \_\_\_\_\_.

Name \_\_\_\_\_

Street Address \_\_\_\_\_

Post Office \_\_\_\_\_

## For SIMPLER MORTISES and QUICKEST FASTENING!

**M**OREOVER, "Grand Rapids" All-Steel Sash Pulleys are the strongest yet lightest pulleys made—capable of carrying any weight a cord or chain will support.

And the fact that they are more widely sold and used than any other sash pulley proves how sweepingly their superiorities appeal to everyone.

In spite of their advantages and exclusive features "Grand Rapids" Pulleys cost no more than common pulleys made of cast iron.

Sold By All Distributors Everywhere



No. 10 Ball-Bearing  
No. 110 Cone Bearing  
(2-inch wheel)

2 popular numbers from a complete line of Ball Bearing, Cone Bearing and Axle Bearing pulleys.



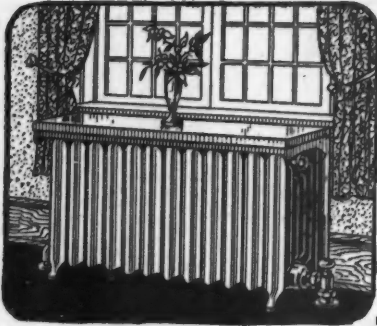
**MAIL COUPON for FREE SAMPLE**

Grand Rapids Hardware Co.,  
556 Eleventh St.,  
Grand Rapids,  
Michigan  
U. S. A.

Grand Rapids Hardware Co.,  
556 Eleventh St., Grand Rapids, Mich.  
I am interested in the pulley illustrated.  
Please send sample.

Name \_\_\_\_\_ Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

# Humidifying Radiator Cabinets

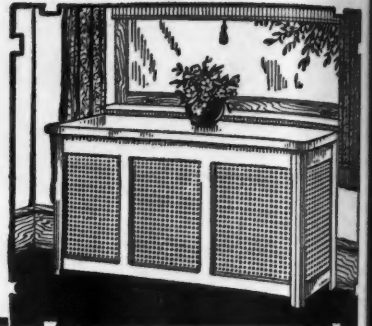


## SAFEGUARD HEALTH AND BEAUTIFY THE HOME

Winchester Radiator Cabinets and Covers installed make the Home, Apartment, Public Building or Office more livable. Properly humidifies the air, prevents wall smudge and ruined drapery. Makes a useful window seat or table. Helps to sell or rent the building. Furnished in baked enamel colors or wood grains to match any decorative scheme.

Write for information.

WINCHESTER RADIATOR CABINET CO.  
355 WEST MONROE ST. CHICAGO, ILLINOIS



## KEES Products for Builders and Contractors

Builders and contractors make no compromise with quality when they use KEES builders' hardware. And there is an advantage in price. Send for the complete catalog. Three popular numbers in this well-known line are illustrated below.



### Screen Hangers

For screens and storm sashes; put on, or taken off in a jiffy. Sample pair gladly sent free to prove their convenience. Write for prices.

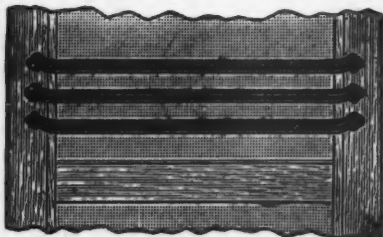
### Building Corners

Accurate angles and bends. Fit perfectly; give clean-cut effect of mitred joint. Paint sticks; no "weathering." Can scarcely be noticed after painting. Write for samples and prices.



### Adjustable Screen Door Guards

Fit any door; protect screen; keep wire from bagging and pulling loose. Improve looks of door; pressed steel, black Japan. Telescope from 24 to 32 inches. Used singly or in sets. Ask for sample and prices.



F. D. KEES MFG. CO.  
Box 93, Beatrice, Nebraska

## Where "Good Fellows Get Together"

"In Cleveland it's the Hollenden" is more than a slogan. It is a terse description



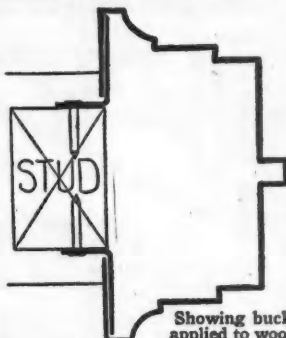
of the attitude of thousands of discriminating travelers; 1050 comfortable rooms all with homelike surroundings, courteous service and good food is the reason.

Make the Hotel Hollenden your headquarters when in Cleveland. Rates, \$3 and upwards.

## In Cleveland-it's The HOLLENDEN

Theo. De Witt, Manager  
Superior Avenue at East Sixth St.

## ROLLED STEEL DOOR FRAMES WILL INCREASE YOUR PROFITS



Showing buck applied to wood stud

The combination buck jamb and trim eliminates separate wood or steel bucks and trim and thereby reduces erection cost two-thirds as the entire unit is installed at one time. Cold rolled of 16 gauge steel—it withstands and absorbs the shock of the heaviest door.

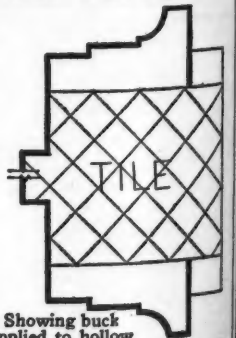
Units made for single or double doors, transom openings, etc. Jambs reinforced securely and drilled and tapped for application of hardware.

Furnished in prime coat ready for finish painting. Prompt shipment, low in cost and easy to install.

LEONARD SHEET METAL WORKS, HOBOKEN, N. J.

Established 1900

Also Manufacturers of Steel Windows, Kalamein Work and Bronze Doors.



Showing buck applied to hollow tile partition



**Add Cheer—Beauty—Comfort and Selling Value TO ANY HOUSE**

**Details Free!**

Dealers, Builders and Home Owners, write for prices and full information.

Special Sales Plan to Representative Dealers.

Far more beautiful and far more economical, Ready-Built fireplaces bring lasting charm and undeniable comfort into the home. They enhance property value by increasing salability. Satisfactorily used and recommended by leading builders in principal cities. Far superior to brick built in beauty and durability, yet cost low enough to be made a selling feature in modest-priced homes.

A variety of designs, styles, sizes and colors makes possible any architectural choice to harmonize with house plan. Easy to install—no disturbance to floor or wall. Any handy man can do it.

Shipped completely ready to install anywhere.

**The Readybuilt Products Co.** 2404 Frederick Ave. Baltimore, Md.



**Let This Quality Material Boost Your Building Sales**

Many a house is sold on the reputation of the materials that go into it. And there is nothing that induces a quicker recognition of real value than

**LOUISIANA RED CYPRESS "The Wood Eternal"**

Home buyers everywhere are familiar with its traditional durability. They know its steadfast service in exterior applications and they appreciate the permanency that it gives to their homes.

If you use and feature this nationally advertised product in your building projects, you will find that it is a valuable asset in making sales.

*THIS HANDY REFERENCE BOOK has all the important information you need on the proper uses and grades of the "Wood Eternal."*

Write for a copy of

Specification Data for Structural Uses of Tidewater Red Cypress (Coast Type). A. I. A. File No. 19.

**LOUISIANA RED CYPRESS BUREAU**  
502 CARONDELET ST., NEW ORLEANS, LA.

# Matot

Full Diameter Lift  
Wheel — Hobbed Gear  
Automatic Brake

## DUMB WAITER

Matot machines are roller-bearing throughout, easy of operation, noiseless, and guaranteed for five years.

**LARGE STOCK  
PROMPT SHIPMENTS**

**[ Catalog ]  
[ On Request ]**

**D. A. MATOT CO.**  
Manufacturers of Hand Power  
Dumb Waiters and Elevators  
1539 Montana St., Chicago

## Do You Build HOMES

Here's an added feature which appeals to men

"Every Home Can Have Its Own Gymnasium"

# GYM JUNIOR

*The Home Gymnasium*

Patented in U. S. and Foreign Countries

is a strong malleable iron apparatus, combining in 7 1/2 x 9 ft. floor space, a Rowing Machine, Chest Weights, Punching Bag, Parallel Bars, Wrist Developer, Chinning Bar, and other standard gymnasium equipment. Three persons can use it simultaneously.

Put it in attic, basement, sleeping porch or small room next to shower. Advertise your homes as **HEALTH-HOMES** — "equipped with a complete gymnasium." Then you will have a selling angle to men, just as built-in kitchen fixtures influence women buyers.

Write for illustrated literature and special discounts to builders.

**GYM JUNIOR COMPANY**  
540 Gregory Avenue, Weehawken, N. J.

**Consider  
the  
BATES-TRUSS  
JOIST  
It  
Pays!**



## Bates-Truss Joists

THE expanded, one-piece Bates-Truss Joist has many advantages over either the assembled or the solid web types of joist. The expanded truss has no joints and therefore has no welds or rivets in shear or tension. The open web permits piping to be run through the joists at any desired point.

**LOW COST**—Because of the simple method of manufacture, Bates-Truss Joists are exceedingly low priced. Write for our catalog.

*The Expanded*

BATES-TRUSS JOIST  
A Sound Engineering Product

**B E S T**  
Bates Expanded-Steel Truss Co.  
EAST CHICAGO, INDIANA

## STRUCTURAL SLATE— AS PERMANENT AS IT IS ATTRACTIVE

Especially in this present day of unusual interiors—wonders can be worked with Structural Slate. Builders, everywhere, appreciate its great adaptability—for Toilet Enclosures, Shower Stalls, Stairways, Caps, Bases, Wainscots, Floors, Fireplace, etc. They realize that "Slate Outlasts the Building" is an absolute fact.

Use Structural Slate in your next job!

THE STRUCTURAL SLATE CO.  
404 ROBINSON AVE. PEN ARGYL, PA.

STRUCTURAL SLATE

# BOYLE'S DAYONNE

*ready to lay*  
Roof and Deck Cloth



The ideal covering for Porch Floors, Decks or Piazzas, Sun Parlors, etc.

Waterproof  
Weatherproof  
Durable  
Flexible

Lays flat  
Stays flat

Ready to lay—Requires no white lead bedding; will not buckle, crack or peel.

Write today for our Sample Booklet "P."



**JOHN BOYLE & CO. Inc.**

Established 1860

112-114 Duane St.,  
1317-1319 Pine St.

New York  
St. Louis, Mo.

## SAVE 1/2

### ON PLUMBING and HEATING EQUIPMENT

**FREE CATALOG**

96 pages, largest and finest of its kind, illustrating and describing our complete line of plumbing and heating supplies that **SAVE YOU HALF**. Guaranteed "A" Grade equipment.

Write today for your copy.

**STANLEY PLUMBING SUPPLY CO. (INC.)**

One of the Largest Plumbing Supply Houses in Philadelphia

412 North 12th St. Philadelphia, Pa.



## ROLLING BATH TUB WITH HEATER

Full size white enameled tub and 12 gal. nickel water heater, attached to frame fitted with casters. Rolls anywhere. Heater attachment for kerosene. Supplies hot water in few minutes. Tub drains through rubber hose. No plumbing required. Tub can be raised upright when not in use. Closes up into space three feet square. Guaranteed.



### SPECIAL OFFER!

Send for complete facts and special price from factory to you.



Stationary Steel Bath Tubs

A standard size white enamel steel bath tub at half the price of ordinary cast iron tubs. No plumbing required. Write for special introductory offer. 4 sizes.

**Roberts Metallic Bath Tub Co.**  
740 Meldrum Ave., Detroit, Mich.

Some territory still open for responsible dealers.

- Please send information on agents' proposition.
- Please send me your special introductory offer and catalogue.

# "EDWARDS"

## METAL Spanish TILE ROOF

Beautiful - Durable Economical

Write for Beautifully Illustrated Catalogue It Explains



A remarkable transformation takes place when an "Edwards" Metal roof is properly applied to a house—all of the charm of the old Spanish Terra Cotta Roofing Tile is preserved, even to the color.

An Edwards Metal or Tile Roof is a real commercial asset and will bring a better return in rent or sale.

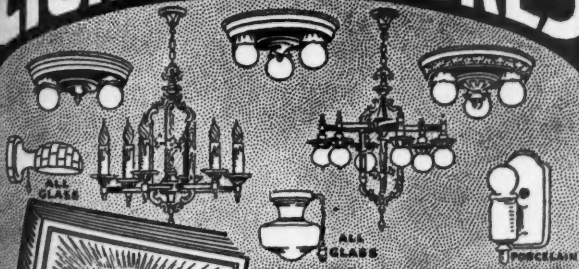
Edwards Metal Roofings made to have the appearance of wood shingles, tile, slate, or any other roofing effect, and none of these fine artistic effects will cost any more than a plain, commonplace roof.

All Edwards Metal Roofing is easy to lay—no big expense for skilled labor—storms and winds will not wrench it loose. It is lightning-proof and fire-proof—Reduces Insurance Rates.

When an Edwards Roof is laid, it is there to stay.

**THE EDWARDS MFG. CO.,** 401-417 EGGLESTON AVE., CINCINNATI, OHIO  
The World's Largest Manufacturers of Metal Roofing, Metal Ceilings, Metal Garages, Portable Buildings, Rolling Steel Doors, etc.

## SAVE MONEY ON YOUR LIGHTING FIXTURES



**HOME OWNERS! BUILDERS!**  
Send for Our **BIG New FREE Catalog**

Containing hundreds of fixtures for every purpose and every taste. Our selection is the finest and most complete. Be sure you have our catalog before buying. Our prices save you money and our **MONEY BACK GUARANTEE** gives you 30 DAYS TRIAL.

Contractors, Builders and Electricians are invited to write for our proposition

### MAIL COUPON

**PARAMOUNT ELECTRIC CO.**  
930 Z ARCH ST., PHILA., PA.

Send me **FREE** your Big Bargain Catalog—

Name \_\_\_\_\_

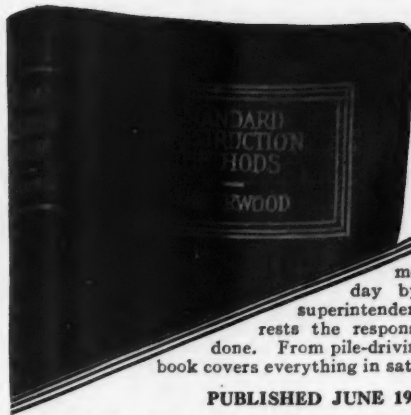
Address \_\_\_\_\_

P.O. \_\_\_\_\_ State \_\_\_\_\_

Occupation \_\_\_\_\_

**PARAMOUNT ELECTRIC CO.**

930 Z ARCH ST., PHILA., PA.



How crack construction men get things done

A manual of actual construction methods; methods that are used every day by practical construction superintendents and others upon whom rests the responsibility of getting things done. From pile-driving to scaffolding, this new book covers everything in satisfying detail.

PUBLISHED JUNE 1927

## STANDARD CONSTRUCTION METHODS

By **G. UNDERWOOD**  
Construction Engineer

408 pages, 6x9, 327 illustrations, flexible  
\$5.00 net, postpaid

A real chapter on rigging and erection work. Tables of safe capacities for tackle—a new simple formula for strengths of manilla and wire rope—figuring the strength of hooks and shackles—how to rig a gin pole and shears, etc., etc., etc.

**McGraw-Hill Book Company, Inc.**  
370 Seventh Ave.  
New York City

### CONTENTS

- I.—Organization and Equipment;
- II.—Excavation;
- III.—Pile-Driving;
- IV.—Concrete Construction;
- V.—Wood Construction;
- VI.—Brick Construction;
- VII.—Steel Construction;
- VIII.—Roofing and Flashing;
- IX.—Lathing and Plastering;
- X.—Scaffolds;
- XI.—Concrete and Bigging;
- XII.—Pipework;
- XIII.—Painting;
- XIV.—Construction Schedules

See your copy—free  
**MAIL THIS COUPON!**

You may send me for 10 days' free examination Underwood's Standard Construction Methods, \$5.00 net, postpaid. I agree to remit for the book or to return it, postpaid, within 10 days of receipt.

Name.....  
Address.....  
Position.....  
Company.....

A.B. 4-1-28



**The LACO OIL BURNER Does Every Heating Job Better..Cheaper**

Whether for small home, stately mansion or large building, the architect or builder who recommends the LACO OIL Burner is showing another example of his good judgment. Made in seven adaptable sizes, one particular model meets every heating requirement better—more economically. Lowest in installation cost; surprisingly quiet, free from annoying service calls—clean and odorless. Thousands in service prove the dependability of the LACO. Dealers invited to write for details of the extraordinary LACO sales opportunity. We gladly co-operate with architects and builders.

**LACO GAS BURNER CO.**  
204 UNION ST. GRISWOLD, IOWA

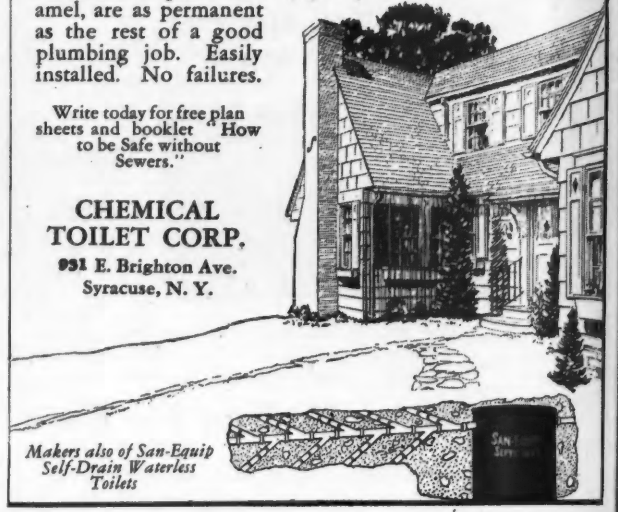
**Increase property values with *San-Equip* Septic Tanks**

The suburban and country homes you build in unsewered districts will sell faster if you include the modern sewage disposal facilities afforded by *San-Equip* Septic Tanks. They will sell at a higher price, too, with these comforts and health protection of up-to-date plumbing.

*San-Equip* Septics are made from U. S. Public Health Service specifications. The copperoid iron tanks, rust-proofed inside and out with plastic enamel, are as permanent as the rest of a good plumbing job. Easily installed. No failures.

Write today for free plan sheets and booklet "How to be Safe without Sewers."

**CHEMICAL TOILET CORP.**  
931 E. Brighton Ave.  
Syracuse, N. Y.



Makers also of *San-Equip* Self-Drain Waterless Toilets

*Color Harmony*  
in Mortar  
and Brick

*Specify* **C. K. WILLIAMS & CO. ANCHOR BRAND**  
MORTAR COLORS  
AND  
CEMENT  
COLORS  
EASTON, PA. U.S.A. *Always*

**Permanent & Uniform**


The first essentials in mortar color are permanence and uniformity. They must not change their shade through exposure to all kinds of weather. Anchor Brand Mortar Colors will retain their original shades throughout the life of the brick. Their color is permanent, uniform and absolutely reliable. There are advantages of complete control of color in their production.

Our booklet "Color Harmony in Mortar & Brick" will be mailed you upon request. Write for this booklet.

**C. K. WILLIAMS & CO.**  
EASTON, PA.

**THE WRIGHT RUBBER TILE**

**The Money Making Possibilities**  
—  
**WRIGHT RUBBER TILE**  
In Your Town  
—  
Directions For Laying



**WRIGHT RUBBER PRODUCTS CO., Dept. A. B. 4, RACINE, WIS.**

**Offer Your Customers This Modern Service**

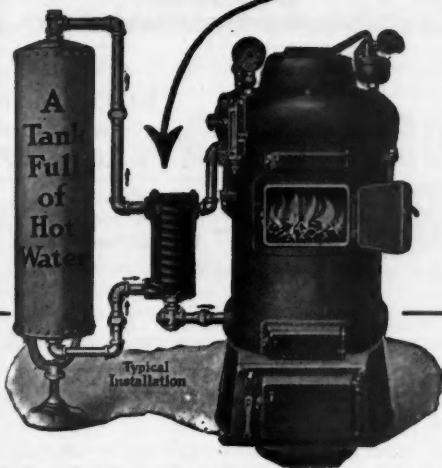
The prospective buyer of a modern home will show a quick appreciation of Wright Rubber Tile floors in bath, kitchen, vestibule and on stair treads.

**Make More Money**

This modern floor will help you make more money by reducing sales resistance and increasing the selling price. Send for the book illustrated at the left. It is packed with real money making facts for you. Write today.

Atlanta  
Baltimore  
Boston  
Buffalo  
Chicago  
Cincinnati  
Cleveland  
Dallas

# EXCELSO WATER HEATER



ATTACHED outside of steam or vapor heating boiler, it supplies plentiful hot water, using the fire that heats the home. Does away with leaking, clogging coils in fire pot.

In sizes for one family or one hundred families

Sold by all plumbing and heating contractors

**Excelso Products Corporation**  
DIVISION OF AMERICAN RADIATOR COMPANY

79 Clyde Ave. Buffalo, N. Y.

Nationally Distributed by Leading Wholesalers and Boiler and Radiator Manufacturers

## WHAT PRICE FURNITURE



### Redybord Saves Grief Worry Dollars

This illustration shows "REDYBORD" attached to a door. Can be fastened to a closet door, bathroom door or on the springs of an In-A-Door Bed.

### REDYBORD for Homes, Hotels, Apartments

Simple to install and inexpensive, the REDYBORD saves the contractor time and money. Hotels furnish one field alone which can be made the source of a good income by energetic contractors who wish to specialize.

Ideally Suited to Pullman Kitchen Units

**DISTRIBUTORS** (Choice exclusive territory for responsible distributors still available.)

Write for complete information now

**REDYBORD, Inc.**

28 So. Wells St.

Chicago, Ill.



The Sign of a Better Job



## Residence Panelboards

Point out this Duco White Enamel Panelboard and watch the buying interest come in your prospect's eyes. Nothing finer for houses to be sold for homes.

Catalog upon request

# Frank Adam

**ELECTRIC COMPANY**  
ST. LOUIS

DISTRICT OFFICES

Atlanta, Ga.  
Baltimore, Md.  
Boston, Mass.  
Buffalo, N. Y.  
Charlotte, N. C.  
Chicago, Ill.  
Cincinnati, Ohio.  
Cleveland, Ohio.  
Dallas, Texas.

Denver, Colo.  
Detroit, Mich.  
Jacksonville, Fla.  
Kansas City, Mo.  
Los Angeles, Calif.  
Memphis, Tenn.  
Minneapolis, Minn.  
Montreal, Que.  
New Orleans, La.  
New York City, N. Y.

Omaha, Neb.  
Philadelphia, Pa.  
Pittsburgh, Pa.  
San Francisco, Calif.  
Seattle, Wash.  
Tampa, Fla.  
Toronto, Ont.  
Vancouver, B. C.  
Walkerville, Ont.  
Winnipeg, Man.

## MAILO-BOX

PAT. U.S. AND CANADA

### QUICK SALES

Every new home is a live prospect for this inexpensive built-in feature. Show it and make an extra sale.

*Easily Installed*

A complete unit, adjustable to any wall thickness. Requires only a few minutes to install. Many styles, priced \$4.75 to \$12.00. Liberal Dealer terms. Exclusive territory to live dealers or distributors.



**PENN-GREG MANUFACTURING CO.** A.B. 4-28  
809-11 University Ave., St. Paul, Minn.

Gentlemen: Please send me full information regarding the MAILO-BOX.

NAME.....

ADDRESS.....

- Dealer
- Architect
- Builder
- Contractor
- Realtor
- Prospective Home Owner


## ATTENTION SPECIAL OFFER

### Metal Weatherstrippers

Our very low overhead enables us to guarantee you a substantial saving. Your check for \$5.90 will bring you 200 ft. of 1 1/4 inch BIQUE Spring Bronze. Plain and corrugated Rib-strips priced in proportion. Also Distributors for NUMETAL WEATHER-STRIPS and KUHLS ELASTIC CEMENT. We will install weatherstripping and do caulking of windows, doors, floors, sidewalks and copings. Work done anywhere.

*Estimates cheerfully furnished.*


**Bique Metal Weatherstripping & Caulking**  
Superior 7744-7745  
126 W. Grand Ave., Chicago, Ill.



**Let Tillery Fire Your Furnace!**

Tillery's Little Janitor Clock will start your fire going before you get up. Works while you sleep. Contractors and Builders install this necessity at a very slight extra cost. Sells homes faster. Send for folder with prices.

**TILLEY'S LITTLE JANITOR CLOCK CO.**  
55 Orchard St. Newark, N. J.



### The Perfect Bond for Concrete

Contains no acid. Therefore cannot injure concrete or steel. Forms a bond stronger than the concrete itself.

Catalog on request  
**LIVING-STONE CO.**  
1 E. Lee Street, Baltimore, Md.

OUR TRADE MARK SINCE 1905



## A Strong Man can stand on it— a child can operate it

*Slides Up  
Into Ceiling  
When  
Not in Use*

*Here is a disappearing  
stairway that beats the  
world for convenience,  
appearance and ease  
of operation. Moderate  
in price, too.*

**THE DISAPPEARING  
STAIRWAY CO. AKRON  
OHIO**

*Send for all  
the facts  
and figures*

**CONCRETE FORM TIE CORPORATION**  
134 SIXTH AVENUE  
HOMESTEAD, PA.

MAKERS OF CONCRETE FORM TIES (See reproduction above) and LOCKTITE STEEL BRIDGING



## LIGHTING FIXTURES READY TO HANG

Direct from the manufacturer. Completely wired, including glassware. Send for new catalog No. 29. Just reduced prices.

*Special Proposition to Dealers*  
**ERIE FIXTURE SUPPLY COMPANY, Inc.**  
Station B Erie, Pa.

## Send for Samples




The new Chicago Expansion Nail was developed primarily for holding wooden strips in place for fastening carpet in the new Stevens Hotel, Chicago. In only one operation the nail becomes an integral part of the concrete. Cheaper and better than driving in wooden plugs.

The Chicago CONCRETE Nail is practical and efficient. To be used only as a temporary fastening and later replaced with Chicago expansion products. We also manufacture Expansion Bolts, Nuts, Bridle Rings, Conduit Hangers and Toggle Bolts of all kinds.

Let us send you a sample Expansion Nail and Concrete Nail. Write for Catalog and Samples today.

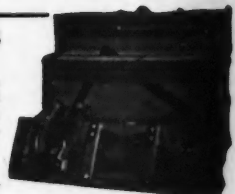
**Chicago Expansion Bolt Co.**  
126 1/2 South Clinton Street, Chicago, Ill.

Expansion Nail      Concrete Nail

## A Real Home Comfort Mallory Shutter Workers MALLORY MFG. CO.

700 BROAD STREET      FLEMINGTON, N. J.

### INDESTRUCTO CARPENTER'S TOOL CASES



Made of three-ply Veneer with canvas, painted and varnished, waterproof, light and strong. Secure locks, strong handle, place for every tool, carried like suitcase.

*Write for booklets and prices.*  
**WEDELL & BOERS**  
128 West Jefferson Ave. Detroit, Mich.



## BUILT-IN WOODWORK

Adds the touch of Refinement. Beauty that increases renting and selling values.

**SEE OUR OFFERS**

Bookcase Colonnades—Sideboards, Medicine Cabinets, etc., are of Distinctive Design and give living comfort to any home.

*Send for  
Free  
Catalog*

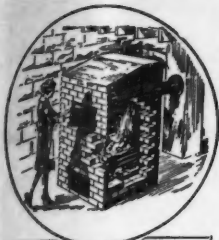
**STEPHEN BILEK CO.**  
2119 South Troy Street : CHICAGO

# If

## YOU DO NOT FIND WHAT YOU WANT

in the AMERICAN BUILDER,  
write us and we will try to  
get it for you.

# Low In First Cost



YOU will be astonished and pleased at the low first cost of an Economy Incinerator. Yet, in giving you the Economy at its low cost, no sacrifice has been made in attaining complete combustion, safety and permanence.

## THE ECONOMY INCINERATOR For New and Old Homes



Complete combustion is secured by means of strong drafts and correct design. It costs nothing to operate the Economy.

The patented hopper door with the "Double-Door" feature prevents flames, smoke, soot and fumes from entering the room. This feature, alone, is of vital importance.

Now the Economy is available for old homes, as well as new ones—at amazingly low cost. Send for complete details and see how we have taken the high cost out of the incinerator and brought it within reach of all.

The upper illustration shows the Economy for homes already built. The lower one is the type used for new construction. Local materials are used, with Economy Metal Fittings and Patented Design.

**ECONOMY INCINERATOR COMPANY, Inc.**  
Milwaukee, Wisconsin

# MANUFACTURERS—ATTENTION

*"The Dream Home of the Century"*

a home that will actually revolutionize homebuilding for the \$4,000 to \$7,000 class (or about 88% of all home-builders) will be built and sponsored by 104 leading daily newspapers—circulations 30,000 to 100,000—practically covering the United States—

During the next 12 months—

In one of the best prepared and most complete home-building campaigns ever inaugurated.

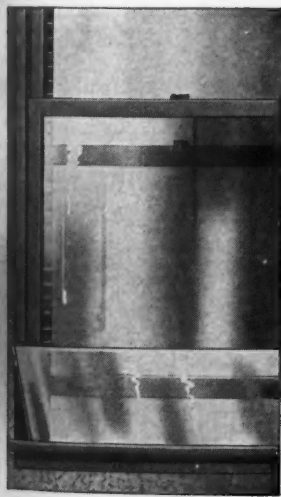
While working out our FIFTH ACTUAL AND FINAL TEST—a 90-day program—we are open to take on a few manufacturers of new and unquestioned products that merit a place in THE DREAM HOME, such as kitchen sinks, alcove fixtures, ironing board units, closet equipment, fireplace units, screens, etc.

We offer a wonderful sales campaign, with distribution secured at the same time if necessary, at a negligible investment. YOU GIVE NOTHING FREE—You pay us nothing. You simply pay the newspapers for a small amount of advertising on your own product, to run at the same time that thousands and thousands are inspecting it.

Your product must merit its place in THE DREAM HOME OF THE CENTURY—it must be something that should be in every home in America costing from \$4,000 to \$7,000 to build.

We really have something that is going to be the sensational success of the year. Write NOW so that we can be mutually satisfied in time to include you on our factory trip. Address

**THE DREAM HOME OF THE CENTURY**  
POST OFFICE BOX 725  
MONTGOMERY, ALABAMA



**B**UILDERS take advantage of this wonderful opportunity for greater profits and satisfied customers by installing Perfection Window Ventilators.

They are not only beautiful but are practical, giving perfect ventilation without draft. Many of the largest contractors and architects are now recognizing them as a standard Building Commodity.

Furnished in clear polished plate and all kinds of obscure glass. Brackets are made of a

non-corrosive metal and are finished in all standard colors, including grained walnut and oak to match window sash.

Brackets are adapted to both steel and wood sash. The complete installation requires but a few minutes.

Write for prices and information.

## The PERFECTION COMPANY

2500-22 W. 21st Street,  
Chicago, Ill., U. S. A.

Established 1917

Cable Address "Curwinco"

# "led-hed" NAILS

## A Better Nail For Roofing Purposes



Here is a nail that plugs the hole caused by driving it through any roofing material. It makes a DOUBLE water-tight seal.

Nails rust away at the shank—UNDERNEATH the head—but "led-hed" nails keep the moisture away which prevents rusting and protects roofing.

A "led-hed" has all the lead under the head. In driving, the hammer hits squarely on the steel nail head and the harder you drive it, the tighter it seals.

Especially designed for Corrugated Sheet Steel; Metal Shingles; Metal Tile, etc.

Pure Copper "led-heds" are perfect nails for laying Slate Shingles. The lead packs in around the nail hole and prevents slate from cutting off nails.

Write for samples and prices

**The Deniston Company :** 3101 W. Harrison St. Chicago, Illinois

**"READY" STEEL BRIDGING**



See this Bridging at your **DEALERS**  
**INITIAL TRIAL SHIPMENTS**  
 To contractors at 2 3/4 cts per strip F.O.B. Muncie Ind  
**FREE SAMPLE ON REQUEST**

Made of rust-resisting **TERNE PLATE STEEL**  
**MID-WEST METAL PRODUCTS CO · MUNCIE IND.**

**Cyclone Door Stop**

For Garages, Barns, Warehouses, etc.

**For New or Old Doors**

Makes doors stay put. Stops doors from flapping, slamming and swinging. Simple. Easily attached. Never get out of order. Adjustable tension on powerful friction action. Fits all doors. Thousands in use.



Makes doors rigid. Overcomes bottom vibration troubles, the fault of top attached stops.

**Cyclone Door Stop Hinge** For New Doors



and bracing old doors. Does double duty. A heavy hinge plus an adjustable door stop. Write for circular and dealer's introducing proposition.

400 Nico St.  
**NORTHFIELD IRON CO.** Northfield, Minn.

**RUNNING WATER**  
 FOR SUBDIVISION HOMES

Building real, lasting worth into the water pressure system of subdivision and suburban homes with the **NEW HOOSIER WATER SERVICE** means distinctly added value and enduring satisfaction for the homeowner. Galvazink protection, inside and out, and superior mechanical features have made the **HOOSIER** the builder's first choice.



**FLINT AND WALLING MFG. CO.**  
 65 Oak Street KENDALLVILLE, IND.

**Which Weatherstrip Men Are Making \$5000 to \$7500 a Year?**

The real money in weatherstrip selling is going to the men who own their own business yet secure the co-operation and support of a strong manufacturer.

The Ceco selling plan is based on the idea that every weatherstrip man is entitled to a home of his own, plus enough money to live well and save for a rainy day. That 91% of the original Ceco agents are still with us after many years is pretty good evidence of the fair dealing and support rendered them. Today Ceco desires a connection in several open territories. Only one man can be chosen for each. He will receive:

(1) Exclusive territory and absolute protection therein; (2) Full selling help, models, samples, literature, advertising, etc.; (3) a direct mail campaign going over his own name with all costs paid; (4) Strips guaranteed absolutely straight and true and made of a fine grade material; (5) 24-hour shipping service on any type and size of strip.

If you want to join this group of money-making business men write us at once.

**Ceco**  
 METAL WEATHERSTRIPS

**Ceco Weatherstrip Co.**  
 1926 So. 52nd Ave., Chicago, Ill.

**TILE**



**FOR EVERY FLOOR**

Department No. 1.—Ceramic White and Colored Floor Tile.  
 Department No. 2.—White and Colored Wall Tiles.  
 Department No. 3.—Wall Tile Trimmers.  
 Department No. 4.—Colored Mantel and Hearth Tiles.  
 Department No. 5.—Red Quarry Tiles.  
 Department No. 6.—Mantels and Faience Tile.

Direct to you at wholesale prices. Here is a chance for you to make plenty of money. Let us tell you how. Any mason, tile-setter or enterprising carpenter can install tile. We furnish instructions.

Write or wire for catalog.  
**Lloyd Floor & Wall Tile Co.**  
 P. O. Box 5064, A-B, Kansas City, Mo.

**Write or Wire for Samples**

**"CONSOLE" MAIL BOXES**  
 DESIGN "C"



**CONSOLE MAIL BOXES** lend a touch of artistic charm and individuality to the home. They are constructed of cast metal in various styles and finishes to suit the most exacting taste. Serves as a permanent utility.

We have other designs and finishes.  
 Write for information and prices


**Colonial Hardware Manufacturers**  
 128 N. Clinton Street Chicago, Illinois



**MAKE A BIGGER PROFIT On The Roof**

Wise, thrifty builders will appreciate the saving in putting on **Walters and Coopers Metal Shingles**. The Walters and Coopers Metal Shingles weigh less than wood or slate and takes lighter frame work to support it. Moreover, it is permanent. This roofing does not require skilled labor to put it on, carries a low rate of insurance and is storm, wind and fireproof. We manufacture a complete line of designs in Painted Tin, Galvanized Sheet Zinc and Copper.

Write for full size samples and prices  
**National Sheet Metal Roofing Co.**  
 339-345 Grand St., Jersey City, N. J.



**LIGNINE (WOOD) CARVINGS—UNBREAKABLE**

Their USE will Save You—BIG MONEY. Beautiful, Attractive, Dependable. Can be Carried in stock Without Loss. Capitals, Pilasters, Drops, Scrolls, Corners, Heads, Period Designs. Supplied in Oak, Mahogany and Walnut.

NUMBER 9 CATALOG—FREE  
**ORNAMENTAL PRODUCTS COMPANY**  
 14th Ave. and La Fayette Blvd., Detroit, Mich.



## Self Clinching JAMB NAILS

Set your door jambs with this new UNIVERSAL JAMB NAIL. It makes a perfect job, saves time, leaves no hammer marks or nail holes to putty up. They are easy to use. These Jamb Nails hold jamb squarely when building settles.

Used by Mills & Sons (the world's largest home builders) and hundreds of others.

**SPECIAL**—Try 1000 at our expense. Use some of them. If not satisfactory return what you have left. Those you used will cost you nothing. **THREE SIZES:** 1 3/4" — 2 1/4" — 3"

MAIL FREE TRIAL COUPON TODAY  
Name.....  
Address.....

AB 4-28  
**STRAND**  
Manufacturing Co.  
644 W. Randolph St., Chicago, Ill.  
Send 1000 Universal Jamb Nails on approval

### Weather stripping is profitable work

Contractors, builders and representatives are making real money by handling and installing Kuhlmann's Metal Weather Stripping.

You can often weather strip a house or building between larger jobs and thus keep busy all the time.

Kuhlmann's Metal Weather Stripping is made in zinc, bronze and brass in various styles for double hung and casement windows and doors, etc. (Note cross sections.) It can easily be installed with ordinary tools.

Write for our proposition and samples and get in on this profitable work.

**KUHLMANN METAL WEATHER STRIP COMPANY**

3806 Forest Park Blvd. St. Louis, Mo.



An efficient quality tool of service, and production which equals or betters a large Band Saw, in quality and quantity of work in 99% of the jobs.

*It must make good or we will.*

Operates from light socket,  
Gear drive  
Weights 145 lbs.

nuf - HORN - sed

**Horn Device Mfg. Co.**  
413 Florida Avenue  
KENMORE, OHIO

Just Completed and the Outstanding Success of the City

## The Belvedere Hotel

48th Street, West of Broadway — Times Square's Finest Hotel

Within convenient walking distance to important business centers and theatres. Ideal transit facilities; 450 rooms, 450 baths. Every room an outside room—with two large windows. Large single rooms, size 11' 6" by 20' with bath, \$4.00 per day. For two, \$5.00—twin beds, \$6.00. Large double rooms, twin beds, bath, \$6.00 per day. Special weekly rates. Furnished or unfurnished suites with serving pantries \$95 to \$150 per month. Moderately priced restaurant featuring a peerless cuisine.

*Illustrated booklet free on request.*

**CURTIS A. HALE, Managing Director.**

## BERRIMAN BILTIN-WARDROB

Save Furniture Cost

Converts waste space into utmost efficiency or monthly income. The appeal to tenants, guest and owners of a fully equipped wardrobe permanently, built-in is instant and universal.

**HOMES, APARTMENTS, HOTELS**

Contractors—Architects—Owners write for complete information and price.

**R. M. MORRIS & CO.**  
1138 Lake Shore Drive, Chicago, Ill.

Unit A Unit B  
Height 6'8" Width 4'  
Depth 1'8"

## THE AMERICAN BUILDER

is carefully edited with a view of service to you. It tells about American business and goods which you might be interested in.

—For permanence specify the famous

## Hodell Sash Chain

Hodell No. 75 Apartment Sash Chain offers the most modest home or apartment building all the advantages of noiseless, permanent, smooth-running sash chain at no greater cost than for cord. Formed from a cold-drawn ribbon of polished steel, NOT STAMPED FROM SHEET; every link is uniform. See Sweet's. Ask for A. I. A. Specification File, Class 27-A1, and No. 75 folder.

*We have some open territory on an exclusive basis for reliable resident agents handling several builders specialties.*

Address  
**THE CHAIN PRODUCTS CO.**  
Established 1888  
CLEVELAND, OHIO

# PULLMANIZE YOUR WINDOWS!

From Mills & Sons—Home Builders—5558 W. North Ave., Chicago, Ill.

"One of the most outstanding improvements in our building construction has been the adoption of Pullman UNIT Sash Balances. When all economies made possible by your device are given proper credit we find them more economical, even in speculative building operations, than the old sash weight box window frame plan. It is also the last word in satisfactory window balancing equipment and we believe you have the best window control available."

Write for New Folder Today

**PULLMAN MFG. CO., INC.** 47 SOUTH FORD ST. ROCHESTER, N. Y., U. S. A.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

**FOR YOUR GARDEN**

Delightful figures of fine Terra Cotta, hand-painted in natural colors, such as gnomes, toad-stools, all kinds of animals, tree trunks for garden seats, charming groups—Red-Riding Hood and Wolf, Rip Van Winkle, etc.

**FAIRYLAND COMPANY - 793 No. Oak Drive, New York City**

**COLONIAL MIRROR SCONCES**

Sconce No. 103 Oval 6"x9". Wired complete. \$7.50 postpaid. Large selection of various styles and sizes, hand wrought of first class workmanship and finish. Moderate prices.

*Send 10 cents for illustration AB.*





**Be Independent**  
*Start a Business of Your Own*

**Atlas Weatherstrips**  
Are in Great Demand

Every home, apartment house, school, office buildings, etc., is a prospect for Atlas Metal Weatherstrips. Just a little effort on your part will assure you a handsome income. Write us today for agency proposition.

**ATLAS WEATHERSTRIP CO.**  
3943 W. 16th St. Chicago, Ill.

**THE GROWING DEMAND FOR**

**FIRE-SAFE ROOFING**

of Permanent Beauty and Service at Reasonable Cost can only be met by CONCRETE ROOF TILE.

Our U. S. CHAMPION TILE MACHINES turn out Light-Weight French and Spanish Concrete Tile Roofing at minimum cost. Anyone can make it and lay it profitably. Proof of 34 years of successful practice is there.

These machines are simple to operate, turn out perfect tile, are speedy, and cost comparatively little. A surprisingly small amount of money purchases our complete tile making outfit.

A Well-Built house needs a concrete tile roof for being perfect. You can supply it profitably by using our machine.

*Write for our illustrated Circular and Prices*

**L. HANSEN CO., 2311 Ward Ave., Kansas City, Mo.**



**IRON RAILINGS**  
For EVERY Purpose

Plain and ornamental iron fence, entrance gates, wire and iron window guards, folding gates, gratings, cellar doors, etc.

*Catalog on request—estimates cheerfully given—orders filled promptly*

**Cincinnati Iron Fence Co., Inc.**  
3331 Spring Grove Ave. Cincinnati, Ohio

Let Us

**SHOW YOU**

*The Way to*

**Start Your Own Business**



We sell you the complete forms, moulds, formulas and full instructions on how to build fireplaces. Excellent opportunities now for alert contractors of fireplaces. Build a product that costs less—sells quickly and nets you large profits. Unskilled labor can build these fireplaces with our full instructions.

Let us show you. It costs nothing to get the facts, how to start your own business. Terms. Write today.

**NATIONAL FIREPLACE SUPPLY CO.**  
2743 Osgood Street, Chicago, Ill.

**HEINZ COPPER CORNER**  
FOR STUCCO CORNERS

No More Wood Stripping



**SOLID COPPER NOSE**

Copper Nose Corrosion Proof

*We Manufacture All Types of Corner Beads*

**Church Appliance Mfg. Co.**  
936 Hennepin St. LA SALLE, ILLINOIS

**WRITE FOR SAMPLES AND PRICES**

Let Us

**HEY ALWAYS HOLD**


Mitered Joints are the best Joints

Clamp Nails make them so. Guaranteed Everlasting Mitered Joints

**DURABLE-DEPENDABLE-ECONOMICAL**

*Ask us for samples.*

**CLAMP NAIL CO.**  
1540 PALMER ST. CHICAGO, ILLINOIS



**CLAMP NAILS**

750 LBS

**Building Plans for Modern Homes**

The most comprehensive book of homes ever published by any architect, size 8 1/2 inches, heavy board covers, 224 pages, 214 different designs for colonial homes, cottages, bungalows and two-family dwellings. Contains floor plans and all dimensions, photo of each design and approximate cost to build. You cannot afford to build until you have seen this book. Postpaid only \$5.00. A new book of 1928 edition containing fifty-eight snappy designs of medium-cost English and American colonial homes, postpaid only \$1.00. These books may save you hundreds of dollars in extras. Both books postpaid for \$3.50.

**Frederick H. Gowing, Architect — 101 Tremont Street, BOSTON, MASS**

**Lighting Fixture Color Scheme**

The beautiful new ALABAX folder printed in full colors shows ALABAX brackets and receptacles in a wide range of over-all colors and colored stripings. It will be helpful in working out your color harmonies. A copy will be sent you free on request.

*Ask for ALABAX Color Chart.*

**PASS & SEYMOUR, INC.**  
SOLVAY STATION SYRACUSE, N. Y.





**Period Mantel-Pieces of Wood**

The quiet refinement of a home is augmented by the use of Wood Mantel-Pieces, painstakingly wrought by master craftsmen skilled by years of experience in the manufacture of fine mantels. Write for literature showing many designs adaptable to the requirements of any room in the home.

**THE BRECHER Co., Inc.**  
443 W. Jefferson St.  
Louisville, Ky.

Each Distinctively Different  
We use Over 55 Designs—

**ALLMETAL WEATHERSTRIP**

**BUY IT LIKE LUMBER  
INSTALL IT YOURSELF  
SAVE ABOUT 50%**

-----RETURN COUPON TODAY FOR SAMPLES-----

ALLMETAL WEATHERSTRIP CO.  
231 West Illinois Street, Chicago, Ill.

Name.....  
Address.....  
City.....State.....

**MARSCHKE**  
*Folding Stairs*

*Make better use of your attic*

Ask for Booklet "A"

**The Marschke Co.**  
St. Paul, Minnesota      Columbus, Ohio

**Sepeco** flameless  
water heaters  
**HOT WATER—QUICK**

THE NEW METHOD—WITHOUT FLAMES OR FIRE HAZARD. WITHOUT FUMES, MUSS OR FUSS, WITH THE SAME EASE AS DONE IN OVER 30,000 OF HOMES IN THE UNITED STATES. THE SEPCO ELECTRIC ENDORSED BY POWER COMPANIES WILL BE A REVELATION TO YOU IN COMFORT AND ECONOMY.

We will mail full details on equipping any home with SEPCO. You'll want to know the cost, conveniences, etc., so write us today for more information.

**AUTOMATIC ELECTRIC HEATER CO.**  
1505 Race St.      Philadelphia, Pa.

**BUCKEYE WATER SUPPLY SYSTEMS**

For city and suburban homes

Dependable, efficient, noiseless in operation, run in oil.

Compare the Buckeye with any other system of similar capacity. Slow speed, sturdy and durable.

50 Years Pump Builders

**MAST, FOOS & CO.**  
Box 501      Springfield, Ohio

Write for Free Booklet

**GRILLES IN SHEETS**

for Screen Doors, Counters, Railings, Partitions, Wickets, Radiator Guards, Window Guards and many other purposes. Being made without frames. Grilles are easily cut to size and set in the woodwork beneath the moulding without extra cost of labor.

*You can now carry Grilles in stock.*

**THE FRED J. MEYERS MFG. CO.**  
WIRE IRON AND BRONZE WORK  
Send for Catalog No. 69      HAMILTON, OHIO

**CANADIAN BUILDING MATERIALS**

Are you interested in building or construction in Canada either as architect or contractor? If so, you will want to know what Canadian materials are available. Canada has large resources of the building stones suitable for external or internal use, clays from which local brick and tile are made, aggregated for concrete, roofing materials, timber and lumber for all purposes.

Before specifying for Canadian work communicate with

**THE DEVELOPMENT BRANCH  
DEPARTMENT OF COLONIZATION & DEVELOPMENT  
CANADIAN PACIFIC RAILWAY  
MONTREAL.**

An expert staff is at your service to obtain and give you free of charge full information about such materials in all parts of Canada.

**HEATING BOOK**

**Ask for Agency Offer and Catalog**

All Kinds of Heating—Hot Water—Steam—Hot Air—Pipeless—Pipe—Sewage Disposal—Water Supply—Plumbing—Low Prices.

**ANDREWS HEATING CO.**  
1500 Heating Bldg.  
MINNEAPOLIS, MINN.

**ANDREWS HEATING COMPANY**  
Please Send Catalog and Agency Offer

Name.....  
Address.....  
Town.....  
State.....

# PATENTS

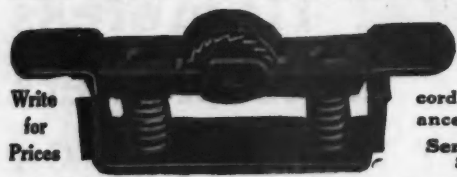
Time counts in applying for patents. Don't risk delay in protecting your ideas. Send sketch or model for instructions or write for FREE book, "How to Obtain a Patent" and "Record of Invention"

form. No charge for information on how to proceed. Communications strictly confidential. Prompt, careful, efficient service. Clarence A. O'Brien, Registered Patent Attorney, 189-F Security Bank Building (directly across street from Patent Office), Washington, D. C.

## WANTED: *Athey* Weatherstrip AGENTS

**A Permanent, Profitable Year-round Business**  
The finest of Private Homes, Hotels, Office Buildings and Hospitals all over the U. S. A. are **ATHEYZED**. Installation Contractors who believe in selling the very best at a reasonable price with good profits are making Big Money as exclusive agents for this high grade Weatherstrip. It makes any rattling, loose window or door of wood or steel air-tight, yet works smoothly without sticking. Territory open in cities up to 50,000. We help you succeed. Write for details NOW.  
**ATHEY COMPANY 6100 W. 65th St., CHICAGO**

## The Most Economical Sash Holder



**It Is Automatic**  
No Sash weights, cords, pulleys or balances necessary.  
**Send For Trial Set \$1.25 Prepaid**

**HARDWARE SALES CO., 30 Church St., Room 446E, NEW YORK CITY**



**Complete Kitchen UNITS \$1.87**  
Triple White Enameled Kitchen or Bathroom Unit, 1 light completely wired with pull chain socket and extra string attachment.  
**VAL. \$3.50**

Send for our special cut rate Lighting Fixture Catalog. Special Prices to Builders  
**UNITED LIGHTING FIXTURE CO., Inc.**  
33 Flatbush Ave., Brooklyn, New York, N. Y., Dept. A. B.



## Stop "Guesstimating"—avoid Errors and Omissions Our BUILDERS' ESTIMATE SHEETS

will SAVE Time and MONEY—  
100 leaves in a book, 4x9 1/2 inches. { 1 Book, \$1.00 }  
via Ins. Parcel Post same day we get order { 3 Books, \$2.50 }  
{ 5 Books, \$4.00 }

**LOUIS FINK & SONS CO., Printers**  
Time Sheets, Job Tickets, Letter Heads, etc.  
In Business Thirty Years Hold for Quick Service  
Elm Ave., Laurel Springs, N. J.

## CORNELL Motor, or Hand, Operated. ROLLING DOORS Underwriters Labeled

**CORNELL IRON WORKS, INC.**  
LONG ISLAND CITY, N. Y.

## JOIN TO-DAY thousands who use MILLER DRIP EDGE

They like it. You will enjoy it's results when laying prepared roofings or shingles. Samples and particulars free. Send a card.

**MILLER & GLEASON, Div. 1, Olean, N. Y.**

## THE SLATINGTON-BANGOR SLATE SYNDICATE, Inc.

SLATINGTON, PENNA.  
Miners and Shippers of  
Black Roofing Slate Natural Blackboard  
Structural Slate Electrical Slate  
and Slate Products  
Write us for prices

# Classified Advertising

**RATES:**  
Small letters 25c per word.  
Capital letters 50c per word.  
Minimum twenty words.  
Business Opportunities  
For Sale and Exchange  
Help and Situations Wanted  
To insure insertion remittance must accompany order

**PATENTS**—Booklet free. Highest references. Best results. Promptness assured. **WATSON E. COLEMAN, Patent Lawyer,** 724 Ninth St., Washington, D. C.

**USED TRANSITS and LEVELS.** BUFF, Hudson Terminal Building, New York City.

**CARPENTERS, CONTRACTORS, BUILDERS, ETC.**—Send for our Free Booklet, "How to Read Blue Prints." Tells how to make most money in the building trades. Every builder should have this information. Write today. Address: Dept. 2344, **CHICAGO TECH., 118 East 26th St., Chicago, Ill.**

**ATTENTION—Home Mechanics.** We sell unusual cabinet hardware, chest trimmings, tea wagon wheels and casters, big line small hinges, locks, etc. Upholstering supplies, electrical hardware, knocked down cedar chests, etc. Send ten cents stamp for catalog. **THURSTON MANUAL TRAINING SUPPLY COMPANY, Jobbers and Manufacturers, Anoka, Minnesota.**

**AGENTS**—Write us for a money making proposition. **BANK** 4204 Hastings St., Detroit, Mich.

**TECHNICAL MAN** with chemical training and production experience wants to make business connection. Box 263, c/o American Builder.

**REBUILT MOTORS AND ELECTRICAL EQUIPMENT BARGAINS.** Glow's FREE Bargain Stock List No. 36 contains 150 Motors, Generators and Electrical Equipment Bargains. Write for copy today. "Glow's Guarantee is like a Government Bond." Prompt shipments. In business since 1905. **THE GLOW ELECTRIC CO., 15 East 2nd Street, Dept. K, Cincinnati, Ohio.**

**PATENT PROCURED.** Prompt service. **PERSONAL, CAREFUL AND EFFICIENT SERVICE.** Highest references. Moderate fees. Send sketch and model for actual search and advice. **GEORGE P. KIMMEL, Master of Patent Law, 94-D, Legal Bldg., Washington, D. C.**

**LIGHTNING RODS, "DIDDIE BLITZEN,"** approved by Underwriters. Write for territory and free samples. **L. W. DIDDIE COMPANY, Marshfield, Wis.**

**ARCHITECT** by profession. Bricklayer by trade. Wants job designing, estimating by supervising. Box 262, Care American Builder.

**CONCRETE BUILDING BLOCK MACHINES AND MOLDS.** Steel molds for burial vaults and culverts. Catalog free. **CONCRETE MACHINERY CO., 5 Main St., St. Louis, Mo.**

**FREE—Valuable Booklet** Containing Plumbing and Heating Information of the Greatest Importance and NEEDED in every HOME. This Booklet costs you nothing and places you under no obligation whatever. Write today. Just a postcard with your name and address. **Chas. Geiser, Dept. 64-A, 4308 Madison St., Chicago, Ill.**

## Banks (Patented) Removable Steel Clothes Posts for Wash Day

We have added to our factory a **PARKERIZING PLANT,** making our clothes posts and flag poles, absolutely **RUST PROOF.** Known by their "Ace of Clubs Top."  
If dealer or jobber can't supply, write for descriptive folder.

**BANKS STEEL POST COMPANY**  
128 Wakeman Ave., Newark, New Jersey



# REPAIRING TRANSITS & LEVELS



**NOW is the time to have your instruments repaired.** Fully equipped repair plant at both Chicago and New York. All work guaranteed.

Ask for list of used transits and levels. Large stock of all makes at low prices.

**CHARLES BRUNING CO., INC.**  
445 Plymouth Court, Chicago  
102 Reade Street, New York



**The CABINET STAIRWAY**  
Slides Up in the Ceiling When Not In Use

**USE YOUR ATTIC**

Non-collapsible; the stair stringers are all one piece, rigid and neat in appearance. Strong enough to carry a person on each step. Perfectly counterpoised by highly resilient springs enclosed in well finished drums.

Send for particulars

**THE STAIRWAY MANUFACTURING CO.**  
Akron, Ohio

**SOUND PROFIT**



Easy sales, satisfied customers and a good welcome profit on every job,—you can have these as agent for Federal Metal Weather Strip. Generous proposition. We tell you how to sell and apply the strip. Many men are boosting their incomes by \$50 a week extra. Begin now at Spring clean-up time.

Write today for proposition

**Federal Metal Weather Strip Co.**  
4538-58 Fullerton Avenue - Chicago, Illinois

**quality lighting fixtures**



**Complete Outfit for 5-Room House \$10**  
Living Room, Dining Room, Bed Room, Porches, Kitchen and Bathroom; all fixtures completely wired and assembled; we furnish tape, wood screws, fasteners and solderless connection. Every fixture guaranteed and tested. Artistic design; beautifully finished. Direct sale to you from factory makes this low price possible. We save you 1/2 to 2/3 on lighting fixtures.

Write for complete catalog.

**BAB'S LIGHTING FIXTURE MFG. CO.**  
4204 Hastings Street Detroit, Michigan



Stores Offices and Homes

**Hopson Metal Ceilings and Sides**

Tasty, dignified designs, characterize Hopson Metal Ceilings and Sides. They're all easy to match and install. Our pictorial catalogue will show what we have to offer in original designs. Get a copy today.

**W. C. HOPSON CO.**  
704 Ellsworth Ave. Grand Rapids, Mich.

**INVISIBLE SASH PULLEYS**  
OFFER MANY VITAL ADVANTAGES



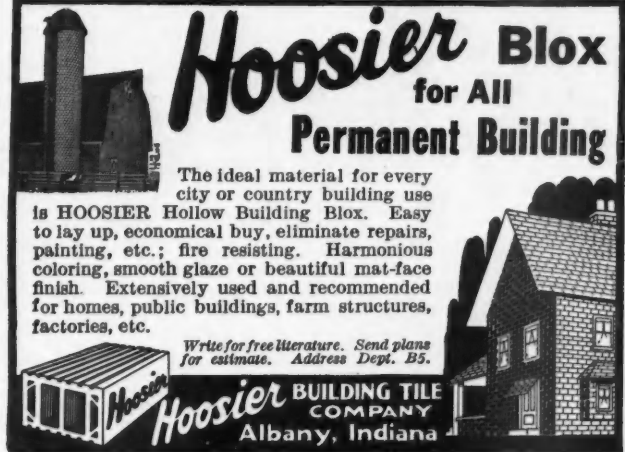
**OUT OF SIGHT  
DUST PROOF  
NOISELESS  
CAN'T CUT CORDS  
WEIGHTS WON'T JAM OR BANG  
RUSTLESS  
TROUBLE PROOF**

**OUTLASTS THE BUILDING**  
Produce a Tailored Frame with no Breaks in Weatherstrip

Free Sample On Request

**VELGUTH METAL PARTS, INC.**  
418 4th STREET MILWAUKEE, WIS.

**Hoosier Blox**  
for All Permanent Building



The ideal material for every city or country building use is HOOSIER Hollow Building Blox. Easy to lay up, economical buy, eliminate repairs, painting, etc.; fire resisting. Harmonious coloring, smooth glaze or beautiful mat-face finish. Extensively used and recommended for homes, public buildings, farm structures, factories, etc.

Write for free literature. Send plans for estimate. Address Dept. B5.

**Hoosier BUILDING TILE COMPANY**  
Albany, Indiana

**Something Finer!**

*A Hidden Medicine Cabinet —A Fine Venetian Mirror*



Here you have the elegance of a decorative mirror. The medicine cabinet is hidden. No hinges visible. The back of the mirror is of steel finished in hand-rubbed walnut. The cabinet is of electrically welded steel, white enameled. Every builder should have the complete Bulletin of our comprehensive De Luxe line on hand. Write for it today.

**Majestic Steel Cabinet Co.**  
Household Steel Cabinet Headquarters  
4211 Belle Plaine Ave. Chicago

**DENNIS**  
ONE PIECE - DOUBLE CUSHION  
**BRONZE WEATHERSTRIP**



Is Easily Installed without Removing Sash or Doors



**For Weather Stripping New and Old Buildings**

Quick application and low price saves labor, time and expense. Made of Spring Bronze that lasts indefinitely. The patented "S" shape provides a snug weatherproof seal that conforms to all warping, shrinkage and expansion of sash. No special tools needed. Comes in convenient Window and Door sets, and bulk.

Endorsed by Contractors, Builders, Architects and Owners. Write now for samples and prices.

**W. J. DENNIS & CO.**  
2110-20 W. Lake St. Chicago, Illinois

W. J. Dennis & Co.,  
2110 W. Lake St., Chicago, Ill.  
Please send FREE Samples and particulars.  
My business is.....  
Name.....  
Street.....  
City..... State.....





# Silver Lake Sash Cord

Solid Braided-100% Cotton  
Look for the name stamped on every foot of cord



**SILVER LAKE CO.,**  
NEWTONVILLE, MASS.

# ADVERTISERS' INDEX

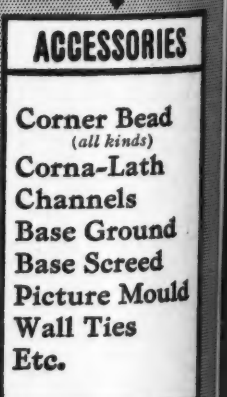
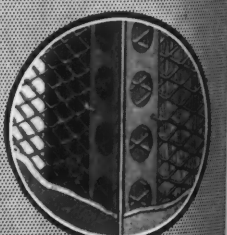
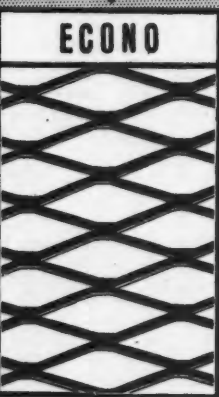
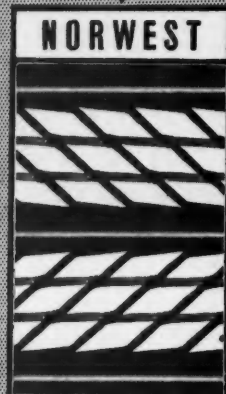
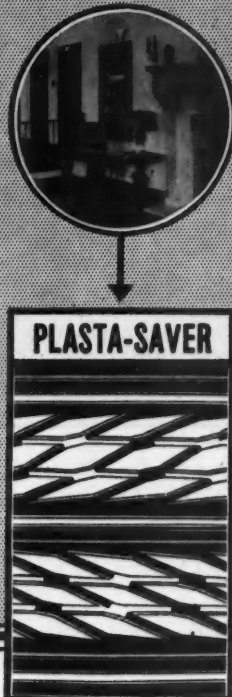
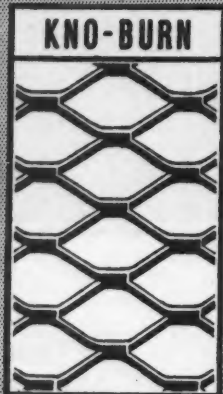
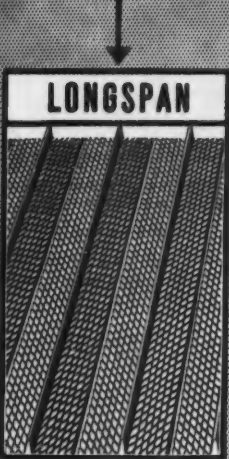


April, 1928

|                                         | Page    |                                             | Page  |                                     | Page    |
|-----------------------------------------|---------|---------------------------------------------|-------|-------------------------------------|---------|
| Acetol Products, Inc.                   | 51      | Barber Asphalt Co.                          | 113   | Caseament Hardware Co.              | 300     |
| Ackerman-Johnson Co.                    | 290     | Bates Expanded Steel Truss Co.              | 358   | Ceco Weatherstrip Co.               | 264     |
| Adam Electric Co., Frank                | 361     | Bates Steel Corp., Walter                   | 309   | Central Specialties Mfg. Co.        | 317     |
| Adamston Flat Glass Co.                 | 354     | Bates Valve Bag Corp.                       | 38    | Century Electric Co.                | 271     |
| Ajax Building Bracket Co.               | 278     | Bayley Co., The Wm.                         | 314   | Chain Belt Co.                      | 2       |
| Allmetal Weatherstrip Co.               | 367     | Bazark Corp.                                | 217   | Chain Products Co.                  | 365     |
| Aloe Co., A. S.                         | 277     | Beckman-Dawson Roofing Co.                  | 92    | Chappell & Co., Wayvell.            | 285     |
| Alpha Portland Cement Co.               | 60      | Beckman Co., The L.                         | 283   | Chase Companies, Inc.               | 112     |
| American Cement Machine Co., Inc.       | 275     | Bessler Disappearing Stairway Co.           | 24-25 | Chemical Toilet Corp.               | 354-360 |
| American Chain Co., Inc.                | 105     | Bilek Co., Stephen                          | 362   | Cheney & Son, S.                    | 282     |
| American Chime Clock Co.                | 317     | Binks Spray Equipment Co.                   | 265   | Chevrolet Motor Co.                 | 243     |
| American Face Brick Assn.               | 102     | Bique Metal Weatherstripping & Caulking Co. | 362   | Chicago Expansion Bolt Co.          | 362     |
| American Floor Surfacing Machine Co.    | 235     | Birch Mfrs. Assn.                           | 353   | Chicago Spring Hinge Co.            | 370     |
| American Radiator Co.                   | 192-193 | Black & Decker Mfg. Co.                     | 254   | Chicago Technical College           | 203-368 |
| American Saw Mill Machinery Co.         | 255     | Boice, W. B. & J. E.                        | 266   | Church Appliance Mfg. Co.           | 366     |
| American Steel & Wire Co.               | 292     | Bommer Spring Hinge Co.                     | 83    | Cincinnati Iron Fence Co.           | 366     |
| American Stove Co.                      | 48      | Boyle & Co., Inc., John                     | 358   | Clamp Nail Co.                      | 366     |
| Andersen Lumber Co.                     | 179     | Bradley-Miller & Co.                        | 212   | Clarke Sanding Machine Co.          | 20-21   |
| Andrews Heating Co.                     | 367     | Brecher Co., The                            | 367   | Clay Products Assn.                 | 294     |
| Anti-Hydro Waterproofing Co.            | 296-313 | Bruce Co., E. L.                            | 190   | Clinton Metallic Paint Co.          | 300     |
| Arkansas Oak Flooring Co.               | 298     | Brunning Co., Inc., Charles                 | 368   | Coleman, Watson E.                  | 368     |
| Art Metal Radiator Co.                  | 214     | Buff & Buff                                 | 368   | Colgan Machinery & Supply Co.       | 283     |
| Asbestos Shingle, Slate & Sheathing Co. | 50      | Burnham Boiler Corp.                        | 82    | Colonial Fireplace Co.              | 288     |
| Athey Company                           | 368     |                                             |       | Colonial Hardware Mfrs.             | 264     |
| Atlas Weatherstrip Co.                  | 368     | Cabot, Inc., Samuel                         | 218   | Columbus Union Oil Cloth Co.        | 310     |
| Austral Window Co.                      | 291     | Canadian Pacific R'y.                       | 367   | Combination Woodworking Machine Co. | 286     |
| Automatic Electric Heater Co.           | 367     | Carborundum Co., The                        | 279   | Common Brick Mfrs. Assn.            | 79      |
|                                         |         | Carey Co., The Phillip                      | 106   | Concealed Bed Corp.                 | 297     |
| Babs Lighting Fixture Co.               | 369     | Carlson Co., Hugo M.                        | 301   | Concrete Equipment Co.              | 281-282 |
| Banks Steel Post Co.                    | 368     | Carter Co., Inc., R. L.                     | 274   | Concrete Form Tie Corp.             | 362     |
|                                         |         |                                             |       | Concrete Machinery Co.              | 368     |

ADVERTISERS' INDEX CONTINUED TO PAGE 373

# NORTH WESTERN METAL LATH



*Here!*

## The Right Metal Lath

To Help You Do Your  
Best Plastering  
MORE ECONOMICALLY

There is one *best* type of Metal Lath for each of your jobs.

You will find it included in the complete North Western line.

If you wish, we will gladly help you select it, or tell you how to most efficiently use it. For this service or for *samples*, catalogs, etc., write any of our twelve branch offices, or to

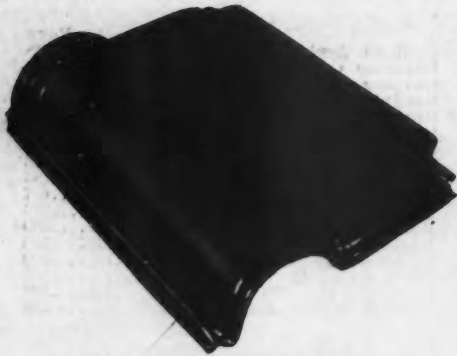
**NORTH WESTERN EXPANDED METAL CO.**  
1203 Old Colony Building  
CHICAGO

BRANCH OFFICES: **Atlanta**—310 Walton Bldg. **Cambridge**—300 Sidney St. **Dallas**—403 Magnolia Bldg. **Kansas City, (Mo.)**—407 Orear-Leslie Bldg. **Los Angeles**—623 Central Bldg. **Pittsburgh**—33 Pride St. **Minneapolis**—207-208 Lumber Exchange Bldg. **Indianapolis**—5255 Park Ave. **Philadelphia**—112 So. Twentieth St. **Cleveland**—627 Sweetland Bldg. **Detroit**—2640 Book Tower. **New York City**—152 W. 42nd St.

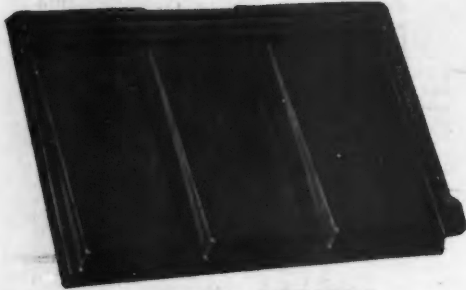
|                                      |                     |
|--------------------------------------|---------------------|
| Consolidated Conc. Machinery Corp.   | 270                 |
| Construction Machinery Co.           | 237                 |
| Copper Bros. & Zook                  | 111                 |
| Cornell Iron Works, Inc.             | 368                 |
| Crane Company                        | 52                  |
| Crescent Machine Co.                 | 260                 |
| Crofoot Co., J. B.                   | 282                 |
| Cromar Co., The                      | 94                  |
| Curtis Companies, Inc.               | 61                  |
|                                      |                     |
| Davis Tool & Engineering Co.         | 314                 |
| Delco-Light Co.                      | 263                 |
| Denison Company                      | 363                 |
| Dennis & Co., W. J.                  | 369                 |
| Detroit Steel Products Co.           | 210-211             |
| De Vilbiss Co., The                  | 242                 |
| DeWalt Products Co.                  | 259                 |
| Diamond Metal Weatherstrip Co.       | 289                 |
| Diddle Co., L. F.                    | 368                 |
| Disappearing Stairway Co.            | 362                 |
| Dixon & Sons Co., Inc., Henry        | 199                 |
| Donley Brothers Co., The             | 298                 |
| Dream Home of the Century, The       | 363                 |
| Dudley Lock Corp.                    | 299                 |
| Dunn Mfg. Co., W. E.                 | 222-223             |
| Du Pont de Nemours & Co., E. I.      | 41                  |
| Duro Co., The                        | 63                  |
|                                      |                     |
| Economy Incinerator Co., Inc.        | 363                 |
| Edwards Mfg. Co., The                | 359                 |
| Electric Rotary Machine Co.          | 272                 |
| Elite Manufacturing Co.              | 276                 |
| El Paso Sash & Door Co.              | 294                 |
| Eric Fixture Supply Co.              | 362                 |
| Essay Mfg. Co.                       | 279                 |
| Eternit, Inc.                        | 16-17               |
| Excelsior Products Corp.             | 361                 |
|                                      |                     |
| Fairbanks, Morse & Co.               | 107                 |
| Fairland Co.                         | 366                 |
| Farrand, Hiram A.                    | 290                 |
| Federal Meal Weatherstrip Co.        | 369                 |
| Federal Motor Truck Co.              | 246                 |
| Flat Metal Mfg. Co.                  | 297                 |
| Fink & Sons Co., Louis               | 368                 |
| Finsler Brothers Clay Co.            | 103                 |
| Fischer Spring Co., Charles          | 302                 |
| Flint & Walling Mfg. Co.             | 264                 |
| Foley Saw Tool Co.                   | 269                 |
| Forest City Bit & Tool Co.           | 286                 |
| Fr. Wayne Engineering & Mfg. Co.     | 354                 |
| Frantz Mfg. Co.                      | 3                   |
| Frasier Stair Co.                    | 352                 |
|                                      |                     |
| Gallmeyer & Livingston Co.           | 280                 |
| Garden City Plating & Mfg. Co.       | 33                  |
| Gas-Gard Co.                         | 314                 |
| Gas-O-Matic Corp.                    | 355                 |
| Geiser, Charles                      | 368                 |
| Geier & Blum                         | 285                 |
| General Electric Co.                 | 9-10-11-12-13-14-15 |
| General Gas Light Co.                | 197                 |
| General Insulating Co.               | 307                 |
| Genfere Steel Co.                    | 80                  |
| Gibbs Boardtile Co.                  | 30                  |
| Gibsonburg Lime Products Co.         | 54                  |
| Gilbert & Bennett Co.                | 77                  |
| Globe Ventilator Co.                 | 355                 |
| Glow Electric Co.                    | 368                 |
| Goodyear Tire & Rubber Co.           | 66                  |
| Gowing, F. H.                        | 368                 |
| Graham Brothers                      | 246                 |
| Grand Rapids Hardware Co.            | 355                 |
| Gray Iron Foundry Co.                | 284                 |
| Greene's Steel Molds                 | 286                 |
| Gurley, W. & L. E.                   | 266                 |
| Gym Junior Company                   | 357                 |
|                                      |                     |
| Hagstrom Mfg. Co.                    | 316                 |
| Hansen Co., L.                       | 366                 |
| Hardin-Lavin Co.                     | 89                  |
| Hardware Sales Co., Inc.             | 368                 |
| Hart & Hegeman Mfg. Co.              | 42                  |
| Hays Mfg. Co.                        | 292                 |
| Hestlator Co.                        | 185                 |
| Hetzl Steel Form & Iron Co.          | 286                 |
| Hess Warming & Ventilating Co.       | 298-314             |
| Heston & Anderson                    | 273                 |
| Higgins Co., Charles M.              | 309                 |
| Higgin Mfg. Co., The                 | 301                 |
| Hilchings & Co.                      | 295                 |
| Holland Furnace Co.                  | 99                  |
| Holt-Bid Service Co.                 | 205-206-207-208     |
| Hoosier Bldg. Tile & Silo Co.        | 369                 |
| Hopson Co., W. C.                    | 369                 |
| Horn Device Mfg. Co.                 | 365                 |
| Hotel Belvidere                      | 365                 |
| Hotel Hollenden                      | 366                 |
| Hotel Pere Marquette                 | 307                 |
| Hunt, Helm, Ferris Co.               | 108                 |
| Hutchinson Mfg. Co.                  | 281                 |
| Huther Bros. Saw Mfg. Co.            | 274                 |
|                                      |                     |
| Ilg Electric Ventilating Co.         | 71                  |
| Indiana Limestone Co.                | 22-23               |
| Ingram Richardson Mfg. Co.           | 45                  |
| Insanite Co., The                    | 57                  |
| International Casement Co., Inc.     | 53                  |
| International Correspondence Schools | 295                 |
| International Harvester Co.          | 241                 |
| International Stamping Co.           | 284                 |
| International Steel & Iron Co.       | 304                 |

|                                  |         |
|----------------------------------|---------|
| Jaeger Machine Co.               | 228-229 |
| Johns-Manville Corp.             | 195     |
| Johnson Plumbing Supply Co.      | 352     |
| Johnson & Son, S. C.             | 173     |
| Jones Superior Machine Co.       | 284     |
|                                  |         |
| Kalman Steel Co.                 | 70      |
| Karol & Sons, B.                 | 308     |
| Kawneer Co., The                 | 65      |
| Kees Mfg. Co., F. D.             | 356     |
| Keith Corporation                | 68      |
| Kennedy, Ralph M.                | 282     |
| Kent Company                     | 270     |
| Kerner Incinerator Co.           | 55      |
| Keuffel & Esser Co.              | 268     |
| Kewanee Mfg. Co.                 | 303     |
| Kimball Brothers Co.             | 302     |
| Kimmel, George P.                | 368     |
| Kliegl Brothers                  | 306     |
| Knappe & Vogt Mfg. Co.           | 293     |
| Knickerbocker Co.                | 277     |
| Knickerbocker Slate Corp.        | 290     |
| Koehring Co.                     | 262     |
| Kornau Machine Co.               | 284     |
| Kuhlman Metal Weather Strip Co.  | 365     |
| Kuhls, H. B. Fred.               | 69      |
| Kwik-Mix Concrete Mixer Co.      | 269     |
|                                  |         |
| Laco Gas Burner Co.              | 360     |
| Lamella Roof Syndicate           | 308     |
| Lansing Co.                      | 256     |
| Leach Company                    | 267     |
| Leonard Sheet Metal Works, Inc.  | 356     |
| Libbey-Owens Sheet Glass Co.     | 62      |
| Lincoln-Schluter Machinery Co.   | 252     |
| Linerusta-Walton Co.             | 216     |
| Living Stone Co.                 | 362     |
| Lloyd Floor & Wall Tile Co.      | 264     |
| Louisiana Red Cypress Bureau     | 357     |
| Louisville Cement Co.            | 116     |
| Lufkin Rule Co., The             | 278     |
| Lupton's Sons Co., David         | 76      |
|                                  |         |
| McGraw-Hill Book Co.             | 359     |
| McKinney Mfg. Co.                | 114     |
| Macomber Steel Co.               | 310     |
| Majestic Co.                     | 56      |
| Majestic Steel Cabinet Co.       | 369     |
| Malleable Asphalt Co.            | 219     |
| Mallory Mfg. Co.                 | 362     |
| Manning Abrasive Co., Inc.       | 275     |
| Maple Flooring Mfrs.             | 189     |
| Marietta Manufacturing Co.       | 304     |
| Marschke Co., The                | 367     |
| Mason Fibre Co.                  | 47      |
| Master Rule Mfg. Co., Inc.       | 281     |
| Master Woodworker Co.            | 287     |
| Mast, Foos & Co.                 | 367     |
| Matot, D. A.                     | 357     |
| Maxwell-Burke, Inc.              | 315     |
| Mellish-Hayward Co.              | 283     |
| Mesker & Co., George L.          | 315     |
| Metal Forms Corp.                | 258     |
| Meyers Mfg. Co., Fred J.         | 367     |
| Miami Cabinet Co., The           | 313     |
| Mid-West Metal Products Co.      | 264     |
| Miles Mfg. Co.                   | 272     |
| Miller & Gleason                 | 368     |
| Milwaukee Air Power Pump Co.     | 316     |
| Milwaukee Corrugating Co.        | 374-375 |
| Mississippi Wire Glass Co.       | 181     |
| Morton Mfg. Co.                  | 59      |
| Morriss & Co., R. M.             | 365     |
| Myers & Bro. Co., The F. E.      | 221     |
|                                  |         |
| National Assn. of Ice Industries | 37      |
| National Fireplace Supply Co.    | 366     |
| National Fireproofing Co.        | 74      |
| National Lumber Mfrs. Assn.      | 100     |
| National Mfg. Co.                | 376     |
| National Radiator Corp.          | 86      |
| National Sanding Machine Co.     | 283     |
| National Sheet Metal Roofing Co. | 264     |
| National Steel Fabric Co.        | 28-29   |
| Nielsen Industries, Inc.         | 291     |
| North Brothers Mfg. Co.          | 280     |
| North Western Expanded Metal Co. | 372     |
| Northfield Iron Co.              | 264     |
| Novo Engine Co.                  | 245     |
|                                  |         |
| Oak Flooring Bureau              | 73      |
| O'Brien, Clarence A.             | 368     |
| Ohio Foundry & Mfg. Co.          | 311     |
| O. K. Clutch & Machinery Co.     | 263     |
| Oliver Machinery Co.             | 282     |
| Onan & Sons, D. W.               | 280     |
| Ornamental Products Co.          | 264     |
| Overhead Door Corp.              | 75      |
|                                  |         |
| Paine Lumber Co.                 | 93      |
| Paramount Electric Co.           | 359     |
| Parks Woodworking Machine Co.    | 278     |
| Pass & Seymour                   | 366     |
| Paxson Co.                       | 276     |
| Peerless Mfg. Co.                | 81      |
| Penn-Greg Mfg. Co.               | 361     |
| Perfection Co.                   | 363     |
| Phenix Mfg. Co.                  | 354     |
| Pioneer Fireplace Co.            | 305     |
| Porter Corp., J. E.              | 8       |
| Porter-Cable Machine Co.         | 247     |
| Post Co., The Frederick          | 264     |
| Premier Standardized Woodwork    | 294     |
| Progressive Mfg. Co.             | 284     |
| Pullman Mfg. Co., Inc.           | 365     |

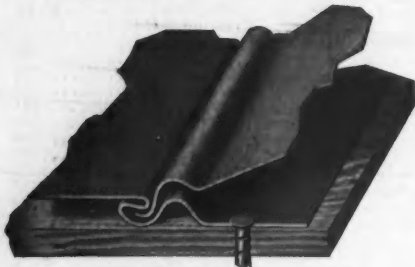
|                                           |             |
|-------------------------------------------|-------------|
| Radford Architectural Co.                 | 95-96-97-98 |
| Ransome Concrete Machinery Co.            | 249         |
| Reading Iron Co.                          | 268         |
| Readybuilt Products Co.                   | 357         |
| Reardon Co.                               | 31          |
| Redybord Co.                              | 361         |
| Reid-Way Co., The                         | 177         |
| Republic Iron Works                       | 275         |
| Reynolds Wire Co.                         | 183         |
| Richards-Wilcox Mfg. Co.                  | 6-7         |
| R. & L. Concrete Machinery Co.            | 273         |
| Roberts Metallic Bath Tub Co.             | 359         |
| Rogers & Co., F. L.                       | 265         |
| Rolscreen Co.                             | 299         |
| Rowles Co., E. W. A.                      | 305         |
| Ruberoid Co., The                         | 101         |
| Ryerson & Son, Joseph T.                  | 220         |
|                                           |             |
| Safe Tool Mfg. Co.                        | 285         |
| Samson Cordage Works                      | 363         |
| Saugen Derrick Co.                        | 284         |
| Schlage Lock Co.                          | 84          |
| Scott-Bansbach Machinery Co.              | 276         |
| Sedgwick Machine Works                    | 289         |
| Segal Lock & Hardware Co.                 | 318         |
| Sellers & Sons Co., G. I.                 | 118         |
| Sheet Steel Trade Extension Committee     | 78          |
| Shepler Stove Co., F. W.                  | 316         |
| Sherwin-Williams Co.                      | 213         |
| Shevlin, Carpenter & Clarke Co.           | 174-175     |
| Sidney Elevator Mfg. Co.                  | 286         |
| Sidney Machine Tool Co.                   | 276         |
| Silver Lake Co.                           | 371         |
| Sisalkraft Co., The                       | 306         |
| Skillsaw, Inc.                            | 250         |
| Slatington Bangor Slate Syndicate         | 368         |
| Slatington Slate Co.                      | 352         |
| Smith Co., The T. L.                      | 232-233     |
| Smith Typewriter Sales Corp.              | 286         |
| Solvay Sales Corp.                        | 110         |
| Specialty Tool Mfrs.                      | 282         |
| Sprayo-Flake Co.                          | 32          |
| Stairway Mfg. Co.                         | 369         |
| Stairway Switch Co.                       | 355         |
| Standard Sanitary Mfg. Co.                | 18-19       |
| Standard Textile Products Co.             | 59          |
| Stanley Plumbing Supply Co.               | 358         |
| Stanley Works                             | 87          |
| Starrett Co., L. S.                       | 271         |
| State Mfg. & Engineering Co.              | 264         |
| Steel Scaffolding Co.                     | 261         |
| Sterling Wheelbarrow Co.                  | 238         |
| Stimmel Winch & Machine Works             | 284         |
| Strand Mfg. Co., Eric J.                  | 365         |
| Structural Slate Co.                      | 358         |
| Strutzel Rubber Co., J. D.                | 312         |
| Superior Sheet Steel Co.                  | 49          |
| Syntron Co.                               | 267         |
|                                           |             |
| Taylor Mfg. Co., James L.                 | 285         |
| Taylor Collapsible Horse Co.              | 286         |
| Textile Bag Mfrs. Assn.                   | 303         |
| Thatcher Co.                              | 201         |
| Thrush & Co., H. A.                       | 313         |
| Thurston Manual Training Supply Co.       | 368         |
| Tillery's Little Janitor Clock Co.        | 362         |
| Toch Brothers                             | 91          |
| Trans Company, The                        | 43          |
| Trico, Inc.                               | 214         |
| Trimpak Corp.                             | 26-27       |
| Truson Laboratories                       | 72          |
| Truson Steel Co.                          | 5-90        |
| Twentieth Century Sales Agency            | 253         |
|                                           |             |
| United Lighting Fixture Co.               | 365         |
| U. S. Gypsum Co.                          | 67          |
| U. S. Mineral Wool Co.                    | 187         |
| United States Radiator Corp.              | 40          |
| Universal Holst & Mfg. Co.                | 284         |
| Universal Portland Cement Co.             | 118         |
|                                           |             |
| Variable Unit Cabinet Co.                 | 34          |
| Velguth Metal Parts, Inc.                 | 369         |
| Vendor Slate Co.                          | 85          |
| Vento Steel Sash Co.                      | 311         |
|                                           |             |
| Wallace & Co., J. D.                      | 251-276     |
| Warren-Knight Co.                         | 281         |
| Waterston, J. M.                          | 284         |
| Weatherbest Stained Shingle Co.           | 293         |
| Weber-Busse Co.                           | 352         |
| Wedell & Boers                            | 362         |
| West Coast Lumber Trade Extension Bureau  | 58          |
| Weyerhaeuser Forest Products              | 44          |
| Wheeler, Osgood Co.                       | 35-36       |
| Wheeling Corrugating Co.                  | 104         |
| Wheeling Metal & Mfg. Co.                 | 316         |
| Wheeling Sanitary Mfg. Co.                | 215         |
| White Co., Inc., David                    | 257         |
| Williams & Co., C. K.                     | 360         |
| Willis Manufacturing Co.                  | 109         |
| Winchester Radiator Cabinet Co.           | 356         |
| Wood Conversion Co.                       | 44          |
| Wright Rubber Products Co.                | 360         |
|                                           |             |
| Zagelmeyer Cast Stone Block Machinery Co. | 286         |
| Zouri Drawn Metals Co.                    | 46          |



**MILCOR "TITELOCK"  
SPANISH METAL TILE**

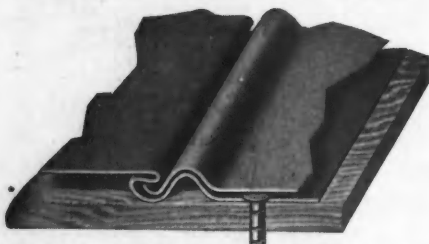


**MILCOR "TITELOCK"  
AMERICAN METAL TILE**



**"TITELOCK" PROTECTION**

No special tools are required. Hook the flange on tile into the grooves of the preceding tile; then lay it flat!



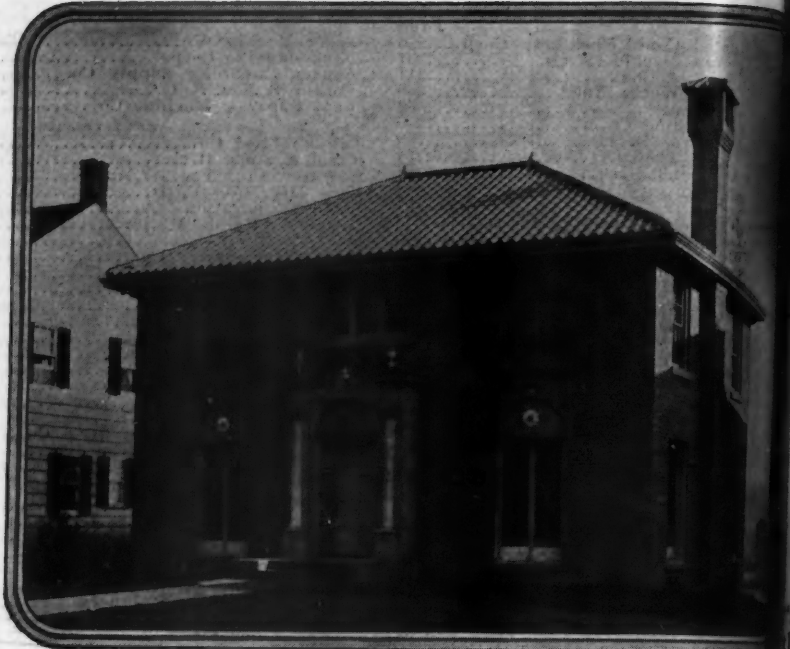
As it is laid flat, it locks tightly. All nail holes and nails are covered by the overlapping tile. Absolutely leak-proof — Milcor "Titelock" roofs lock out rain and snow.

Send 10c  
Postage

Send for this  
Valuable 72  
Page Data  
Book, in 5-  
colors.



When writing,  
Mention Data  
Book No. 24



The Tisler Residence at Eau Claire, Wis. Milcor Spanish Metal Tile laid by R. G. Suettinger, Contractor.

## A Better Roof was never built

**It's in Style!** Milcor "Titelock" Spanish Metal Tile expresses most beautifully the charm of quaint old Spanish Roofs. In oxidized copper, or steel or ARMCO Ingot Iron, painted red, green or any color desired, the architectural beauty of this metal roof is beyond compare.

**It is Safe!** Each unit of Milcor Metal Roofing locks tightly into adjoining units, in such manner that a positively storm-tight roof is the result. Driving rains, snow, ice or steady drizzling rains — all are positively locked out by the Milcor "Titelock" construction. Not a nail hole is exposed. The protective armor is unbroken. It protects against fire and lightning, too—an advantage possessed by no other type of roofing.

**It Lasts!** Milcor Metal Roofing outlasts the building. In copper it lasts forever. Freezing in winter can't break this tile. Settling strains or vibrations can't crack it, either.

**It is Economical!** Heavy substructure is not required. This means big saving. And maintenance cost is less, too.

These are practical roofs. Do not confuse Milcor "Titelock" Metal Roofing with ordinary metal roofing. Investigate!

Milcor Spanish Metal Tile, American Metal Tile, Metal Slate and Metal Shingles are made from Terne Plate Painted Red or Green, Terne Plate Galvanized, Pure Zinc, Pure Copper or

**RUST-RESISTING**

### Easily Erected!

Any workman can lay a Milcor "Titelock" Metal Roof. No special tools are required. No soldering, either. Less labor is required, ordinarily, than in laying wood shingles.



Ingot Iron

### Comfortable!

The big air pockets under Milcor Spanish Metal Tile form an insulating blanket which effectively protects the building against heat in summer and cold in winter.

MILWAUKEE CORRUGATING COMPANY, Milwaukee, Wisconsin  
CHICAGO, ILL. KANSAS CITY, MO. LA CROSSE, WIS.

# MILCOR METAL TILE ROOFING

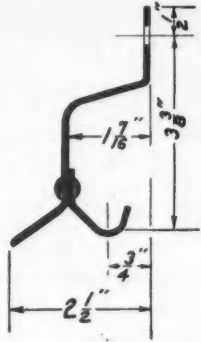
FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



# Now "Shedwel" Track is Added To Make the Line Complete.

"Shedwel" Track, the latest addition to the Frantz Line of Guaranteed Builders' Hardware, was created to fill the demand for an economical weather-proof track for medium or light weight doors. Now—the Frantz Line of Tracks and their Hangers is complete and it is possible to select easily the correct and most economical type of equipment for any door, large or small, heavy or light.

"Shedwel" Track is in reality a small size reproduction of "Glide," the Track that for years has given complete satisfaction on thousands of large doors throughout the country. This new track offers the same advantages of construction — the same positive weather protection and easy operation that have characterized "Glide" from the time the first installation was made. It has been made smaller and lighter than "Glide" to adapt it for use on medium or light weight doors. All types of "Runwel" Hangers operate easily and smoothly in "Shedwel" Track.



End View of "Shedwel" Track Showing Dimensions

Write Dept. A-5 for a copy of the "How to Select the Correct Hanger and Track for any Door" Chart. It tells you how to quickly diagnose the needs of and prescribe the right equipment for any particular size or weight door at a minimum cost. It is sent FREE on request.

**FRANTZ MANUFACTURING CO.**  
Sterling, Illinois



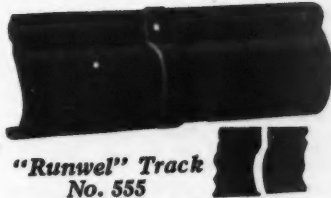
**"Glide" Track No. 111**

For large or heavy doors. Perfect weather protection. One-piece construction. No joint-brackets required. Has patented telescoping joint feature.



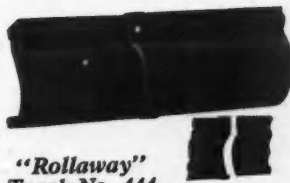
**"Hi-Lo" Track No. 666**

For large or heavy doors. Semi-weather protection. Made in one piece. No joint-brackets required. Has patented telescoping joint feature.



**"Runwel" Track No. 555**

For medium size and weight doors. Semi-weather protection. One-piece construction. No joint-brackets required. Has patented telescoping joint feature.



**"Rollaway" Track No. 444**

For small or light weight doors. Semi-weather protection. One-piece construction. No joint-brackets required. Has patented telescoping joint feature.

**"No Hardware Is Genuine FRANTZ QUALITY Without the Red Label"**