

# AMERICAN BUILDER

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## American Builder

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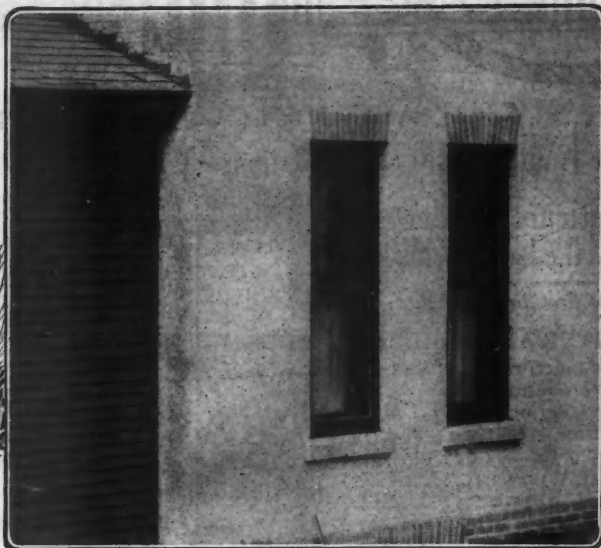
## Table of Contents

	Page		Page		Page
Around the Family Table.....	77	Remodeling a Business District.....	108	Careful Planning Enables Builder to	
Table of Contents.....	79	Lake Forest Commercial Section Has		Add Room and Light to Old Home	
An Example of Good Architecture.....	81	Advantage of Being Planned as a		Electrify All Buildings.....	132
Portal of the London Guarantee and		Unit		Child Will Win \$15,000 Home.....	132
Accident Building		Building Houses for Workers.....	111	What's New	
Selling Budgeted Homes.....	82	Linotype Company Assists Workers		A Handy Ladder Accessory.....	136
Philadelphia Builder Co-operates Suc-		in Plan to Own Their Own Homes		Unbreakable Tool Handle.....	136
cessfully with Furniture Firm		Co-operative Apartments Popular from		Special Transmission for Fords.....	136
A Pleasing Spanish Type Bungalow... 84		Coast to Coast.....	114	A Combination Range.....	138
Western Architect Designs Home with		Plan Which Makes Tenants Their Own		A Valuable Finishing Wood Substi-	
Pleasant Exterior and Convenient		Landlords Finds Increasing Favor		tute.....	138
Room Arrangement		When We Build Our Stairway.....	118	A Handy Secret Compartment.....	138
Our Front Cover Home.....	86	The Stairs Are One of the Most Im-		Flat Conduit Eliminates Grooving	
Shingle Residence of Seven Rooms		portant Decorative Features of the		Walls.....	140
and Three Baths Gives Pleasing		Home		A New Use for Linoleum.....	140
Impression of Hospitality and		Suggestions for Remodeling.....	120	Automatic Cellar Insurance.....	140
Happy Home Life		Plans Show Efficient Suggestions for		News of the Field.....	144
Blue Ribbon Home Section (in Two		Increasing Value of Homes		Building Operations Show Continued	
Colors).....	91 to 106	How Dan Does It.....	122	Increase.....	144
Waiting for the Homefolks.....	1	Beam Construction for Sidewalks.....	122	New Jersey Zinc Company Extends	
An Efficient Home.....	2	Auxiliary Heat.....	122	Line.....	144
A Home of Comfort.....	3	Auxiliary Spring Platform.....	123	R. M. Kincaid Elected Garford Off-	
A Doctor's Home.....	4	Fitting Ladder for Roof Work.....	123	cial.....	144
A Charming Frame Bungalow.....	5	A Useful Tripod Hoist.....	123	Westinghouse Chief Engineer Dies... 144	
A Western Colonial.....	6	Instructions in Roof Framing.....	124	Lumbermen Feature Modern Home... 144	
An Unusual Duplex.....	7	Backing Hip and Valley Rafters		Motor Trucks and Trailers.....	146
A Charming Bungalow.....	8	Correspondence Department.....	126	Ohio Lime Plant Enlarged.....	154
Mission Style Bungalow.....	9	Where's That Board Stretcher.....	126	Wood Preservation Research.....	154
A Picturesque Bungalow.....	10	Wrecking Brick Walls.....	126	Invention Exhibition Planned.....	154
Five-Room Stucco Bungalow.....	11	Another Wall Wrecking Method.....	126	Ideal Company Moves.....	154
A Cottage of Dignity.....	12	Uses Van for Three-Fold Purpose.....	126	Reconstructed Stone Made by Hy-	
Distinction in Stucco.....	13	Changes in Framing Methods.....	127	draulic methods.....	158
A Castle in Spain.....	14	Simplified Framing Wanted.....	127	Standardized Management for Co-op-	
A Big Little House.....	15	New Sun Room Modernizes Old Style		erative Apartments.....	156
Built to Last.....	16	Home.....	128	Books, Bulletins and Catalogs for	
Who's Who in the Building Industry... 107				You.....	160-162

## AN INVITATION TO YOU

The AMERICAN BUILDER cordially invites and urges you to enjoy the privileges and benefits of its Correspondence Department. Any phase of any building question may be profitably and instructively discussed in this department. If your problem is a knotty or technical one submit it to the Correspondence Department and secure the benefits of the opinions of other experienced builders. It's a "give" as well as a "take" department, and you are asked to relate your achievements and tell how you have conquered difficulties as well as to ask for information and advice. Rough drawings are desired, for they make clear involved points. We will gladly work over the rough drawings to meet publication requirements. The Correspondence Department is your department. Use it freely and frequently.

We have interesting booklets for  
Architects, Contractors and Dealers.  
Please tell which booklet you want.



Home of John Reichel, Hudson, Wis. Photo taken Nov. 8, 1923.  
Andersen Frames furnished August 8, 1905.

## These Frames Are Nineteen Years Old

FOR nineteen years the wind and water have been trying to wear out these window frames, but cannot do it.

John Reichel built this house in 1905, using Andersen White Pine Frames. Yet these frames are just as good today as they were the day they were set in the house.

The Andersen Frame of today is built of the same genuine White Pine that was used in these 19 year old frames.

### Reasons Why Andersen Frames Are Preferred:

1. Immediate delivery—no expensive delays waiting for special frames.
2. 121 sizes ready for every purpose.
3. Delivered in two compact bundles plainly marked for size and easily handled.
4. 7 units instead of 57. No small parts to become lost or broken.
5. No sorting, measuring or refitting. The complete frame nailed up with pockets and pulleys in place in ten minutes.
6. Accuracy gives smooth running windows, yet excludes weather.
7. Modern machinery, methods and specialization lower costs at the factory; quickness of assembly saves you time, labor and money on the job.
8. Better results in frame, brick or stucco buildings.
9. White Pine preserves original accuracy and gives continuous service.
10. Made by largest exclusive standard frame manufacturer. The trade-mark is absolute protection.

**Andersen Lumber Company**

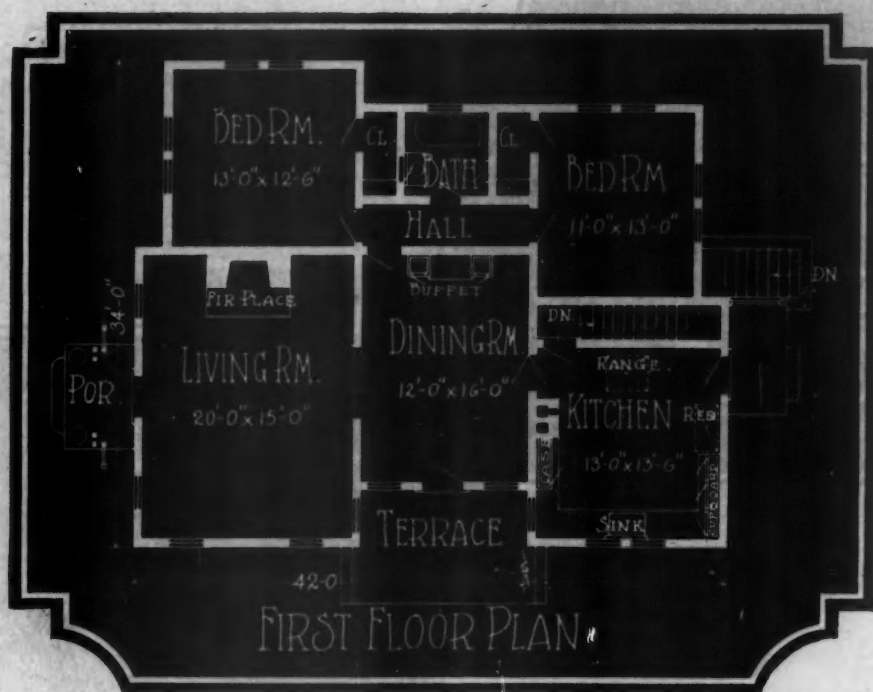
Dept. A-8

Bayport, Minnesota

# Andersen FRAMES



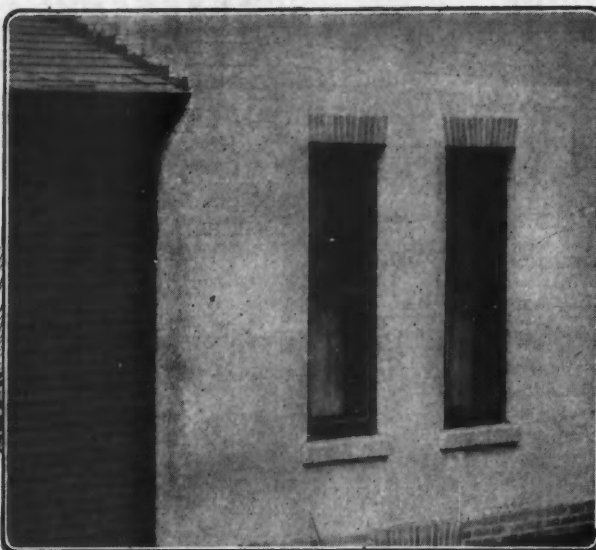
# BLUE RIBBON HOMES



**WAITING FOR THE HOMEFOLKS.** Undoubtedly this design will appeal to those who know how to make a home the center of their lives. Half of its charm is in the effect it gives of fitting the needs of the occupants. Such a dwelling quickly shows the care given to it and its surroundings by the occupants.

The interior arrangement of the house is particularly notable for the large, comfortable living quarters. The living room, with its fireplace, the large dining room and the efficient kitchen are such as would be expected in the home of hospitable persons. The bedrooms are efficiently arranged with the bathroom well isolated by closets.

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Bayport, Minnesota

# Andersen FRAMES





AN EXAMPLE OF GOOD ARCHITECTURE

*The Portal of the  
LONDON GUARANTEE  
& ACCIDENT BUILDING  
CHICAGO . . . ILLINOIS  
Alfred S. Alschuler, Architect*

# Selling Budgeted Homes

Philadelphia Builder and Department Store Combine to Supply Buyer with Completely Furnished Home on Payment Plan

By THEODORE MAISCH

**S**ELLING homes from furnished sample houses was at one time a novelty. It was the application of one of the first principles of salesmanship. It seems to be only a short step further to sell homes completely furnished, ready for housekeeping. But there is only one operative builder in Philadelphia who has taken that short extra step. Fundamentally he is a salesman, and success has attended him. Of 154

houses erected, selling from \$6,650 to \$11,000 unfurnished, all have been sold.

West of 69th street, on West Chester Pike, which is a continuation of Market street in Philadelphia, just outside the city limits there is a long hill. Five years ago at most this was open country. But builders have been busy and now hundreds of houses have displaced the wide fields and herds of cows. From the crest of the hill one can look down on Billy Penn's hat which never changes with the seasons; with a pair of field-glasses one can see the gaunt skeleton of Philadelphia's approach to the great Delaware River bridge—probably eight miles away. It is an ideal spot. Here, less than a year ago, Walter A. McClatchey started his houses. In addition to the 154 sales he has sold many which still exist only on the plans.



Selling Completely Furnished Homes on Payments Has Proven a Successful Plan for Walter A. McClatchey, Philadelphia Builder. Above is a view of one of his Budget homes which is offered completely furnished by the John Wanamaker Store on monthly payments. Below is the bedroom of one of the Budget homes, as furnished by the department store which co-operated with the builder in the venture.



Sometime ago McClatchey and the budget department of the John Wanamaker store hatched out the scheme of budgeting whereby a purchaser of a home could buy it completely furnished, should he so desire, and pay off the cost in installments based on his earning power. Each sale is handled on a different basis. Some installments are figured to expire within a few months and others are graded over a period of many months.

The plan, while new to this city, has been tried before. The Wanamaker store in New York had success with a similar plan over a year ago. It is really an extension of the Wanamaker Home Budgets plan which has as its object the education of individuals in the science of living within their incomes. Family budgets are arranged when requested, expenditures are allocated to the various costs incidental to living.

Therefore, it was a natural outcome that the scheme should be put into practice after the furnished sample house had created much favorable comment. This was furnished by Wanamaker.

At the time of this writing four complete sets of house furnishings have been sold in as many weeks. It is impossible to determine the actual sales value of the scheme in the selling of the houses alone. That it had a great stimulating effect is certain. The advertisements of the Budget House features drew hundreds of people. On one day alone 21 houses were sold. This article is the result of interest stimulated by the unusual features named in these advertisements.

According to Mr. McClatchey, the rush was so great at times that it became a mere matter of waiting on the people without having to resort to selling methods. Much of this interest, of course, can be credited to the budget scheme.

The houses are detached and semi-detached depending on price. Each house has a lot 115 feet in depth,

with a frontage varying from 25 feet up. Garages, should they be wanted, are extra. The houses are beautifully finished. The one illustrated by the photographs was priced at \$8,750. There are six rooms,



The Kitchens of the McClatchey Homes Have a Strong Appeal in Their Attractiveness and Efficiency.

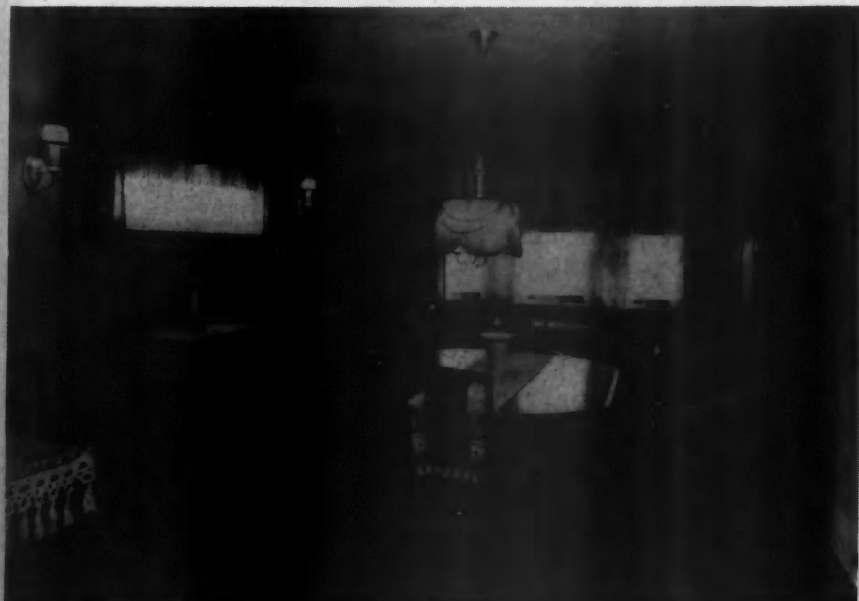
with a bath tiled to within a few feet of the ceiling.

The rooms are spacious. The dining room is 13 feet 11 inches long and 10 feet 9 inches wide. The front bedroom is 15 feet 3 inches by 15 feet 6 inches.

In each room two framed notices contain full descriptions. The one gives the total cost of the furnishings, followed by an itemized list giving the prices of each piece. The other draws attention to the various features of the room, answering questions such as are usually asked: size of room, windows, closets, electric outlets and size of rug required. The total cost of the furnishings in the house illustrated is \$2,100.

The houses are combination stone and stucco. The streets are all paved and all conveniences installed.

No charge is made for placing mortgages. The rate on the first is 5½ per cent, which is ½ per cent below that usually asked. An unusual feature of Mr. McClatchey's method of doing business is his policy of returning all deposit money should the purchaser wish not to conclude the sale.



Buyers of the Budget Homes Do Not Have to Try and Visualize How the Completed Home Will Look; They Can See. Above is one of the dining rooms.

# A Well Planned Spanish Bungalow

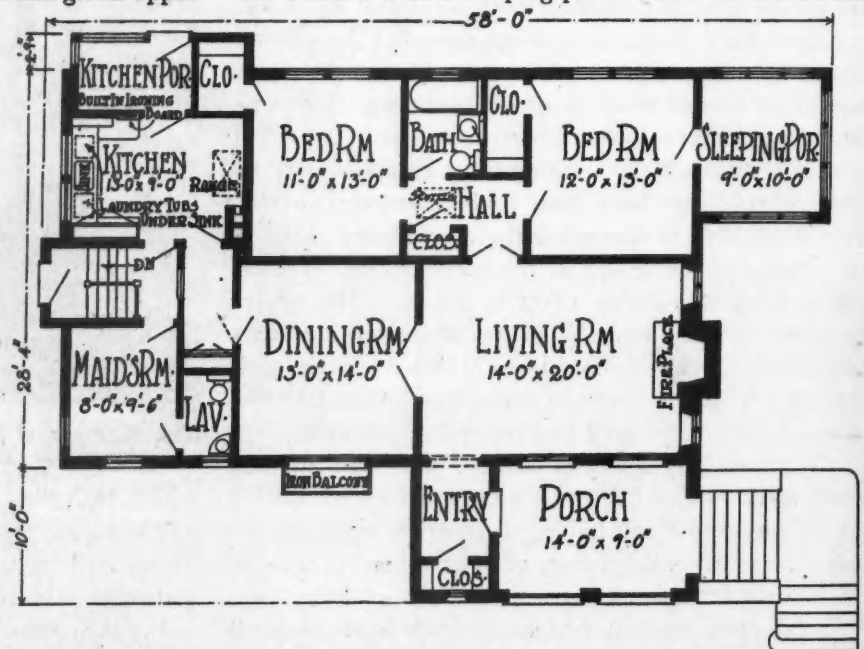
Residence of Mr. and Mrs. William E. Hite, Colorado Springs, Colo., Combines Convenience and Beauty. Charles E. Thomas, Architect

By THEODORE M. FISHER

THE residence which Mr. Charles E. Thomas, of Colorado Springs, has recently designed for Mr. and Mrs. William E. Hite, of that city, is one of the best examples of small house architecture in that section of the West. The Spanish style—handled with restraint—is well suited to the sunny climate while the plan could hardly be improved on for economy and convenience. The construction is of light gray stucco laid on frame with a red shingled roof laid in courses. The site on a hillside has given opportunity for working out a house and grounds scheme on several levels. The approach from the street is by a rustic stone path across a generous width of lawn with three short flights of steps to the covered entrance porch. The house faces west to the superb mountain view with the living and dining rooms on this front. The matter of exposure for all rooms, it will be noted, has been ideally worked out.

The entrance porch has a red-toned concrete floor marked off in tile pattern; French windows give it an intimate connection with the living room. The formal entrance door gives into an entry which pleasingly connects with the living room—14 by 20 feet—through an arched opening. The focal point of this room is the charming fireplace

of stone in Italian design. This is flanked with in-swinging casement windows. The walls are light toned sand finished plaster; the floor quarter sawed oak; the trim was given four coats of lead, oil and turpentine with a resultant flat surfaced ivory tint. Built-in book shelves flank the double French doors which open into the dining room; these are used too for the entrance to the hall connecting the two master's bedrooms. The latter are of ample size each with generous closets and the owner's with a sleeping porch under the main roof.



The Floor Plan of the Hite Home Shows a Practical Utility Which Makes for Comfort. The economical utilization of the space is a feature worthy of study.



Red Stained Shingles, Laid in Courses, Give the Roof of This Home the Appearance of Being Tiled. It is the residence of Mr. and Mrs. William E. Hite of Colorado Springs. Charles E. Thomas, architect.

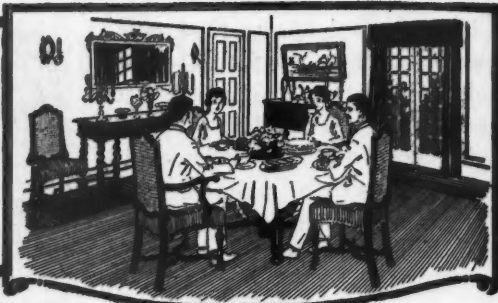


The architect has worked out a compact kitchen which has all the built-in features which make for convenience. The sink is placed under the two north windows with laundry trays fitted under the adjacent, removable sink boards. There are open shelves, and counters with cupboards under and cabinets with adjustable shelves and sliding glass doors over. Of course there is an ironing board which folds into a wall recess. The range is an electric. Meters for this service and the one for house lighting are placed on the screened kitchen porch so that the meter reader may have access to them at any time which obviates his entering the house proper. Similarly the furnace caretaker can get into the basement through the outside door indicated.



The Interiors of the Hite Home Show the Pleasing Result of Careful Planning. Above is the hall leading into the living room, below the living room with its inviting built-in book cases.

# OUR FRONT COVER HOME



## *Shingle Residence of Seven Rooms and Three Baths Gives a Pleasing Impression of Hospitality and Happy Home Life*

**T**HE full meaning of the phrase, "Under your own roof" should be realized by the happy family which builds this month's Front Cover Home, for the predominating roof of this dwelling seems to hover protectingly over the house beneath it and brings to it a unity which is responsible for much of the pleasing aspect of the exterior. And this unity is further carried out in using shingles both for the roof covering and for the walls, though monotony is avoided by the thatched effect of the roof shingles.

The floor plans, shown to scale on the following pages, present a most pleasing arrangement of seven commodious rooms and three baths, with a large and

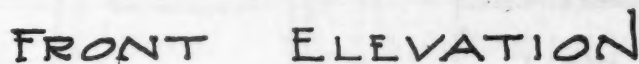
well-planned recreation room in the basement in addition. The living room is delightful with its high arched ceiling, its arched window to conform to the arch of the ceiling and its generous proportions. Indirect lighting of the room through lights concealed behind a moulding near the ceiling as shown in the detailed plans on the following pages is an unusual and pleasing feature.

The second floor arrangement provides for one large, well arranged bedroom, with its own bath and two smaller ones, their convenience heightened by careful planning. The recreation room in the basement is a feature which will be appreciated.



The Thatched Effect Shingled Roof with Its Pleasing Sweep Over the Living Room and the Shingled Sides of the Walls, with the Wide, Arched Living Room Window and the Carefully Balanced Details of the Doorway Are Charming Features of the Exterior of This Month's Front Cover Home. Working drawings of the home will be found on the following pages.

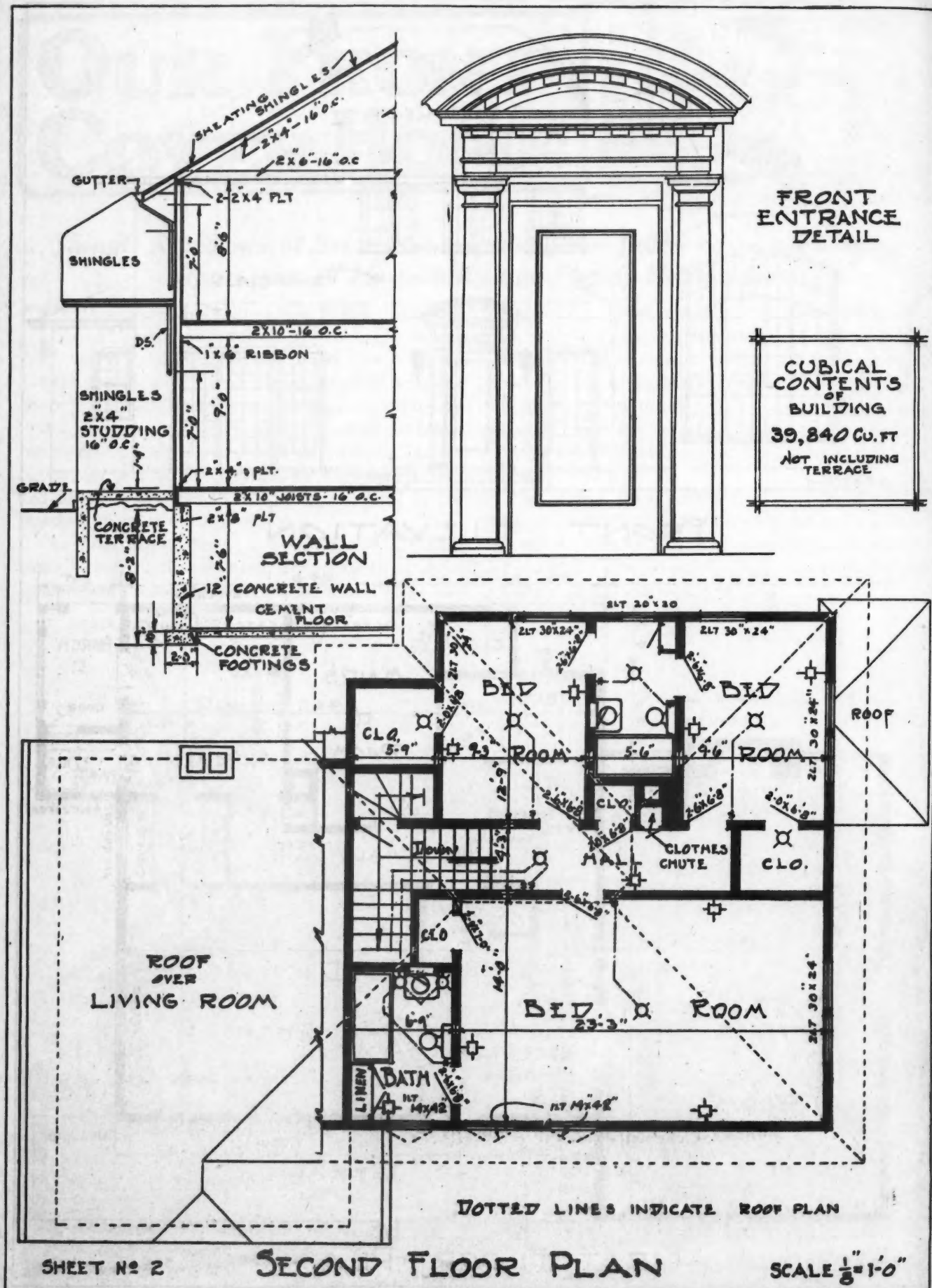




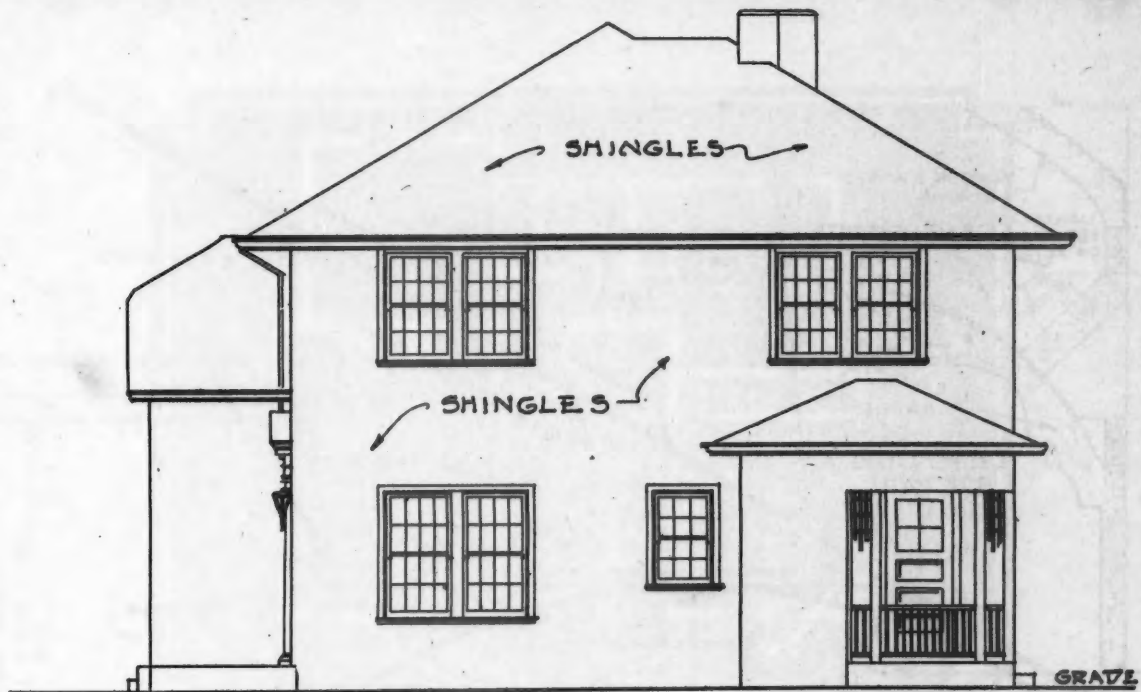
### FIRST FLOOR PLAN

SCALE  $\frac{1}{8}'' = 1'-0''$

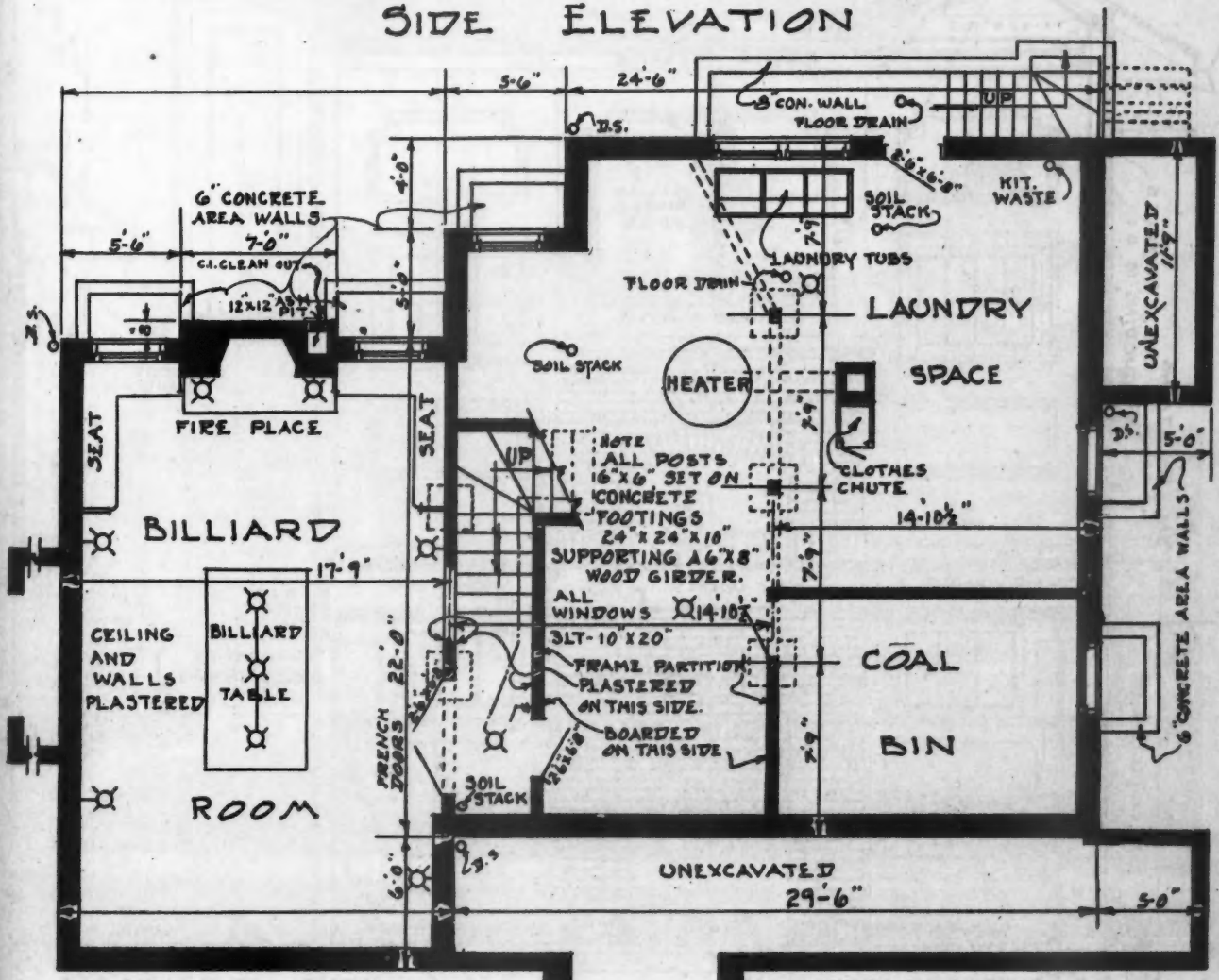
The Scale Drawing of the Front Elevation of the Front Cover Home Shows How Well the Details of Fenestration and the Entrance Have Been Worked Out. The first floor plan is exceptionally efficient, with the high, arched ceilinged living room as a predominating feature. The second floor plans are presented on the next page.



The Second Floor Plan of the Front Cover Home Shows the Exceptional Quality of the Master Bedroom, with Its Wealth of Space and Private Bath. The two smaller bedrooms are provided with commodious closets and have a bath accessible to both. The basement plan and side elevation are presented on the following page.



SIDE ELEVATION



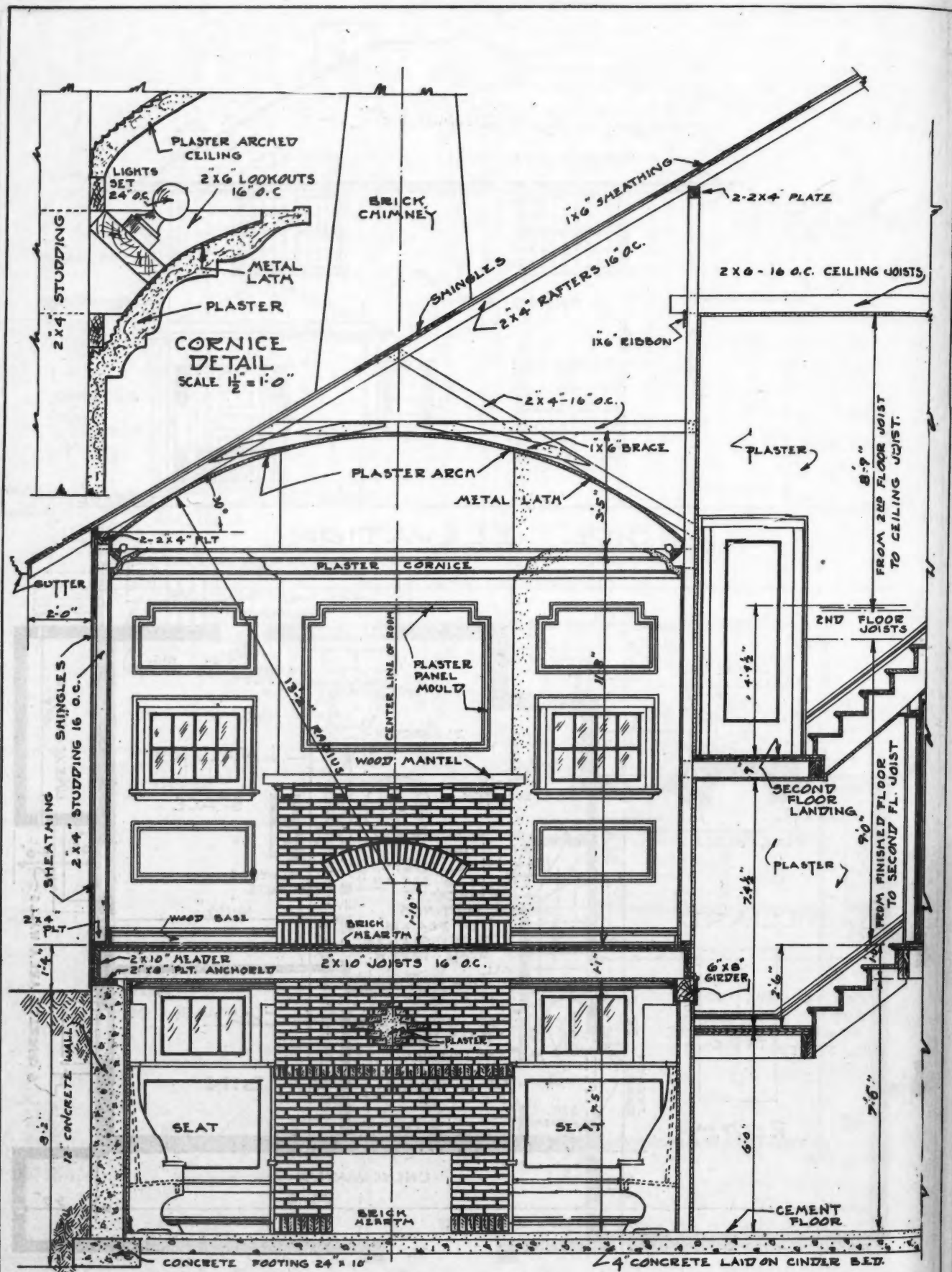
SHEET NO 3.

BASEMENT PLAN

SCALE  $\frac{1}{8}'' = 1'-0''$

The Basement of the Front Cover Home, Through Careful Attention to Detail, Is an Important and Usable Portion of the House Which Adds Much to Its Convenience. The billiard room is an inviting one and the rest of the basement area is utilized to good advantage. A cross-section of the billiard room and the living room above it is presented on the following page.

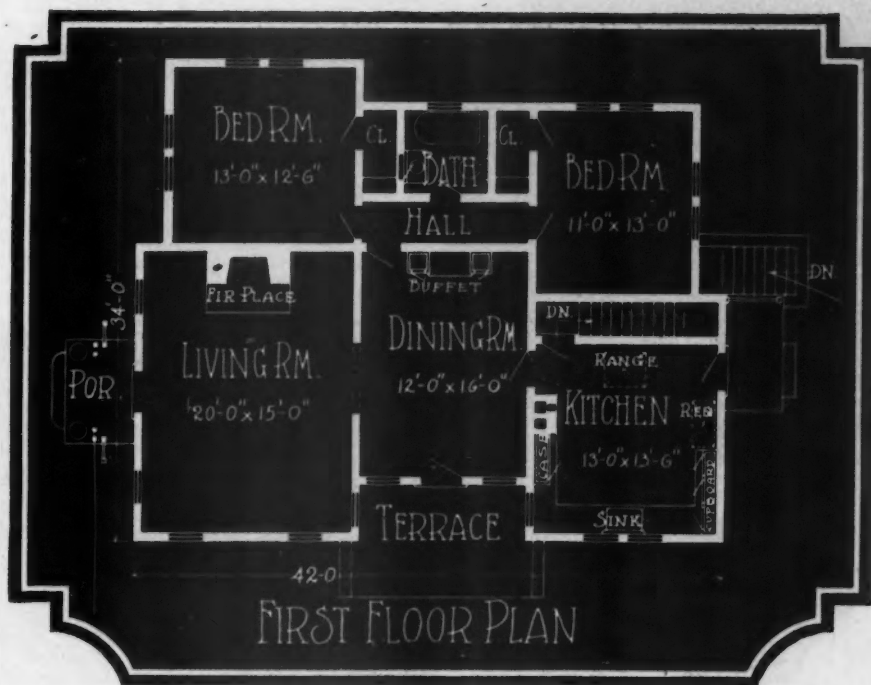




SHEET NO. 4 CROSS-SECTION THRU LIVING & BILLIARD ROOMS SCALE  $\frac{1}{4}'' = 1'-0''$

Details of the Construction of the High Arched Ceiling of the Living Room of the Front Cover Home, with the Placement of the Indirect Lights Are Shown in the Cross-Section. The fireplace of the basement room, with its built-in seats gives an idea of its attractiveness. If the nature of the building site permits this basement ceiling height should be increased.

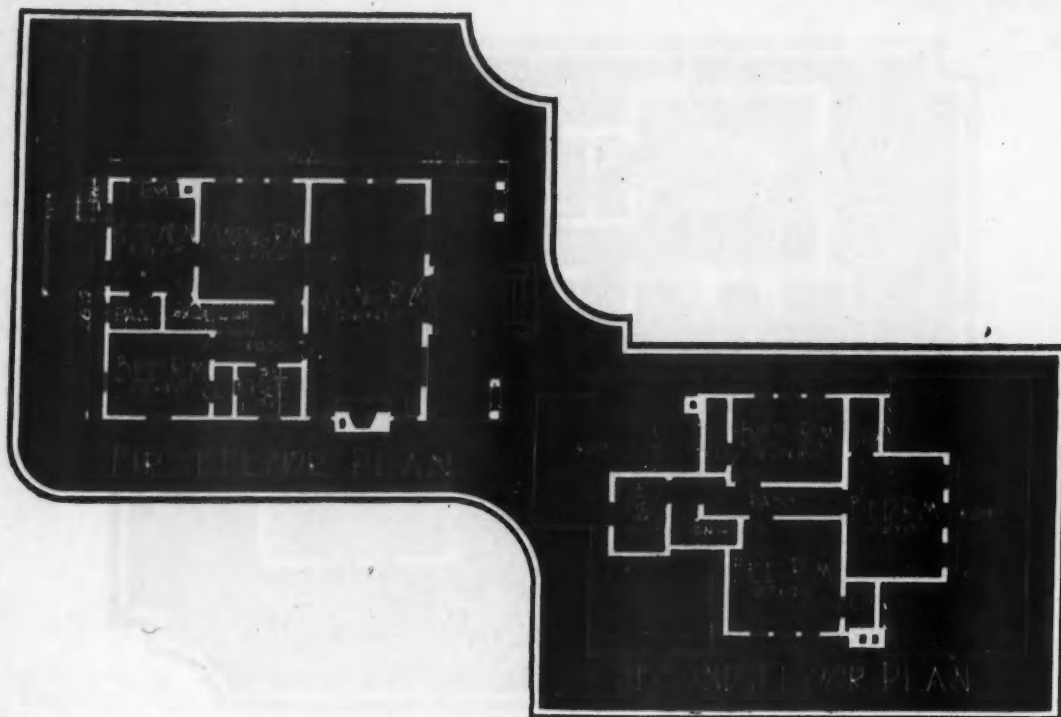
# BLUE RIBBON HOMES



**WAITING FOR THE HOMEFOLKS.** Undoubtedly this design will appeal to those who know how to make a home the center of their lives. Half of its charm is in the effect it gives of fitting the needs of the occupants. Such a dwelling quickly shows the care given to it and its surroundings by the occupants.

The interior arrangement of the house is particularly notable for the large, comfortable living quarters. The living room, with its fireplace, the large dining room and the efficient kitchen are such as would be expected in the home of hospitable persons. The bedrooms are efficiently arranged with the bathroom well isolated by closets.

## BLUE RIBBON HOMES



**AN EFFICIENT HOME.** This charming story and a half home will be found to contain a great deal of room and can be erected with the economy which is characteristic of this type of house.

The wide porch, with its pleasing arched lines and the fireplace chimney are attractive features of the exterior. The living room, running the full width of the house and lighted on three sides, will give the visitor a fine first

impression of the home. A bedroom on the first floor is a feature which will be appreciated by families where there are elderly persons.

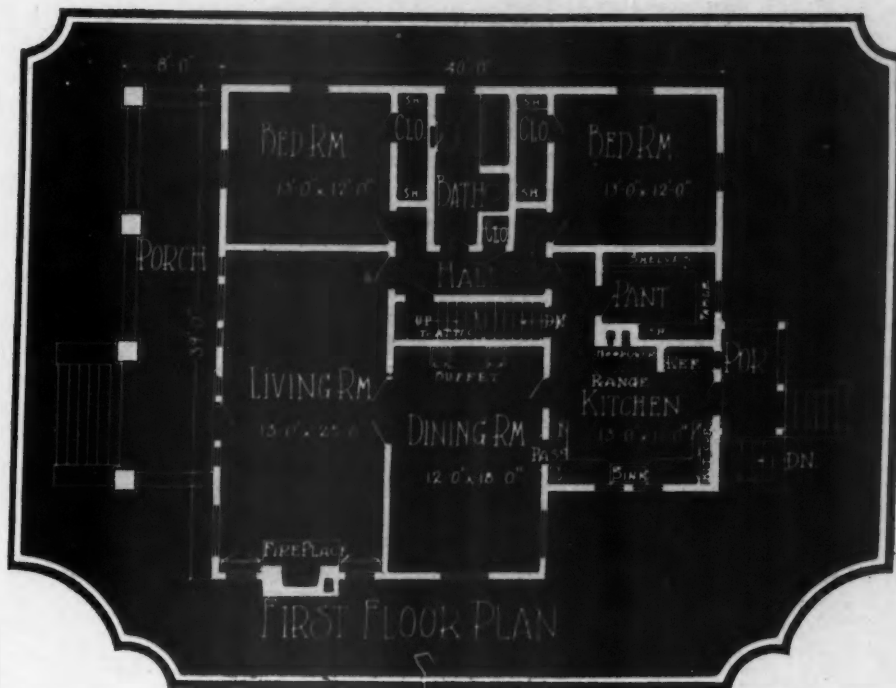
On the second floor three bedrooms are grouped to make the most of the space offered by the sloping roof. All have large closets.

The house is 26 feet wide and 35 feet long.

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# BLUE RIBBON HOMES



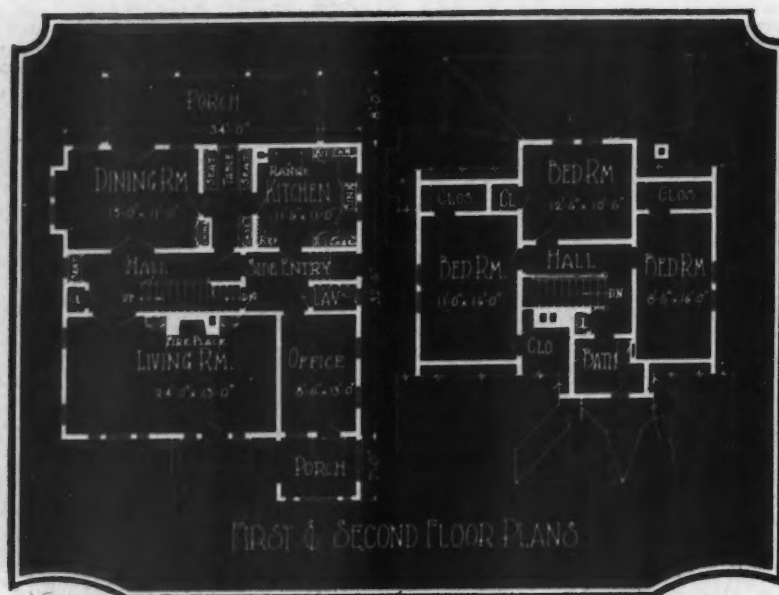
**A HOME OF COMFORT.** The fact that this home contains spacious rooms does not prevent it from having a pleasing exterior, which is dominated by the wide, hospitable porch, which automatically seems to suggest delightful summer evenings.

The interior arrangement is distinguished by the size of the living quarters, the living room itself being 13 by 25

feet, and the dining room of a proportionate size. The roomy pantry is a good feature of the efficiently arranged kitchen group. The two bedrooms are well planned and lighted.

The house is 39 feet wide, which would make it suitable for lots of generous size.

# BLUE RIBBON HOMES

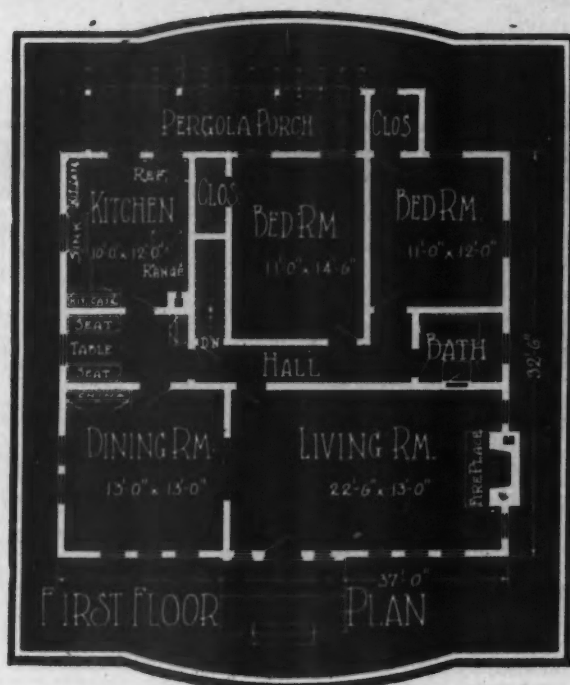


**A DOCTOR'S HOME.** Many physicians, especially in the smaller cities and towns have an office in connection with their home. Architects have designed such homes especially for doctors. A good example of this type of home is shown in the illustration. At the corner of the house and reached by the porch is an office, 8½ by 13 feet.

Adjoining it at the back is a lavatory for the use of doctor and patients. With the exception of the door leading to the rear hall the office is entirely shut off from the remainder of the house. This is a story-and-a-half gabled house containing six rooms besides the office. The house is practically square, being 32½ by 34 feet.

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## BLUE RIBBON HOMES

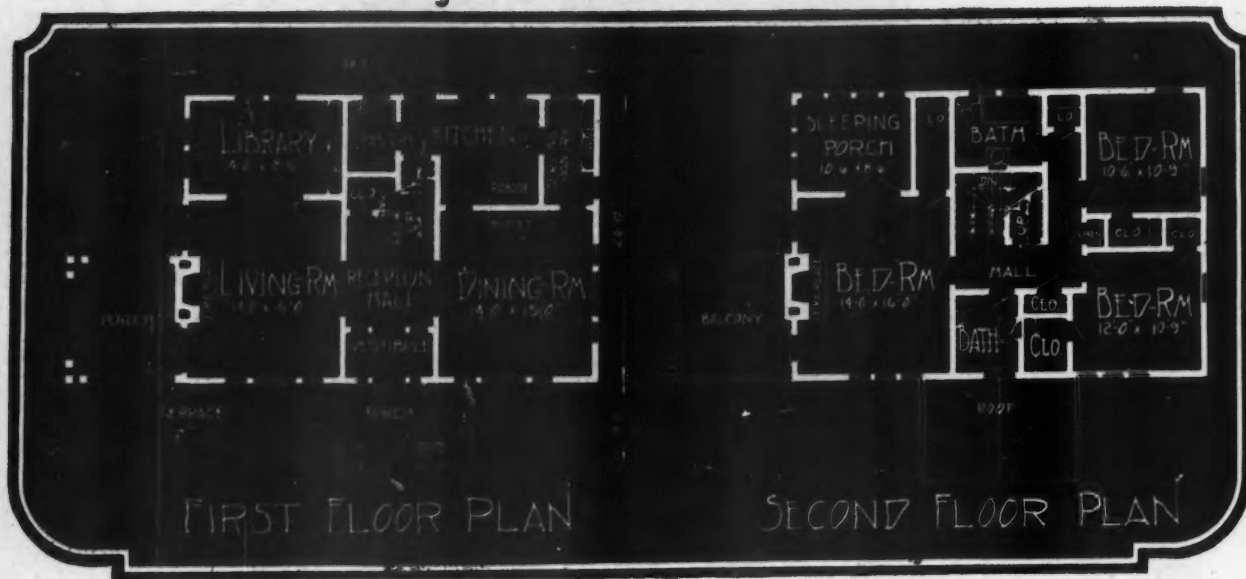


**A CHARMING FRAME BUNGALOW.** Frame construction makes a charming bungalow because it gives an air of cozy comfort to those who observe the house. This is especially true when the grounds around the bungalow are planted with flowers and shrubs to set off the lawn, such as has been done about the house shown in the illustration. This is a frame bungalow, containing five rooms,

all of good size and the living room unusually large for a bungalow of this type. The entrance door leads directly into the living room, which is 13 by 22½ feet. The dining room adjoins the living room, being connected with it by a cased opening. The two bedrooms and bath and the kitchen are at the rear. The home is 37 feet by 32½ feet.



## BLUE RIBBON HOMES



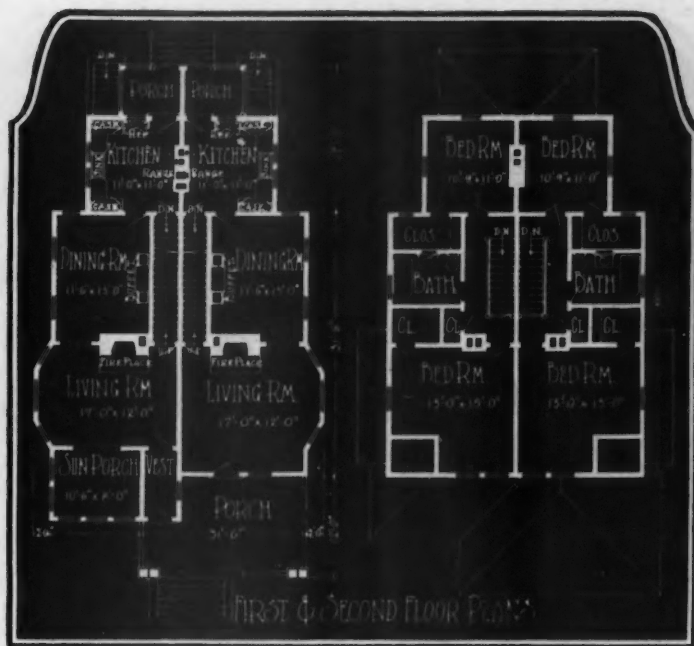
**A WESTERN COLONIAL.** The excellent floor arrangement of the Colonial house, together with the pleasing exterior proportions of that type of architecture have been adopted in planning the home of stucco and wide siding shown here. And with these features have been combined an entrance and system of ornamentation which is individual.

An attractive feature of the outside of this home is the

parapeted terrace which joins the two porches. The interior arrangement has the conventional Colonial hallway in the center of the house, modified by the use of a vestibule. On one side of this hall is the kitchen and dining room group, on the other the living room and library.

On the second floor are three bedrms, a sleeping porch and two baths.

# BLUE RIBBON HOMES



**AN UNUSUAL DUPLEX.** Few would suspect, from a casual survey, that this attractive dwelling of siding and stucco was built to house two families in comfort. This is a building which well might be erected by a family which wished to have the assistance of the rent of the extra apartment in paying for their home.

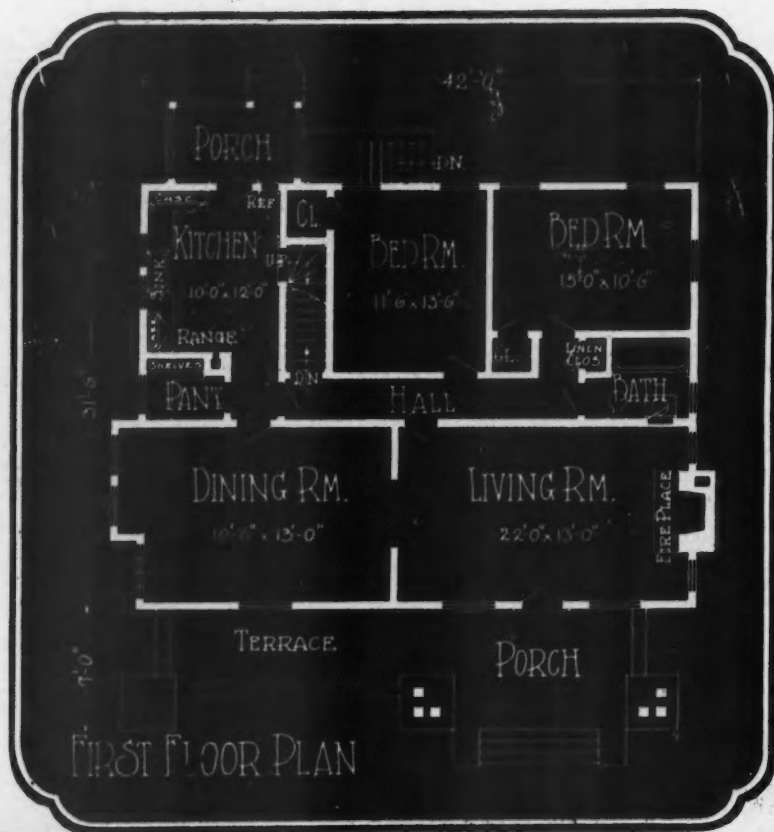
Each apartment of the duplex provides a living room with a fireplace, a dining room and a kitchen on the first

floor. The major difference between the two is that one is provided with a sun parlor.

On the second floor the two apartments are identical, with two bedrooms, both lighted and ventilated from two sides in each apartment. The bedrooms are provided with closets of generous size.

The size of the duplex makes it well adapted to the average city lot, since the width is  $31\frac{1}{2}$  feet.

## BLUE RIBBON HOMES



**A CHARMING BUNGALOW.** The combination of a terrace and porch, with distinctive brick work do much to heighten the appeal of the unpretentious home pictured here. As for the interior arrangements, a close study of the plans will show that it is well suited to serve comfortably the needs of the small family.

The long living room has the fireplace at one end, always an attractive arrangement. The fact that the dining room opens directly off the living room with a wide arched

opening will add materially to the apparent length of both rooms and give a vista of the entire width of the house.

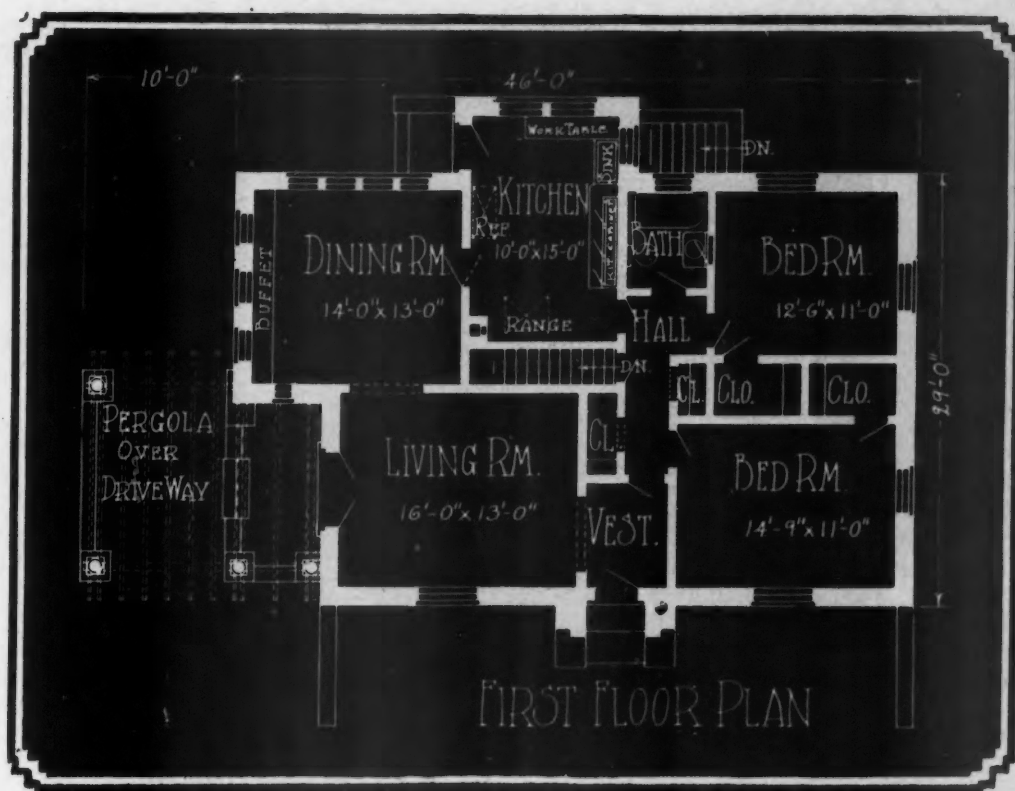
The kitchen and bedrooms are arranged conveniently. Notice that a place is provided for stairs leading to the upper part of the house, where additional rooms may be finished after the home is built.

The 42-foot width of the house would require rather a wide lot.

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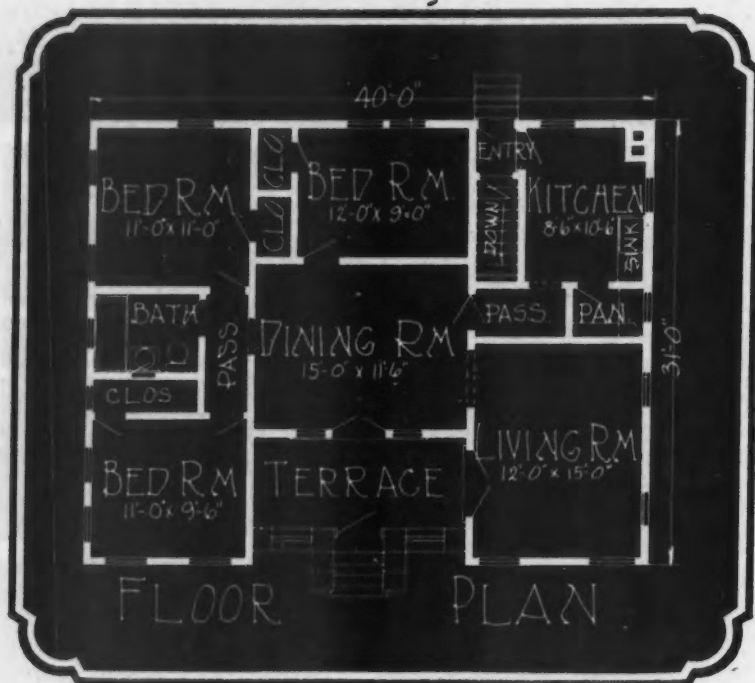
## BLUE RIBBON HOMES



**MISSION STYLE BUNGALOW.** The Spanish Mission style has had a great influence on bungalow architecture, because the bungalow is primarily a product of California, especially the southern part where the climate permits residences to be rather flimsily constructed. However, architects have combined this style with more substantial construction and together we have attractive bungalows that are suitable for any section of the country. Here is a five-room, stucco bungalow, 46 by 29 feet. The entrance door and the pergola at the side break the monotony of the straight walls and make it a very desirable home building plan.

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## BLUE RIBBON HOMES



**A PICTURESQUE BUNGALOW.** Originating on the western coast of the continent, such bungalows as the stucco structure shown here are finding increased and deserved popularity in all parts of the United States.

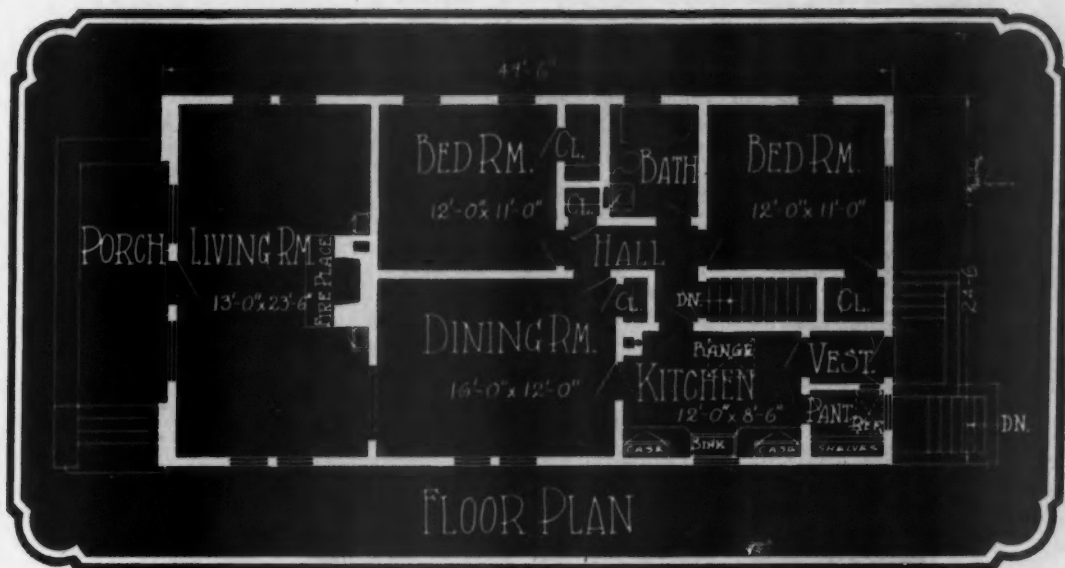
The unusual and attractive terrace, with its decorative railing and gate is an attractive touch to such a home and

the terrace which it incloses will be found to serve the purposes of a porch.

The interior arrangement is unusual but convenient, and will repay study.

This plan, because of the 40 foot width of the house, will require a large lot.

## BLUE RIBBON HOMES

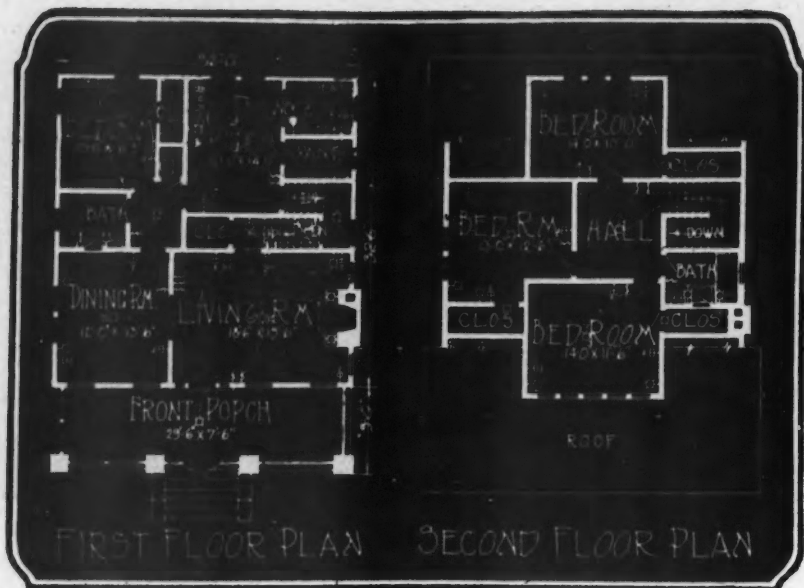


**FIVE-ROOM STUCCO BUNGALOW.** Here is an unusual bungalow. Across the entire front of the home is a terrace, with a solid wall around it. The entrance door is at the center with windows of the same design on either side. The door leads into a living room 13 by 23 feet 6 inches, an unusually large room for a bungalow. Windows at both ends in connection with those at the front make

this a light, airy and cheerful sitting room. Connected with the living room by a cased opening is the dining room, 12 by 16 feet, and at the back is the kitchen. Two bedrooms open off the hall that is reached through the dining room. The bath is at the center. The bungalow is 24½ feet by 49½ feet.



# BLUE RIBBON HOMES



**A COTTAGE OF DIGNITY.** Many of the advantages of the bungalow have been adopted in this story and a half brick and stucco home. The exterior gives an impression of quiet, pleasing dignity which lends itself well to the decorative influence of flowers and shrubs. The large roof plane, with its monotony broken by the bedroom window dormer, gives an opportunity for the utilization of a decorative roofing.

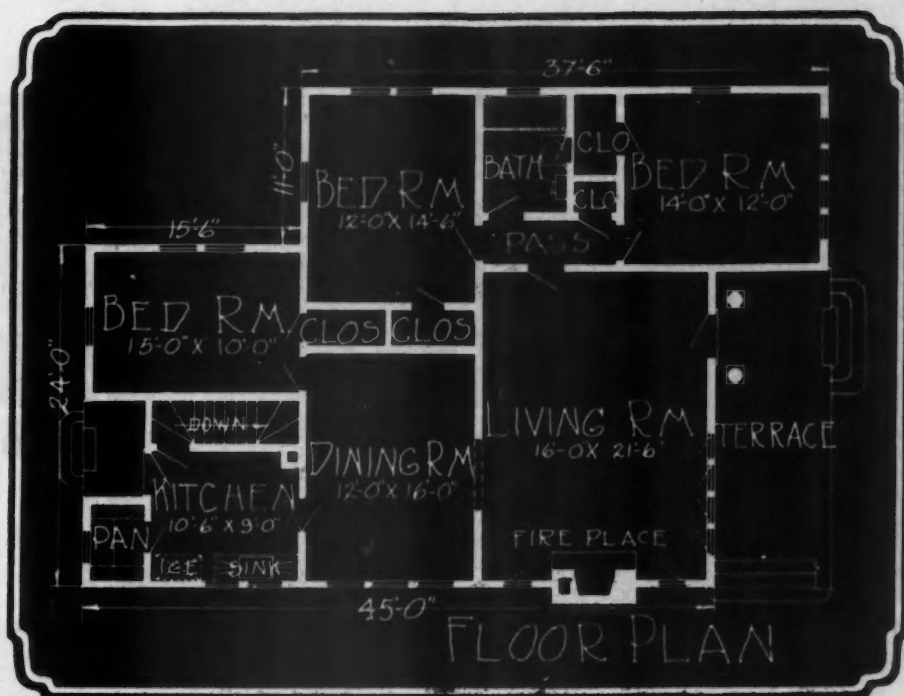
The comfort of the occupants of the home is insured to a large degree by the consideration given to the wiring.

Notice that in the blue print of the floor plans the place for each light is designated and that convenience outlets are indicated where they will be of the utmost aid in the upkeep and beautifying of the home.

One of the strong features of this home is the bedroom on the ground floor, with its own bath. The arrangement of the living room and dining room is efficient, and the breakfast nook in the kitchen will save many steps. The group of three bedrooms on the second floor is attractive.

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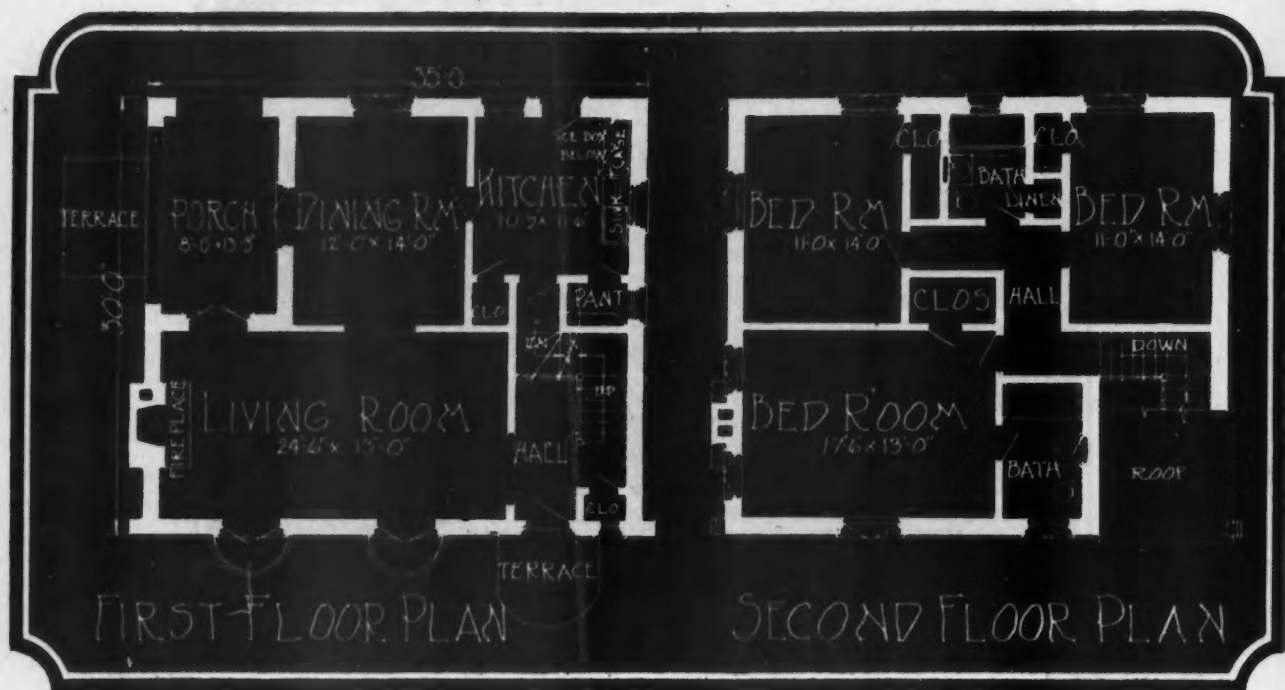
# BLUE RIBBON HOMES



**DISTINCTION IN STUCCO.** Carefully studied roof lines and angles contribute much to the attractiveness of this rather unusual home. The many gables find just the right relief from severity in the triangular louvers and the interior arrangement commends itself to the home lover.

The living room is of the rectangular shape that is so pleasing with the fireplace on one end. The dining room is well placed in reference to the kitchen and the bedroom groups are well provided with closets. This design measures 56 by 35 feet.

# BLUE RIBBON HOMES



**A** CASTLE IN SPAIN well may have been the original inspiration for this attractive and comfortable stucco home. For, though many modifications are evident, it still may be seen that many of the features of this house can be tracked back to Mediterranean architecture. The plane surface of the front elevation and the carefully placed windows are well relieved by the ornamental door and the bright colors of the awnings.

The long living room, just off the entrance hall, is one of the charming features of the dwelling. And note that

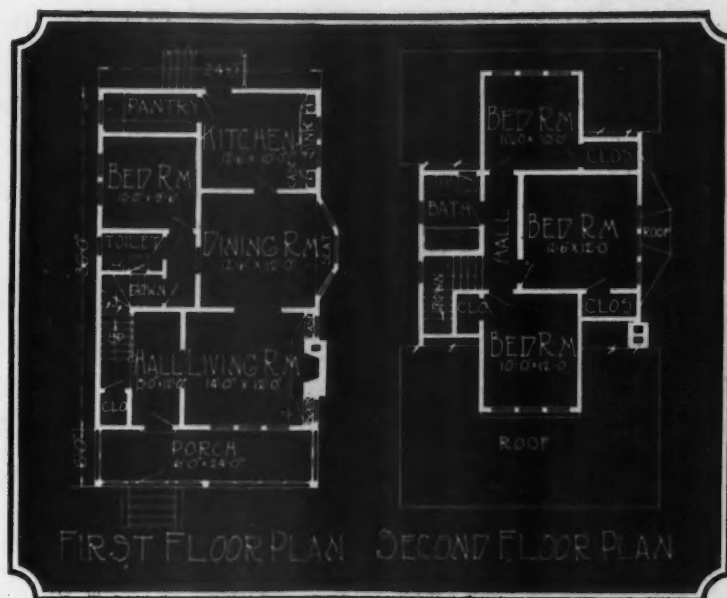
the porch has all the charms of seclusion, built as it is away from the street. This porch, opening from both the living room and the dining room by means of French doors, might well prove the setting for outdoor meals.

The second floor is unusually practical and livable with the master's chamber provided with its own bath and another bath provided for the other two bedrooms. All of the bedrooms are well supplied with closets and all have light and ventilation from two sides.

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# BLUE RIBBON HOMES



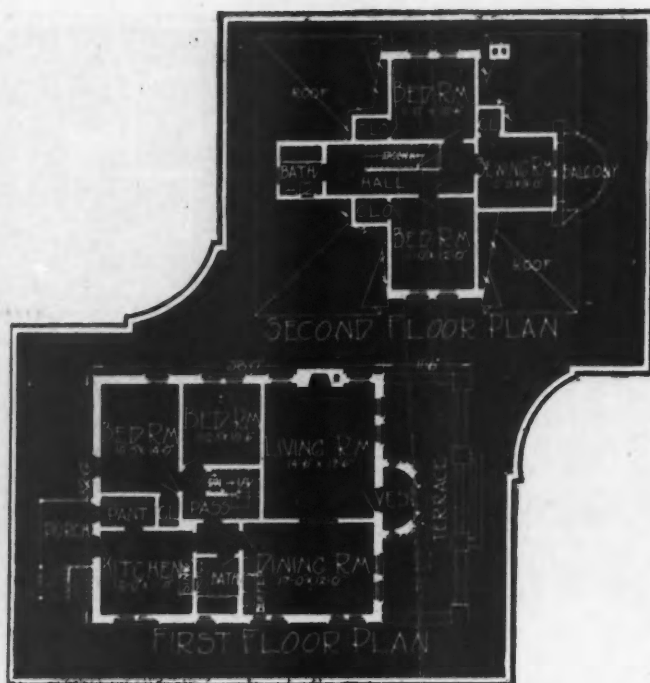
**A BIG LITTLE HOUSE.** This house gives little outside indication of containing four bedrooms, yet that many are provided for in the floor plans and without cutting down the size of the other rooms below livable proportions.

The story and a half home, always an economical one to build, is well developed in this plan. The attractive exte-

rior is a combination of shingles and stucco, with good roof.

The screened-in porch leads directly to the hall, which is provided with a closet and gives access either to the upper floor by the stairs or to the living room. The downstairs bedroom, with its lavatory is a feature which will be appreciated by many. The house, 24 feet wide, is well adapted to the average lot.

# BLUE RIBBON HOMES



**BUILT TO LAST.** This sturdy story and a half home of brick will have a very definite appeal for the family which wishes for a comfortable house which will be really a permanent home. The width of the house shown, 32 feet, will allow it to be built on the lot of ordinary size. The length is 38 feet, exclusive of the porch. The arched windows in the front of the home are quite appropriate with the semi-circular vestibule, and the terrace is an attractive feature. The door from the vestibule leads into the living

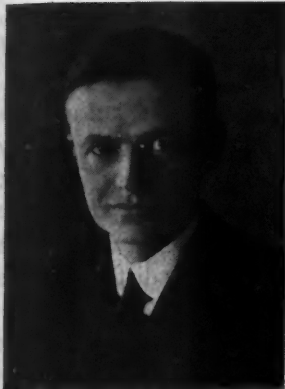
room, arranged with the fireplace at one end. This room, with the dining room, occupy the front of the house. The dining room is of a pleasing size and one of the valuable features of the kitchen arrangement is its well lighted pantry. The two bed rooms and the bath on the first floor will please members of the family who do not care to climb stairs. Two additional bed rooms, a sewing room and a bath room are on the second floor.

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# WHO'S WHO IN THE BUILDING INDUSTRY

*A Department of Late News Photographs of Men Who are Right Now in the Public Eye*



**FRANK W. RADFORD**  
of Oakbrook, Wis., the new President of the Wholesale Sash & Door Assn.  
Garrett Photo



**FRED C. SMITH**  
appointed Secy.-Mgr., International Woodwork Institute, Chicago, which will launch better millwork campaign.



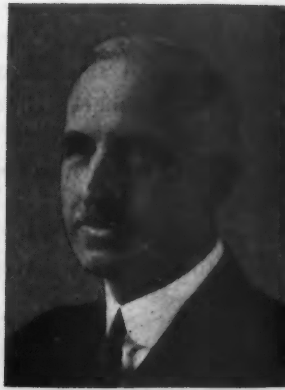
**A. M. BURCH**  
of the Minneapolis Steel & Machinery Co., who had charge of the erection of the structural steel of the new ten million dollar Twin City Ford plant.



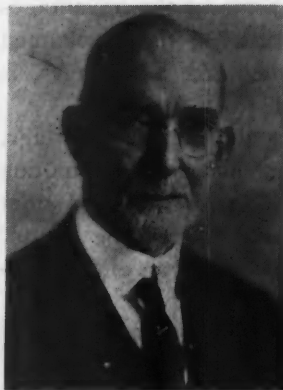
**FRANK A. MERRILL**  
of Boston, elected President of the Heating and Piping Contractors National Ass'n, at their recent Atlantic City convention.



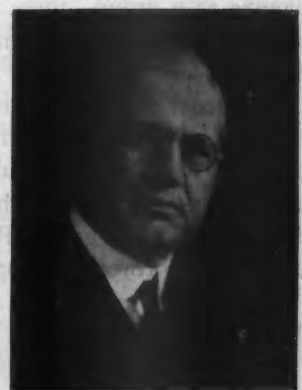
**H. T. HOTTEHL**  
Executive Secretary, Indianapolis Real Estate Board, who won a \$100 prize for the best essay on "The Ethics of the Realtor" at the recent convention of the National Ass'n of Real Estate Boards.  
Moorfield Photo



**W. H. FITCH**  
Pres. & Gen. Mgr. of Richards-Wilcox Mfg. Co., Aurora, Ill., is famous locally as an enthusiast for physical exercise; and finds much time for it, in addition to running his farm and managing the business.



**ADDISON E. WELLS**  
President, Wells Bros Construction Co., general contractors of American Furniture Mart, Chicago, largest building of its kind in the world, recently completed.  
Moffett Photo



**THOMAS A. DEVILBISS**  
Pres., The DeVilbiss Mfg. Co., Toledo, O., which is now completely located in their new big modern factory building, giving them bigger and better production.



**HARRY KURT BIEG**  
Young Armour Institute graduate wins Paris prize of the Society of Beaux Arts Architects, which entitles him to \$3,000.00 for further architectural study in France.  
P. and A. Photo



**U. S. ASHENHURST**  
of Chicago, the inventor of the process for changing gypsum into the wonderful new insulating material, "Insulex."  
Daguerre Photo



**MATHIAS NIEWENHOUSE**  
Pres., The Niewenhouse Co., Inc., who are building the \$3,000,000 Bronx Municipal Terminal Market, the Concourse Plaza Hotel and other important New York structures.  
Champlain Photo



**JAMES FORD**  
Executive Director of Better Homes in America, which organization has just completed another successful campaign in which hundreds of cities competed for home demonstration prizes. Kalamazoo, Mich., won first; Atlanta, Ga., second, and Greenville, S. C., third.  
Harris & Ewing Photo



# Remodeling a Business District

Lake Forest, Illinois, Now Has a Handsome, Well Arranged Business District Known as Market Square

**C**ITY planning, zoning and similar movements have been taken up by quite a few of the smaller cities and undoubtedly it is a hopeful sign of the times. Reconstruction of an entire district is even more radical; and wonderful results have been accomplished in a number of places. For instance, in the village of Elcho, Wisconsin, in a certain residential section of Philadelphia and in the dignified suburb of Lake Forest, Illinois, which is the subject of this sketch.

Most cities and villages just happen; their planning if any, is haphazard. What a wonderful improvement could be made were it possible to build them in the beginning, on a carefully prepared or preconceived plan! Handsomely laid out districts, instead of narrow streets with poor buildings. A complete shopping center, with fine, modern store fronts facing park, boulevard or square and with buildings which harmonize as a group—these are some of the advantages to be gained. Next in importance to the preplanned city, and obtaining many of the same advantages, is the remodeled business district.

When construction overtakes the housing shortage, builders will have to find new means of promoting business. It is with this thought in mind that **AMERICAN BUILDER**, in this article, tells the history of the Lake Forest development, where an entire busi-

ness district was remodeled. In many small cities and suburbs throughout the United States, similar projects are needed and would be equally successful. Needless to say they would furnish quite a volume of business for local builders.

The business district of Lake Forest before this development was most unlovely. Across a narrow street from the railway station stretched for 200 feet a succession of shacks which might have been in some frontier town in the days of the "gold rush." In these were housed the entire shopping district of the town.

The residential section of Lake Forest had great natural advantages. This beautifully wooded district overlooking Lake Michigan, with high bluffs cut at intervals by picturesque ravines, attracted a fine class of residents. People of wealth and culture built their homes there. A small university and a boys' academy found sites there. It was a region of beautiful homes and park-like estates. But the business section, for a time, remained unchanged. With stores housed in such primitive shacks amid such dirty, dusty surroundings, the storekeepers did but little business. Most of the people made it a point to do their buying in Chicago.

Fortunately there were men of vision and initiative among those who departed by train every morning for



Lake Forest, One of Chicago's Better Suburbs, Has Replaced a Very Haphazard Market District with the Well-Planned "Market Square" Illustrated Here. Definite planning and co-operation of a number of the residents of the suburb made the transformation possible. The square was planned by Howard Shaw, architect.

the city and alighted every evening to gaze upon this unprepossessing business district. The well-known architect Howard Van Doren Shaw was one of these men and he gradually interested others in a plan for sweeping changes and improvements. Among these men were Cyrus H. McCormick, D. Mark Cummings, David B. Jones, Arthur Aldis and others. About \$200,000.00 was subscribed and options secured on all the properties involved. A few property owners held out for exorbitant prices, having learned what was afoot. Most of the options, however, were secured at a fair price. Owing to a financial stringency which ensued, nothing was done for several years.

Some three years later the proposed new market square again became an active issue and the support of more influential men was gained, including Mr. James O. Heyworth, Mr. A. A. Sprague II, and Mr. D. R. McLennan, who were asked to act as an advisory committee with a view to active prosecution of the enterprise. These gentlemen obtained subscriptions for another \$100,000.00 and several Chicago banks, as well as the leading Lake Forest bank, handled the necessary bond issue. Mr. Edward H. Bennett, also a resident of Lake Forest, had had considerable experience in city planning and assisted the architect, Mr. Howard Shaw, in the preparation of numerous plans.

The business district of Lake Forest formerly consisted of a frontage comprising about 200 feet on Western Avenue. As already stated, the buildings were mostly wooden shacks with dingy store fronts and small, insanitary, unsightly store spaces. The lots extended to a depth of 260 feet, the rear 200 feet being occupied mainly by filth and refuse.

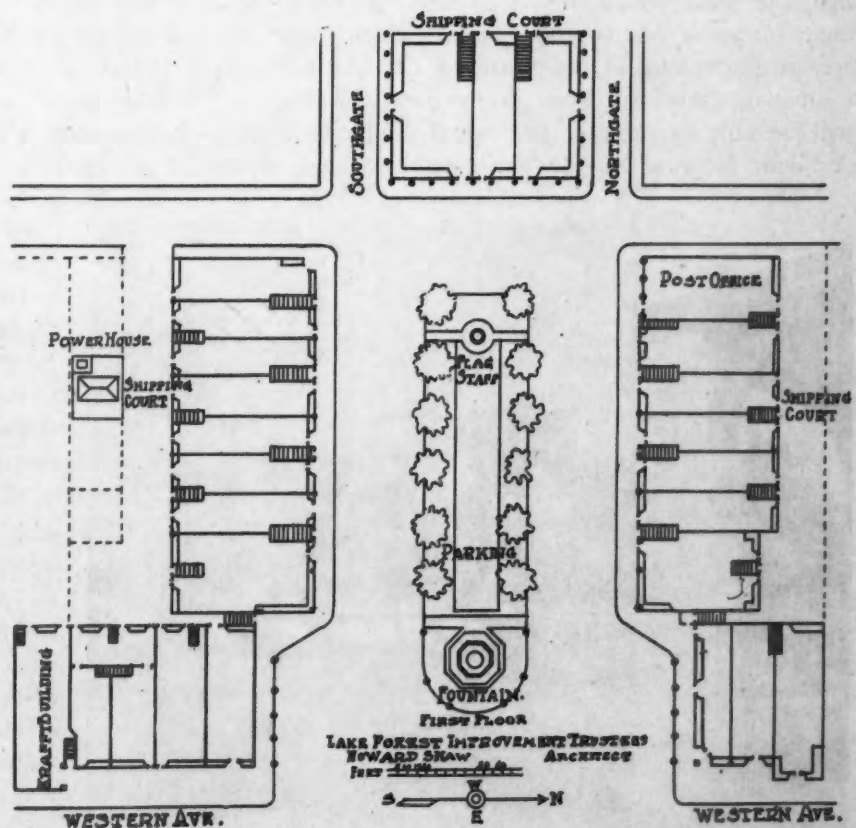
In place of this arrangement Mr. Shaw's plan substituted a market square, about 200 feet each way, with a central parkway bordered by grass, trees and flowers. The old buildings had to be wrecked and the new ones erected without cessation of business in the various shops. This was a task of no small complexity, but was accomplished in about a year by careful planning, hard work and great attention to detail. The tenants who were formerly housed amid such squalid surroundings took readily to the fine stores with modern conveniences, handsome store fronts and windows, as well as adequate storage space.

In spite of the high prices demanded by several owners and the further drawback of having to accustom the merchants to a new and increased scale of rents, the recon-

struction was carried through at a cost which allowed a return of nearly 4 per cent on the capital required. With the revised scale of rents now in effect, the enterprise has yielded a larger and more adequate return on the investment, which was not, primarily, for profit. For instance, Mr. Shaw, who invested a large amount of time and effort, agreed to accept his compensation entirely in stock in the association.

The new square was designed as a group to present a pleasing and harmonious effect, monotony being entirely avoided. This was accomplished, not only by variation of architectural outline, but also by the use of diversified building material. The choice of building materials, however, was limited to fire-resistant types, mostly brick with stone trimming and stucco over hollow building tile.

The square is somewhat wider at its entrance than throughout the greater part of its length and towers of striking design mark these angles on each side of the square. Comparison with the former frontage shows that shop window frontage has been increased by over 50 per cent and the area of the stores themselves largely increased and made vastly more attractive. There has been no copying of architectural design but the effect gained is that of some Flemish or German village of the Sixteenth century, modernized with cement walks, curbing, parkway and concrete light standards.



Increased Business for the Merchants of Lake Forest, Ill., Has Resulted from the Creation of a Wide, Attractive Market Place Where Residents of the Suburb Enjoy Shopping. It overcomes the former tendency to purchase all supplies in Chicago which was so noticeable when the shopping center of Lake Forest was haphazard and unattractive.



Banks, stores and post office occupy the buildings at the street level and the second floors are occupied as apartments and offices. The list of shops is quite typical of the average community, as follows: a corner drug store, a delicatessen, grocery and market, a hardware store, a shoe store, a real estate office, a Methodist mission, restaurant and telegraph office, a millinery shop, an automobile appliance shop, a bank, a public service company, post office, plumber's shop, barber shop, express office, nurseryman, house furnishings, bakery, sewing machine and musical records shop, a confectionery shop, billiards, pool and cigar shop, hotel and restaurant. The Y. W. C. A. club rooms occupy the entire second floor of the bank building and the Young Men's Club occupy an adjoining building of their own. All the buildings on the square are heated from a central power plant—a great convenience and economy.

Mr. Arthur Aldis made the following statement in regard to the success of the enterprise:

"We feel sure that the increased shop facilities and the handsome character of the stores have led to an improved and enlarged business on the part of the local shop keepers. When these were unattractive, the residents did most of their trading in Chicago. Now that the local shops are clean and attractive and their storage facilities good, the merchants have increased the volume of their business. It may fairly be estimated, therefore, that, in the near future, they will be able to increase the rental which they pay. A slight increase of the gross rental would easily

increase the net rentals to a fair basis of profit, which is about 6 per cent. It has been necessary, however, to go slowly in this, as they have grown accustomed to very low rentals which were all they could pay in



The Attractive Street of Shops in Lake Forest Has Much of the Charm of an Old World Village with the Added Advantage Which Comes from Definite Planning of the Entire District at One Time.

their old shacks which had to be heated by themselves and in which they could not do business economically." (Since the date of this interview the rental income has passed the 6 per cent mark.)

Surely there must be many localities throughout the United States where a reconstruction similar to that in Lake Forest is badly needed and where there is sufficient enterprise to take up the matter enthusiastically when it is properly presented and promoted. Such reconstructions might be on an entirely different scale, cost and style of architecture to suit the individual needs. Ask the merchants of Lake Forest if they are better off for this improvement—both financially and artistically—and the answer will be an enthusiastic "yes." And the commuters are now entirely proud of the business section.

The legitimate returns on the investment which the remodeled shops have enabled the merchants of Lake Forest to pay cheerfully should encourage other communities to like endeavors. And there is no doubt that such an enterprise, worked out with the co-operation of the entire community, would create a spirit which would be quite as valuable as the new beauty and business revival which would be likely to follow such an improvement in any suburb.

Readers of the AMERICAN BUILDER will naturally be in the forefront of any constructive movement of this kind.



The Fountain in the Center of the Market Square of Lake Forest Is a Detail Which Raises the Business Center of the Town Above That of the Ordinary Suburb or Small Town in America.



# Building Houses for Workers

Mergenthaler Linotype Company and Employees Co-operate in Developing Practical Plan for Home Building and Ownership

By ROBERT F. SALADE

**T**HERE are many entirely new features about the housing project which is being executed by the employees of the Mergenthaler Linotype Company, Brooklyn, N. Y. The method that has been worked out is eminently practical, is on a sound business foundation and therefore should be of interest wherever the housing difficulty may exist. The plan that has been developed was originated by the Shop Committee of the linotype factory force, with the advice and counsel of the linotype company's officers.

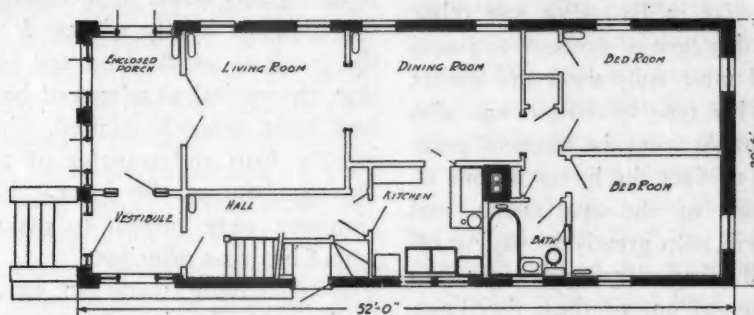
We are offering the facts because the problem which in this case is actually being solved to no little extent is of national importance. The problem is that of providing neat, comfortable living accommodations for workers and their families at a reasonable cost.

The Shop Committee is composed of members of the working force elected from their own ranks. This committee meets regularly with the department heads of the company and the management to discuss matters relating to the business and to the comfort and happiness of the workers. At one of

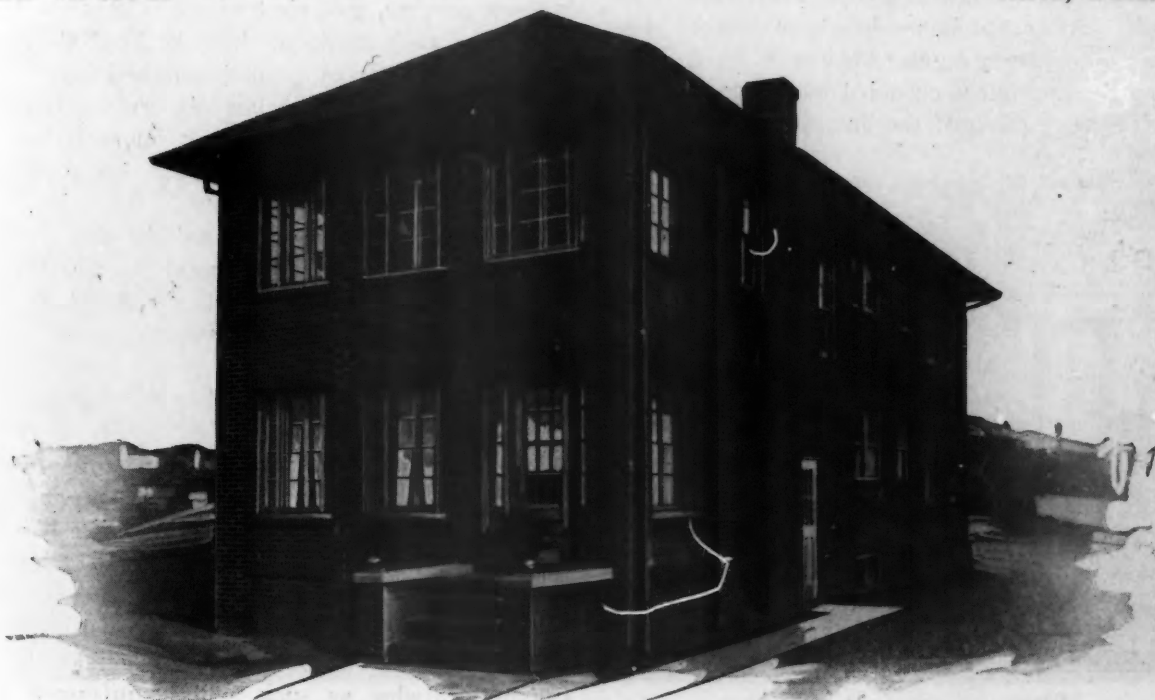
these meetings held recently came up the question of obtaining suitable living quarters at a reasonable price. This question was so important that it was followed by a general discussion, and it was then disclosed that a number of the workers desired to own their own homes if such a thing could be done economically and on reasonable terms of payment.

From this meeting eventually resulted one of the most notable home-building operations ever attempted in Brooklyn. However, a great deal of preliminary work on the part of the Housing Committee, and also on the part of officials of the linotype company, was essential before the first group of thirty-five two-family houses was completed. The Borough of Brooklyn proper is almost as congested as the Manhattan section of Greater New York City, but, fortunately, Brooklyn has

ample suburban and semi-suburban territory, and unlike many other large towns, these suburban districts can be easily reached by means of the numerous high-speed elevated, surface and "open-air" subway lines, which have



**The Ground Floor Plan.** The plan of the second floor is identical except that another bedroom occupies the space taken on the first floor by the vestibule and hall.



**Thirty-five Two-Family Homes Have Been Built by the Mergenthaler Linotype Company in Co-operation with Their Employees.** Employees will be assisted in procuring title to the homes through the rental of the extra apartment.

been constructed throughout Brooklyn during the last few years.

The tract on which the thirty-five two-family houses have been built is large enough to give each house a lot 30 feet wide by 100 deep, but four of the houses, which were erected on Avenue N, between East 27th and East 28th streets, are on even larger size plots—40 by 100 feet. The others were erected along East 28th street, between Avenue N and Avenue O. The "sample house" was built at 2712 Avenue N, and all of the other thirty-four houses have been built in the same style as the "sample."

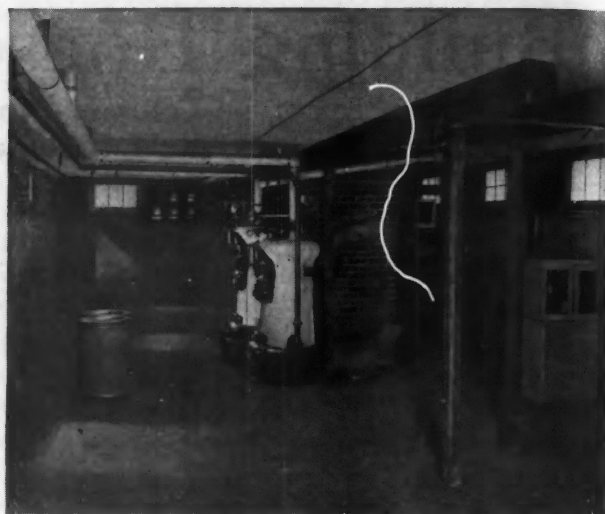
For the design of these houses the Housing Committee laid down the primary rule that while the nature of the project demanded a house of reasonable cost, construction and materials must be substantial to assure value for a long period. To achieve this, and also to insure minimum periodical charges, such as repairs, painting and similar up-keep, it was decided to use brick construction with 8 inch walls, slate roofs, copper gutters and leaders, and other material equally durable, inside and out.

Because of the fact that the detached two-family house is exceedingly popular in Brooklyn and other parts of New York City, this type of house was found to be the one that would most fully meet the wishes of the factory force. This type of house was also found to be the most desirable from the financial point of view, for as a matter of fact the buyer of one of these homes can rent one of the apartments, and the rent received for it will help greatly in paying off the first mortgage and all other carrying charges. In other words, the purchaser of one of these dwellings, by the method of renting out one apartment at the usual rate paid in the Flatbush section of Brooklyn, can actually buy the house at comparatively small cost to himself. After the house has been bought clear the owner may have a regular income in the form of rent from the apartment occupied by another family.

The treasurer's office of the linotype company gave



Sun Parlors Are Provided for Both Apartments in Each Duplex. The illustration shows the enclosed porch from the living room.



In the Basement of Each Duplex Are Two Separate Heating Plants So That the Occupants of Each Apartment May Regulate Their Heat to Suit Themselves.

its expert knowledge to the financial plan, working out the method for purchasing the land, paying for the construction and transferring the ownership on advantageous terms to members of the force. While the company kindly advanced the capital needed for the purchase of the land and for the initial construction, the capital so advanced has been furnished on a loan basis, properly secured, with provisions for retiring the loan and transfer of complete ownership to the members of the force. Both the men and the company were careful to make it an enterprise on sound business principles.

After having made an exhaustive study of the project, the Housing Committee was able to report to its fellow workers that it could turn over to them handsome, soundly-built, two-family houses with glass-enclosed porches, gas, electricity and separate heating plants for each floor, on lots 30 by 100 feet, for \$11,750, total cost of ground and building. This is not only considerably below the ruling prices for property equal to it in character, but it is below the estimate of actual value accorded by conservative appraisers of investment security.

The company having advanced the money to purchase the land and start the initial construction work, the treasurer of the company, Joseph T. Mackey, suggested a method by which a development corporation, organized within the linotype force, took over the property and will conduct further building operations. The organization and operation of this corporation, now named the Melco Development Corporation, are described as follows:

The Melco Development Corporation is a New York State corporation with a capital stock of \$250,000, represented by 25,000 shares of stock of par value at \$10 each. Its Board of Directors consists of seven persons, one of whom is the president of the Shop Committee, who, as such, will be informed of the activities of the new company. The officers of the company consist of president, vice-president, secretary,



treasurer, assistant secretary and treasurer, and an auditor.

This company, through the sale of stock and the temporary borrowing of additional funds for its immediate needs, has taken over from the linotype company the group of thirty-five houses and the ground upon which they stand. These homes have been sold under an agreement known as "Contract and Sale."

The cash payments were payable upon the signing of the contract to purchase. The payments under the contract of sale are at the minimum rate of \$40 per month, plus 6 per cent interest. The annual carrying charges, consisting of interest on the first mortgage, interest on contract of sale payments, taxes on the land, insurance, water rent and repairs, are estimated at about \$720 per year.

Thus a rental of about \$30 per month for each of the two apartments in the dwellings will carry the house, or, if \$60 per month is obtained for the rent of one floor, the purchaser will have his own apartment rent free.

The shares of stock are being sold only to employees of the company at the par value of \$10 each, which may be paid in installments through an agreement to be entered into between the employee and the Melco Development Corporation, whereby the employee will issue an order to the linotype company to deduct out of his weekly earnings payments on account of stock purchased—an arrangement similar to that made with employees who bought liberty bonds during the war.

One of the savings banks of Brooklyn recently made an appraisal of the first house built by this plan, and,

basing this upon their expectancy of the real estate market of ten years hence, conservatively estimated the value of the house at \$11,500 and the value of the land on which it stands at \$2,500, or a total value of \$14,000. There is no doubt that the houses could be sold in the open market at a price considerably in excess of the estimate made by the conservative savings bank; in truth, many high offers have already been made to those fortunate families who now occupy the first group of thirty-five homes.

The floor plans of these houses are as follows: The basement has walls and floor of concrete; is well lighted by windows on three sides, and it contains the two separate heating plants. The first floor measures 20 feet 6 inches by 52 feet, and contains the vestibule, enclosed porch, hall, living room, dining room, kitchen, two bedrooms and a bath. The second floor arrangement is practically the same as on the first floor, with enclosed porch, living room, etc., but having an additional bedroom, or three bedrooms all told. On account of the first floor having to provide a vestibule and stairway for the upper floor the lower apartment has only two bedrooms while the second floor has additional space for the third.

The first block of thirty-five two-family houses was completely sold out before the construction was completed, and the plan has proven so successful that the linotype factory force is now planning additional operations of the same character. The big linotype factory is located in Ryerson street. The linotype workers who have purchased the new homes in the beautiful Flatbush section can reach the plant, by means of the numerous high-speed lines, within half an hour.



General View of the Construction of the Thirty-five Two-Family Homes for Employees of the Mergenthaler Linotype Company. Co-operation between the company and its employees resulted in an organization which assists the latter to acquire homes of their own through particularly efficient means.



# Co-Operative Apartments Popular from Coast to Coast

**Idea Popular in Large American Cities and Growing with Remarkable Rapidity Which Opens Up New Building Opportunities**

**T**HE demand for co-operative apartments in the larger cities has reached a stage where it is a most important factor in modern real estate development and one of vital interest to builders.

The really remarkable thing about it, at the present stage, is the popularity of the co-operative apartment with the prosperous middle class and even with the wealthy. Many of the buildings already erected for this purpose are extremely high class in their location and appointments. Investment in these buildings seems to tend towards the luxury class and many of the projects now under way in New York, Chicago, San Francisco and Los Angeles are *de luxe* in every sense of the word.

Co-operative buildings are frequently of fireproof construction, many stories in height, equipped with elevators, a central refrigerating plant, and the most modern heating systems. Locations are facing parks, on boulevards and in superior residential districts. The apartments themselves are large and airy, with ample window space facing either the street or a large, park-like court. Frequently, all rooms are outside rooms—no cramped or darkened quarters, but luxury both in fittings and environment.

But it is to the great middle class seeking relief

from high rents that the co-operatively owned apartment has made the greatest appeal. The poorer classes have been largely excluded because they have not had funds for the necessary first investment. In other words, they have generally not had the small capital requisite to home ownership. Another factor is that a loan of some magnitude is necessary in order to buy or erect a building large enough to be successful on the co-operative plan. In these cases, it is generally necessary to go to a large bonding company to borrow the initial loan. These companies, naturally, are more willing to lend on buildings of the better type, selling to a class of people who have good incomes and who measure up to the social requirements.

The general level of rents is the governing factor in promoting a co-operative apartment building enterprise. It is quite generally accepted among real estate men as a fact that, at the present scale of rents, five years' rental will pay the purchase price of the stock in an apartment. Indeed, that is commonly the method adopted for fixing the purchase price.

The rental value of each suite in a co-operative apartment building is generally appraised by a committee representing the bonding company, the builder or promoter, the stockholders in the co-operation and



Exterior View of The Andridge Co-Operative Apartment Building, Located on Evanston's Famous "Ridge" in the Best Residential Section of Evanston, Illinois. This building is owned and operated by tenant-owners, who paid \$150,000 for their stock in the incorporation which owns it. There is a bond issue of \$235,000 against the property running from two to seven years. Operating expense, including interest, will be \$27,879 for the year ending next September. The payment on a three-room apartment is about \$50.00 per month, having a normal rental value of about \$90.00 per month. Four and five room apartments have proportionately larger payments and savings compared with renting. Robert C. Ostergren, Architect.

the company guaranteeing the title. As these are experienced real estate men, it may be assumed that the appraisals accurately represent the proportionate values and the values in that neighborhood.

To those who hear it for the first time, it is usually astonishing to learn that an apartment will buy itself up to the mortgage in five years' rentals under the co-operative plan. Indeed, it will do more than that, for it is claimed that the co-operative plan will effect a saving of 35 per cent over the landlord plan. Here is the way it has been worked out by the Co-operative Apartment Association of Chicago and the National Association of Real Estate Boards, Co-operative Apartment Section:

Combining owned apartments under one roof saves all loss from vacant apartments, all loss from uncollectible rents, all expense of management, all cost of excessive decorations and all repairs occasioned by frequent shifting of tenants. In addition to this, co-operative ownership eliminates entirely the landlord's profit. These factors they claim will enable the co-operative owner to save half the rent now being paid for his apartment.

In other words, an apartment which would rent for \$90.00 per month, normal rental, would have a purchase price of \$5,400.00 under the co-operative plan. Approximately half of this would be represented by the apartment's proportion of the first mortgage loan. Taking an actual case:

The initial purchase of stock amounts to....\$1,920.00  
Estimated assessments, five years..... 3,360.00

Total outlay .....\$5,280.00  
Deduct book value of stock, end of five years. 2,728.00

Net cost .....\$2,552.00



Interior of One of the Kitchens in the Andridge Apartments. It is compact and well arranged. The closed shelving above the sink is a convenient feature appreciated by the housewife. Refrigerators and gas ranges, of course, were installed by the builder, as were also the kitchen cabinets.

The total saving, therefore, in this instance, under the co-operative plan compared with renting would be the difference between the figure named and 60 months at \$90.00 per month; in short, the difference between \$5,400.00 and \$2,252.00, or \$2,848.00 saving.

The stock issued on a co-operative building is priced at the equity value above the loan. The incorporation of tenant-owners secures title to the property subject to the mortgage indebtedness. Amortization of principal and interest is usually arranged so as to pay off the entire mortgage in from 7 to 20 years. If the bond issue runs for a shorter term of years, it is the plan to secure a new loan and pay off the first one at its expiration. The payments on amortization are included in the monthly assessments along with the cost of operating the building by the tenant-owners.

The usual plan of procedure is for a builder, real estate promoter or both to buy or erect a high class building. Such a building must be better than the average, for buyers under the co-operative plan quite naturally demand more of a building in which they expect to live for many years than they would of buildings in which they lease and move every year or two. They want larger rooms, more air and light, more closet and drawer space, a structure better designed and built than the average. Furthermore, it must be equipped for convenience and economy in operation.

The sale of co-operative apartments has become active chiefly in the last three or four years due to changes in State laws allowing corporations organized for the sole purpose of owning and operating real estate.



Interior of One of the Spacious Living Rooms in the Andridge Apartments, with a Glimpse of the Dining Room Beyond. The windows look out on beautiful residences across the boulevard and the courtyard with its grass and flowers.

In all the large cities of the United States the situation is much the same in regard to co-operative apartment building. Apartment buildings sold and managed on the co-operative principle are now to be found in Boston, Pittsburgh, Washington, Baltimore, Detroit, St. Louis, New Orleans, Akron, (O.), Champaign, (Ill.), Davenport, (Ia.), Lincoln, (Neb.), Milwaukee, (Wis.), Birmingham, (Ala.), Long Beach, (Cal.), Los Angeles and Glendale, (Cal.).

Generally speaking, there are three sale plans in vogue—the 100 per cent co-operative, the semi-co-operative, and the compromise plan. In the first, all the apartments in a building are sold to co-operative tenant-buyers. In the semi-co-operative plan, only one-third of the apartments are occupied by tenant-buyers, the remaining two-thirds being rented in the ordinary way for the benefit of the co-operative buyers, which,

at present rentals, is very remunerative. With the compromise plan, two-thirds of the apartments in a building are sold to tenant-buyers and the remaining one-third rented in the ordinary way for the benefit of the co-operative company.

The shareholders in these enterprises usually elect a directorate to manage the building which meets once a month. At the beginning of each fiscal year, they tabulate a budget and arrange the monthly assessments for each apartment, to take care of fuel and janitor costs, taxes, upkeep, amortization of bonds and all items of expense. Following is a sample budget for a 36-apartment building for the year October 1st, 1922-September 30th, 1923. The par value of the stock in the building is \$75,000.00, it having been purchased several years ago when prices were somewhat lower than now, and while the neighbor-



Typical Floor Plan of the Andridge Co-Operative Apartments as Illustrated on Page 114. Notice the ample provision for light and air. Every room is an outside room.





This Comfortable Bedroom in the Andridge Is Similar to the Bedrooms in the Other Apartments with Minor Differences. Cool lake breezes through these large windows temper the heat of summer. The smaller apartments contain boudoirs and recessed beds.

hood is good, it is not what might be termed exclusive or expensive. The budget in the case of this building was ample and no deficit was experienced.

Taxes .....	\$2,000.00
Fuel .....	2,000.00
Janitor Hire .....	2,334.00
Interest .....	9,232.00
Electric Light .....	200.00
Water .....	250.00
Insurance .....	300.00
Hauling Ashes .....	154.00
Emergencies .....	750.00
Miscellaneous .....	200.00
Mortgage Prepayments .....	5,875.00
	<hr/>
	\$23,295.00
Less rent on basement apartment.....	420.00
	<hr/>
	\$22,875.00

Most of the apartments in this building consist of four rooms and are assessed a total of \$50.33 each per month. There are six 5-room apartments and these are assessed \$66.07 each per month. A fair rental value for the four-room apartments would be not less than \$80.00 per month.

A more recent example in a more expensive neighborhood calls for an investment of \$8,390 in a five-room apartment, with a monthly assessment at the outset of \$91.75 on the 100 percent co-operative plan. After nine and one-half years the monthly assessment would be \$60.95 for an apartment with a present rental value of \$180 per month. This latter is being promoted by a very conservative realty company operating in the more fashionable residential districts, serving a high class clientele. They are quite successful, also, in disposing of apartments on the semi-co-operative or compromise plans. These latter offer a better return to the investor because of the high rental revenues from that portion of the building which is rented

in the usual manner. This plan, of course, requires a much heavier initial investment in cash.

Under the most usual corporate plan of handling co-operative apartment buildings, standardized accounting forms are used and the promoting company has these all audited at one time and gives such other assistance to the stockholders in their various buildings that the expense of management is kept down to a minimum. Some companies claim that the directors in each building, serving without salary, can manage it without expense for a manager. Other promoters arrange to manage the building for the tenant-owners, reporting fully to their directors, and charging \$1,500.00 per year for management. Corporation reports have to be made out, tax schedules filed, taxes paid to federal, state, county and municipal authorities. Further, the individual interests of members—conflicting or otherwise—have to be adjusted and the work of the janitor supervised.

Individual apartment owners are allowed to sell out their stock or lease their apartments to any new owner who can meet the requirements of the directors, who will pass upon his references. Many apartments have been sold out at a profit. While rents are advancing, they can usually be sold at a profit. Should rents fall, it is possible there might be a loss, but this seems unlikely in large cities where population and land values are constantly increasing.

#### Idea Spreading to Smaller Cities

For the present, co-operative apartments seem better fitted to the large cities, but the movement is quite apt to spread to smaller cities provided they are large enough to have any great proportion of the people living in apartments of any kind. If the city is small enough to suffer no congestion and if detached houses are in use as the common housing method, co-operative apartments will be exceptional. However, it should not be forgotten that the "skyscraper" was once thought to be exclusively a metropolitan feature, whereas it has spread to smaller cities throughout the country. The same is true of the "class" hotel and so it would be rash to state that the co-operative apartment may not likewise spread to the smaller city.

To the builder able to finance about 40 per cent of the original cost of construction, especially if he is associated with an experienced realtor capable of handling the sales and management of the building, co-operative apartment construction on a wisely chosen site is an attractive and remunerative venture. This is mainly because of the ready sale and the assured nature of the enterprise in the larger cities. It is the common experience in Chicago or New York for each co-operative apartment building to have a large waiting list. These, in turn, become ready buyers for the next co-operative apartment building which the promoters erect. One large building of this kind in Chicago was sold out in three weeks and in three more weeks the waiting list was large enough to fill another building.

(Continued to page 152.)

# When We Build Our Stairway

The Feature of the Home Which Often Gives the First Impression of the Household to the Visitor Calls for Careful Planning

By MARION BROWNFIELD

**T**HE staircase not only lends a welcoming air to the hall, but gives us the first impression of dignity and charm in the home.

The bungalow and small apartment has had a slight tendency to belittle the importance of the stairway. But the revival of Renaissance and Colonial architecture has shown us that the necessity of connecting the first and second floors may be a very artistic as well as practical feature.

The stairway has had such a long and interesting development—dating back at least six thousand years B. C.—that the great possibilities of combining beauty with dignity, bequeathed us from history, should not be overlooked. It is said that the three most important essentials for any staircase are that it be “comfortable, picturesque and individual.” The very earliest staircases were decidedly picturesque “means to the end,”

for they were suggested by the rock formations found in nature and the rope ladder. By gradual evolution and experiment the crude stairs of the Middle Ages were reached. There were designed at first for defense! For this reason they were built outside the fortress or castle and made as difficult as possible for the invader to climb. Even today, the outside staircase is a feature of country homes the world over and those ascending from an inner courtyard are the most common type of Renaissance architecture whether in Italy, Spain or England. Staircases between walls was a later development of the medieval period and were designed for the privacy of the lords and ladies of the castle or palace whose apartments were nearly always several stories above the first floor. Hand rails were also one of the first additions for comfort and convenience.



The Wrought Iron Handrail, with Its Finely Traced Pattern, Contrasts Effectively with the Austerity of Stucco Walls. The type of stairway shown here is growing in popularity with the vogue of homes of the Spanish and Italian types.



The merging of the Gothic into the Medieval and finally the Renaissance type of architecture, brought us the graceful spiral staircase that is being revived so charmingly in our modern homes.

In England the Renaissance styles of Italy—inspired by the classic spirit of ancient Rome and Greece—were domesticated and Anglicized in the Georgian styles, which copied in young America, has given us the "Colonial" staircase.

Whether we shall build a Renaissance, Colonial or very simple and much modified type of staircase, really depends upon our own individual home. A stucco dwelling naturally suggests emphasizing the Renaissance influence with stairs of Italian or Spanish effect, while with a brick or white clapboarded home a Colonial stairway is usually pleasing. To make the staircase distinctive is only combining the artistic with the practical. In other words, we must consider our space and then make the most of it. The proportion both to the hall, and the home as a whole should be one of the first thoughts. Simplicity is always good taste, and if this is kept in mind for the general plan of the staircase, there is still much opportunity for decoration in the balustrade, which includes such details as the handrail, balusters, and newels or posts.

Landings were used in some of the earliest staircases built, and as they both contribute comfort and a certain air of hospitality, they are attractive when space permits. If the staircase is to continue to a third story, the landing is especially desirable. Where two staircases crowd the home a landing half way up the main staircase is very useful for opening on to "back stairs." One or two landings are used on most of the American adapted staircases. The "second landing," when placed a few steps from the top is also very popular. Frequently we see the "clock on the stairs" here. Again we see a wide platform from which a pair of stairs lead up at each end. This is known as the "branched landing." Sometimes a cozy window seat is placed on these wider landings.

Whether there is a seat or not, windows are most often built at the point of landings to light the staircase. But they cannot be built, of course, unless the staircase is placed against an outside wall, or at least reach one by means of a turn or curve.

Curves are recognized as such a graceful means of



Stairways and Halls Such as the One Illustrated Here Are Charming Features of Many Modern American Homes. They originated with the builders of the American Colonies, who adapted the Georgian styles of England to the new environment.

achieving the practical and artistic in a staircase that many of the Colonial type also start with a curved handrail. This is based on a wide curving first step that has all the charm of feminine flounces!

However, one of the most attractive features of Colonial stairways is the contrast of the dark handrail with the white balusters or "spindles." The effect of mahogany and white enamel is often employed for the stairs themselves, whether the "treads" are to be carpeted or left bare.

Contrast makes any staircase more picturesque, and the outline of it against the wall is one of the things to consider in planning the general lines. Thus with the home accenting the Spanish note, a balcony effect may be charmingly suggested when the stairs lead up from a living room or patio. When the wrought iron balustrade is draped with rich hangings, or a colorful rug, a bit of romantic Spain is successfully borrowed.

The materials, too, from which the staircase is constructed, emphasize the good points. The wrought

(Continued to page 152.)



# SUGGESTIONS FOR REMODELING

A series of very helpful drawings from the book, "Better Homes from Old Houses," prepared and copyrighted, 1924, by The Barrett Company. This series began in June and will be a regular feature of the American Builder during the next four months.—The Editor.

## Project No. 3—American Farmhouse Type



View from the Street Showing Front and Right Side.

THE American Farm House type is noted for its sensible, spacious and comfortable rooms, and for its simplicity of design.

It is the prize possession of, and a real foundation for the remodeler. If you are fortunate enough to have an old house of this type, or one which resembles it, we feel that you will be delighted with the many charming alterations suggested here for adapting it to modern home requirements.

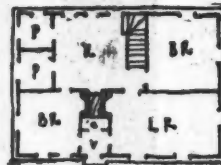
### Alteration One

New porches have been added at the front and side. The living room is enlarged by removing the partition that formed the old rear bedroom. The approximate cost of these additions is \$600. The picture opposite shows shutters, small paned windows and a large chimney; these are quite often found intact in old houses; if not they should be restored to give the true Colonial appearance, but the cost of this work is not included in the figure given here.

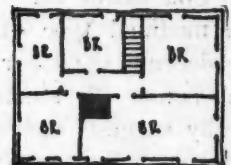


View from Street Showing Front and Right Side with Mount Vernon Porch on Front.

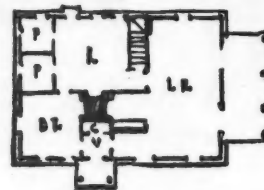
Exterior View and Floor Plans Before Alteration.



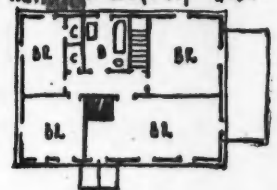
First Floor.



Second Floor.



First Floor

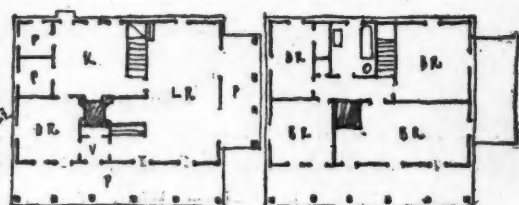


Second Floor.

Floor Plans and Exterior Showing Porches, Shutters and Larger Chimney, Alteration One.

### Alteration Two

In this alteration a two-story porch similar to that at Mount Vernon is built across the front, the main roof being extended out with a slight slope to cover it. The living room is enlarged and a porch opening from it through French windows is added at the side. These changes would cost about \$1,200.



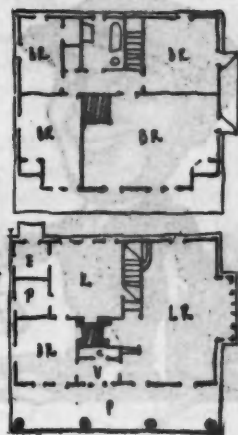
First Floor.

Second Floor.

Plans for Alteration Two.

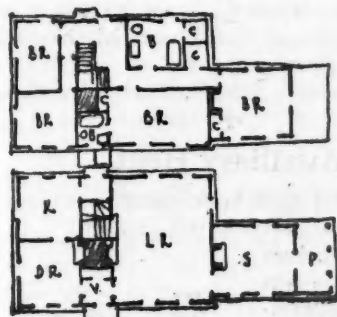


View from Street Showing Front and Right Side—Alteration Three.

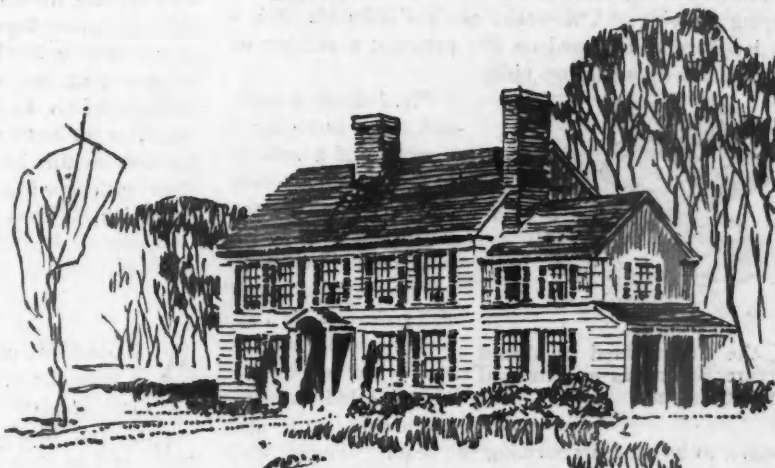
Second Floor Above.  
First Floor Below.**Alteration Three**

The main roof is carried down across the whole front of the house to cover a wide porch. A long dormer is built in the roof which enlarges the front bedrooms and provides them with large closets. The living room is made especially attractive with a long bay window opposite the fireplace arranged with ingle seats. Approximate cost of alterations is \$2,000.

*Next month we will take up the  
OLD COLONIAL COTTAGE*



Floor Plans, Alteration Four.



Front and Right Side View, Alteration Four.

**Alteration Four**

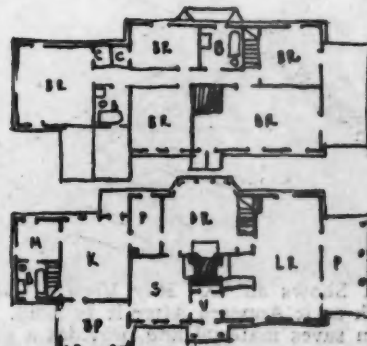
A new wing with chimney is built at the right side of the house containing a study and porch on the first floor and a bedroom above. A new staircase is built, the living room enlarged and two bathrooms provided. Cost, exclusive of plumbing, about \$3,500.

**Alteration Five**

Here a new wing is built at the left containing a kitchen, maid's room and bath; with a large bedroom and bath over. The former kitchen is made the dining room; a breakfast porch and a living porch are also added. Approximate cost, \$4,500.



View of Front and Left Side, Alteration Five.



Floor Plans, Alteration Five.



# 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 going to edit 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.

### Beam-Construction for Sidewalks

A METHOD of building sidewalks with reinforced beams and reinforced top slabs is shown in perspective by the accompanying drawings. The writer can see from his desk a walk that has been constructed on this principle a number of years ago and is without defect today.

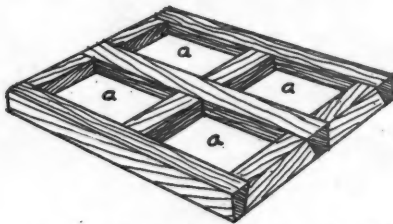


Fig. 2, the Form Used to Mould the Concrete Beams as an Integral Part of the Sidewalk.

Fig. 1 shows a walk, and more particularly a section of a walk in perspective, showing by dotted lines the beams and the thickness of the top slab, both of which must be governed by the amount and kind of traffic the work is to be subjected to. Fig. 2 shows a form, also

in perspective, to be used for forming the beams. The sections marked with the letter a, after the form is set in the position that the beams are to be in, are filled with cinders, which are wetted enough to hold their shape and tamped. When these sections are full, remove the form and set it for another section of walk, again filling the sections with cinders and tamp

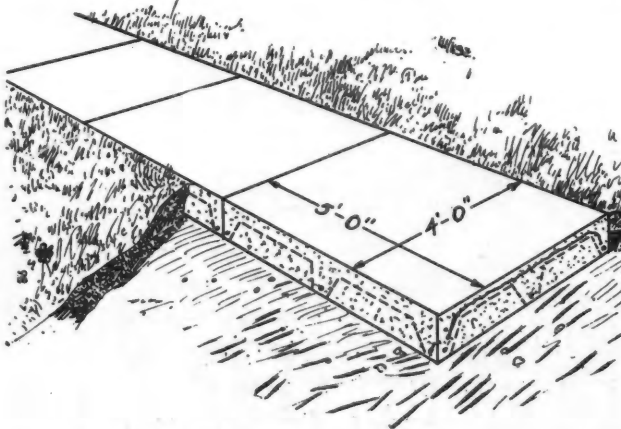


Fig. 1 Shows an "X" Ray View of Beam Construction Sidewalk as it Appears After it Is Laid. Use of this construction saves material and provides a good walk if properly constructed and reinforced.

as before. Repeat this operation until all of the cinders are in place. This done, assuming that the outside forms are set, lay your reinforcing rods for the beams, and also the woven wire fencing for the top slab. The heavy dots on Fig. 1 show the location of the rods—the location of the fencing is shown at the end by the irregular line. An expansion joint should be placed at, say, every other joint. A piece of 6-inch lap siding, set into the joint in such a manner that it can be lifted out after the concrete has had its initial set, is a simply way to provide for this joint. When the board is removed fill up the joint with sawdust or some other material that will permit expansion.

H. H. SIEGLE, Emporia, Kan.



### Auxiliary Heat

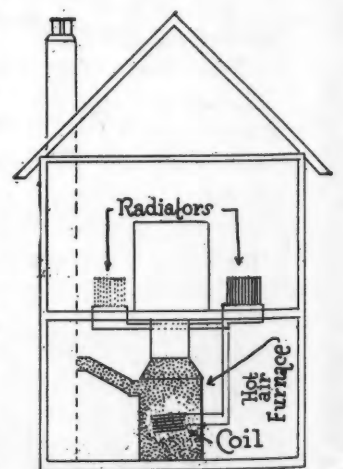
A BUILDER called upon to do some remodeling work in a large home, was faced by this problem:

A heating plant had been put in after the house was built, and to save unnecessary expense, the hot air pipes had been put on the outside of the wall and papered right over. The new owner felt these elongated boxes were undesirable.

In most cases the wall could be cut, the pipes sunk, and lathing and plastering done. But in one case this was impossible, because the pipe was on the outside of a shallow partition back of which a sliding door ran on a track. There seemed no other place to bring heat into that room in an advantageous way.

After figuring on the situation, a small coil was put in the furnace, and a hot water radiator installed which with an auxiliary one in the hall outside this room made this space on the front of the house more comfortable than it had ever been before.

LESTER G. HERBERT, Auburn, N. Y.



An Auxiliary Coil, in a Hot Air Furnace, Connected with Hot Water Radiators Solved a Difficult Heating Problem for One Builder.



### Auxiliary Spring Platform

RECENTLY I was called upon, in connection with the remodeling of a jewelry store, to contract for the temporary removal (and consequent replacement) of all the glass display cases, counters and other fixtures in the store. These had to be taken to a storage room a mile away over streets which were rough, to say the least.

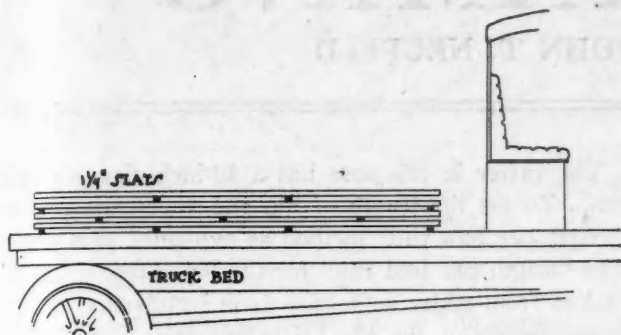


Plate Glass Showcases, Window Glass and Many Other Objects of a Fragile Nature May Be Hauled Safely on a Truck with an Auxiliary Platform Made of 1 by 4 Inch Slats.

Having only a flat truck, equipped with springs which were too strong for this delicate work, I became concerned over the financial risk I assumed in taking the job at all.

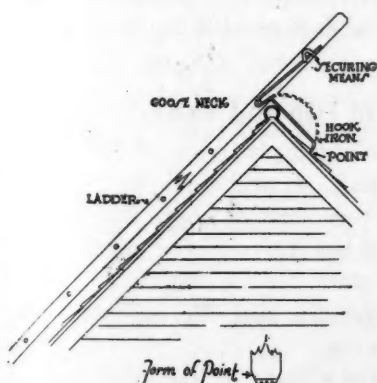
I went ahead, however, and first made an auxiliary spring platform of slats of inch and a quarter material with cross-cleats of the same material in the manner shown in the sketch. The timber used may be of any thickness and width, varying with the nature of the work for which the platform is to be used. The idea is the thing. And the platform accomplished what was expected of it and more in any case. I have found it a valuable aid in some way nearly every day. The platform covers the entire truck bed and is removable and reversible.

BERT W. CULBERTSON, Jackson, Miss.



### Fitting Ladder for Roof Work

FOR adapting an ordinary ladder for roof work, try the form of iron shown. It is shaped from flat steel stock,  $\frac{3}{8}$  inch by 2 inches (or thereabout). The size of the goose-neck should be such as to accommodate the common size of rung, and the length of the shank sufficient to reach well beyond the next higher rung.



The Diagram Illustrates a Handy Attachment to Adapt a Ladder to Roof Work. The device may be detached in a short time when it is not needed.

easily reached, the device is secured in place as indicated. A strong cross-section cut from an old inner tube, applied as shown, serves excellently as a securing means. A light ladder so fitted enables one to reach any point of almost any roof with ease and safety.

LOUIS SCHNEIDER, Clinton, Mo.

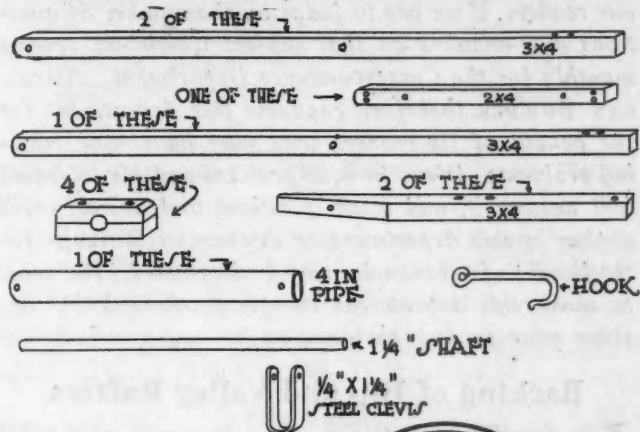
### A Useful Tripod Hoist

FOR heavy lifting such as loading machinery, pulling well pipes, storing farm implements to upper floors and a varied use about the farm, some portable type of hoist has often been desired.

Such a hoist may be constructed with parts as are usually found on a farm and the labor is not great.

Two buggy, hay rake or other wheels of about four feet in diameter are procured, the boxings are removed if too small for a  $1\frac{1}{4}$ -inch shaft, which size they should be placed on. A piece of 4-inch pipe is procured and placed over the hubs of the wheels and fastened by drilling three holes in each end and placing in wood screws if wood hubs are on the wheels and cap screws if the hubs are of metal.

The frame of the tripod is built of 4x4 timbers if the loads are not more than ordinarily found to be lifted about a farm



All of the Materials Needed for the Construction of the Tripod Hoist Are Illustrated Here.



but if for heavy lifts such as two or three tons these pieces should be made of 4x6 timbers. The wheels should be mounted on the shaft so as they will clear the ground by about 12 inches when the tripod is erected for lifting use. The lifting rope is tied to a spoke of one of the wheels when ready for hoisting and the wheels then turned to wind the rope on the windlass. A hook attached to one side of the frame work is placed so as it may be hooked over a spoke to hold the load at any point. When moving the hoist from one job to another the rope is loosened from the wheel, the single leg is folded over on top of the frame and the wheels carry the whole as they are rolled along.—GEORGE G. McVICKERS, North Bend, Neb.



The Tripod Hoist May Be Found Useful in a Number of Ways. This builder has found it valuable in placing an underground tank.

# INSTRUCTIONS IN ROOF FRAMING

LESSON SEVEN—By JOHN T. NEUFELD

**EDITOR'S NOTE:** *The question of correct roof framing seems to be one of perennial interest among our readers, if we are to judge by the number of questions and answers on that subject which are sent in monthly for the Correspondence Department. AMERICAN BUILDER therefore conducts this department for the benefit of its readers who may have roof framing problems. Write in your problem and Mr. Neufeld will answer it, and some questions and answers will appear in this department of AMERICAN BUILDER for the benefit of others who may be interested. We want to make this department the place where YOU can solve your roofing problems.*

## Backing of Hip and Valley Rafters

**I**N the illustration, Fig. 27, a hip roof with gable addition is shown. In this case the rafters have no overhang. This type of roof has been chosen as it is easier to show the backing of the hip and to show the relation between the hip and valley rafters. If these points are understood in this type of roof they will also be understood on other types where the rafters have an overhang.

### Length of Hip and Valley

As will be noted from the plan of the roof, the hip and valley rafters have the same run and the pitch

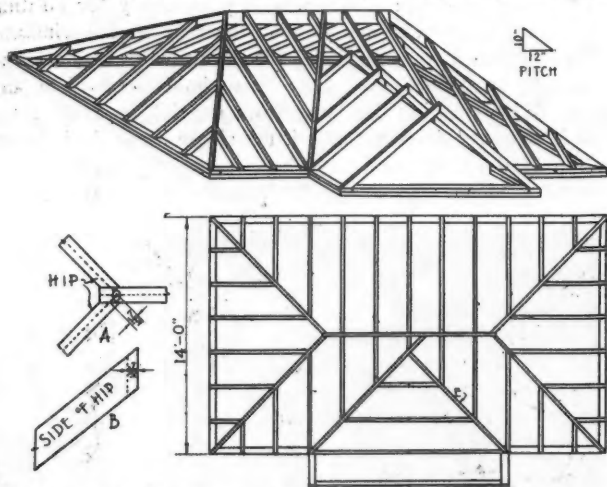


Fig. 27. The Hip Roof with a Gable Addition Considered in This Month's Problem.

being equal, therefore also the same length. Of course, there is a short valley shown at "E" here, which would not have the same total length but it would have the same "length per foot run."

The rafter in this case has a 10-inch rise per foot run. To get the length of hip and valley we use the "length per foot run" method as explained previously. The "length per foot run" for the hip rafter is 19.69" (taken from tables on square or in handbooks). This is the length of the hip rafter for each foot of run of the common rafter.

The building is 14 feet wide. The total run therefore is 7 feet.

The total length of the hip or valley rafter is  $19.69 \times 7 = 137.83$  inches or  $11' 5 \frac{13}{16}"$ .

This must be considered as the distance from the exact corner of the building to the center line of the ridge (or to 0 in the small detail "A," Fig. 27).

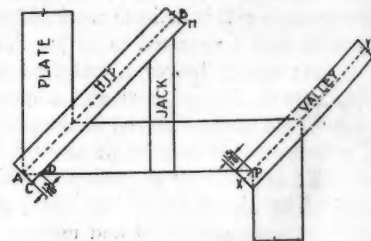


Fig. 29. Plan of Lower Ends of Hip and Valley Rafters.

### Allowance for Ridge Board

The short length to be deducted for the ridge is  $1 \frac{7}{32}"$  on the horizontal if the ridge is  $1 \frac{5}{8}"$ . After we have laid out the top cut for the hip we measure back this length on a horizontal line as shown in "B," Fig. 27. This allowance is the same on the valley as on the hip rafter.

### Backing of Hip and Valley

Fig. 29 shows an enlarged plan view of lower ends of hip and valley rafters. It will be noticed that the center line of hip is shown starting at the exact corner of the building or plate but the corner or edges extend over the edge of the plate.

For the valley rafter it is just the opposite if the rafter is placed as shown.

At "A," Fig. 28, the corner of the plate is indicated. Line CH is the edge of the rafter and we see that it extends over the edge of the plate. As the common or Jack rafters start at the edge of the plate, it is evident that the edge of the hip rafter is too high as shown by the distance from D to E. The rafter must therefore be beveled off or lowered.

The line from D to E shows how much the edge of the rafter has to be beveled off or lowered. The length of this line depends on the pitch of the rafters

The line C to D is a portion of the run and is the same for all pitches as long as the end and side of the roof are of the same pitch. C D is equal to one-half the thickness of the rafter.

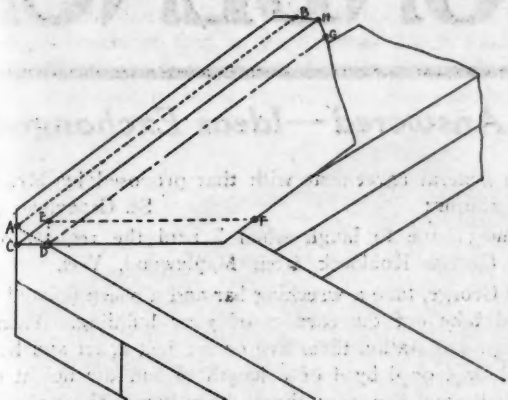


Fig. 28. Detail of Lower End of Hip Rafter.

In Fig. 30 we show one method of finding the amount of backing or beveling. Take the "run of hip rafter" per foot run of common rafter on the blade of the square and the rise of hip per foot run of common on the tongue. This gives us the pitch of the roof. If we now take the small portion that the edge of hip extends over the edge of plate and lay it off on the rafter as shown in Fig. 30 (13/16" in this case

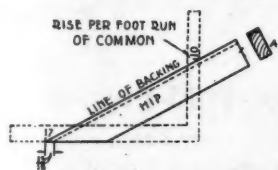


Fig. 30.

Methods of Finding Backing for Hip Rafters.

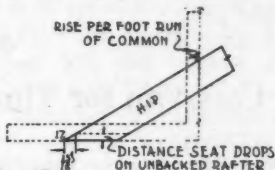


Fig. 31.

and always one-half thickness of the rafter on even-pitched roofs) we get the point which fixes the line of backing. This is the point where the edge of plate and edge of rafter should meet. Bevel the rafter as shown at "A."

The method of beveling the rafter is rarely used as the usual practice is to drop the rafter so that the edges coincide with the edge of plate and common rafters. Fig. 31 shows how the amount of drop is determined.

If the rafter projects over the plate the method remains the same. See Fig. 32.

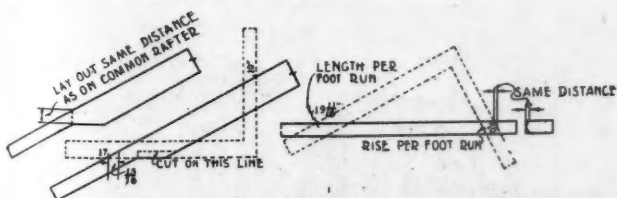


Fig. 32.

Methods of Finding Backing for Hip Rafters.

Another method to find the amount of backing for the hip is shown in Fig. 33. The rule is: Take the length of hip rafter per foot run on the blade and the rise per foot run on the tongue or take the total length of hip on the blade and the total rise on the

tongue. Apply the square to the back of the hip and measure off along the edge of the rafter as shown in Fig. 33.

## Uneven Pitched Roofs

Where the hip rafter does not run at 45 degrees with the plate, that is, where the end and side of the roof are of uneven pitch, then the backing or drop may be found by laying out the plan of the corner and measuring the distance that the edges of the rafter extends over the plate (see Fig. 34). These distances should be substituted for the 13/16" in Figs. 30 or 31

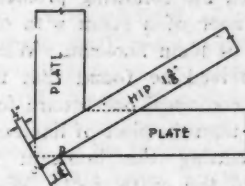


Fig. 34.

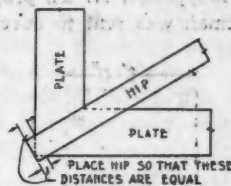


Fig. 35.

Detail of Lower End of Hip Rafter on Uneven Pitched Roof.

If the hip is to be lowered instead of being backed, then the rafter may be set to one side both at the lower end and also at the upper end so that the distances that the two edges extend over the plate edge are made equal. This is shown in Fig. 35.

## The Valley

As already noted, if the edges of the valley are placed to meet the edges of the plate, then the center of the valley is too high and its length also will not fit unless it is moved forward as shown in Fig. 37. The distance to be moved forward is one-half the thickness of the rafter.

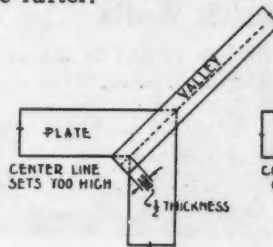


Fig. 36.

Incorrect and Correct Valley Rafter Positions.

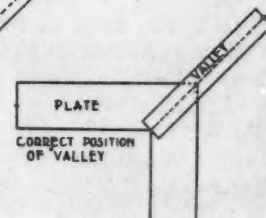


Fig. 37.

If the rafter has a tail as in Fig. 38 then the seat cut must be lengthened as shown. Measure back one-half the thickness of the rafter along the side as in Fig. 37.

Where it is desired to bevel the valley rafter, the depth of beveling is determined the same as for hip rafters (see Fig. 30-33), the only difference being that on the valley the center is taken away in place of the edges (see Fig. 39).

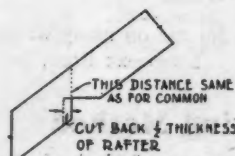


Fig. 38. Lengthening Seat Cut for Rafter.



Fig. 39. Beveling Hip and Valley Rafters.



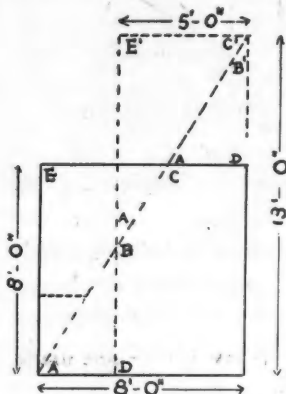


# CORRESPONDENCE

## Questions Answered—Ideas Exchanged

### Where's That Board Stretcher?

IN the June issue of the *AMERICAN BUILDER* Richard Brush, of Hauppauge, N. Y., propounded the following problem: A workman was sent to cover the floor of a room with one



Mr. Bopp Solves the Linoleum Problem, Giving the Size of the Linoleum as 8 by 8 Feet, the Room 5 by 13 Feet, and the Cuts as Shown in the Diagram.

with it?

he arrived he found that the floor contained one square foot more than the piece of linoleum. By cutting the linoleum he gained the extra foot. What was the size of the room, the size of the linoleum and what cuts were made in the piece?

And here is the diagram sent by Theodore Bopp, Jr., Kirkwood, Mo., showing the size of the linoleum as eight feet square, the size of the room as five feet wide and thirteen feet long, and the cuts made. This answer makes 65 square feet out of 64 square feet.

Will the Correspondence Department fans let this answer stand? It looks right, and, if it is wrong, what is the matter

THE EDITOR.

### Wrecking Brick Walls

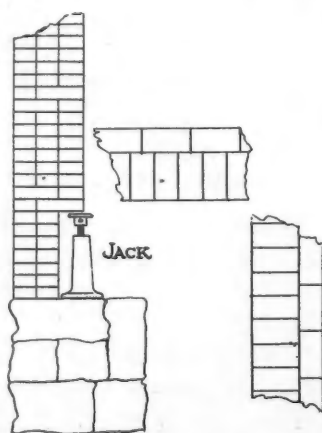
MR. BOPP also sends an efficient answer to the question of George Kohlbeck, Maplewood, Wis., who inquired for a method of wrecking brick walls.

Kirkwood, Mo.

To the Editor:

In answer to George Kohlbeck, Maplewood, Wis., in regard to taking down brick church building.

Commence by shearing or taking away all lumber and leaving the bare walls stand. Take out the corner bricks from top down to the stone foundation, but before doing this cut recesses from eight to ten feet apart in the inside walls large enough to place a jack screw on the foundations as shown in the sketch. After the walls are separated at the corners, jack up the walls and throw them out. This way has worked to success for me on many wrecking jobs.



The Diagram Shows a Successful Method of Wrecking Brick Walls.

THEODORE BOPP, JR.

### Another Wall Wrecking Method

ANOTHER correspondent who has a good deal of good natured fun with Mr. Kohlbeck, as he comes to his assistance, has given a method somewhat different, although

it is in general agreement with that proposed by Mr. Bopp. To the Editor:

St. Genevieve, Mo.

I almost have to laugh when I read the request of our friend, George Kohlbeck from Maplewood, Wis.

Dear George, take a wrecking bar and a sharp pointed crowbar and take out the corners of your building. Then take your men and station them five or six feet apart and let them use a 2 by 4 or 4 by 4 of a length to suit the height of the brick wall—and one, two, three, down comes the wall. Brick walls are very easily pushed over, although they stand up well against wind. Be sure and take the roof of the building first, so nothing but the walls are standing.

When dynamite is used in a brick wall you shoot a hole and leave the wall standing and if you put it under the foundations you will have less results because your dirt is lighter than the walls and explosives go to the place of least resistance. You would have to put it about three and a half or four feet below the ground and then place a stick every two feet to get the results you want and if you have to deal with cement mortar the results are not sure.

F. E. SEIDEL.

### Uses Van for Three-Fold Purpose

To the Editor:

New Braunfels, Texas.

Alfred Herry, general contractor, New Braunfels, Texas, has hit upon the idea of utilizing a large van very advantageously in his work as a builder. This van is constructed upon wheels in such a fashion that it can be easily pulled by a Ford from location to location wherever Mr. Herry is at work. The van serves as a safe place in which to lock tools, nails, glass and other building materials over night. It also serves as an office for the builder, a place where he can set up an emergency desk if need be. But perhaps the greatest advantage of such a van comes from the fact that it is a conspicuous advertisement. Mr. Herry has found that the van has brought him more than one contract, since the large lettering on its sides can be plainly seen from a distance.

A. W. ROE.



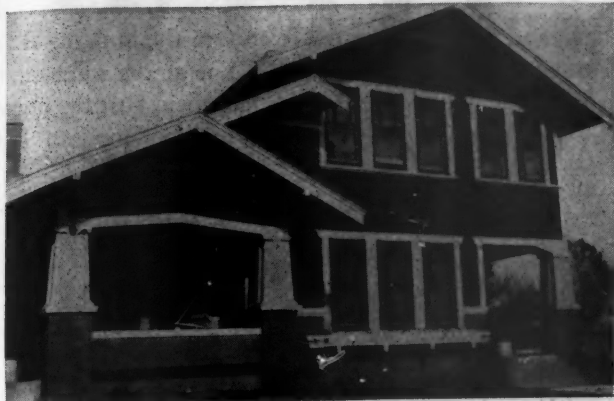
Alf Herry, Texas Builder, Gets Full Service from the Van Shown Above.

## Changes in Framing Methods

To the Editor:

Indianapolis, Ind.

Framing of today is largely laying off spaces 16 inches apart and that is done handily with the 16-inch tongue of our squares and all worked very nicely with our 2-inch body to rank at each side as long as we had full 2-inch lumber, but since our lumber comes dressed there is always that three-eighths of an inch to bother with. To overcome that many



Robert Felsing, Seguin, Texas, Builder, Sends the Above Picture of His Own Home, Recently Constructed, to the Correspondence Department.

use one line and then make a witness mark to show where to set joist or studding, as the case may be. But to make a witness mark all the time takes time and pencil and is more or less confusing as there is no rule for making witness marks so one makes one kind and others make different ones. In olden times many put their witness marks on the outside of the mortise so it would always be on the timber to show, while many of the better mechanics preferred to make theirs so to show where to do the work and, as they said, always cut the witness mark out so when the building is raised the timbers will be perfectly clean from any marks or scratches. So while it is very easy for a few men to understand each other and their marks and get along very nicely though when we are on large work, and that is the kind we are getting more and more; if there is a large gang of men working the witness marks are likely to be much in dispute.

Old time framing of years ago was nearly all done with bigger and heavier tools than the ones we use today. Framing chisels were quite heavy compared to the chisels we use mainly now, and the corner chisel that we seldom see now was the main one in my early days. Adz, broad axe, and many other tools of the earlier days were all of a heavier type than any of ours of today.

The first real work I ever did in framing was to run a



F. L. Lumbert, a Contractor of West Falmouth, Mass., Recently Moved the Large House Shown Here Without Dismantling the Chimney Nor Disturbing the Plaster.

machine, not an auto but a real boring machine, not with gasoline, or electric power but real muscular movement, if you please. Those were great days and how we did enjoy them, much better than we would the same kind of work now.

When I got my first mortise cleaned out with the slick you can bet it was a slick mortise and it was no wonder I was proud. I would almost give my life today to do anything that I would be as proud to think I had accomplished something really worth while.

As we travel over the world today, or those that do not have the time or money to travel, look at the pictures and they will see that buildings all over the world and of all times of human history are very much alike, yet in only part of a century in our own country the manner of construction has greatly changed. Not only are tools and lumber lighter but our day's work is shorter and brighter, yet perhaps our greatest improvement is getting to and from the job.

Great changes in tools and methods in framing the home of today and of years gone by, yet there are many, many other changes of the home of today far greater than that of framing.

Home life today is wonderful, and our great knowledge of building them it is a wonder that we do not know enough to enjoy them even better than we do.



DWIGHT L. STODDARD.

## Simplified Framing Wanted

To the Editor:

Chicago, Ill.

I read with much interest the various articles submitted on roof framing. But—why do they cover so much territory in their explanations? For instance, Mr. Darling's explanation of the methods of finding the length of rafters on a roof of unequal pitch was very good up to finding the length of the



Another Home Erected by Robert Felsing, of Seguin, Texas, Sent to the Correspondence Department as Typical of Texas Residence Construction.

jacks. Then he was like a man who stands beside a spring of pure water and runs to a muddy river to get a drink. He tells you that the length of the common rafter on one side is 15 feet 11 inches, then proceeds to use up some two or three hundred words of complicated language which few carpenters will understand to get a result that can be stated in a dozen words that any one can follow: Viz.: 15 feet 11 inches divided by 4 gives the same answer, 3.97. The length of the main rafter divided by the number of spaces will always give the length of the first jack.

Another point: Why is it necessary to draw a line on the rafter and work to that line when you lay off the plumb cut first? Is not the timber the same length on the back as on the line when you must lay off a plumb cut to get the heel cut anyhow?

L. C. ROYER.



# New Sun Room Modernizes Old Style Home

**Clever Use of New Device Enables Builder to Add Popular Feature to Sturdy Home Erected When Open Porches Were Popular**

**T**HERE are standing in the United States today any number of sturdy homes, built twenty or more years ago, which are as serviceable and as sound as the day they were built. Erected of excellent materials in days when material cost was considerably less than at the present time, and built when the workman's time was less expensive, these homes are standing testimonials to the skill of the craftsmen who built them and to the honesty of the materials used.

But in the great majority of cases, these houses may be known as not of modern construction from even a casual glance at the exterior. The owner may have kept the home in the best repair and may have installed all modern electrical features, but if the home lacks a sun room, it is not modern in the eyes of the public which buys or rents homes. And this is the public which sets the value of a home.

Charles A. Pipenhagen, of Chicago, owned such a

home, and through long experience in the building field appreciated its structural worth, but at the same time realized how much below the replacement cost the home was worth when it lacked the popular modern sun



**The Improved Appearance of the House and Its Increased Value Paid Big Dividends to the Owner Who Utilized the Porch Roof to Cover a Sun Room by Means of the Simple Alteration Pictured Here.**

**Though Sound and Sturdy in Construction, Lack of a Sun Room Marked This Home as One Built Some Years Ago. The manner in which it was modernized is shown below.**

room. And the manner in which Mr. Pipenhagen modernized his home should be a money-making suggestion for every person engaged in construction work and everyone who wishes to modernize an old property.

It was a comparatively simple matter to determine the manner in which the porch, of the variety immensely popular when the home was erected, should be inclosed to make a sun room. But the primary purpose of sun rooms is to admit sun and light, and if the additional space within the home was to serve its purpose, it must admit all of the light and sun possible.

Mr. Paul Frederick Olsen, the architect, who has had a great deal of experience in sun room construction in large apartment buildings,



# JOHNSON'S WOOD DYE

## For Artistically Coloring All Wood

**J**OHNSON'S WOOD DYE is entirely different from the many wood stains and tints on the market. With it inexpensive soft wood such as pine, cypress, fir, birch, etc., may be finished so they are as beautiful and artistic as hardwood. It brings out the beauty of the grain without raising it in the slightest.

Johnson's Wood Dye goes on easily and quickly without a lap or a streak. It dries in four hours and will not rub off or smudge. You will find Johnson's Wood Dye a big help in working out color schemes in stained woods. Johnson's Wood Dye is made in 17 beautiful shades, all of which may be lightened, darkened or intermixed. Full directions on every label.

Johnson's Wood Dye is a *dye* in every sense of the word. It contains no finish whatsoever. Like most first class products, it answers one purpose only—it dyes the wood—the finish must be applied over it. We recommend Johnson's Varnishes or Johnson's Polishing Wax for a finish over Johnson's Wood Dye.

Johnson's Wood Dye always run uniform as to color—there is no variation whatsoever.

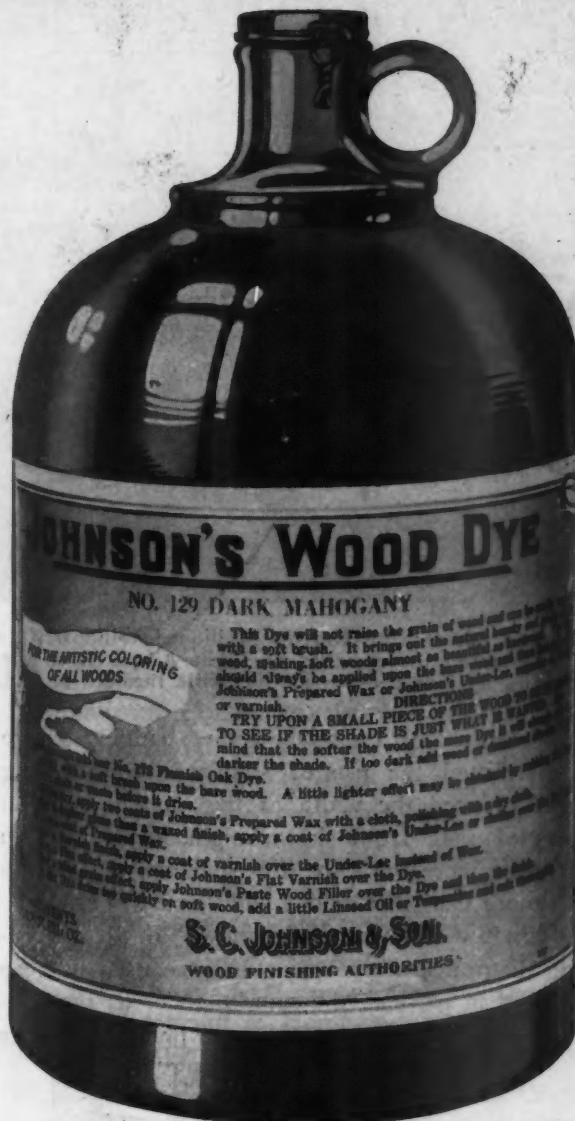
## FREE—25¢ Book on WOOD FINISHING

It's the best book ever published on Artistic Wood Finishing—the work of famous experts—illustrated in color. This book is written for the practical man—it gives covering capacities, includes color charts, etc. We will gladly send it free and postpaid. Use coupon at right.

**S. C. JOHNSON & SON, RACINE, WIS.**

"The Wood Finishing Authorities"

(Canadian Factory—Brantford)



(Penetrating)

S. C. JOHNSON & SON, Dept. A-B 8, RACINE, WIS.

"The Wood Finishing Authorities"

Please send me free and postpaid your authoritative Book on Wood Finishing.

I usually buy Paints and Varnishes from .....

My Name .....

My Address .....

City and State .....



The Sun Parlor, with Narrow Mullioned Windows, Not Only Gave Much Additional Space Within the House, but Greatly Increased the Amount of Light Admitted to the Rooms Behind the Sun Room. The illustration shows the pleasing and modern room made available through remodeling the front of the home.

suggested the use of a special window hanging device which permitted the use of standard double hung sash and reduced the width of the mullion between two sets of sash from six or eight inches to two inches. The increased light thus obtained was equivalent to more than that of one additional window.

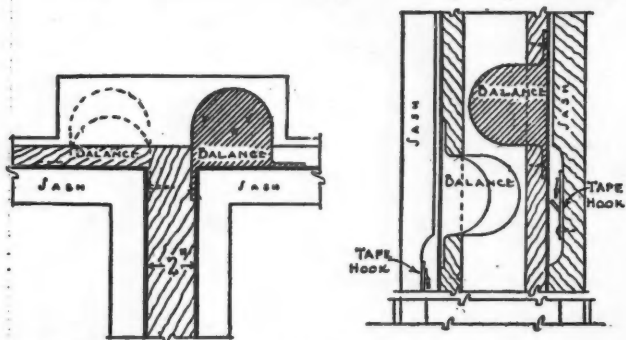
The window balances used, shown in the accompanying diagrams, are a spring balance used to keep the window in place in the same manner as the conventional installation of weights and pulleys. Where

there is no obstruction above the windows the balance may be installed with fair clearance for the steel tapes which run from the balance to the sash, as shown in the diagram of the narrow mullion. Where the balance must be installed within the mullion, they are staggered and take up slightly more room. The balances are guaranteed to give twenty years of service, which is attractive in comparison with the life of a sash cord.

The use of brick in the construction of the sun room gave the Pipenhagen home an appearance of stability and a permanent character which was an improvement over the former front comprising round wooden columns supporting the roof of the porch. It will be noted from the picture of the remodeled home that a brick pillar was used on the corner outside the stairs, corresponding to the brick work in the sun room.

An added advantage of the remodeling was realized from the additional light admitted to the basement through three windows below the sun room.

Readers who wish more detailed information as to this remodeling may write Mr. Pipenhagen, in care of the AMERICAN BUILDER, since he has agreed to give further detail to any of our readers who are interested.



VERTICAL SECTION-NARROW MULLION USING TOP PATTERN BALANCES SECTION THRU MULLION SIDE BALANCES STAGGERED

The Diagrams Show the Two Methods of Installing the Window Balances for Narrow Mullions.



*In the Westover development all residences are of the high character of this brick house.*



FRED H. HAMMOND

FRANK H. HAMMOND

## HAMMOND & HAMMOND

REALTORS

1715 F. &amp; M. BANK BUILDING

FORT WORTH, TEXAS

April 21, 1924

Common Brick Mfg. Association,  
Cleveland, Ohio

Dear Sirs:

Because of the high character of the property in this subdivision, we believed its development would more completely express our ideal and be a more permanent civic asset, as well as a more profitable investment to the purchasers if all homes in this subdivision were restricted to fireproof exterior walls and roofs.

Our success in handling the subdivision to date, convinces us that this requirement has met with hearty approval, and will result to the permanent good of all parties concerned.

Trusting this answers your inquiry, we

are

Very truly yours,

HAMMOND & HAMMOND

BY *Fred H. Hammond*

FHE/LH

### Practical Plans for Attractive Homes

There is a real demand for permanent homes of enduring, fireproof materials.

Any of the 122 attractive brick homes available thru our home planning department will increase the salability of your properties.

Each home has been actually built and lived in. Capable architects designed them. The working drawings, complete in every detail, may be had as low as \$10 per set.

These 122 winners were selected from thousands of homes because they are practical to build, have well arranged interiors and attractive exteriors.

"The Home You Can Afford" shows sixty-two good ones in picture and plan. "Your Next Home" gives you sixty more. Send 20 cents for both booklets (or 10 cents for either one). That gives you 122 economical brick homes from which to choose those best suited to your particular needs.

## Prove That Public Demands Brick Homes

Buyers Welcome Entire Development Restricted to Fireproof Exteriors

Whether you build one or a hundred homes a year, you will be keenly interested in the success with which Hammond & Hammond have *restricted an entire development to homes of fireproof exteriors. Every builder* can profit by this experience proving that—

Home buyers *want* sound, fireproof construction. They *want* walls that require no upkeep—that *improve* in appearance without painting, repair or replacement.

People will *pay a little more* for *permanent* value. Hammond & Hammond have *proved* this beyond question!

Meet this growing demand with homes of Common Brick. Tho the lowest in price of any enduring materials, Common Brick has an informal beauty and distinctive character worthy of the best neighborhoods. It is available everywhere.

In many localities you can build with Common Brick at a cost no greater than for less enduring materials. Write for list of members. Get the *facts*.

THE COMMON BRICK MANUFACTURERS' ASSOCIATION OF AMERICA

2131 Cleveland Discount Building

CLEVELAND, OHIO



# ELECTRIFY ALL BUILDINGS

A Department of Up-to-date Information  
for all who Plan and Build

## Child Will Win \$15,000 Home

Modern Electric Home Will Be Awarded to Schoolchild Adjudged Winner of Essay Contest Fostered by Lighting Educational Committee

“AND a little child shall lead them” is a Biblical quotation which has been used to express many things, but in the not far distant future it will mean that some bright schoolchild in the United States will lead its parents into a new and most desirable \$15,000 home and say:

“This is the home which I won for our family without cost.”

For the schoolchild who ranks highest in the contest among the 24,000,000 school children in the United States and Canada in the contest to be conducted by the Lighting Educational Committee, 680



This \$15,000 Modern Electrical Home Will Be Presented to the Bright Schoolchild Who Wins the Essay Contest Fostered by the Lighting Educational Committee. The house was designed by James Renwick Thompson and Francis Keally, winners of the \$1,500 contest for the best plans for the contest home. See page 134 for arrangement.



Excavation work on the Equitable Society Building opposite Hotel Pennsylvania, New York City.

Traveling concrete mixing plant on foundation work at Valhalla, N. Y. Operated by G-E Motor.

Hoist and derrick equipment driven by G-E Motor, used on construction of Equitable Building, lower Broadway, New York City.

# Foundations

"Speed, speed and *more speed*" is the insistent demand of contractors on excavation and foundation work. Contracts must be completed on time—sooner, if possible—for the builders of the superstructure must not be held up.

Speed, speed and *more speed* is the consistent answer of the equipment operated by G-E Motors and Control. Many of the most important excavation and foundation jobs are done by machinery operated with General Electric equipment.

Today the foremost contracting organizations use G-E Motors for driving air compressors that run rock drills or furnish compressed air to caissons. They use General Electric equipment to operate power-shovels, hoists, derricks, pumps, screens, mixers, conveyors, cranes, tramways and crushers, also G-E Floodlights for night work—in excavation, and building of foundations.



**General Electric Company**  
Schenectady, N. Y.  
Sales Offices in all Large Cities

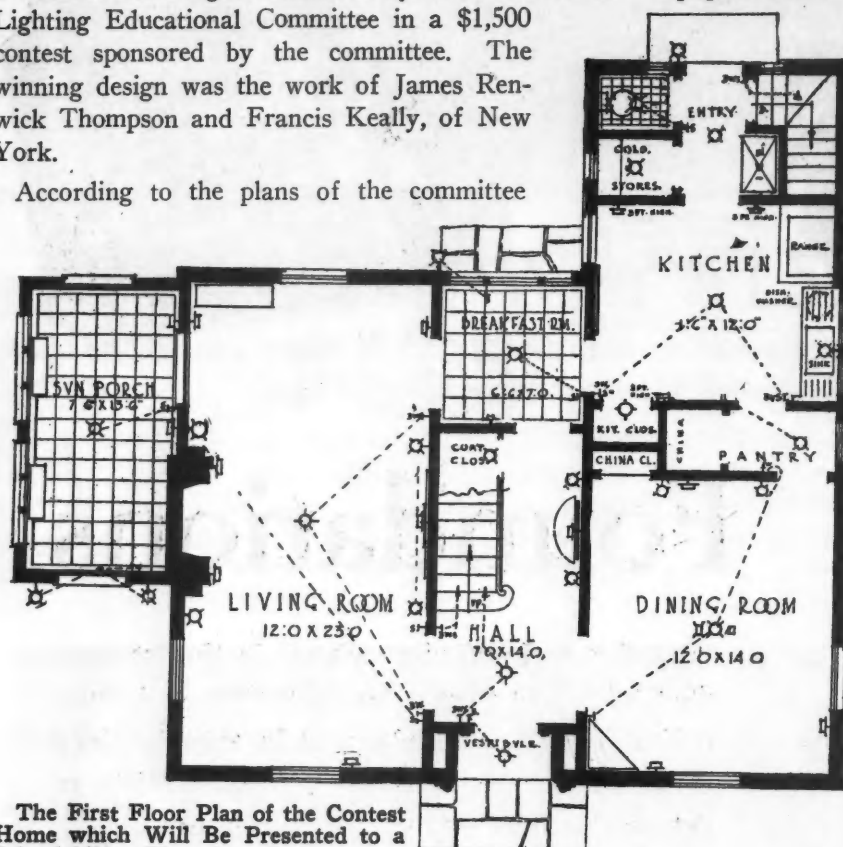
# GENERAL ELECTRIC

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Fifth Avenue, New York, will be presented with a \$15,000 home, designed to represent the best in American home construction and equipped with the most modern household conveniences with special emphasis on the electrical equipment.

The home, shown in this article, was chosen from a number of designs submitted by architects to the Lighting Educational Committee in a \$1,500 contest sponsored by the committee. The winning design was the work of James Renwick Thompson and Francis Keally, of New York.

According to the plans of the committee



The First Floor Plan of the Contest Home which Will Be Presented to a Schoolchild. The plan of the rooms is simple and highly efficient.

in charge of the essay contest, the electrical groups in each city of the United States and Canada are to conduct contests among the school children in their city for better lighting in the home. The campaign has been indorsed by national educational organizations and includes in its plans the distribution of lighting primers to the school children and the publication of lighting lessons in 1,200 newspapers.

The children enter the contest by studying the primer and the newspaper lessons and inspecting the lighting of their own and their neighbors' homes. From the information they gain from these sources they will paste what they think are the correct lighting fixtures in pictures of rooms of the model house shown in the primer and write an essay on the best way to light their own homes and those of two neighbors.

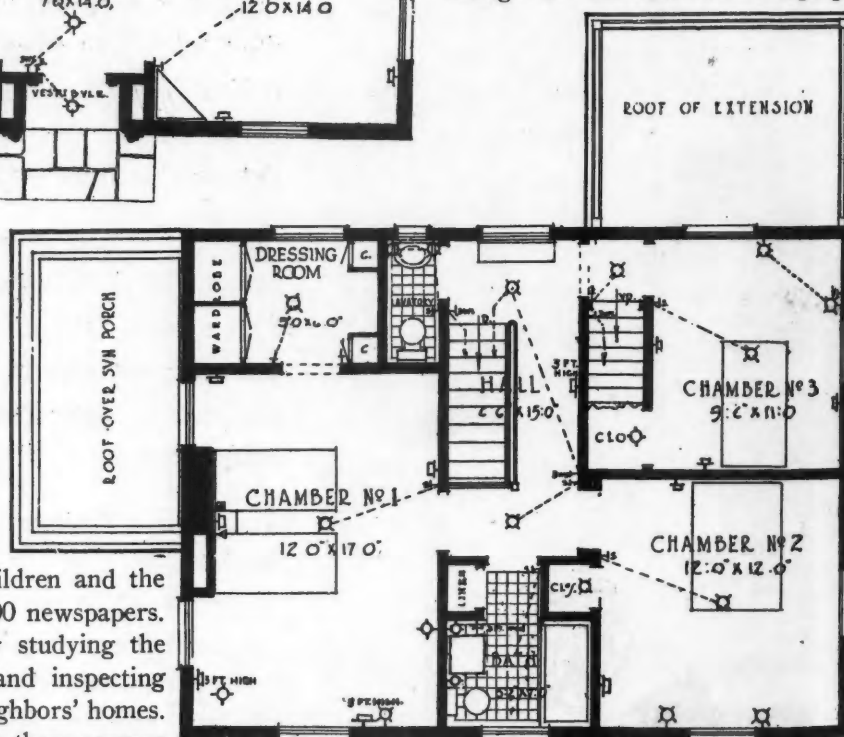
The pasted primer and the essay will be submitted to judges in their own towns and local prizes will be given to a number of the best plans. The winners from all of the communities in the United States and

Canada will have their plans entered in the national contest. The first prize will be the \$15,000 model home and a number of other prizes of scholarships will be given.

And so, it is expected, the opening of school this fall will see a vast increase in the interest in lighting equipment on the part of the millions of school children who will be brought into direct contact with the contest through the school rooms, the newspapers and other agencies. And it is not too much to believe that many of the parents will find time to assist their children in understanding what will be required in the essays as finally submitted.

And each child who enters the contest will gain a valuable knowledge of what constitutes proper lighting, according to the plans of those in charge of the contest, while the widespread interest such a contest is sure to arouse will be reflected in increased activity in the electrical industry.

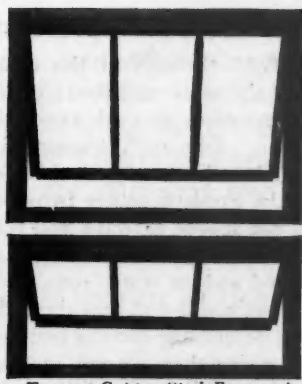
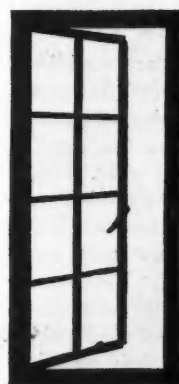
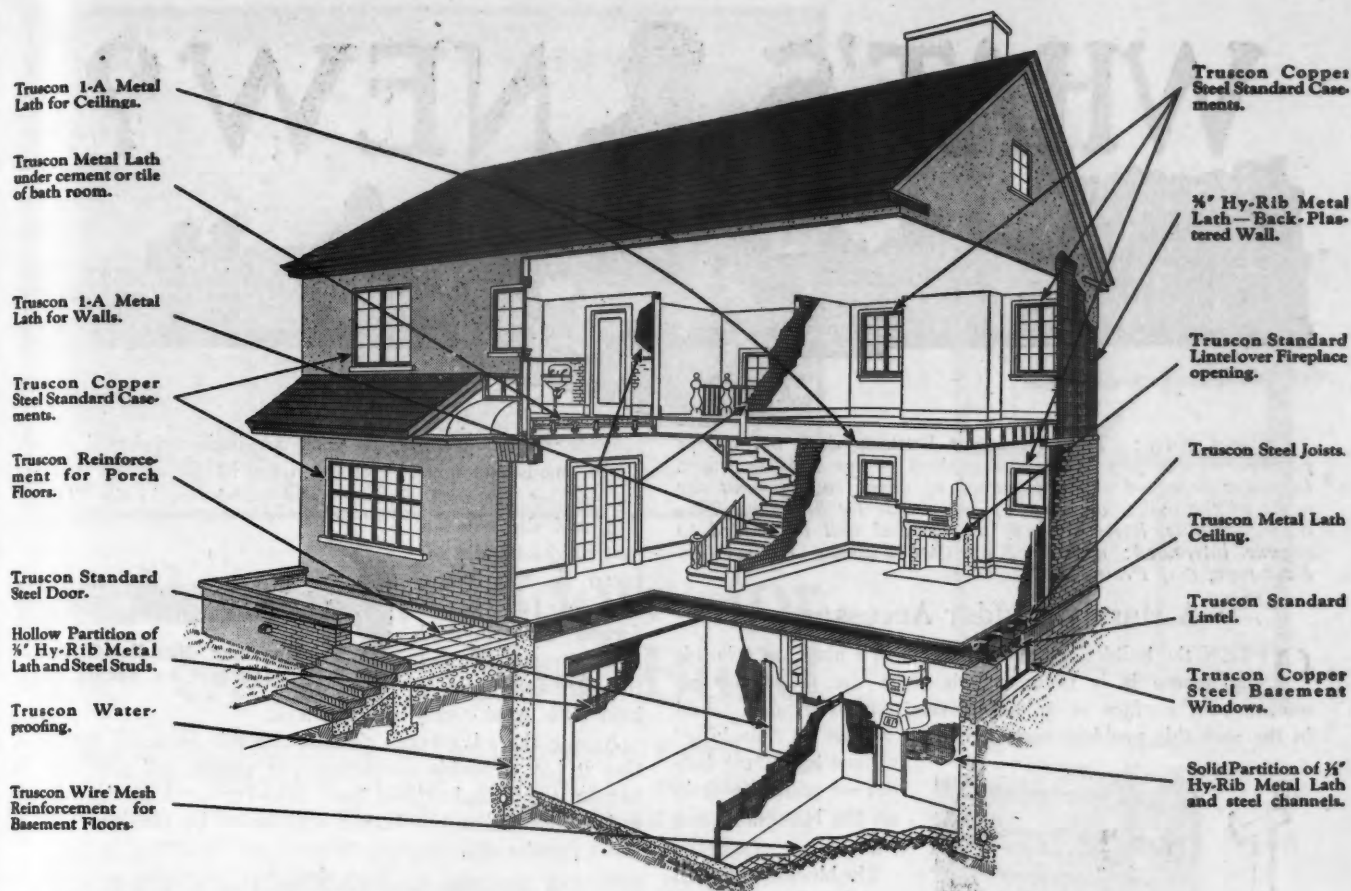
It is hoped by the group in charge of the national campaign



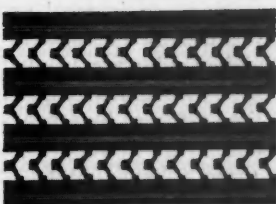
The Second Floor Plan of the Contest Home. Plans show the places where lights are to be installed and the contestants must select the proper units for the places shown as part of the contest requirements.

that one of the model homes will be built in many of the communities where the children enter the contest, and a number of groups of electrical interests have signified their intention of doing this.

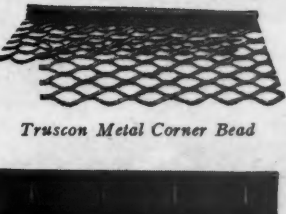




Truscon Copper Steel Basement Windows—shown in two sizes



Truscon Hy-Rib Metal Lath



Truscon Metal Corner Bead

Truscon Copper Steel Casements—in three sizes.

Truscon Copper Steel Standard Lintel

## The Key to Better Home Construction

The sketch above shows you at a glance the features which make for better homes.

In building a home the first and most important thing is the right kind of an ideal to work toward—and that ideal should be first of all, high quality material.

Truscon Home Building Products give a better constructed, longer lasting home. Truscon manufacturing facilities have placed these within the reach of practically all builders, with a result that due to quantity production the highest class products can now be secured at minimum cost.

The Home Builder's Encyclopedia contains hundreds of useful facts that every home builder should know. Write for this free book.

**TRUSCON STEEL CO., Youngstown, Ohio**

*Warehouses and Offices from Pacific to Atlantic.  
For addresses see phone books of principal cities.  
Walkerville, Ont. Foreign Div.: New York.*

# TRUSCON HOME BUILDING PRODUCTS



**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.*

### A Handy Ladder Accessory

**O**FTEN the builder is required to get at a place on a building where it is necessary to place the ladder on an uneven roof surface or an uneven spot of ground. And in the past this problem usually had to be met by "blocking"



Extension Adapts Ladder to Use on Uneven Surfaces. Inset shows details of construction.

up one leg of the ladder or nailing a strip on the bottom of one leg.

The blocking method certainly is rather dangerous and unsatisfactory and the nailing of a strip on the ladder is not conducive to good for the ladder and has nothing of a workmanlike nature to commend it.

Now a simple and competent solution is offered to the builder in the form of an extension which can be applied to the ladder in a very few moments and can be adjusted to any length up to 15 inches. The ladder may be applied

to either the right or left hand leg of the ladder. The device is very simple, simply a metal extension formed as shown and secured to the ladder with two set screws which hold firmly at the desired height. It takes only a few seconds to apply or remove the adjustable ladder leg.



### Unbreakable Tool Handles

**B**REAKING the handle of a favorite hammer or broad hatchet is a minor tragedy in the life of any good workman who comes to love his tools through long use. And just such accidents are made impossible by a new line of tools now on the market, according to the manufacturers, who back their claim by guaranteeing their products against breaking or loosening handles forever, with the

promise of replacement if such an incident should occur.

The heads and metal sections of the handle of the hammer and hatchet are made in one piece, as shown in the illustration, and the wooden part of the handle secured to this piece. The metal is of forged, oil-tempered steel throughout and the hardwood grip is held with solid rivets and washers.



A Hammer Handle Guaranteed Not to Break.

Among the advantages claimed for this form of hatchet is that it has a double usefulness for prying and pulling; the handle is thin back of the head, allowing work in close places and the fact that the handle will never be too long or too short for the eye.



### Special Transmission for Fords

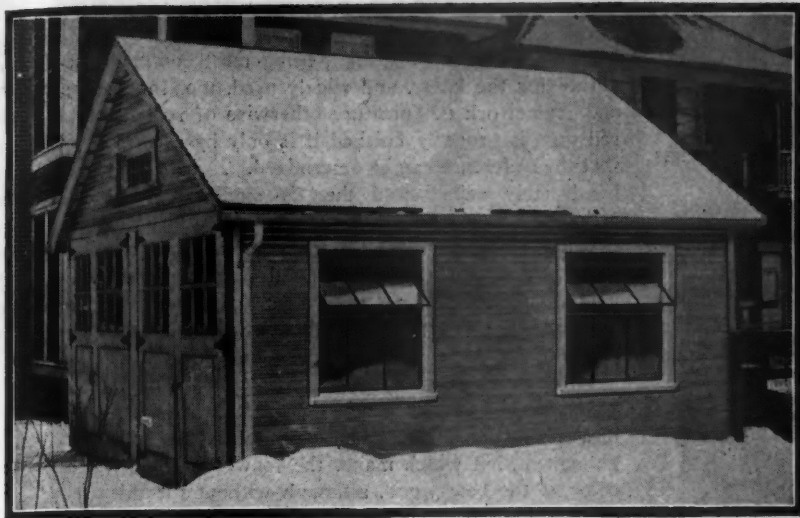
**B**UILDERS throughout the country are rapidly recognizing the wide usefulness of the Ford Truck to their particular purposes through the installation of an auxiliary transmission. One such transmission on the market is a sturdily built selective type, three-speed gear, which supplements the Ford planetary two-speed transmission, giving the truck six speeds forward and three reverse. This gives the Ford Truck both two-ton capacity and pace where the going is good and on return runs unloaded. Builders who are using this equipment find that the wide range of speeds makes the truck a dependable two-ton unit under all road and weather conditions giving them a truck that hauls their materials over hard roads at a thirty-mile clip and through axle-deep mud or unbroken fields with unfailing power.

A new product, an internal expanding toggle brake, recently announced by the makers of the transmission, will interest builders who are using the transmission-equipped Ford trucks. This brake is of the highly efficient internal wrapping type actuated by a floating toggle which transmits a tremendous pressure to the drums by a slight pressure from the driver's hands, stopping the truck as effectively as the transmission rolls it.



Ford Truck with Special Equipment Hauls Immense Loads of Lumber and Makes Rapid Return Trips.





## A Better Window for the Garages You Build

The utility window, a new and improved Fenestra product, provides all the advantages of steel window construction—more light, more air, better fire protection, easy operation—and, in addition, it is especially adapted to use in private garages.

This window is 3' 4½" wide by 3' 7½" high with ½" extra outside these dimensions for anchorage in the wall. The ventilator is 22" high, accommodates three lights of 12 x 20 glass and is pivoted 2" above center. The stay bar permits 20, 40 or 60 degree openings and 50% ventilation and neither ventilator nor stay projects far enough to be in the way.

The cam handle locking device locks the window automatically, as it closes.

Like all Fenestra Windows, this new window can be easily and economically installed in any type of construction—brick, wood, concrete block, poured concrete, tile or field stone.

Whatever type of small building you build—garages, farm buildings, shops, laundries or similar buildings—this new Fenestra Window will help you deliver a more usable, permanent and attractive job at little if any greater cost.

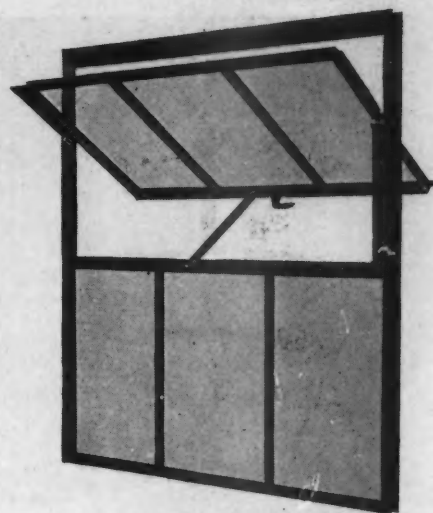
*For sale exclusively through dealers.*

DETROIT STEEL PRODUCTS COMPANY  
U-2260 East Grand Boulevard, Detroit, Mich.

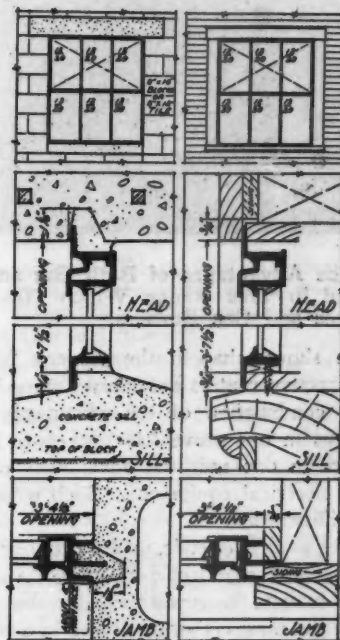
# Fenestra

## UTILITY WINDOW

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



The New Fenestra  
Utility Window



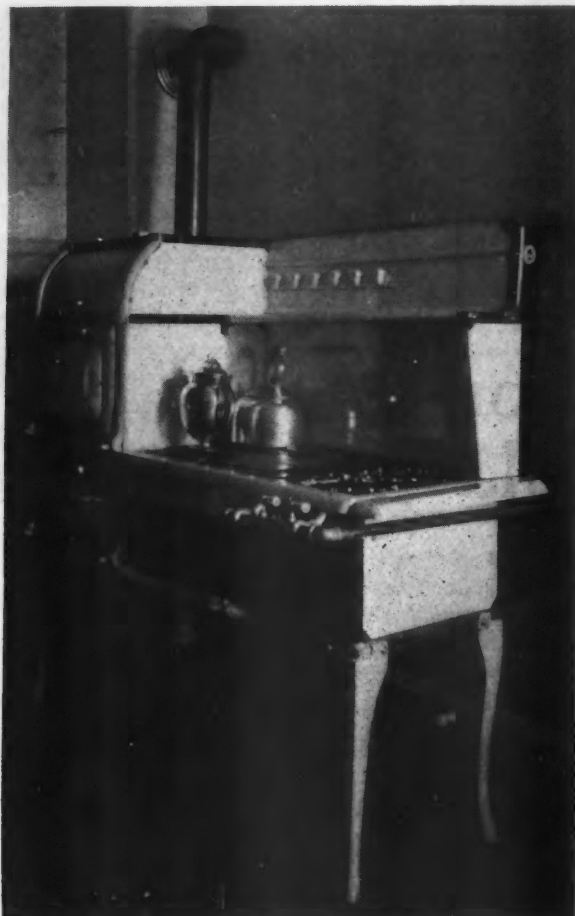
Installation drawings of the new utility window are shown above, the left hand column showing installation in concrete block, the right hand column in wood. Note particularly that in concrete block construction the window dimensions exactly fit an opening 2½ blocks wide by 6 blocks high including a concrete sill.

The jamb details at the bottom show the projecting fin flanked by inside and outside guides which assist the mason in laying up the wall and preclude the possibility of the mason's fouling the ventilator.



### A Combination Range

**B**UILDERS of modern apartments are ever on the alert to find and adopt for their buildings any devices which will save valuable room space and add to the convenience of the apartments and the comfort of the tenants, since it has



**The Advantages of Both Gas and Electricity Are Combined in This Range Which Has an Electric Oven and Plates and Gas Burners.**

been shown that in the modern "efficiency" apartment, the prospective renters are swayed very largely by the equipment.

A combination of the advantages of the gas and electric ranges in one stove has proven to be a happy one, since it offers in one unit the advantages of the latest type of gas and electrical equipment. Such a range is the one shown in the illustration.

The oven is electric, as are the four burners nearest the oven, while at the extreme right are two gas burners. Such a combination, it is claimed by the manufacturer, will cook even the most elaborate dinner in a remarkably short time.

The builder who does not wish to take a chance will find a certain answer to the problem of whether to install gas or electric cooking equipment in this range, which is now available.



### A Valuable Finishing Wood Substitute

**I**NCREASING cost of mahogany, walnut and other hardwoods suitable for cabinet work and high class interior trim as well as the more acute scarcity of such woods has caused a demand for a cheaper substitute which will serve the same purpose as those for which these woods long have been used.

The wood known variously as sweet gum and red gum, with the rather impressive botanical name of Liquidamber Styraciflua, has been considered ideal for this purpose. Of it a government bulletin says:

"The natural color of the wood, the heartwood, is itself

attractive, but takes stain so well that it is often used to imitate mahogany or walnut, being most commonly used substitute for the latter, and widely used, too, for the legs, posts and framework of furniture otherwise of real walnut. When red gum is properly finished it is only by careful examination that the difference can be determined. . . . Red gum is often handsomely veined and then is similar to true Circassian walnut."

While the wood has all of these advantages, a millman who made a study of the wood found that the color which gave it its distinction was not permanent and when exposed to wear of usage the heartwood gradually would lose its grain and much of its color if left in the natural state.

Through a series of experiments covering a long period of years, he has perfected a process of "kiln curing" or seasoning of the wood which not only makes the color and grain permanent, but which makes the sapwood of the tree the same color as the heartwood, although without the distinctive grain of the latter.

The process is a natural one in that the natural gum content of the tree, to which it owes its color, is made to penetrate the entire wood structure, giving the wood a darker, richer color tone and one which will not dry out. It has been found that the color produced in this manner is permanent, with a tendency to grow darker with age as is the case with mahogany.

The value of a wood in which the color runs through undoubtedly is much greater than on one where a superficial stain must be depended on to produce the darker effects sought. And with this product, its utility is increased greatly by the fact that the cost is approximately half of that of the woods for which it substitutes.

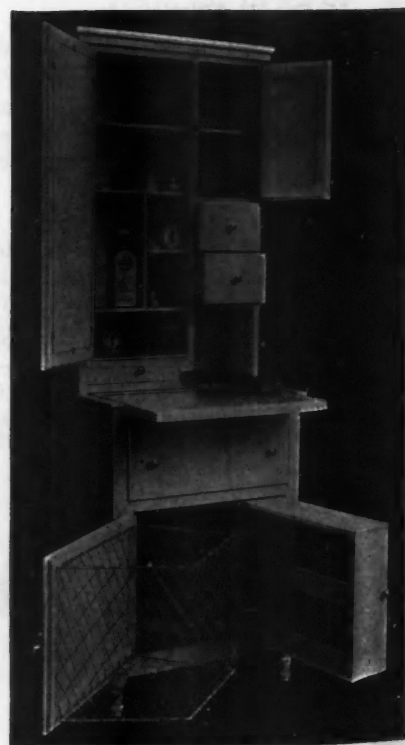
The treated gum wood is now in production and can be obtained by architects, builders and others interested. It is planned to expand the plant when demand for the wood justifies the growth.



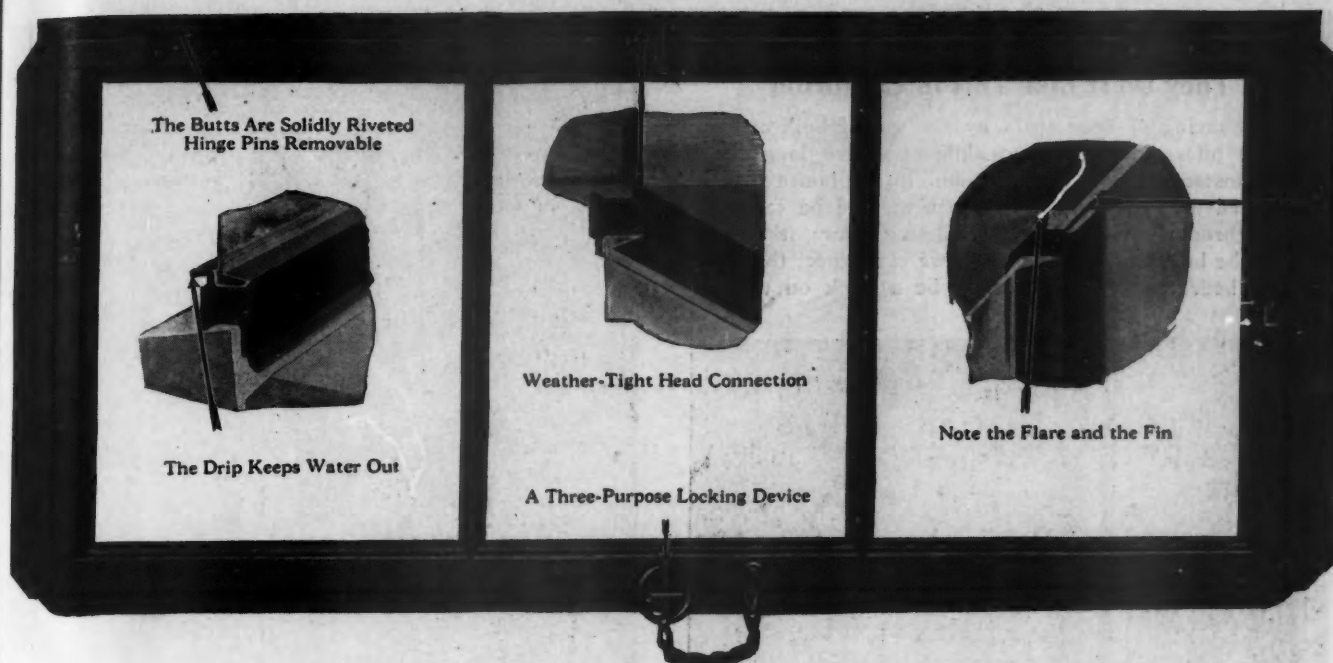
### A Handy Secret Compartment

**M**ANUFACTURERS of bathroom cabinets are constantly improving their products in order more perfectly to fill the requirements of the modern family. A new feature has

been added to the full length bathroom cabinet by one manufacturer, which consists of a secret compartment back of the wire clothes basket at the bottom. This compartment is shown opened out in the cut. When closed, it presents a flush wall appearance similar to the back of the cabinet and cannot be detected by the uninitiated. It is a splendid place in which to keep poisonous antiseptics or toilet goods of an intimate nature. To close it up, it is pushed straight back a few inches on a smoothly working slide and then shut like a gate against the back of the cabinet.



**A Hidden Compartment for Antiseptics and Other Articles Is Provided in This Bathroom Cabinet.**



# And Now a Still Better Fenestra Basement Window

—new, improved, with 25 important advantages that help you sell the houses you build.

It is the greatest improvement since steel replaced the old-fashioned wood window in the basements of modern homes. Yet its cost is little if any more than the cost of a wood window.

Fenestra Basement Windows, besides admitting more light and air, add attractiveness to both the interior and exterior of a home, and provide absolute protection against rain and storm. Being made of steel, these windows cannot warp or stick, they cannot rot or break, and they are fire-resistant and a barrier against intruders.

Fenestra Basement Windows come completely assembled, ready for immediate use. All sash are interchangeable, and the frames can be installed while glazing is being done.

Home owners everywhere are demanding brighter, more airy, more useful basements and builders are meeting this demand with the new Fenestra Basement Windows. Let us send you the name of a dealer in your locality who can show you these windows and quote prices.

## It Has These Distinctive Advantages

1. Made of solid steel with jams and sill in one piece. Corners are true right angles, rigid against distortion.
2. Double contact weathering at all points makes it absolutely storm-tight.
3. Anchors solidly in the wall by means of the special Fenestra fin which also insures air and water-tight weathering between sash and masonry.
4. Provides guides for the mason in laying up both inside and outside walls.
5. Glazing is done from the inside and glazing clips are not necessary.
6. All sash are interchangeable and easily removed.
7. Has the exclusive Fenestra self-centering lock which draws sash and frame tightly together, secures the window when closed, and furnishes a convenient means of holding it open.

DETROIT STEEL PRODUCTS COMPANY, B-2260 E. Grand Boulevard, DETROIT, MICH.

# Fenestra

## BASEMENT WINDOWS

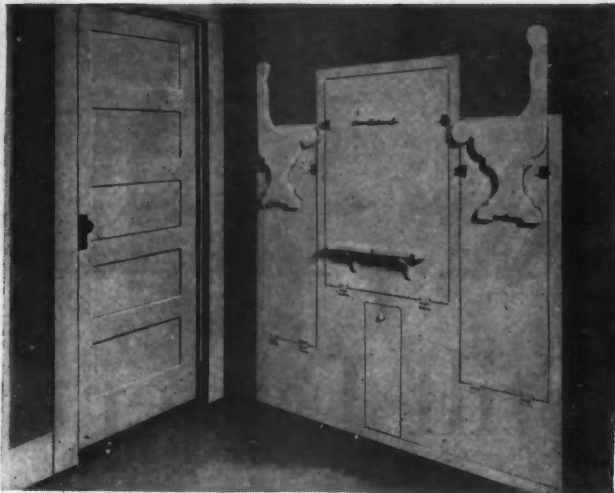


WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



### A Fold-Away Pullman Nook They Do It Like This in California

**T**HE saving of floor space by the use of built-in furniture offers interesting possibilities. How long will it be, for instance, before we can come into the house at night, be picked up by a trolley arrangement, and be carried to the bathroom, the kitchen, the dining room, the living room, the bedroom? Like as not, we can expect the space-saving bedroom of the future to be a hook on the hall,

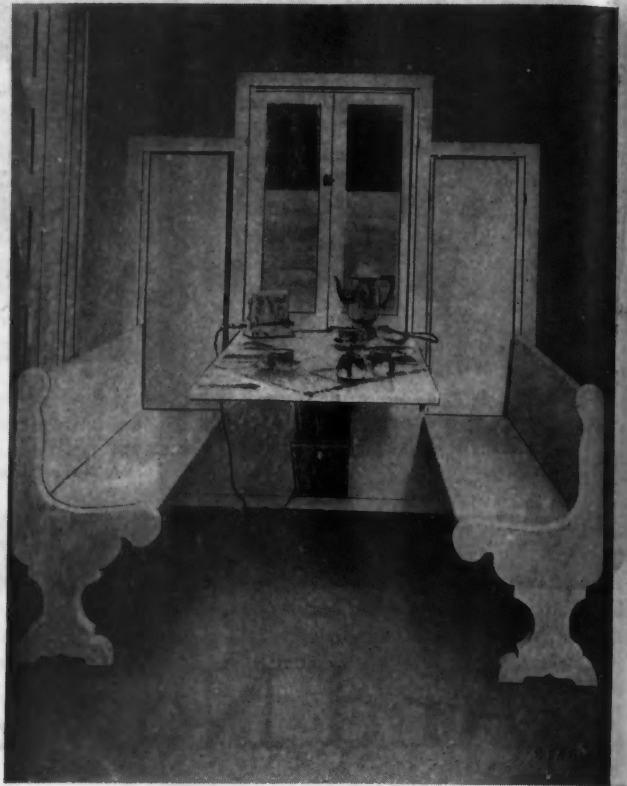


Looks Like a Cupboard Built Into the Wall, Doesn't It? But it isn't, as you will see below.

whereon we will sleep suspended the night through in a specially made gunnysack, equipped with body harness.

Here is one phase of the built-in, space-saver idea. It came from California, where they are always trying out something. You look at the first illustration, and see a white enamel cupboard affair against the wall. Looks retiring and unassuming enough, but in comes Mrs. Housewife, reaches for the pull button, and down comes the settle chair like McGinty. Down comes the table, too, with its prop coming from below, and there is a nice little working unit to help one get the dinner vegetables out of the way.

The next transformation comes when the other settle chairs is let down. We then have a complete Pullman breakfast nook, with the sunlight shining in on the table; its toaster, grill and percolator electrically operated. All the



Well, Well, WELL! Surely a very good Breakfast nook, and all set to make someone a very nice breakfast.

comforts of a great big dining room here, one may say, without the inconvenience.

The meal over, the dining board is let go back into place. The ironing board is drawn out, and the housework goes on, with Mrs. Housewife finishing up the ironing of the weekly wash. We would like to see one of the settles high-seated enough to permit her to sit down at this task; also, we don't like the way the window light gets shut off when only the ironing board is used. But isn't that just like a man, never satisfied? Maybe one could build a porthole window into the table, and feel abroad at home.

At any rate, these conveniences, with their room-saving possibilities, offer an excellent opportunity to the builders of apartments and also to the builder of small homes, where the designer often forgets that many conveniences of this type may be built in with little additional cost.



Part of the Built-In Convenience Dropped Down to Make a Work Table for the Kitchen Tasks.

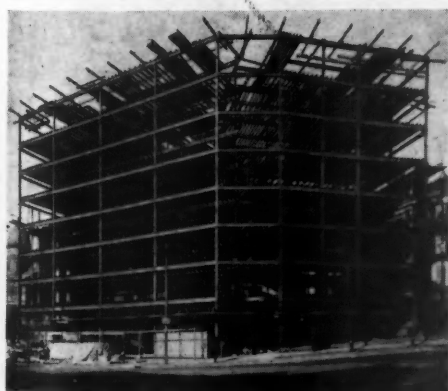


Table Back in Place and Ironing Board Pressed Into Service.





*Berloy Metal Lumber in eleven floors and roof of Renkert Building, Canton, O.  
Architects Walker and Weeks, Cleveland, O. Contractors, Conley Construction Co.*



### Erected in Two Weeks

In the apartment house at Clinton Ave. and High Street, Newark, N. J. eight floors and roof. 90,000 square feet of Metal Lumber floor construction were installed complete ready for the finish flooring in two weeks time. Contractor and workmen had had no previous experience with Metal Lumber.

Architects: Backoff, Cook & Jones. Builders: Henry Kruvant and Co.

## Ask any contractor

Ask any contractor who has ever installed Metal Lumber fireproof construction. He'll tell you that the material goes into place easily and rapidly. He'll tell you that it's easy to handle and practically fool-proof; that the numbered sections marked to correspond with erection drawings make erection easy.

Metal Lumber is uniformly strong and free from imperfections. Every section will always carry its full rated load and more.

Architects who have once used Berloy Metal Lumber specify it again and again. Contractors like to install it. It saves a lot of time over ordinary fireproof construction. Have you received your copy of our new bulletin L-3? If not, ask nearest Berger office for it at once.

## The Berger Manufacturing Co.

Canton, O., Boston, New York, Philadelphia, Chicago,  
St. Louis, Kansas City, Minneapolis, San Francisco,  
Los Angeles, Dallas, Roanoke, Jacksonville

# BERLOY METAL LUMBER

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

# ELECTRIFY ALL BUILDINGS

A Department of Up-to-date Information  
for all who Plan and Build

## Efficient Small Home Wiring

Money Spent for Electrical Equipment Should Be Proportionate to  
Other Costs and Adequate to Insure Comfort

**I**N planning the wiring for any house there are certain specific needs that must be considered. The rooms must look as attractive as possible. The outlets for appliances and switches for lights should be conveniently located, and the lighting plan must furnish ample illumination of a good quality to insure comfort. Poorly planned illumination may cause great discomfort. There should be no scowls and squints because the light is glaring, no strained eyes because there is insufficient light, and no groping in dark halls.

The lighting of a small and modest home is, more than any other, influenced by dollars and cents. The

money spent for wiring should be adequate to insure comfort and so that the wiring will be an asset in selling it. Even the person who builds a house for his own use must consider its possible market value if circumstances make it advisable or necessary to sell. With an eye to this item of salability, enough permanent lighting fixtures should be provided to furnish each room in the house with general illumination. Although the table and floor lamp is playing an ever more important part in the lighting of the average home, it is frequently regarded as part of the furnishings and decorations which may be acquired at any time. This means that prior to the period of pur-



Nowhere Is Proper Wiring More Important Than in Small But Attractive Homes Like the One Shown Here. Full details of proper wiring for this bungalow will be found on page 144.



# Radford Land Organization

*Brings Buyer and Seller Together*

## Here Are a Few of Our Wonderful Propositions

**GEORGIA FARM OF 4,000 ACRES.** Water power; running stream; tenant houses; all in fine condition. Good roads; one mile to railroad; 20,000 bearing peach trees. File No. 1101.

### A Farm

Farm lands have recovered from their post-war inflation. Farm lands can now be secured at a price that will enable owners to reap a comfortable return on their investment. Deflation and other circumstances over which land owners had no control have forced some to sell—forced sales in the settlement of estates have created some wonderful bargains in farm lands. The wise investor puts his money in land. It is the safest investment on earth. Now is the time to secure that farm that you have been wanting. **RADFORD LAND ORGANIZATION** is in a position to put you in touch with land bargains. Farms of every description, grain, dairy, poultry, garden truck, or fruit farms all may be secured now at a price that insures stable returns.

**FLORIDA ORCHARD FARM.** 33 acres; 250 bearing orange trees; 4½ acres in pecans. Fruits of all kinds. Good home and buildings. File No. 1307.

### A Ranch

Land peculiarly suited to livestock raising is available in many sections. Many of these ranches are being offered for sale at prices that will bring a handsome return. Fruit ranches make a most attractive proposition. They combine high returns with the most desirable of country homes. Foremost judges of these two types of ranches are members of **RADFORD LAND ORGANIZATION**. These men offer a type of service that cannot be found elsewhere. Their services and knowledge are available through the **RADFORD LAND ORGANIZATION**.

**LARGE SOUTH CAROLINA FRUIT FARM.** Several thousand acres. Hundreds of acres of peaches, grapes and dewberries. Hard surface road and railroad shipping point. Unusually low price. File No. 1602.

**336 ACRES IN SOUTH DAKOTA.** 250 acres under plow; 25 in hay; balance pasture. 74 milk cows and 30 head young stock. 8,000 bushel granary; good well and windmill. File No. 2104.

**WELL LOCATED OHIO FARM.** 123 acres near town and school on hard road. Two houses 10 and 6 rooms, barn, etc. Maple grove. Can obtain \$10,000 Federal farm loan on property. File No. 1405.

**BIG NEBRASKA FARM.** 1,040 acres, 660 under cultivation. 150 in alfalfa; 120 in clover; 320 in corn. 1,000 rods of hog tight fencing. Near school and church. File No. 1010.

**VIRGINIA BLUE GRASS FARM.** 1,180 acres in blue grass; ideal place for stock raising. Good buildings and improvements. A real buy. File No. 4212.

**2,080 ACRES IN NEBRASKA.** All under fence. Best grass land in Western Nebraska. All in pasture. Cattle country. File No. 2206.

**HIGHLY IMPROVED NEW YORK FARM.** 140 acre homestead; in same family four generations. Good soil and excellent buildings. Electric light and power. File No. 4109.

**CALIFORNIA FRUIT RANCH.** 34 acres in an irrigation district. Grapes and figs; good house; all buildings painted and in best of condition. A bargain. File No. 3608.

**5,000 ACRE TEXAS RANCH.** All bottom land bordering on a river. Fine soil. Has been cut over and timber removed. Price reasonable. File No. 1213.

### An Estate

Business men who are forced to spend a part of their time in the cities find it healthful, pleasant and profitable to have a country estate. Whether it be plain farming, breeding pure-bred livestock or maintaining a country place for the family and for the entertainment of guests, an estate brings large returns in satisfaction and pride of land ownership. **RADFORD LAND ORGANIZATION** can be of greatest assistance in helping those who want country estates to find exactly what they desire.

**WYOMING RANCH.** 1,200 acres of finest Wyoming land. Sheep and cattle country. In the oil district. Sell or lease. File No. 2711.

### A Plantation

Farming on a plantation in the Sunny South has brought enormous returns during the last few years. Cotton, sugar cane and early fruits bring high prices. For various reasons some of these plantations are being offered for sale. **RADFORD LAND ORGANIZATION** can be of service to those who want to locate in a milder climate and combine with a pleasant life a most profitable type of agriculture.

## Hundreds of Other Unusual Land Opportunities

The above land opportunities were picked at random from the hundreds we have listed for sale. They give an idea of the present-day chance to secure valuable lands at reasonable prices. Write for more complete information. There is no obligation.

**RADFORD LAND ORGANIZATION** is ready to serve everyone who has land to sell or who wants to buy land. Your property will be listed free. Write at once, so that your proposition will be in our hands ready for buyers to investigate.

**Radford Land Organization**

1827-1901 Prairie Avenue

Chicago, Illinois

**RADFORD**





## Building Operations Show Continued Increase

**P**ROSPECTIVE building operations throughout the entire country continue to increase in volume as the season advances, notwithstanding an unmistakable slowing down in many sections, according to the monthly report of the S. W. Straus & Co., issued July 1. The report says:

"During the first six months of this year 328 cities and towns reported plans filed and building permits issued amounting to \$1,966,082,235, a gain of 8 per cent over the corresponding period of 1923.

"Official records in the same cities and towns revealed June building plans and permits amounting to \$299,692,315, a gain of 10 per cent over June last year.

"Inasmuch as these records constitute the only official figures in existence giving a dependable indication of future building tendencies, they may be accepted as proof that prospective building operations in the United States as a whole have attained unprecedented volume.

"Analysis of the reports indicates a tendency towards less active conditions in a large number of places and that the saturation point in building seems to have been reached in many sections. Nevertheless, the onward sweep of the building movement in the large cities has more than overbalanced the recessions alluded to.

"The twenty-five cities which led in plans filed and permits issued during the half year ended June 30 showed a gain of 11 per cent over 1923.

"In June these same cities gained 19 per cent over the same month last year and 18 per cent over June, 1922.

"The Eastern and Southern cities reported a gain over the first half of last year and the Central West and Pacific Coast cities reported slight losses. The Eastern, Central and Southern cities reported gains over June, 1923, but the Pacific Coast reported a loss also from June, 1923. In 93 Eastern cities the gain was 20 per cent for the half year and 17 per cent over June last year. In 107 Central cities the loss from the first half of last year was 3 per cent and the gain over June, 1923, was 23 per cent. In 76 Pacific Western cities the loss from the first half of last year was 4 per cent and the loss from June last year was 28 per cent. In 52 Southern cities the gain over the first six months last year was 4 per cent and the gain over June, 1923, was 14 per cent."



## New Jersey Zinc Company Extends Line

**Z**INC SHEETS will be added to the list of products of the New Jersey Zinc Company and for the production of this new product an additional rolling mill is being erected by the company at Palmerton, Pa. The plant will produce corrugated and plain zinc sheets in standard sizes and gauges. This will be in addition to the production of the narrower strips and ribbons now made by the company.

## R. M. Kincaid Elected Garford Official

**R**USSELL M. KINCAID has been unanimously elected vice-president of the Garford Motor Truck Company, Lima, Ohio, by the board of directors recently convened.

Mr. Kincaid's connection with Garford in the capacity of assistant to the president dates only from March 1st, but the result of his work since that time warrant the election, John L. Galvin, chairman of the board, announces.

Kincaid was formerly works manager of the U. S. Light & Heat Corp., at Niagara Falls and enjoys a continuous producing record.

Emmet R. Curtin, prominent Ohio financier, is president of the Garford company.



## Westinghouse Chief Engineer Dies

**B**ENJAMIN G. Lamme, chief engineer of the Westinghouse Electric and Manufacturing Company, one of the world's leading electrical authorities, died July 8, at his home, 230 Stratford street, East Liberty, Pa., after an illness of several months.

Mr. Lamme was born on a farm near Springfield, Ohio, January 12, 1864. He was graduated from Ohio State University in 1888, specializing in Mechanical Engineering, since little in electrical engineering was offered at that time.

He was employed by the Westinghouse company within a year after his graduation and six months later designed a double gear railway motor which was marketed in 1890. The same year he started the design of a street railway motor with only a single-gear reduction, which proved to be the forerunner of the model used on street cars at the present time.

Among his outstanding achievements were the designing of the electrical equipment for the World's Fair in Chicago, generators for the first Niagara Falls power installation, generating and motor equipment for the first big railway electrification, that of the New York, New Haven & Hartford, and the design of the most successful synchronous converter ever used.

Mr. Lamme was a member of the Naval Consulting Board during the World War. He was awarded the Edison medal by the American Institute of Electrical Engineers in 1919 and was awarded the Joseph Sullivan medal by the Trustees of Ohio State University. He was a member of the American Institute of Electrical Engineers and of the Engineers Club of New York.



## Lumbermen Feature Model Home

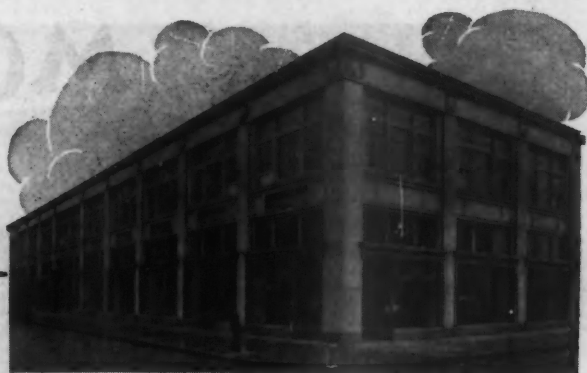
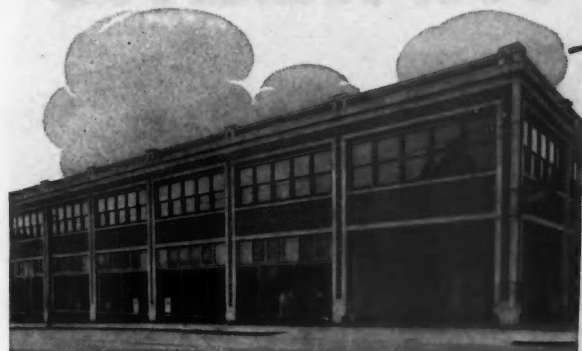
**A** FEATURE of the Home Owning Show to be conducted by the Northern Illinois Lumbermen's Club at the Forestry Building, Central States Exposition, Aurora, Ill., August 15th to 24th, will be a life-size model home, erected in the center of the building and completely equipped and furnished throughout.

The model house will measure 24 by 38 feet and will consist of five rooms and a sun parlor. It will include every modern idea in construction and will be erected with the idea of creating a desire for a home and furnishing ideas and suggestions for those already interested in home building.

(News Department continued to page 154.)



Benjamin G. Lamme.  
1864-1924



Above, the Steiner Building, Minneapolis,  
Brasco equipped.

At the left, a Fargo, N. D., garage, with  
Brascoed show windows.

## Brasco Preference Knows No Boundaries!

### These Cities, Northwest and Southwest, Are Further Evidence of Brasco Popularity

Live, growing sections of the country testify convincingly to Brasco supremacy. Northwest, southwest and everywhere—builders find that Brasco not only meets best all store front requirements, but actually leads in the development of new and better designs and more effective construction.

The elegance of line and grace of proportion add to the appearance of any store building, large or small, simple or elaborate. Erection is easy and economical. Only standard millwork is required. Less lumber and labor are needed than for any other type.

And Brasco setting is safest for plate glass. The grip is unusually wide and firm yet supple enough to permit flexure and absorb vibration. This important feature, plus our patented method of in-

direct screw fastening, eliminates the danger of glass breakage and cost of replacements.

In any weather, windows are clear and display unmarred with the Brasco system of ventilation and drainage. Highest quality marks every unit in Brasco construction, guaranteeing permanence and eliminating upkeep.

Installing Brasco fronts is profitable work. Let us show you how to get the most out of it. We will send you our catalog with full descriptions of Brasco construction features and designs of attractive store fronts. Use the coupon below.

### Brasco Manufacturing Co.

5029 South Wabash Ave.

Chicago, Ill.

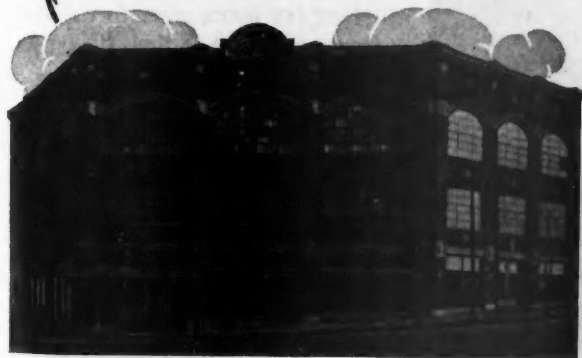
**Brasco**  
COPPER STORE FRONTS

Brasco Manufacturing Co.  
5029 So. Wabash Avenue, Chicago, Ill.  
Send me your catalogue and book of store front designs.

AB-8

Name .....

Address .....



Simons-Wiles Motor  
Co. Building, Kansas  
City, Mo., and at the  
right, the Peacock  
Shop, Little Rock,  
Ark., with Brasco  
Fronts.



# MOTOR TRUCKS and TRAILERS



## Selecting Truck Drivers

**Training Coolheaded, Reliable Men Usually Proves More Satisfactory Than Hiring Mechanics for Speed Mania**

**F**ROM what source is it best to select motor truck drivers? This is a question that looms big among the problems confronting the builder who is operating motor trucks. Many a perfectly good motor truck has been doomed to failure and unnecessary expense through the negligence of its drivers.

The experience of the majority shows that better results come from training sober, cool-headed, reliable men—possibly teamsters—than from employing mechanical experts of proved ability to take taxicabs around corners on two wheels and to weave through crowded traffic at a breakneck speed. The taste for speed is easier to acquire than to relinquish—and in a motor truck it is not only dangerous, but is an agent of destruction.

The commonest complaint against truck operators

is lack of interest and loyalty. They fail to keep the truck in good condition because it makes no difference to them whether it runs or stands in the garage. And a truck that is unduly expensive to operate takes no more from their pockets than one that costs almost nothing in repairs or supplies.

This is a problem that must be faced and solved by each individual builder. Some have done it by a system of merits and demerits; reward and punishment for things done or left undone. Others have done it by offering prizes and bonuses to drivers whose cost records reflect intelligent care and attention to the truck itself. Still others have solved it by putting the driver on half-pay when the truck has to be sent to the shop because he failed to report symptoms that foretold accident, breakage or interrupted service.

At the same time they make a provision that pay is not decreased if the truck goes to the shop on the recommendation of the driver, providing the trouble to be corrected is still in its initial stages.

There is one concern in an eastern city that has solved it by turning the truck over to the driver after he has handled it satisfactorily for two years, then having him haul for the firm on a fair contract basis. Officials of the company say they have found that this plan saves them enough in the first two years of a truck's life to make it possible to give away the truck, and actually save money while doing it.

Yet no matter what plan is remuneration you adopt, or what

(Continued to page 150.)



Trucks in the Service of Builders of Necessity Must Operate Under Trying Conditions. It pays to know that the drivers appreciate their responsibility.





## Make a Profit on Your Hauling

**L**ET whatever hauling you do with your own trucks pay you a profit. GMC Trucks will reduce your costs—first and last!

Last cost because of the simplicity and stamina of GMC design. Every vital part of a GMC is oversize, extra sturdy. Every wearing part has an easily replaceable bushing or bearing. GMC Trucks are built to give you more miles and more years of trouble-free service.

They are a General Motors Product!

GMC Trucks carry a first cost much lower than any other truck of similar quality because of the GMC sales policy. Their selling price is arrived at by adding a fair profit to cost of manufacture. *There is no cushion added into that profit for trade-ins.*

GMC dealers accept a trade-in at its fair resale value—no more. When you buy a GMC you can be sure you are not paying more for it than someone else has paid!

Your bank balance deserves GMC assistance. Ask for a catalog today!

**GENERAL MOTORS TRUCK COMPANY**  
Division of General Motors Corporation  
PONTIAC, MICHIGAN

## General Motors Trucks



CLIP AND MAIL

GENERAL MOTORS TRUCK CO.,  
Dept. 9, Pontiac, Mich.

Send me the GMC Catalog.

Name \_\_\_\_\_

Business \_\_\_\_\_

Address \_\_\_\_\_

# Without Warford— Your Hauling Costs Too Much

PHONE, SOUTH 0230

**HOWARD FARM DAIRY**  
A. H. MATTHEISZ, Proprietor  
746 EAST FORT AVENUE  
BALTIMORE, MD.

April, 2, 1924.

Auto Accessory Assn' Inc.  
1101-03 Cathedral St.  
City.

Gentlemen:— Please send me at once another Warford Transmission for Ford Truck. We are going to use this Transmission on an old Ford that we have re-built, which we are anxious to get into service.

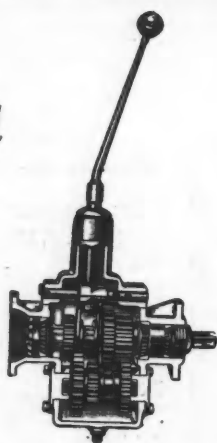
Owing to the fact that by installing your Transmissions in my Ford Trucks and gaining such great satisfaction from same, I feel it is my duty to write your firm. I have never had one minute of trouble with any of your Transmissions in the two years of service that I have used them. Since installing Warford's we have increased our loads and now carry an average of 53 Ten Gallon cans of milk per trip, total weight including cans about 3100 pounds. I find that I save fifty percent on time which alone pays for the Transmission in one week of steady operation, as we make two trips where we formerly made one, and also get 20 miles to the gallon of gasoline instead of 11 miles our former regular Ford Truck mileage.

I must say if you quit making these Transmissions, I will limit my purchase of Ford Trucks to exactly what I have on hand, because, this Transmission of yours is the very heart of the Truck and the only economical thing that makes it possible to operate Ford Trucks in my line of business, furthermore, if anyone wishes to know more about your Transmissions from me, I will gladly demonstrate or communicate with them.

Sincerely yours  
*August H. Mattheisz*  
Pres & Mgr.



"A Speed  
For  
Every  
Need"



Warford would be a worthwhile investment if it gave you nothing more than a two-ton Ford truck—but Warford gives you a speed truck too.

To Mr. Mattheisz the speed-wagon swiftness of the Warford equipped Ford means even more than its two-ton capacity. Warford speed gives him two trips where he made but one before, writing off Warford cost in a single week.

Mr. Mattheisz' experience, 20 miles to the gallon with Warford, 11 miles without, makes the Warford claim, "two-ton performance at Ford one-ton cost" more than modest.

This much you can bank on—with Warford equipped Ford trucks your hauling costs will be less. Ask your Ford dealer or write us today.

**Warford**  
AUXILIARY TRANSMISSION

The Warford Corporation

44 Whitehall Street, New York City



*The Fordson with trailers saves time, money and labor in transporting building supplies, lumber, etc.*

*Fordson sweeping New Belle Isle Bridge at Detroit, Michigan. Cities favor Fordson for its adaptability to many uses.*



## Fordson Power— Always at Your Service

On industrial jobs of every description—from ripping up asphalt and sweeping streets to operating rock crushers, saw mills and building good roads—the Fordson can be depended on to do better work at a *lower cost* and in *less time*.

Its ability to function either as a stationary power plant or for motive purposes, makes it an invaluable power unit for municipalities, contractors, builders, engineers and manufacturers.

The low operating cost—the minimum investment required for so capable a power plant—and the unsurpassed service available to all users of Ford equipment are advantages that every power user can appreciate.

Your nearest Authorized Ford dealer will gladly arrange to give you a practical Fordson demonstration. See for yourself how the Fordson can save you time, labor and money.

**Fordson Tractor—\$420 f. o. b. Detroit**

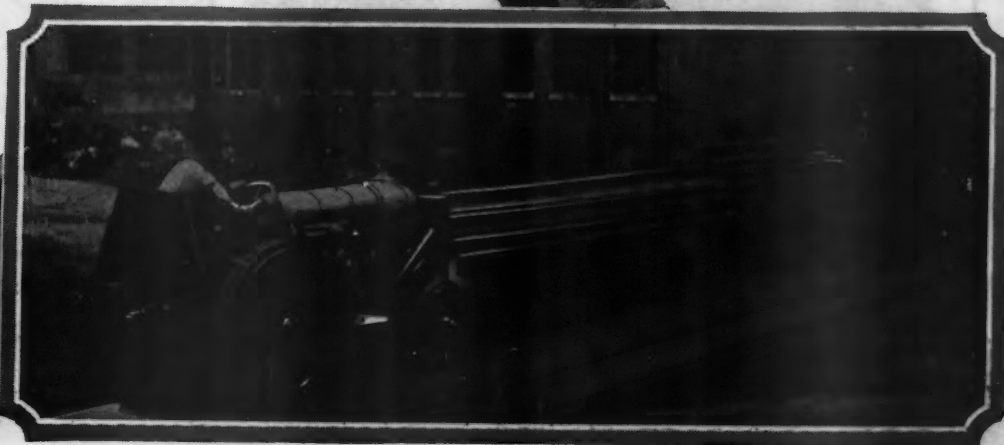
# Ford

CARS • TRUCKS • TRACTORS



*Fordson doing the work of 4 teams and 8 men at mammoth sand pit, Minneapolis, Minn.*

*Inter-shop transportation is practicable at low cost with the Fordson. Unskilled labor is made more productive.*





(Continued from page 146.)

steps you take to insure the driver's interest in the firm, the first essential will be the selection of the driver himself. Don't make the mistake of thinking that any man who can handle a steering wheel is fit to be trusted with your investment. Not only may he ruin the truck, but you will be held accountable for any damage to other machines or to persons.

The dash and vigor of youth is not only unnecessary in a truck driver, but it is often a serious menace. Likewise, a high-strung, nervous man is apt to take out his temperament on the car.

Defects in hearing or vision, of course, should be regarded as an absolute bar against employment.

Encourage your driver to study your transportation problems and to read truck literature. If the driver knows why it is poor policy to overload or to over-speed your truck, he is much more likely to use care and judgment than if merely told "Don't carry more than so many pounds, and never go more than so many miles per hour." Select the men intelligently and then treat them as human beings—and the chances are that the driver problem will not cause you any loss of sleep.



### Routing Truck Traffic

**M**ORE economical truck operation and an aid to the solution of the traffic congestion in cities are being accomplished by a routing system now being used by some of the larger truck operators. They have

devised specified routes that radiate from the garage to all sections of the city and which escape congested arteries and intersections.

That "the longest way round is the shortest way there" has been demonstrated by those truck operators who have adopted the new system. Frequently the specified routes are of slightly greater mileage than the most direct way, but by eliminating the delays incident to heavily traveled thoroughfares the actual trip time has been found to be shorter.

At present most truck drivers are given their delivery orders and are left to select their own route. This, frequently, is over the main traveled—and best known—streets. It results in the driver being forced to move slowly through dense traffic, causing an appreciable loss of time and fuel.

The more scientific and economical system now being adopted saves this loss. The truck operator or his superintendent in charge of the transportation fleet first familiarizes himself with traffic conditions throughout the city and then plans the specified routes his trucks are to follow in going from one section of the city to another.

These routes are charted on a map of the city which is usually placed at the loading dock door.

Owners of trucks who have already acted on this suggestion report appreciable improvement in service and a material saving in time and fuel, it is reported. The plan also is highly approved by city traffic officials generally.

## RECONSTRUCTED STONE

### for Building Permanent Damp-Proof Buildings

The Hydraulic machine applies a ram of 70,000 pounds each operation at the rate of 240 rams per minute. All air voids are displaced and a perfect bond results. Cannot be equalled for small absorption, strength and durability. Reconstructed stone is pleasing to the mason, approved by the architect and desirable for the contractor, as it means from four to five times as much wall at the same cost. Our machine makes stone all lengths, sizes and shapes, up to its

capacity. This includes one piece, 3-lug stone; stone for two and one piece, 3-lugged wall is designed for homes and bungalows and builds the best structure on the market for low cost, handsome appearance and positively dry walls. We have 40 plants operating successfully in the United States; also plants in Tokio, Japan; London, England; Johannesburg, South Africa; and Alexandria, Egypt.

Write today for a free sample and complete information.

**HYDRAULIC RAMMING CONCRETE STONE MACHINERY,**  
788 McBride Ave., Little Falls, N. J.





## "The Most Powerful Truck of Its Capacity Build!"

That is the way E. Carlisle of Ellsworth Falls, Maine, expresses his enthusiasm for the performance of his 2-ton Garford which he has had in service for six years.

"We have never had any trouble with it yet and the motor has never been overhauled." Mr. Carlisle goes on to say, "The truck will handle 10 tons anywhere with a trailer. We use it mostly for moving derricks and boilers. The load shown in the photograph is 9 tons on a 50 mile haul."

Garford Engineers discourage overloading, but the high standard of built-in service of this unit, however, is noticeable first

in strength, power and easy handling, in freedom from trouble and low operating cost, and finally in the way it continues to give good service year after year.

When you consider the purchase of a truck for any purpose whatever, it will pay you to call on Garford Engineers for information and recommendations.

They have made intensive surveys and analyses of haulage requirements in more than 90 per cent of American industries, and are prepared to give you valuable co-operation.

Write for further particulars.

**The Garford Motor Truck Company, Lima, Ohio**

Manufacturers of Motor Trucks 1 to 7½ Tons

# GARFORD

## DEPENDABLE TRANSPORTATION





Architects, Builders, Realtors, everywhere realize the value of Kilmoth as a final factor in closing both rental and sales transactions. Buyers favor the Kilmoth equipped home, apartment or apartment hotel.

Kilmoth is not to be confused with ordinary cedar. Kilmoth is a selected aromatic red cedar, manufactured under a "KILMOTH" process to retain a specific volatile content of the wood—the real lasting moth preventative.

Insist on Kilmoth—a trade mark nationally known. Kilmoth is your assurance of the aromatic red cedar "with the GOOD left in."

*Send for further information.*

### KILMOTH PRODUCTS CORP.

50-A Union Square

New York



KILMOTH PRODUCTS CORPORATION

50-A Union Square, New York.

Please send detail information about KILMOTH.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I am ☐ Architect ☐ Builder ☐ Realtor ☐ Lumber Supply

This  
Trade-Mark  
Plate



On Every  
Installation

## Co-operative Apartments Popular

(Continued from page 117.)

The idea seems to have "caught on" in common parlance, and one reason seems to be because the promoters are making these buildings so attractive. They are so designed and equipped that they are better to look at and better to live in—more built-in features of convenience, large rooms, plenty of light and air, well built and finished.

One co-operative building in Chicago has been equipped with the most expensive type of oil-burning automatic heating device made. It is said to have saved \$2,400.00 in fuel and janitors' wages during its first year of operation. Some of these buildings are being equipped with central refrigerating plants, water filters, water closets and lavatories of vitreous china, extra long enameled bathtubs, equipped with showers and curtains, bathroom walls in glazed tile with mosaic tile flooring. Medicine cases and towel cases are frequently built-in features of these bathrooms. Living rooms are often provided with fireplaces and gas logs; kitchens with porcelainized gas stoves; laundries with three compartment tubs, dryers and electric outlets for washing machines. These features, of course, are in the more expensive buildings but, even there, at a saving of at least 40 per cent under the cost of rented apartments in the same neighborhood.

There seems no good reason why the co-operative ownership feature could not be applied more generally to the smaller buildings. It has already been done in isolated cases of two-flat, four-flat, six and eight-flat buildings. Those races excluded in some districts can (and have already, to a limited extent) get together and build their own co-operative buildings. But the success of these ventures is bound to be governed by the wisdom of the plans and the character of those allowed to participate in them.



## When We Build Our Stairway

(Continued from page 119.)

iron handrail, with its daintily traced pattern, for example, contrasts most effectively against the austerity of stucco walls, and is exceedingly appropriate for emphasizing Renaissance architecture. Even velvet is a material that the Old World has suggested for the staircase. An inner handrail, composed of a velour rope looped to the wall is a luxurious detail appreciated by the comfort-loving American. Wood, however, remains the medium most employed for handsome stair posts or "newels." Where something fine like oak, walnut or mahogany is available, a substantial post adds undoubted dignity. Fluting or carving them are decorative details.

The spindles should harmonize with the newels. Whether they are round, square, hexagonal, fluted or grilled in Jacobean style is dependent on the general plan. But three to a step is the usual arrangement.





## Monuments of Integrity

THE contractor or builder who builds with ASBESTONE Magnesia Stucco erects monuments to his business integrity that will endure for generations. Buildings that will be a source of pride to him as well as their owners and a constant recommendation of the quality material and skilled workmanship used in their construction.

The high quality of materials used in ASBESTONE give it many times the strength of ordinary stuccos and elasticity to with-

stand the severest strains. Its unvarying quality is insured by daily laboratory tests and its moderate price especially recommend it to the builder who wants high grade construction within a price limit.

The new ASBESTONE book is out. Ask your dealer or write us for it, and for samples in color tints and pebble dashes.

FRANKLYN R. MULLER, Inc.  
208 Madison Street, Waukegan, Ill.

# ASBESTONE

EVERLASTING MAGNESIA STUCCO



ASBESTONE Stucco for Exteriors ♦ ASBESTONE Plaster for Interiors

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

(Continued from page 144.)

### Ohio Lime Plant Enlarged

**T**O keep up with the demand for its products, the Genoa, Ohio, lime plant of the United States Gypsum Company has been enlarged by the addition of thirteen new kilns and other equipment costing \$300,000. These improvements are near completion and early in July the entire bank of forty kilns will be in operation, making this the largest hydrated finishing lime plant under one roof in the world. This construction, which has been in progress since last December, makes the plant's capacity 500 tons a day.

This is the fourth such expansion. The U. S. Gypsum Company purchased the property in 1915 and erected nine kilns. The next year eight more were added in 1919, five more; in 1923, another five; and now, thirteen more. This installation also includes a new gantry crane, a second Schaffer hydrater, a second Williams swing hammer mill, a new power-house and additional cooling, grinding and shipping facilities.

As a result of this new equipment, the United States Gypsum Company, besides adding to its capacity for manufacturing Ivory hydrated finishing lime, adds two new products to its list: U. S. G. Mason's hydrate and Grand Prize hydrated finishing lime. New packing units also have been installed making possible the shipment of the Ivory lime in 10-pound as well as 50-pound paper sacks.

### Wood-Preservation Research

**D**IRECTOR E. R. WEIDLEIN, of Mellon Institute of Industrial Research of the University of Pittsburgh, has announced the founding of an Industrial Fellowship on the treatment of timber. This research, which is being sustained

by the Grasselli Chemical Company, of Cleveland, Ohio, and is being conducted by Dr. A. M. Howald, has for its purpose a study toward improvement of the methods of applying zinc chloride in the wood-preservation industry.

Investigational work which was begun during 1923 will be continued throughout the present year. An experimental wood-impregnating plant is maintained for practical tests of processes. Research is at present being done under the supervision of Dr. Howald on the development of a method of increasing the permanence of zinc chloride treatments of timber by the addition of petroleum oils.

### Invention Exhibition Planned

**H**ANDLERS of building materials, construction engineers and others in the building world whose activities touch in any way on the fertile field of inventions will be interested in learning of the Exposition of Inventions to be held, December 8th to 13th, inclusive, 1924, in the famous Engineering Societies Building, New York City. The American Institute of the City of New York is handling this display through its Inventors' Section, with behind it an experience of ninety-six years in fostering and portraying American industrial life.

A feature of the exposition will be exhibits from the various machines, utilities and processing methods. In all fields the ingenuity of the inventor and the part he has played in the progress of America will be emphasized.

### Ideal Company Moves

**T**HE Ideal Concrete Machinery Company is celebrating its removal to its spacious new fireproof factory at 5000 Spring Grove Avenue, Cincinnati, Ohio. With every facility that an ultra-modern plant affords at its command, the company looks forward to bigger business.

## Surfacing Floors The "American Universal" Way



Efficiency counts nowadays and dollars saved are dollars made. Your profits depend largely upon your operating costs and your operating costs, in turn, depend upon your operating methods.

### Why Pay Six Men for One Man's Job

That's exactly what you are doing when you employ hand scrapers to surface floors instead of doing it with an "American Universal" (electrically driven) Floor Surfacing Machine, because one man with an "American Universal" will do as much work as five to six fast hand scrapers and do a **better** job besides.

Can you afford to go on losing money that an "American Universal" machine would enable you to **save**—to add to your profits?

**You Can  
Keep an**

**American Universal**  
FLOOR SURFACING MACHINE

**Busy  
Every Day**

Even if you have not enough floor surfacing work of your own, you will find a big demand for "American Universal" work among other contractors and you can keep your machine busy on highly profitable jobs every day. You can also, if you wish, work up a big-paying independent business by specializing in new and old floor surfacing. Dozens of live contractors

have done so without the slightest interference with their established business.

Write us for details regarding the "American Universal" Floor Surfacing Machine. And have us send you letters from many well known contractors who are using it; also particulars of our **Five Day Trial**, prices, terms, and other interesting information. Do it now, it will mean money in your pocket.

**The American Floor Surfacing Machine Company**  
515 South Saint Clair St., Toledo, Ohio

**SAVE THE WAGES OF THESE SIX MEN !**





ARD-O-SITE roofs sold these houses quickly and at higher prices to the Builder. His name for the asking.

# ARD-O-SITE ASBESTOS SHINGLES

**they pay  
5 ways**

- 1-
- 2-
- 3-
- 4-
- 5-

ARD-O-SITE Asbestos Shingles are guaranteed to remain in perfect service until their supporting structure fails to hold them through decay.

They are a positive barrier against fire, water and drifting snow. Furnished in such colors that are absolutely permanent and FADE PROOF.

They are furnished in shapes which are not only architecturally correct, but also beautiful in design.

ARD-O-SITE Asbestos Shingles are easily and effectively applied directly over wood or asphalt shingles.

ARD-O-SITE prices now permit the use of asbestos, as the best in roofing. A comparison of first costs will show them well within the field of all semi-permanent roofing products.

It will pay you to investigate this remarkable roofing product which is class A fire-proof. Our literature will be sent you for the asking. Write for samples.

*Send us your address*

*A few agencies are still open to live-wire dealers. Write now.*

**BATCHELLER-McCONNEL COMPANY, Ltd.**  
66-70 Beaver Street  
NEW YORK





### Illinois Builders Adopt Code

**A**T a recent meeting of the Associated Building Contractors of Illinois adopted, as expressing their attitude toward their work, their clients and the public at large, the following excellent code:

The builder considers his vocation worthy of respect and adulation as affording him distinct opportunity to serve society.

The builder desires to improve himself, increase his efficiency and enlarge his service, and by so doing he expects to profit through and by such service.

The builder realizes that he is a business man and ambitious to succeed, but that first he must be ethical and wish no success that is not founded on justice and morality.

The builder holds that he must exchange his product, his labor, his service and his ideas for profit. He wants that profit to be legitimate and ethical and desires all parties in the exchange benefited.

The builder wants to be an example to his brother builders and uses his best efforts to elevate the standards of his vocation, and conduct his affairs that others may find it wise, profitable and conducive to happiness.

The builder wants to conduct his business so as to render perfect service, superior to his competitors, and, when in doubt, give service beyond the strict measure of obligation.

The builder believes in the Golden Rule: "All things, whatsoever ye would that men should do unto you, do ye even so unto them."

The builder contends that society best holds together when equal opportunity is accorded all men.



### International Bridge to Be Reconstructed

**P**LANS, estimates, and specifications have been completed by engineers for the reconstruction of the international steel vehicle and foot bridge connecting Piedras Negras, Mexico,

with Eagle Pass, Texas, to cost approximately \$250,000. Authority for its construction and operation has been approved by the United States Government, and the board of directors now only await similar authority from the Mexican government to proceed with the work.



### Standardized Management for Co-operative Apartment Buildings

**A**T the Washington convention of the National Association of Real Estate Boards, June 3, a paper on co-operative apartment promotion and management was read by Albert W. Swayne of Chicago before the Co-operative Apartment Section. He stated that co-operative apartment homes are the only hope of building up the percentage of home owners in our larger cities that is gradually being reduced through the replacement of individual homes by apartment buildings and business blocks. Mr. Swayne made the following announcement:

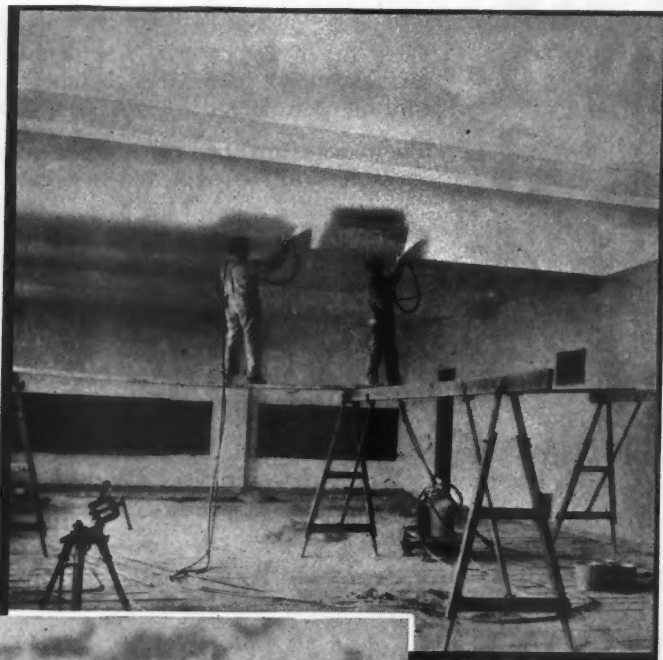
"The Co-operative Association of Chicago began some nine months ago to compile a book of instructions and forms to be used in connection with the forming and operating of a co-operative apartment building on the corporate plan. This was not an easy task and many days and nights have been spent by men who have given their time gratuitously in getting into book form a complete set of instructions for organizing and operating an apartment building on the co-operative plan with a full set of forms for every move that is necessary to be taken by such organization from its very incipency to its operation after completion. This book of forms has been adopted by the Co-operative Association of Chicago and sufficient copies printed so that anyone who desires to go into the co-operative business or to familiarize themselves with the general principles of such operations can obtain a copy of this book."

## Better Painting—Greater Profits

*IN the new 2000-student capacity high school building pictured below, the wall and ceiling surface was spray-painted with DeVilbiss equipment.*

*The contractor who did the spray-painting reported that three coat work, greater in hiding power and highly superior in quality, was done with a coverage of over 600 sq. ft. to the gallon of paint; further, that on the entire job he effected a saving in excess of 70% on the single item of labor.*

*The larger picture at the right shows the spray-painting operation in one of the class rooms.*



RESULTS produced on a wide variety of work, over a period of years, show that spray-painting with DeVilbiss equipment insures an improvement in quality of work and an increase in net earnings.

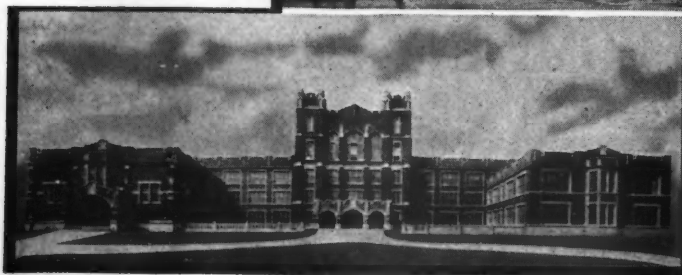
This school was an average job. The contractor produced a superior quality of painting throughout and saved 70% in labor costs. He gave his customer the benefit of part of that saving and still made considerably more money than he ordinarily would. Both as to quality and to lower cost of work, this painter made for himself a completely satisfied customer who will prove to be a substantial business booster.

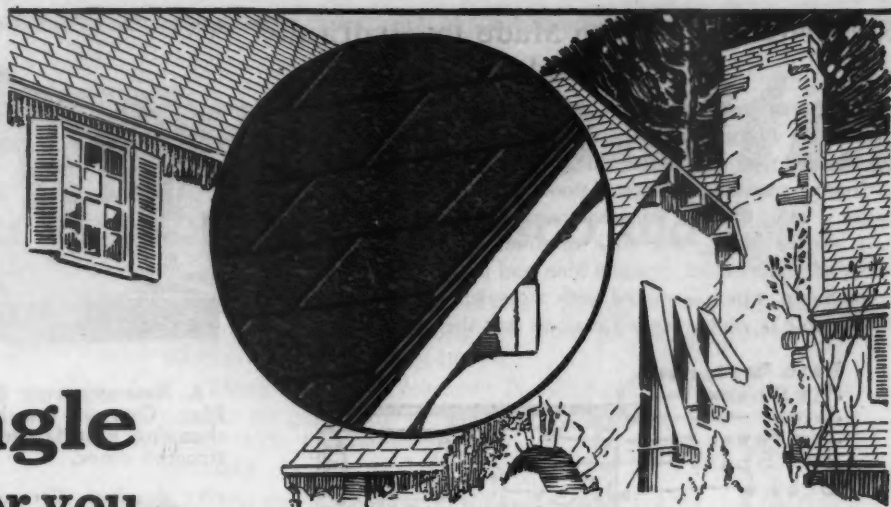
Painting the DeVilbiss way, on all classes of work, will average 4 to 5 times faster than brush painting. The coatings applied reach all places, and are uniform, free from defects and greater in hiding power. There is no dripping and spattering. The painting is done quickly and without confusion.

For further consideration of this important matter of painting better and making greater profits, we'll gladly mail you additional facts about the DeVilbiss Spray-painting System and what it will enable you to do. Address—

THE DEVILBISS MFG. CO.  
238 Phillips Ave. TOLEDO, OHIO

**DeVilbiss**  
**Spray-painting System**





## This Shingle saves money for you— and for your customers!

**T**HERE is a saving for you when you apply it, because it handles easier, requires less time and less nails. The big size, 10x15 $\frac{3}{4}$  inches gives a 5-inch exposure and still makes a three-thickness roof. There is a deeper shadow line, too, which pleases both architect and owner.

And this shingle saves money for the home owner because it is permanent. This is "the Shingle that Never Curls," and this means that when once you apply this roof it is there to stay. It makes friends for you.

Contractors universally recognize the fact that here is a shingle of sufficient quality to justify its use on the finest structures, yet practical and economical enough for the most modest buildings.

It is furnished in three handsome colors: red, green and blue-black. The natural slate surface is especially pleasing.

Won't you let us send you complete information regarding this better shingle, "the Shingle that Never Curls"?

### THE PHILIP CAREY COMPANY

510-530 Wayne Ave., Lockland,

Cincinnati, Ohio

**Carey**  
ASFALTSLATE  
SHINGLES

THE SHINGLE THAT NEVER CURLS

THE PHILIP CAREY COMPANY,  
510-530 Lockland, Cincinnati, O.

Gentlemen: Please send copy of "Before You Build"  
booklet to

Name \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

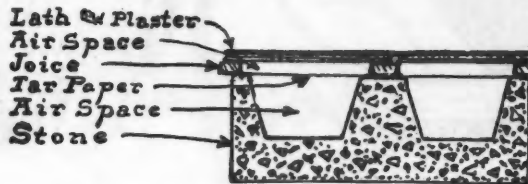


## Reconstructed Stone Made by Hydraulic Methods

Editor AMERICAN BUILDER:

Little Falls, N. J.

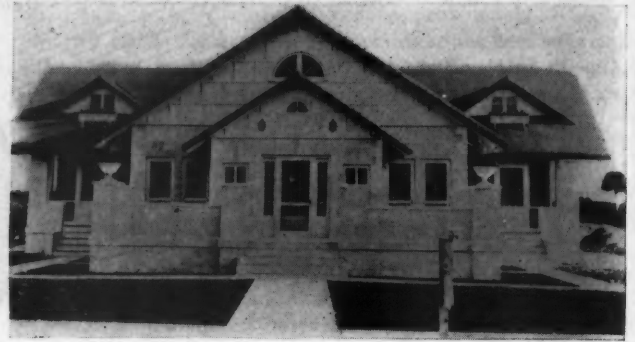
Here is a photo of a winter home in Kelsey City, Fla., constructed of reconstructed stone manufactured by the hydraulic ramming concrete stone plant at that city. This house is 64 by 65 feet, fourteen rooms, four baths, one and one-half stories high. The base or foundation is of a granite veneered water table. Spanish blue, and unfading blue imported from Spain, which is mixed with the sand. The bevel on this water table is white, sloping back to join the body stone of the



Section of Wall Built of 3-Lug Stone, Furred, Lathed and Plastered.

house, which is faced by Jupiter beach sand and shells just as taken from the seashore and mixed with white sand and cement. The concrete body of the stone is Florida sand and dark portland cement. When this stone comes from the machine, they immediately pass through a spray of water washing back all traces of cement and sealing them, this preventing any cracking or crazing of the face, leaving the veneering of fine shells exposed in their natural color, sealed and water proof.

The corners and around the doors and openings are white sand and white cement also sprayed. A slight variation of the shells lends a blending to the keystone and screw-back over the windows and doors, and brings out a distinction



A Reconstructed Stone, Winter Home at Kelsey City, Fla. One of the leading industries at Kelsey City is changing Florida sand into beautiful, non-absorbent reconstructed stone.

very pleasing. Then a blue stone 5 inches wide forms the top of the chimney.

An open porch 16 feet wide extends across the front of the main part of the house on the level with the floors, and opening from the living room onto this porch are French windows. This porch has six 24 by 24-inch columns and are 6 feet wide joined by a two-piece wall forming a railing. The outside is finished with shells and the inside of granite up to a white coping on top of the wall. On each of the corner columns are set large flower vases of white concrete.

In the living room is a reconstructed stone open fireplace, faced with crushed green glass (size of a pea), marble chips, amber chips, carborundum flakes with a body of white cement and white sand.

Kindly let us know if there is any further information desired.

HYDRAULIC RAMMING CONCRETE STONE MACHINERY,  
W. H. Fisher, Manager.

## A Special Inducement

to enable you to discover the ease of application, economy and lasting beauty of Cameo. We want you to try it for yourself.

The attached coupon and \$2.00 will bring you 1 quart each of Cameo White Flat and Cameo White Enamel. Specify whether you wish Gloss or Matte (Satin Finish) (Regular Sales price \$3.55).

# CAMEO

White Enamels  
and White Flat

Specifications in Sweet's

**DENNY, HILBORN & ROSENBACH**  
Chicago, PHILADELPHIA, New York.

Fill out and mail this coupon today.

Denny, Hilborn & Rosenbach,  
318 W. Washington St., Chicago

Attached is \$2.00 for which please send me one quart each of Cameo White Flat and Cameo White Enamel Gloss or Matte.

My Dealer's Name.....

Name.....

Address.....

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



House near Chicago, showing its "underclothing" of Cabot's Quilt, with furring strips over the Quilt, on which the outside finish is laid. Roof also insulated. Leon E. Stanhope, Architect, Chicago

## Underwear for Houses

Underclothing makes people warm because it prevents the heat of their bodies from escaping. You can make your houses warm in the same way.

## Cabot's Insulating Quilt

prevents the house heat from escaping. It insulates the whole house and saves the heat from the heater—that costly heat. It keeps the house warm on the smallest amount of coal; saves one-quarter to one-half of the coal bill. Makes the house comfortable for all time. Preserves health and saves doctor's bills. Makes the house cooler in summer. Quilt is not a mere felt or paper, but a scientific insulator that makes the house like a thermos bottle.



Sample of Quilt with full details, and references to dozens of users, sent FREE on application.

**SAMUEL CABOT, Inc., Mfg. Chemists**  
BOSTON, MASS.

342 Madison Ave., New York  
24 W. Kinzie St., Chicago

Cabot's Creosote Stains, Conserve Wood Preservative, Stucco & Brick Stains, Damp-Proofing



# Rain doesn't matter

## when you reroof the Genasco way

You can lay Genasco Latite Shingles over old warped and damaged wood shingles—just as easily, quickly and effectively as over new boards.

Think what this means! No disturbing the old roof—no dangerous gambling with the weather while the new roof is being laid—no littering lawns and walks with splinters and old nails.

Genasco Latite Shingles are locked together. A patented key device—**invisible on the completed roof**—holds each shingle firmly and flatly to those underneath. There is no curling by the sun—no flapping in the wind.

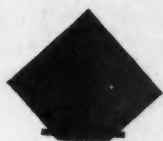
Equally important—Genasco Latite Shingles are **FIRE-SAFE**. A thick top coating of crushed slate gives complete protection from sparks and burning embers.

Waterproofed with Trinidad Lake Asphalt Cement—reinforced with rag felt of exceptional toughness—Genasco Latite Shingles last for years. They are made in three natural, unfading colors—red, green and blue-black.

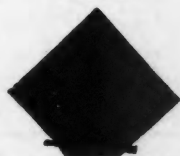
There is a Genasco Roofing—roll or shingles—for any type of building, home, industrial and farm. Write at once for illustrated folders.

### They lock on your roof

Front View



Back View



Front and back views of a Genasco Latite Shingle showing the "key"—**invisible on the completed roof**—that locks them together. These shingles are especially well adapted for laying over old, worn-out wood shingles.

### THE BARBER ASPHALT CO.

#### PHILADELPHIA

NEW YORK  
ST. LOUIS

CHICAGO  
KANSAS CITY

PITTSBURGH  
SAN FRANCISCO



## Books, Bulletins and Catalogs for You

**T**HE literature and publications listed here are available to readers of the American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

"Theater Switchboards," is the title of a new publication just released by the Westinghouse Electric & Manufacturing Company describing their line of theater lighting-control equipment and announcing their multi-preset board. The multi-preset feature, a new Westinghouse development which is attracting widespread attention, especially in theatrical circles.

Up until the present time the best board which has ever been produced could be used to set up the lighting effects for one scene in advance, and one only. As a result, the stage electrician works feverishly between every scene, opening and closing switches with the ever-present possibility of closing the wrong switch.

The multi-preset board, featured in this circular, is the Westinghouse solution of the problems introduced under the old method of control. With this board all the lighting effects for every scene of a theatrical production may be set up in advance and remain undisturbed for the entire run of the production. These effects may be worked out previous to the first performance, the proper switches thrown, and the cabinet doors closed and locked, completely protecting them from molestation.

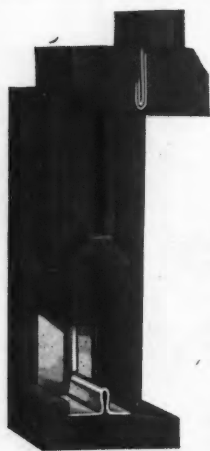
The lighting for any scene is then produced by merely throwing a lever or pushing a button (master control switch), depending on the type of board. They may be made large enough to control the complicated lighting effects of the most elaborate productions.

"Ice and Frost," is the title of an interesting publication issued by the Frick Company, Inc., Waynesboro, Pa., descriptive of the mechanical refrigeration, ice making and other like machinery made by the company. Installations of the refrigerating machinery in dairies, creameries, ice cream plants, and retail stores of various descriptions are described and illustrated. Especially interesting to the builder who is frequently called upon to design stores where refrigeration equipment must be housed and furnished are the references to meat markets, grocery stores and other retail establishments where proper equipment must be installed.

"Origin, Development, Results of Elesco" is the subject of a booklet which is published by The Superheater Company of New York and Chicago, manufacturers of Elesco Superheaters. It gives in brief form the history of The Superheater Company and the growth of its operations up to the present time when it occupies the unique position of manufacturers of superheaters for every type of steam boiler in locomotive, marine and stationary services. The development of the use of high degree superheated steam is traced from the earliest experiments of the late Dr. Wilhelm Schmidt of Cassel, Germany, to the present tendencies in steam generation in this country. An interesting paragraph is the one that explains the origin of the trade name "Elesco" applied to the products of that company.

A Message to Realtors and Builders is contained in a pamphlet issued by the Edward N. Riddle Company, Toledo, Ohio. In this the wisdom of installing attractive electrical fittings in homes and apartments is pointed out. It tells of the special planning service maintained by the Riddle company for realtors and builders, which makes available the help of the company in laying out residence and apartment lighting installations.

## All Metal Weatherstrip



*Here is an  
opportunity for the  
wide-awake  
contractor*

No carpenter or builder can go wrong if he is looking for weatherstrip that will come up to his every expectation.

All Metal makes an instant appeal to every building owner—easy to sell and install.

This is the building season when weatherstrip should be installed. Get started now in this profitable work. Exclusive territory to producers.

**Wanted—Salesmen and Agents**

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**SEND BACK THE COUPON**

All Metal Weatherstrip Co.,  
231 W. Illinois St., Chicago, Ill.

Gentlemen: Without obligation, please send me samples and literature.

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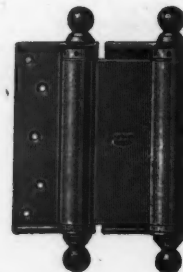
City.....State.....

# STOP



# HEED

**BUY  
THE BEST  
HARDWARE  
FOR  
HARD-WEAR**



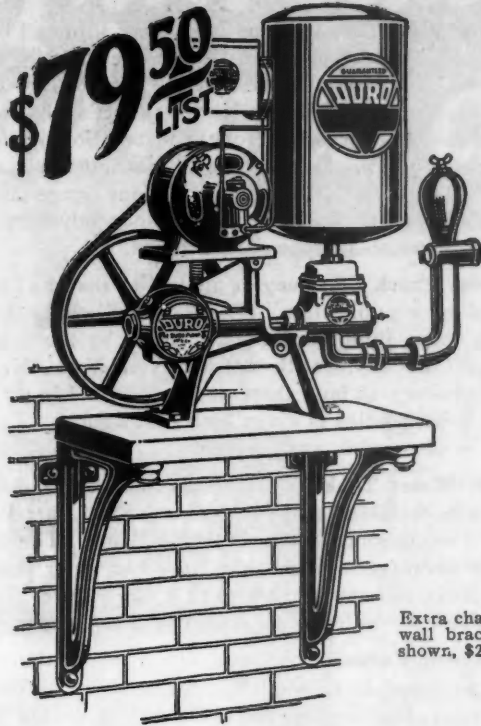
**UTILITY  
DURABILITY  
BEAUTY  
IN THE  
BOMMER**

# BOMMER SPRING HINGES ARE THE BEST

**Your DEALER handles them,  
Get New Catalog 47, you need it.**

**BOMMER SPRING HINGE COMPANY  
MANUFACTURERS BROOKLYN, N. Y.**

## DURO *Electric* Water Lift



Extra charge for wall bracket as shown, \$2.50.

### Made especially for you to give your clients better water service

Another step forward! The new Duro Electric Water Lift was designed particularly for Contractors and Builders who have been using the old-type water motors in popular-priced houses.

#### Helps to Sell the House

When you point out to the prospect the Duro Electric Water Lift installation and explain just a few of its many advantages over the troublesome water motor you will have done much to decide the sale of the house. The Duro Electric Water Lift enables your client to truly enjoy his home by providing hot and cold rainwater under strong pressure, at all times—unfailingly.

#### Advantages of the Duro Electric Water Lift

1. Economical and efficient.
2. Less expensive to operate.
3. Has upright tank to prevent water logging. No extra tank required.
4. Automatic air device guarantees adequate air supply. No hand pumping.
5. No city water plumbing required; simply connect electric wires.
9. Quiet and modern.
7. Built for long life and has simplified parts.
8. Inexpensive to install.

Progressive builders may now have a *modern* Duro Electric Water Lift at a price that is irresistible. Write for details or see the nearest Duro dealer.

**THE DURO PUMP & MFG. CO.**  
108 MONUMENT AVE. DAYTON, OHIO

*Duro Water Softeners are priced as low as \$175.*

## Why work by guess? when \$20.<sup>00</sup> buys a Transit

STARRETT offers you an accurate Transit that will do your work just as satisfactorily as an Engineer's Instrument costing several times as much.

The Starrett Transit (like all Starrett Tools) is reliably well made. It is light and sturdy, simple in operation and free from confusing attachments. You don't have to be a college professor to be able to use it. Nor do you have to have a moving picture actor's income to own it. Notice the price. For sale at good hardware stores everywhere.

Write today for the Starrett Catalog No. 23 "6" containing complete description of Starrett Transits, Leveling Instruments; Combination Squares, Steel Tapes, etc. Mailed free.

#### THE L. S. STARRETT CO.

*The World's Greatest Toolmakers*  
Manufacturers of Hacksaws Unexcelled  
ATHOL, MASS.

## Use the Starrett Transit



With plain  
sight tube  
only  
**\$20.<sup>00</sup>**

With  
Telescope  
only  
**\$40.<sup>00</sup>**



# INSTALL YOUR HEATING BY EASY METHOD

Easy as A B C. Any handy man can cut the cost of a new heating plant or plumbing system in half. We show you how with simple diagrams and clear instructions. Installing plans FREE. We loan you the tools if necessary. Enjoy clean, even, economical heat the new Hardin-Lavin Easy Way. Our Handy Man Book tells the whole story. Send Coupon for your copy TODAY.

## Factory Fitted Heating Plants

Send us rough sketch or tell us your needs and our Practical Service Department will show you the simplest, most inexpensive, and best installing method, and help you select systems or fixtures best suited to your requirements. You save waste, labor, time, money and material when you buy at wholesale from our Big Handy Man Plumbing and Heating Encyclopedia. Shows over 10,000 fixtures and supplies—Steam Heating Supplies, Bathroom Outfits and Water Systems. The big saving from our products and new easy method will surprise you. **BID ON THE FINISHED CONTRACT.**

## Planning Service Free

Ask us for estimate on any work. No obligation. When you buy from us you get quality merchandise with exclusive features at wholesale price. A guarantee of satisfaction or money back.

## Big Handy Book

Bound well for work on the job. It combines our wholesale catalog with many trade secrets, money-saving kinks, practical plans, diagrams, sketches, elevations, etc. No expense was spared to make this the most practical and useful book of its kind. To save broadcasting this book we require a deposit of 25c for each copy. Deposit credited on first order. Send for your copy TODAY.

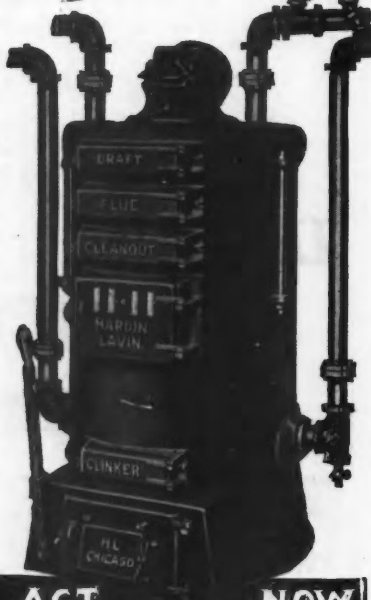
## Mail Coupon

and know that Hardin-Lavin Heating Outfits and Plumbing Systems save you money, increase your profit, enlarge your prestige.

## Hardin-Lavin Company

50 years at  
4522-34 Cottage Grove Ave.,  
Chicago, Ill.

See our advertisement on page 226.



## BOOK COUPON ACT NOW

Hardin-Lavin Company, 4522-34 Cottage Grove Ave., Chicago. Enclosed find 25 cents. Please send me your big, complete Handy Man Book Catalog with Special Contractors' wholesale discount sheets. I am interested in:

- ☐ Heating Plants ☐ Water Supply Systems  
☐ Pipeless Furnaces ☐ Bathroom Outfits

Name.....

Address.....

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

## Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to readers of the American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

**Murphy Bed Installations** are shown in detail in a set of architectural detail sheets issued by the Murphy Door Bed Company, 22 West Monroe Street, Chicago, Ill. The publication, of a proper size for the architect's files, shows the complete details necessary for the installation of the Murphy beds, with the working drawings showing the space necessary to the installation of the various space-saving types of the company's product. Methods of applying the fixtures to partitions of all types are detailed.

**Motor Truck Efficiency** as applied to road building is discussed in a publication, "There Is a Definite Reason for Every Road Building Success," issued by the International Motor Company, 25 Broadway, New York, N. Y. The detailed story of how three successful road building operations were handled is given with cost figures. The publication is illustrated attractively.

**Hot Water Tanks** is the subject of an interesting folder issued by the Detroit Range Boiler & Steel Barrel Company, 2475 Twenty-fourth Street, Detroit, Mich. The folder tells of the advantages of the Star-Naco hot water tanks, expansion tanks and other products of a like nature. It also lists a number of dealer helps issued by the company.

**Majestic Furnaces** and methods of installation are shown and described in Catalog No. A-24, issued by the Majestic Company, Huntington, Ind. Interesting details of the construction and special features of the Majestic line are shown and diagrams presented which show the simple installations possible with the material made by the company.

**Decorative Linoleum Floors** is a most attractive publication issued by the Armstrong Cork Company, Linoleum Division, Lancaster, Pa. The publication, which is 11 by 15 inches, is beautifully illustrated in colors, showing model interiors with Armstrong Linoleum applied to the floors and also the patterns and colors of many numbers of the Armstrong line. The publication is written especially to treat the problem of the architect and builder in designing and constructing practical floors, and contains much valuable information and many good color suggestions.

"**Cement Is the Magic of Concrete**," is the address delivered by F. W. Kelley, president of the Portland Cement Association, at the twentieth anniversary convention of the American Concrete Institute. The address has been reprinted in pamphlet form by the Portland Cement Association, 111 West Washington Avenue, Chicago. Mr. Kelley in his address gives a most interesting and authentic account of the developments of the cement industry and particularly in the United States.

**Progressive Engineers** have their attention called to the merits of the "Sterling" engineers' wye level in a folder just issued by the Warren-Knight Company, 136 North Twelfth Street, Philadelphia, Pa. The folder tells of the leveling methods used in the construction of the Delaware River Bridge and the excellent results obtained as well as giving a complete description of the instruments used.

**Lumber and Timber Information**, published by the National Lumber Manufacturers' Association, Conway Building, Chicago, Ill., is a mine of information concerning the activities and development of the lumber industry. Nearly all phases of the industry are treated in the comprehensive survey contained in its pages, which also review the history and activities of the association.

# Turn odds and ends into cash!

## 12 Operations

*Every cut needed in building*



Ripping



Mitreing



Cross Cutting



Jointing



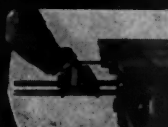
Bevel Jointing



Dadoing



Bevel Sawing



Boring



Rabbetting



Sanding



Band Sawing



Grinding

## You can do it with a Leach

IT took a good many years to build a saw rig so good that thousands of practical builders call it the handiest and steadiest on the market.

The Leach has earned that reputation on the job—by performing twelve operations so accurately and dependably that it makes money every work day.

Builders have found that they can't buy a more versatile machine than the Leach by paying twice as much—or that they can't get Leach accuracy and steady service by buying a cheaper outfit! They want the saw rig that will pay the most per dollar invested, and have found it in the Leach.

### Ask any user

The real verdict on any piece of equipment comes from the jury of users. Ask any of them if there is any step in building that the Leach does not perform quicker and better. Ask them if there is any outfit that can stand as many rough jolts and still stay as true as the Leach. Their answers will be your reason for buying a Leach Ever Ready

### How much are you losing?

What is it costing you to take the long road—in the twelve building operations illustrated opposite? How much will you save when you use the short cut—the Leach? Hundreds of users tell us that the Leach paid for itself in thirty days. After that it puts money in the contractor's pocket.

### Try it out free

Sending the coupon below does not obligate you in any way. We simply want to send you complete details and then leave the verdict to you. You can try out the Leach for ten days without cost.

### Yours—for \$48.00 payment

If you decide to buy it you can purchase it on a deferred payment plan. A first payment of \$48.00 makes the Leach yours.

**LEACH COMPANY**  
915 Amber Street, Oshkosh, Wisconsin  
(Formerly Oshkosh Mfg. Co.)

## LEACH Saw Rigs Ever Ready!



*this coupon tells how*

Leach Company, 915 Amber St., Oshkosh, Wis.  
Check information desired.  
☐ Send complete description of the Leach Ever Ready Saw Rig.  
☐ Tell me how I can own a Leach for a payment of \$48.00.  
Name.....  
Address.....  
AE9-M-RTG





Leg Shoe

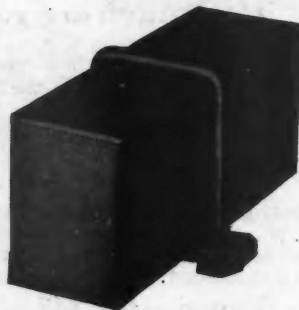
The mere matter of a shoe on the leg simply means you wear the shoe and not the leg.



This attention to details means a great deal to you in saving of repair costs and in added efficiency.

The handle clamps do away with bolt holes at the point of most strain—thus save handle breakage.

Handle Clamp



These improvements in construction add but little to the cost, but it puts Sterling barrows on a standard of quality.

Self-lubricating wheel bearings do away with the oil can and reduce the effort of wheeling—ask your foreman.

Wheel Bearing



The longer the service the better "Sterlings" show by comparison because they are made right in every part.

# Sterling Wheelbarrow Company

NEW YORK  
BOSTON  
CLEVELAND  
BUFFALO

MILWAUKEE, WIS.

CANADIAN AGENTS—MUSSENS LIMITED, MONTREAL, TORONTO, WINNIPEG, VAN COUVER

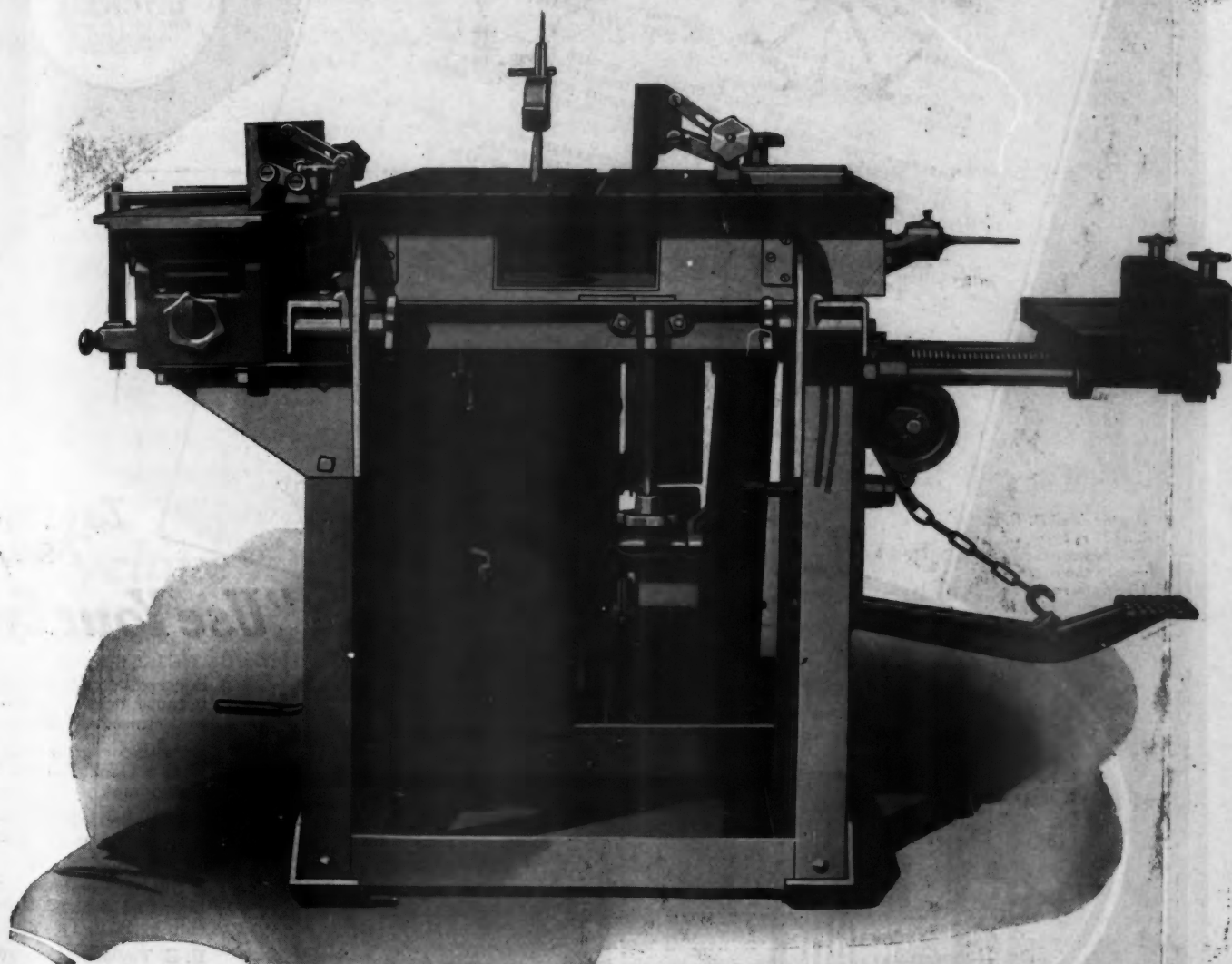
DETROIT  
CHICAGO  
ST. LOUIS  
SPOKANE





# Put This Home Builder's Saw Rig on your job.

It has a four-horse engine, six-inch jointer, mortising attachment, emery wheel, sander, dado head, rip and cross cut saws.



Do you want our catalog?

## C. H. & E. Manufacturing Co.

322 Mineral Street

Milwaukee, Wis.

**B. E.  
Taylor's  
Brightmoor,  
Mich.**

LOTS SOLD FOR CASH OR ON THE INSTALLMENT PLAN

OFFICE:  
501-519 FORD BUILDING  
PHONE CASH 445

**B. E. TAYLOR  
REAL ESTATE**

DETROIT, MICH.  
July 22, 1924.

The Ford Roofing Products Company  
535 South Franklin Street  
Chicago, Illinois

Attention Edward R. Litsinger

Gentlemen:

We are taking this opportunity to write you about the splendid success we have had with your new product, the Cyclone Shingle.

Last year we built over 1000 houses of our own four and five room designs, and we used on the roofs the regular 4 in 1 shingle. This spring when your agent presented the Cyclone Shingle to us, we were favorably impressed with it for several reasons.

Its neat and attractive roof design has a tendency to make the roof look more substantial than the regular 4 in 1. The fact that the Cyclone Shingle will not curl or blow up is a wonderful advantage over the regular 4 in 1.

The carpenter prefers the Cyclone because it can be laid faster, at least a 20% saving.

The roof laid with Cyclone Shingles has been a factor in closing sales of our houses. Its permanency is apparent. We consider the Cyclone Shingle the best shingle for the money that we have ever used. We are recognized as the largest builders of small house construction in this part of the country, having built to 2628 buildings and a population of 8500 within a period of two years. Consequently our building experience and selection of material ought to count for something.

We will continue to use the Cyclone Shingle until you can give us something better.

Yours truly,

B. E. TAYLOR

Per *W. A. Mason*  
CONSTRUCTION MANAGER

*Taylor  
Says-*

**"Use Your Eyes"**

Success has crowned B. E. Taylor because he performed in accordance of promised.

Brightmoor grew in 17 months from a farm yard to a town of 2682 homes.

Brightmoor is served by its own bus line of 19 regularly scheduled busses.

A \$12,000 Community Hall built and donated to the township by B. E. Taylor.

B. E. Taylor has opened 61 divisions in 10 years.

The use and endorsement of the Cyclone Shingle by an operator of the B. E. Taylor type makes undeniable merit.



**The World's Fastest Laid Shingle**





# 26 Car Loads of Cyclone

For months, the Cyclone Shingle has been receiving the most favorable reports from the building industry. It is the most popular shingle in the world. The Construction Industry has adopted Cyclone Shingle. As a result, the Cyclone Shingle is the most popular shingle in the world.

## A Sensational Success

Each Cyclone Shingle is double the size of a regular shingle. It is the most popular shingle in the world. The Construction Industry has adopted Cyclone Shingle. As a result, the Cyclone Shingle is the most popular shingle in the world.

### Cyclone Shingle

Each Cyclone Shingle is double the size of a regular shingle. It is the most popular shingle in the world. The Construction Industry has adopted Cyclone Shingle. As a result, the Cyclone Shingle is the most popular shingle in the world.

### Don't Wait!

Delay means lost profits. Start now selling and using Cyclone Shingles. Take advantage of the saving in both labor and material. The Cyclone means better, more beautiful roofs that will increase the value of the buildings they are laid on. Mail the coupon now.

**Ford Roofing Products Company**  
535 South Franklin Street  
Chicago, Illinois

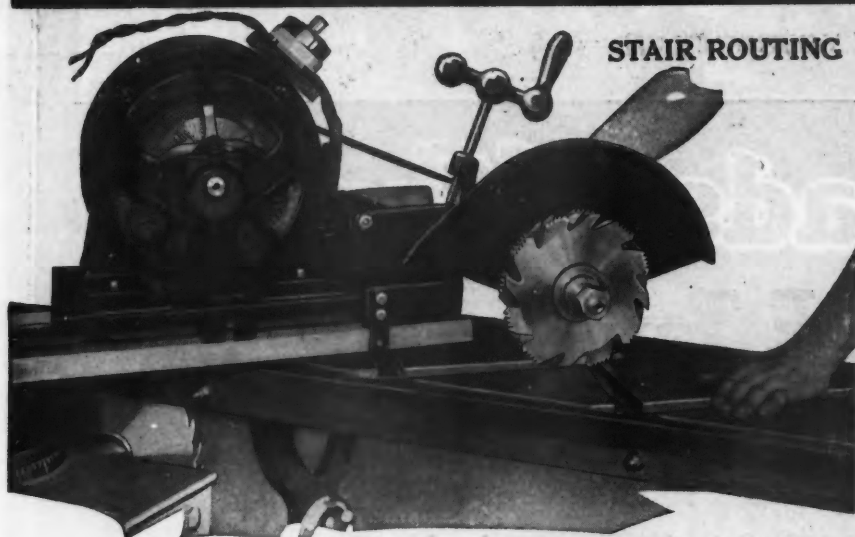
**Mail Today**

**Ford Roofing Products Co., Chicago, Illinois**  
Kindly send full particulars and prices of the Cyclone Shingles FREE and without obligation to us.

Name.....  
Address.....  
Town.....



# The "Master"



STAIR ROUTING

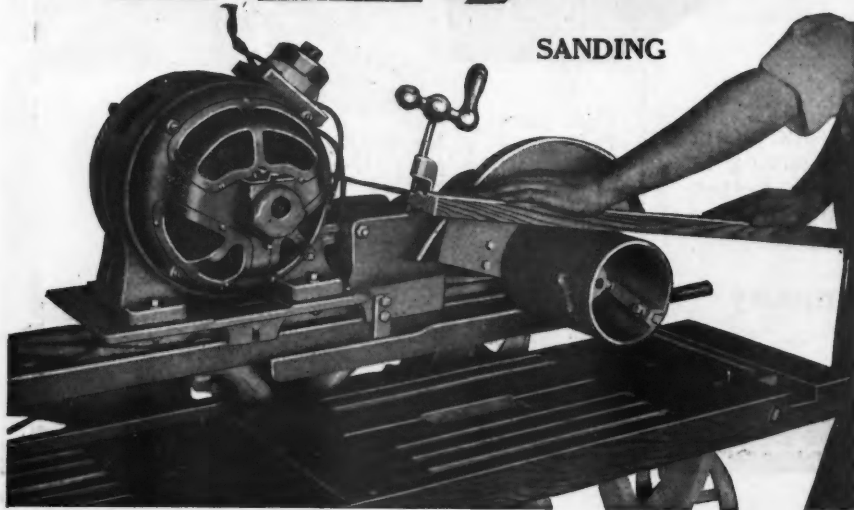
MODEL NO. 9.

Patented Nov. 24, 1914—Feb. 5, 1924  
Infringers will be prosecuted

JACK RAFTERS CUT  
The Saw Travels at Any Angle



SANDING



## A Great Lab

THE MASTER WOODWORKER is a combination of real power and accuracy. Equipped with special motors, developing  $4\frac{1}{2}$  H. P. (No real Woodworker can be operated with satisfaction on 2 to 4-inch stock with any less horse-power.) If you want to do real work and make money, you must have the "power." THE MASTER WOODWORKER is a machine tool with a reputation—the most powerful woodworker for its size.

THE MASTER HAS NO COMPETITION. It may be "imitated" but never "duplicated." It is the first, foremost and finest Woodworker in America.

### The Master Leads Others Follow

THE MASTER is built in four different sizes exactly of the same design. All operations are duplicated on all models according to the size, horsepower and capacity—each model being designed to meet the particular requirements of the wood-working trade.

If you have been dissatisfied with old style saw rigs or cheap contrap-

Manufac

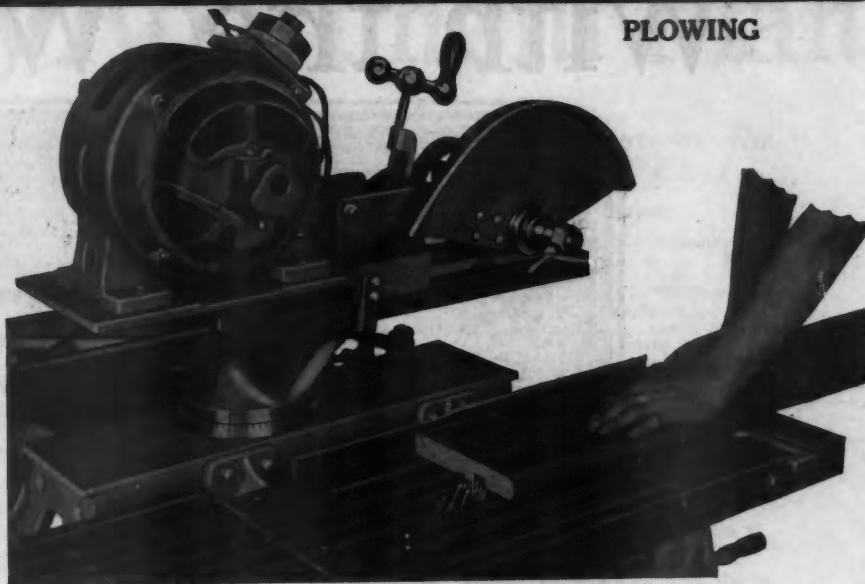
## The Master Woodwork

Brush &amp; Congress Sts.

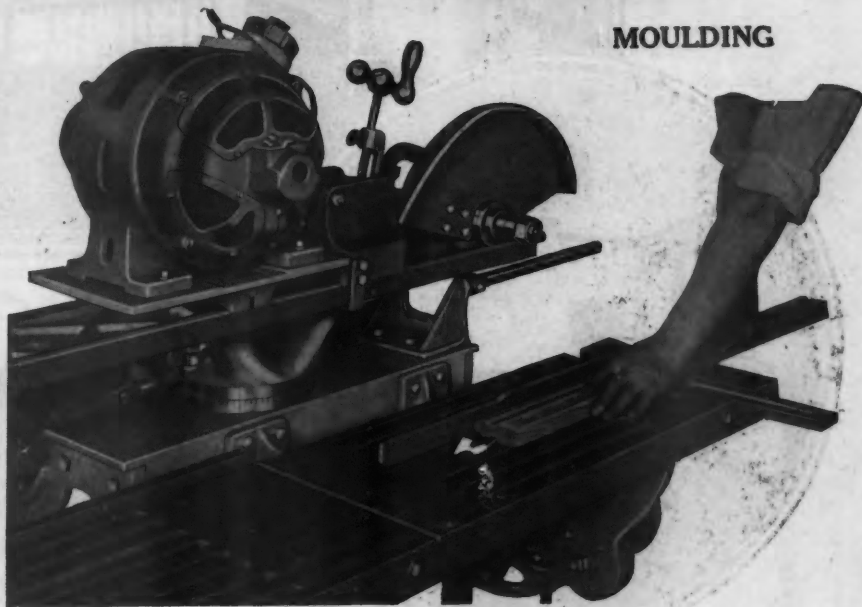
# Woodworker

CROSS CUT 4' THICK  
RIPS - - - 4' THICK  
DADOES - 2' WIDE

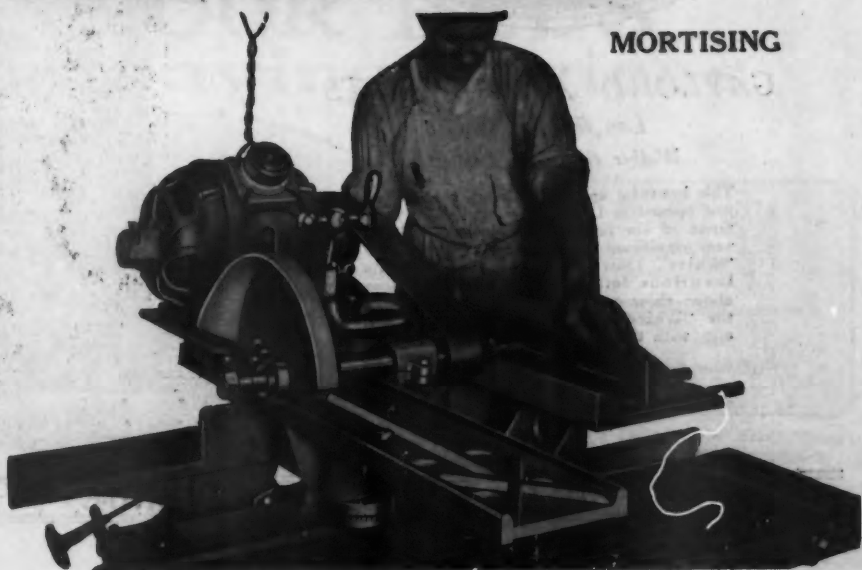
FLOWING



MOULDING



MORTISING



## Labor Saver

tions, try the MASTER WOOD-  
WORKER and join the successful  
contractors.

The MASTER WOODWORKER  
is equipped with a tilting table.  
The jointer is 42" long. No accurate  
work can be done on short jointers.  
Ask the man who owns one.

### This is Our Best Recommendation

*10,000 in Operation All  
Over the World*

Try it on your job for sixty days and  
if not entirely satisfied, return it to  
us C. O. D. the amount paid.

Make up your own guaranty and  
send it to us to be signed.

THE MASTER is sold on long time  
terms. Make it pay for itself.

### 12 Machines in One

- No Bars to Pull!
- No Idler to get stuck with  
sawdust!
- No complicated belts to get  
out of order!
- The Motor rides on ball  
bearings!
- An exclusive patent of the  
Master Woodworker!

tured by *Catalog on Request*

er Manufacturing Co.

Detroit, Michigan

# Profitable Residential B With the "WHITE" E



## GAYLORD APARTMENTS

*Los Angeles, Cal.*

*Walker & Eisen, Architects*

This beautiful apartment hotel, which has just opened in Los Angeles, is one of the finest of its kind in the country. It is very significant therefore that over 200 "White" Door Beds are included in its luxurious furnishings. The illustrations above show one of the apartments with the "White" Door Bed in position and also with the bed completely out of sight.



LESS SPACE — MORE REVENUE — GREATER COMFORT



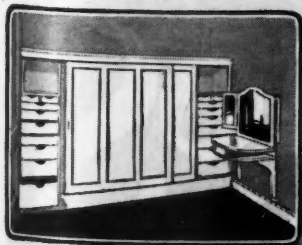
# Buildings for Your Clients Efficiency Apartment Plan

**W**HETHER it be an apartment hotel or apartment building that is being planned, it is the natural desire of the builder to have it so designed that it will produce the greatest possible return on his investment consistent with the comfortable living of his tenants. The WHITE "Efficiency Apartment" idea is the exact solution of this problem as it permits a greater number of apartments for the same amount of space and at the same time increases the convenience and comfort of each. By eliminating waste space the WHITE "Efficiency Apartment" makes possible the advantages of a four room apartment in two room space thus materially increasing the revenue. The biggest advantage of the WHITE "Efficiency Apartment" is that it immediately finds favor with everyone which assures quick rentals, satisfied tenants and greater profits.

**The "White" Door Bed Company**  
130 North Wells Street ~ Chicago, Ill.

*Prospective builders and their architects are invited to confer with our engineers regarding their plans. This service will not obligate you in any way. Send for our Catalog L 97 of "White" Door Beds and Space Saving Devices, also Book L 98 of WHITE "Efficiency Homes".*

## "WHITE" DOOR BEDS and Space Saving Devices

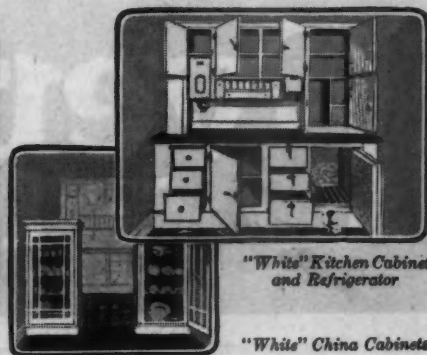


"White" Dressing  
Cabinet and  
Dressing Table

"White" Ironing Board  
and Cabinet



The "White" Door Bed



"White" Kitchen Cabinet  
and Refrigerator

"White" China Cabinets

### Sales Agents in the Principal Cities

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#### MINNEAPOLIS

Reese Metal Weather Strip Co.,  
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#### DES MOINES

Perkins Builders Supply & Fuel Co.,  
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# Don't Overlook This Source of Profit

Masons and builders can secure day-in-and-day-out, all-year-round, money-making contracts laying Everlasbestos Floors.

## *Many Contracts for the Asking*

Right in your own neighborhood, or your city or section, there are hundreds of factory owners, merchants, school boards, home owners, who are now building or preparing to build, or who have floors that show wear or are not giving the service they should. All these are splendid prospects for you to lay Everlasbestos Floors.

## *Low-Cost—Long Wearing Floors*

No other floor on the market gives anything like the service that an Everlasbestos Floor will give for offices, lunch rooms, rest rooms of factories, stores, churches, schools and for bathrooms, kitchens, enclosed porches of homes. Costs less than any other permanent floor and will look as good ten years from now as the day it is laid.

## *No Seams to Collect Dirt*

An Everlasbestos Floor is seamless, dustless, and sanitary. Can be rounded up onto wainscoting if desired fire-proof.

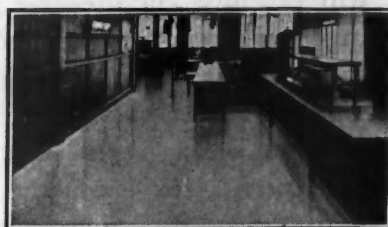
## *Over Old Floors or for New Work A Good Job Assured*

Superior ingredients and perfected formula contained in Manual of Instructions assure a good job of laying, a floor free from flaws and imperfections and the satisfaction of customers.

A sample on wood and complete description is yours for the asking. Write for them today. Everlasbestos Flooring Co., Dept. B, 95 North Street, Rochester, N. Y.



Everlasbestos Floor in Drug Store



Everlasbestos Floor in Factory Lunch Room



Laid like cement  $\frac{3}{8}$ " to  $\frac{1}{2}$ " thick.  
Hardens in 24 hours.  
Can be laid in one piece with cove base or wainscot.  
Bonds with any foundation.  
Good man can lay 200 sq. ft. per day.  
Valuable Instruction Manual free with order.  
Colors, Red, Buff, Gray.  
Shipped in bags ready for use. Shipping weight 4½ lbs. per sq. foot.

# Everlasbestos Flooring



## California Pines Preserve the Lines that Impart Colonial Charm —

### CALIFORNIA WHITE PINE CALIFORNIA SUGAR PINE

*A 200-year supply of these woods now stands in the region where our mills operate. Natural growth of standing timber, augmented by natural reproduction and re-forestation, assures a supply of these valuable building woods for all time.*

California Pines are used more than any other wood for doors, sash, millwork and interior finish. Millions of doors and window sash and frames of California Pines are annually installed in the homes of America.



Send for this free booklet for additional information about California White Pine and California Sugar Pine.



ENAMELED in white, ivory or gray, California White Pine and California Sugar Pine preserve the charm of stately Colonial architecture.

These fine, soft woods take enamel and paint perfectly. The close, evenly spaced, delicately marked grain of these woods offers the decorator's brush a smooth, satiny surface, light in color, that requires less enamel and paint to obtain the most lustrous finish—an economy both of materials and of labor time.

Because California Pines are unusually free from resinous substances and "raised" grain, the whitest of white enamel retains its brilliancy without discoloration, and without checking, chipping or peeling off.

California White Pine and Sugar Pine permit the delicately moulded contours and sharp profiles of Colonial doors, sash, mantels, stairways and all interior woodwork, because these fine-textured soft woods cut readily either with or across the grain. Unusually free from warping and shrinking, these woods "stay put," thereby giving permanence to the purity of line and ornament in the architect's design.

## California WHITE & SUGAR PINE

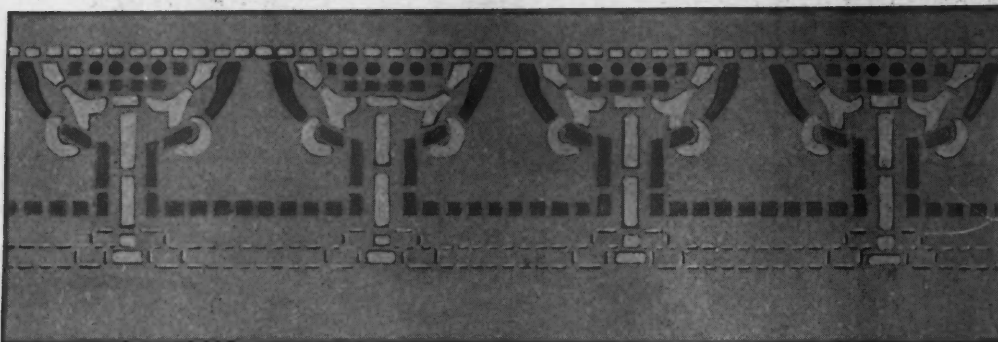
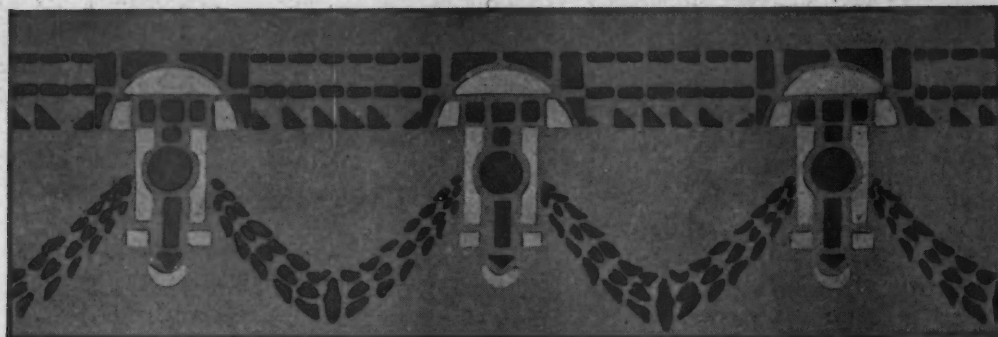
MANUFACTURERS' ASSOCIATION

656 CALL BLDG., SAN FRANCISCO

Also producers of

CALIFORNIA WHITE FIR / CALIFORNIA DOUGLAS FIR / CALIFORNIA INCENSE CEDAR





*Typical Stock Patterns of Decorated Sani Onyx*

## **SANI ONYX**

### **A VITREOUS MARBLE**

A PRODUCT OF THE MARIETTA MANUFACTURING COMPANY

### ***Decorated Stock and Special Patterns***

Sani Onyx lends itself readily to ornamentation. Hence in following any plan of decoration it is doubly desirable—

First—Because the exclusive physical characteristics of Sani Onyx, its density, uniformity and non-absorbing features, its ease in installation, its economy in maintenance, and permanent utility make for complete owner satisfaction.

Second—In addition to its inherent beauty, by an exclusive process, any pattern or design may be etched permanently into the surface. Ceramic coloring can also be added and is actually fused into the material. Thus any decoration applied is as lasting as Sani Onyx itself.

### ***Only Sani Onyx has these Advantages***

*A wide range of stock patterns is available for borders, friezes, and pilasters. Or, if you prefer, your own designs can be followed on blue, black, white or gray Sani Onyx plain or tile pattern sheets. In combination with these, beautiful and lasting decorative effects are secured. Ask the Marietta Engineering Department for complete details.*

## **MARIETTA MANUFACTURING CO.**

Main Office and Works—80 BROOKSIDE, INDIANAPOLIS, INDIANA

*Distributors and Construction Houses  
throughout the United States and Canada*

TO builders throughout the world, the Certain-teed Label has long stood for genuine building satisfaction.

Asphalt Roofing  
Asphalt Shingles  
Paints and Varnishes  
Gypsum Plaster  
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Linoleum

**Certain-teed**

Certain-teed means  
CERTAIN satisfaction  
—quality guaranteed

Certain-teed Products Corporation

# Certain-teed

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



**T**HIS handsome staircase has been in constant use for more than one hundred years! What a monument to the builder who erected it over a century ago! Have *you* left an enduring work?

He who builds with Mahogany leaves behind a lasting record of his life work.

TRY GENUINE MAHOGANY ON YOUR NEXT CONTRACT

MAHOGANY ASSOCIATION, INC., 1133 BROADWAY, NEW YORK

**A NATIONAL ORGANIZATION OF MAHOGANY PRODUCERS**



# FRANTZ BUILDERS' HARDWARE

**With its Extraordinary  
Appearance and  
Perfect Performance**

insures your reputation as a builder because you will give your client lasting satisfaction.

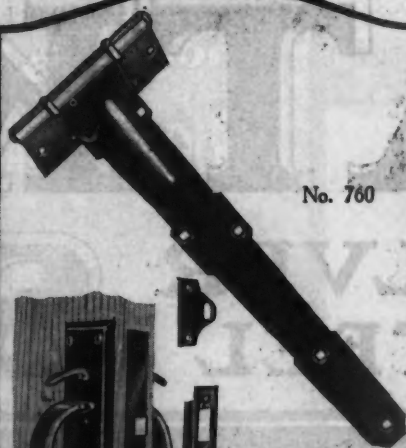
We manufacture a complete line of Builder's Hardware for HOMES, GARAGES and BARNES. Every piece of Hardware we make is covered by our iron-clad guarantee.

Hardware is one of the most important materials that goes into the buildings you construct. Don't slight it.

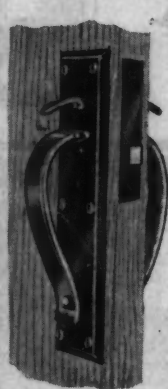
Go to your FRANTZ dealer's store—ask to see the hardware packed in the box bearing the Orange FRANTZ label. You will see at once why you should use FRANTZ HARDWARE on all your jobs.

*Our literature on garage, barn and general line of hardware will be mailed you free of charge, just send us your address on a post card and say you saw our advertisement in the "American Builder."*

**Frantz Manufacturing Co.**  
STERLING, ILLINOIS



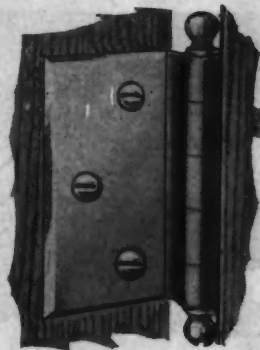
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# ATKINS

## SILVER STEEL SAWS



### Look On the Saw For The Name, ATKINS

Hundreds of thousands of carpenters have looked for the name ATKINS and found it on the best of saws in the world.

For over sixty-six years, this company has been manufacturing saws and kindred products. A reputation has been built up on quality, therefore we can assure you that any Saw, Saw Tool, or Saw Specialty of our manufacture on which our name appears is as our slogan implies.

### "The Finest On Earth"

Buy them from any first class hardware dealer; insist upon your dealer furnishing you the saw you want, an ATKINS. If he cannot supply you, write us.

*Send us thirty-five cents for high grade nail apron, Saw Sense book and useful souvenir.*

### E. C. ATKINS & CO.

ESTABLISHED 1857 THE SILVER STEEL SAW PEOPLE  
Home Office and Factory, INDIANAPOLIS, INDIANA

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ORIGINAL  
The **Paine Miracle** Door

THE WORLD'S MOST BEAUTIFUL DOOR

**Price**

Softwood  
about one  
dollar  
more than  
a one  
panel  
softwood  
door

**Price**

Hardwood  
no more  
than a  
one  
panel  
hardwood  
door



**Paine Lumber Company, Ltd.**  
OSHKOSH, WISCONSIN.

THE MIRACLE DOOR IS A REVELATION  
OF BEAUTY AND ECONOMY



ORIGINAL

**The PAINE Miracle Door**

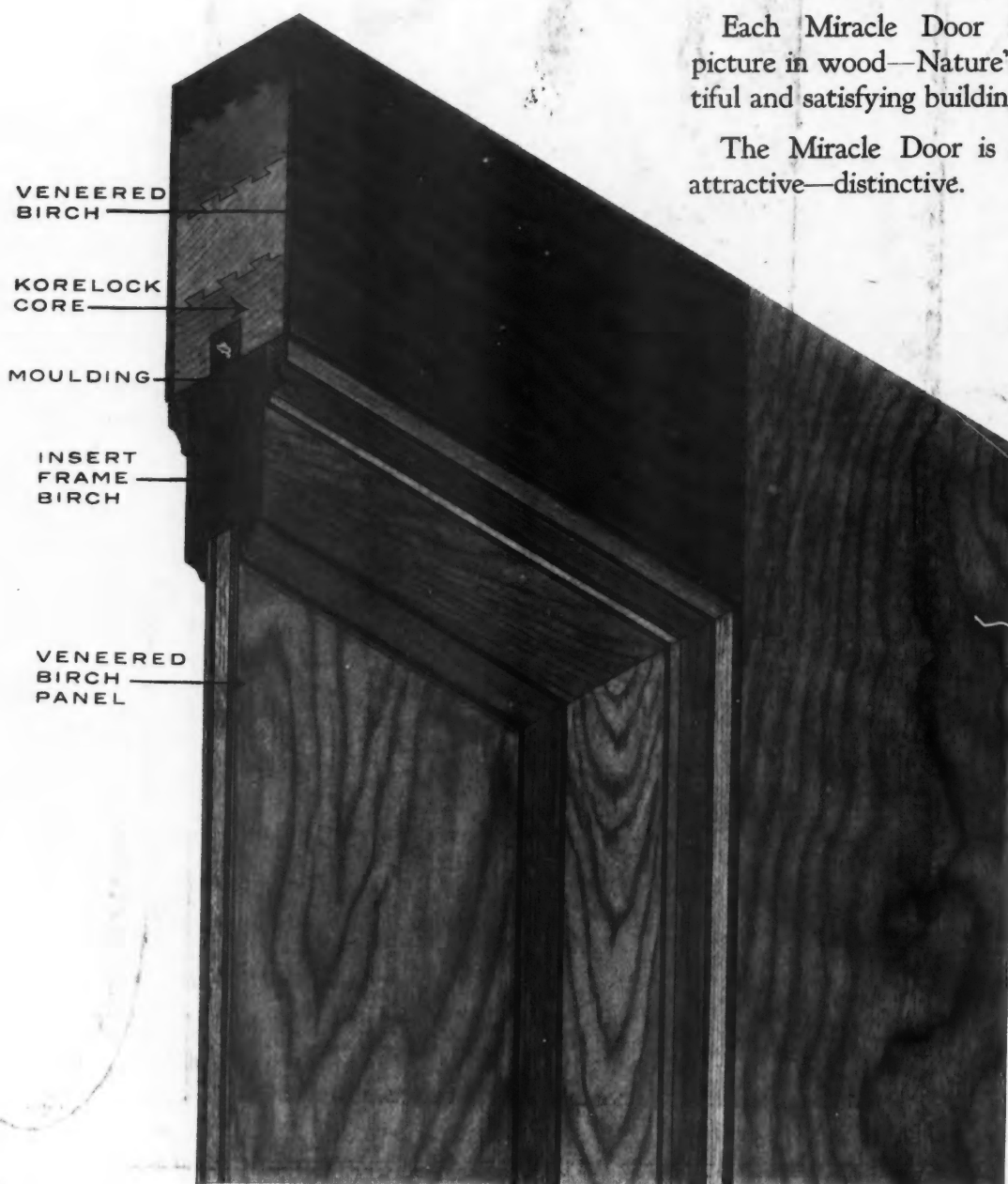
TRADE MARK REG. PAT. JULY 10, 1923

THE Miracle Door brings to the door industry the greatest improvement in doors ever made.

The Miracle Door combines the simplicity of the one panel door with the richness of a moulded door.

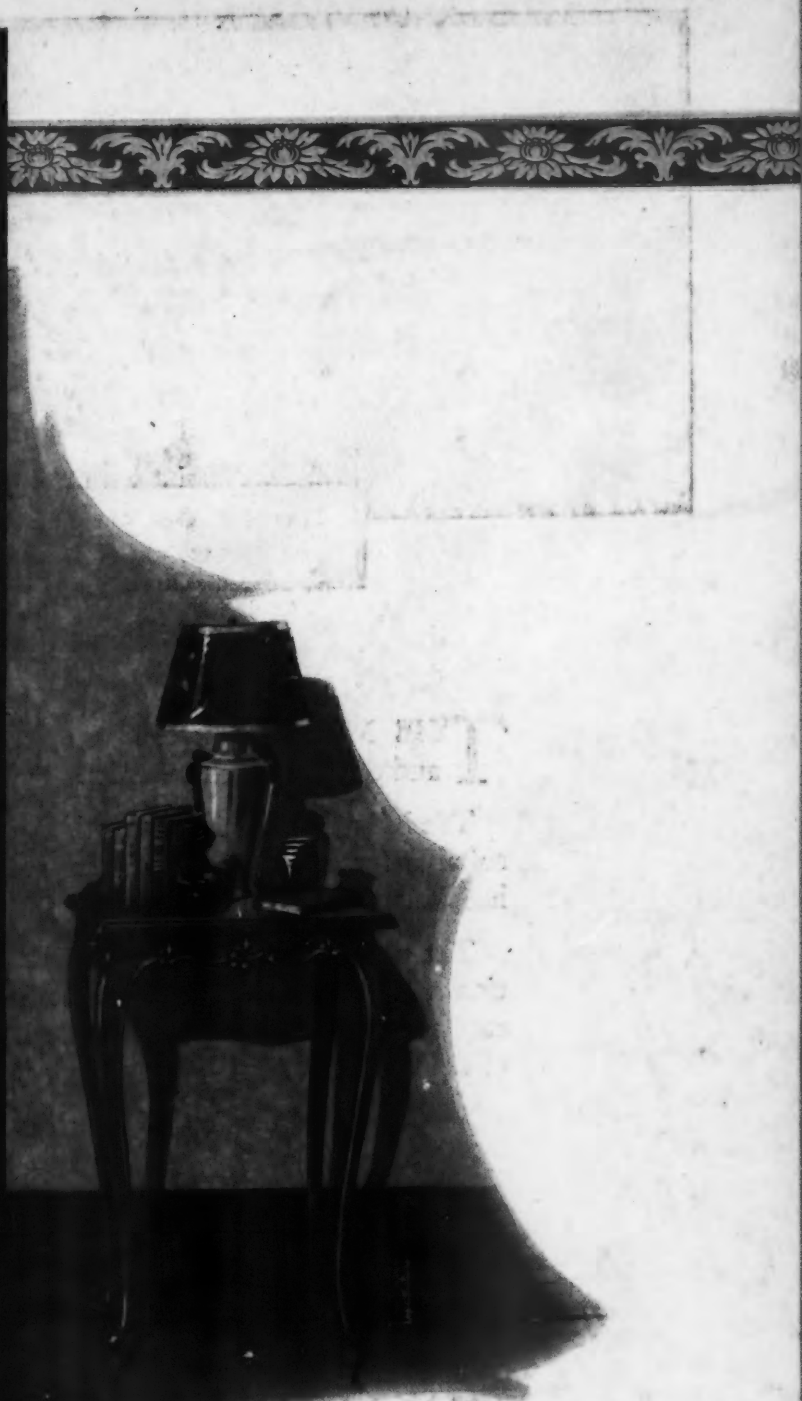
Each Miracle Door is a framed picture in wood—Nature's most beautiful and satisfying building material.

The Miracle Door is substantial—  
attractive—distinctive.



TRADE MARK REGISTERED PAT. JULY 10, 1923  
CONSTRUCTION OF VENEERED MIRACLE DOOR

**PAINE LUMBER COMPANY, LIMITED**  
**OSHKOSH, WISCONSIN**

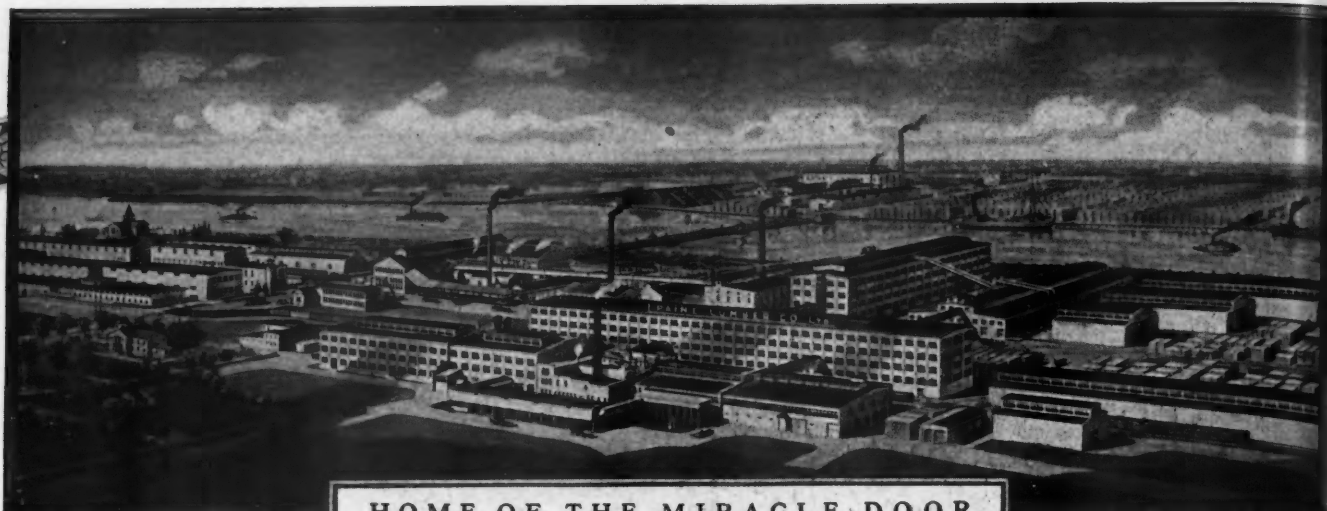


**B**IRCH is America's most versatile hardwood. You can paint, stain or finish Birch natural. Any tone or shade is possible in this wood. No other wood surpasses its variety of grain or has its wearing qualities.

As a cabinet article at a stock door price the Miracle Door has no equal.

The smooth, sanitary appearance of the Miracle Door makes it suitable in place of a flush door at a great saving in cost.





## HOME OF THE MIRACLE DOOR

Established 1853  
The largest woodworking plant in the world

**T**HE Miracle Door has been endorsed and specified by architects and enthusiastically received by the entire building industry.

The Miracle Door adapts itself to the many styles of architecture. It is suitable for all types of buildings, including homes, apartments, hotels, hospitals and office buildings.

The possibilities of staining the Miracle Door and using it in combination with varied wall treatments are unlimited. Desired contrasts can easily be secured with the Miracle Door which adapts itself to any style of trim.

The Miracle Door is made in all woods.

The Miracle Door is made possible by entirely new patented standards of precision in wood manufacture.

The Miracle Door is produced and guaranteed by an organization that operates from tree to finished product with unparalleled facilities.

Wholesale stocks of Miracle Doors are carried in over eighty cities. If your dealer does not carry Miracle Doors write us.

A new fifty-six page catalog showing representative installations of Miracle Doors is just out. This gives numerous complete ideas in color for finishing Miracle Doors in all woods, together with the floors, walls and woodwork in connection. A copy will be mailed you upon request.

*Demand the Genuine Miracle Door. Refuse Imitations*

ORIGINAL

The **PAINE** **Miracle** Door

TRADE MARK REG.

PAT. JULY 10, 1923

**PAINE LUMBER COMPANY, LIMITED**  
**OSHKOSH, WISCONSIN**





(Above) Stedman Flooring as used in a store of the Stetson Shoe Co., Boston.

## For Store Floors

The permanence of Stedman Reinforced Rubber Flooring makes it the most economical floor for almost every type of building.

This durability is particularly necessary in stores. Stedman Flooring will not wear out no matter how heavy the traffic.

We will be pleased to suggest the designs and color combinations best suited to your particular scheme of decoration.

### Stedman Products Company

*"Originators of Reinforced Rubber Flooring"*

SOUTH BRAINTREE, MASS.

*Agencies in principal cities.*

*See local telephone directory.*

#### DIRECT BRANCHES

101 Park Avenue  
NEW YORK

218 South Wabash Avenue  
CHICAGO

4 Park Street  
BOSTON

1217 Book Building  
DETROIT

462 Hippodrome Avenue  
CLEVELAND



As used in Heitkemper's Jewelry Store, Portland, Oregon.

# Stedman

## REINFORCED RUBBER FLOORING

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Nine Kernerator-equipped residences, constructed for Mr. W. E. Byrd, by I. R. Olivine, at Alto Avenue and Division Street, Baltimore, Maryland.

William Edgar Byrd  
ATTORNEY AT LAW  
224 ST. PAUL STREET  
BALTIMORE, MD.

Kerner Incinerator Company  
1029 Chestnut Street  
Milwaukee, Wisconsin

lemen:-

About three years ago I built nine brick cottages in this city, into one of which I moved as a residence and which I have continuously occupied up to the present time.

At the time I built these houses, it was suggested to me that I equip each house with one of your incinerators. At that time I hesitated about doing it as it did not appeal very forcibly to me. However, I was persuaded to equip them with your Incinerator and I have never regretted so doing.

After nearly three years' personal use and also the experience of the other eight houses, I feel that I am fully qualified to testify as to the advantages of the incinerator in the home. I would not now be without one and would build an incinerator be installed in any house or out on the back lawn, garbage or any character nor do I see garbage cans around.

I take pleasure in heartily recommending them to any person who proposes to erect a home or to erect a house for sale. In selling several of these houses, I found that the incinerator was quite an attraction to the purchaser and I am sure increased their selling value.

Very truly yours,  
W. E. Byrd

WEB:LHH

## Rentability Saleability Economy

— as told by the builder of these 9 homes

Mr. Byrd's letter tells, without need for elaboration, what the Kernerator, which disposes of garbage *where it originates and without cost*, has meant to him. His experience is typical. This built-in-the-chimney convenience, in thousands of residences, apartments and institutions, has proved a splendid source of profit and satisfaction to owner and tenant—buyer and seller.

The experience of your first client who adopts the Kernerator will make you want to recommend it to a hundred others.

Full details appear in *Sweet's* (1923) Pages 2340-41.

Additional information cheerfully furnished, just write to

KERNER INCINERATOR COMPANY, 1053 Chestnut St., Milwaukee, Wis.

# KERNERATOR

Built in the Chimney

Reg. U. S. Patent Office

Emptying the vacuum  
sweeper bag. Drop ALL  
waste here—then forget it!



Sweepings  
Waste  
Flammable  
M.C. Gas  
You Can  
Waste Paper  
Refuse

# A Combination Bath Tub

— PATENTED —

One size only, for all  
size people

Regular Bath, Seat Bath, Shower  
Bath, Foot Bath, and Child's Bath,  
all in one piece

Made of Semi-Vitreous  
Porcelain Ware  
and  
Enameled Iron Ware



Plate 30 E

Semi-Vitreous Porcelain Ware, 44x30 inches to tile in right or left hand corner, or in recess. Glazed white all sides. Only one size made.



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. Only one size made.

## Testimonials

Mr. T. H. Kelley, 158 E. 188th St., New York City, says:

"I had installed in my house several months ago one of your Combination Bath Tubs fitted complete with shower and curtain, and I cannot say too much in recommending this fixture and am glad I decided on this new type of tub, as it gives the bathroom features that other pattern tubs do not have.

"I am a man weighing two hundred pounds and the tubs have ample room for one of my size to properly bathe.

"You are at liberty to use this letter in any way to advance the use of this fixture, as I cheerfully recommend this tub to anyone, and if I were to equip another bathroom for my own use, or for sale, I would use this Combination Tub."

Dr. Herman N. Bundesen, 7414 Oglesby Ave., Chicago, Ill., installed one of these tubs in his new residence a year ago and remarks as follows:

"It is the best fixture I ever saw, and I would not be without it for anything. It is most economical in the use of hot water, and this is a decided advantage where instantaneous gas water heaters are used, and this is a decided advantage where there are children, as it can be used to great advantage as a foot bath where the children come in dirty form playing. The shower feature is also an advantage which I greatly enjoy. In fact, this tub is most acceptable in every way, and I most thoroughly recommend this fixture."

Mrs. Bundesen is equally as enthusiastic as the Doctor, and states:

"It is a wonderful bath."

*Sold through jobbers of plumbing supplies. Write us for descriptive circular.*

**Wheeling Sanitary Mfg. Co.**  
Wheeling, W. Va.

Vitreous China-Closet, Bowls and Flush Tanks of all kinds

Semi-Vitreous Porcelain Baths, Sinks, Lavatories, Drinking Fountains, Urinal Stalls, etc.  
Enameled Iron—Baths on feet and on base.

Branch Office and Show Room: 315 Wrigley Building, Chicago, Illinois



## Weatherbest STAINED-SHINGLES FOR ROOFS AND SIDEWALLS



Out on the spacious grounds of the St. Louis, (Mo.) Country Club stands this beautiful home of Mr. S. D. Capen. It would be hard, indeed, to improve on the charming simplicity and blending of colors that Architect E. J. Giesseler secured here thru the use of deep Moss Green, 16 in. WEATHERBEST Stained Shingles for the roof and heavy butt, 24 in. WEATHERBEST in Silver Gray for the sidewalls.

## Proved by "close-ups" or "long shots"

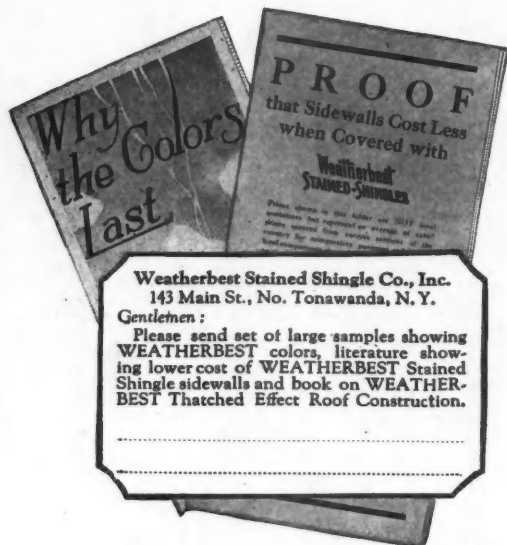
ANY way you choose to look at them WEATHERBEST Stained Shingles prove themselves preferable for the small home. From a distance you appreciate their soft harmony of color. Closer inspection reveals the uniform edge grain which absorbs stain evenly and makes them lie flat and smooth.

To their first impression of artistic charm time adds a realization of unusual durability and up-keep economy.

### It Is "100% Edge Grain" that Makes the Big Difference

WEATHERBEST Stained Shingles are all strictly edge grain, British Columbia red cedar. They are dipped loose — not in bundles — and afterwards re-bundled. Each shingle soaks in plenty of creosote preservative as well as color pigments, so that colors last and the shingles resist rot, warping, or curling. Applied with zinc coated nails, they last 50 years on roofs. And on sidewalls they cost from \$100 to \$250 less per house than weatherboarding and will last as long as the building itself.

*Return Coupon for Literature and Color Samples*



## WEATHERBEST STAINED SHINGLE COMPANY, Inc.

*Formerly Transfer Stained Shingle Co., Inc.*

143 Main Street, No. Tonawanda, N.Y.

Western Plant, Minnesota Transfer, Minn.

## TAPESTRY GLASS

TAPESTRY GLASS is an opaque glass, yet it admits the maximum of light. The surfaces are smoothly rounded, obstructing vision, but the body of Tapestry Glass has all the strength and clarity of the finest plate.

Tapestry Glass is a new and exclusive product. It is not only the finest opaque glass made, but also the most beautiful. Tapestry Glass is used for office partitions, banks, churches, residences, stores or wherever clear and brilliant light is necessary and privacy is desirable. It adds beauty and dignity to any interior or building and its value and usefulness are beyond all question.



*Missouri Pacific Hospital, St. Louis, Mo. C.H. Wray, Architect. E. M. Tucker, Supervising Architect. Plain Tapestry Glass with 1/2-inch mitre.*

Tapestry Glass may be permanently and inexpensively decorated by blown, chipped or mitred designs. These may conform to any architectural or decorative scheme and are especially attractive when used in transoms, side lights or front

doors of residences. Names, numbers and suitable designs for office partitions and doors, business buildings and hotels may be added to Tapestry Glass before installation.

Investigate the possibilities of Tapestry Glass through the nearest glass dealer or write for catalog and samples to the Pittsburgh Plate Glass Company.

**PITTSBURGH PLATE GLASS CO.**  
GLASS VARNISH PAINT

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# KEYSTONE Copper Steel



*This is your protection  
mark. Look for it on  
all sheet metal products*

gives lasting and satisfactory service for all uses in the building construction field. The railroads purchased over 50,000 tons of Keystone Sheets for new car construction during the first twelve weeks of this year, because of its excellence.

## Black and Galvanized Sheets and Roofing Tin Plates

### *Superior in Rust-resistance*

The destructive enemy of sheet metal is *rust*. It is a well established fact that an alloy of copper gives to Steel Sheets and Tin Plates the maximum of *rust resistance*. Keystone Copper Steel is unequalled for roofing, siding, spouting, gutters, culverts, metal lath, and similar uses. It assures roofs and sheet metal work that will withstand the ravages of fire, wear and weather. Shall we send proofs from actual service tests? We manufacture Steel Sheets

and Tin Plates for all purposes and specially adapted to the requirements of builders and contractors: Black Sheets, Special Sheets, Apollo and Apollo-Keystone Galvanized Sheets, Corrugated Sheets, Formed Roofing and Siding Products, Roofing Tin Plates, Bright Tin Plate, Black Plate, Etc. Sold by leading metal merchants. Our products represent the highest standards of quality and utility. Write for quotations, also our booklet, *Testimony of a Decade*.



## American Sheet and Tin Plate Company

General Offices: Frick Building, Pittsburgh, Pa.

#### DISTRICT SALES OFFICES:

Chicago Cincinnati Denver Detroit New Orleans New York Philadelphia Pittsburgh St. Louis  
Export Representatives: UNITED STATES STEEL PRODUCTS COMPANY, New York City  
Pacific Coast Representatives: UNITED STATES STEEL PRODUCTS COMPANY, San Francisco, Los Angeles, Portland, Seattle





Apartment Building at Oakdale and Pine Grove Avenues, Chicago. F. A. Anderson, Owner and Builder, Chicago. John A. Nyden, Architect, Chicago. All kitchens are equipped with Reliable "Angliron" Gas Ranges with Lorain Oven Heat Regulators. Below are shown the two types of Reliable Gas Ranges in use in the apartments.

## Tenants Stay Longer Where Equipment is Most Modern

**O**WNERS of rented properties find that tenants remain longer if the equipment throughout is of the most modern type. Architects everywhere are aware of this fact, and are specifying for kitchens the most modern cookery appliances—Gas Ranges equipped with the Lorain Oven Heat Regulator.

They know that the big advantages of the Lorain Self-Regulating Oven appeal immediately to housewives. Lorain eliminates the bug-bear of "pot-watching." It insures uniform baking-results. It makes possible the cooking of a Whole Meal at one time while the housewife is miles away. And it permits of the canning of fruits and tomatoes with entirely successful results.

Lorain-equipped Gas Ranges are approved and used by the leading cookery authorities of America. These remarkable stoves are used in thousands upon thousands of the finest homes, apartments, churches, hospitals, fraternal organization buildings and many other types of structures. They are used for cookery instruction purposes in over a thousand schools and universities.

Lorain-equipped Gas Ranges are made in every popular size, style and finish. Catalogs and data of special interest to architects gladly sent upon request. For specific data see pages 2315-24, 18th Edition Sweet's Architectural Catalog.

## AMERICAN STOVE COMPANY

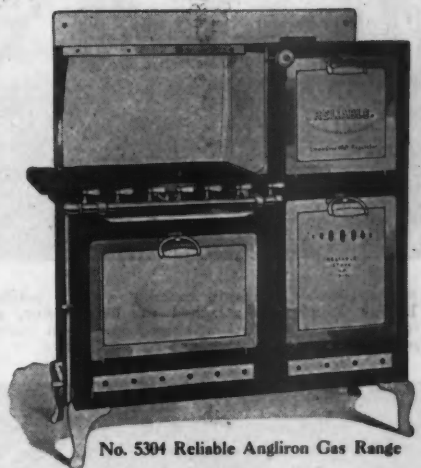
Largest Makers of Gas Ranges in the World

233 CHOUTEAU AVENUE ST. LOUIS, MO.

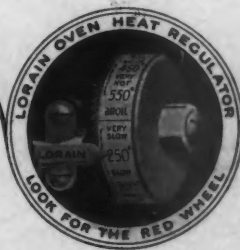
These famous gas stoves are equipped with the Lorain Oven Heat Regulator: Direct Action, New Process, Quick Meal, Reliable, Clark Jewel and Dangler



No. 5381 Reliable Angliron Gas Range



No. 5304 Reliable Angliron Gas Range



One easy turn of the Lorain Red Wheel gives the housewife a choice of 44 measured and controlled oven heats for any kind of oven cooking or baking

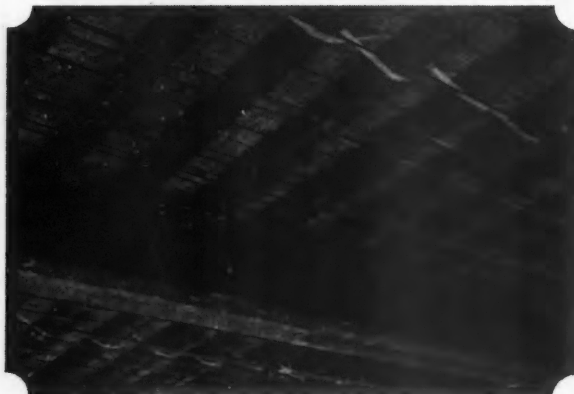
# LORAIN OVEN HEAT REGULATOR



Applying the  $\frac{3}{8}$ " Ribplex to Metal Lumber joists. As the floor will be of concrete, wood nailing strips are not needed.



Metal Lumber studs in exterior wall of residence.  $\frac{3}{8}$ " Berloy Ribplex is attached to the exterior, and stucco is being applied. After stucco has been back-plastered, interior lath and plaster will be applied.



$\frac{3}{8}$ " Ribplex applied to bottom of Metal Lumber joists, ready for ceiling plaster. Note prongs on the joists by means of which Ribplex is attached.

## Quickly erected, fire-safe, permanent—yet inexpensive

Berloy Ribplex and Metal Lumber reduce the weight of fire-proof construction to a minimum. They successfully meet the same live load requirements as the bulkier types of construction and with less than half the dead load. The consequent saving in footings and superstructure makes the total cost of the building little if any more than when cheap, burnable materials are used.

The builder can disregard the weather with these materials. They are not affected by any conditions. Fewer men are required for erection, and they need not be experts, as all pieces come cut to fit and plainly marked.

Ribplex sheets have ribs for stiffness which makes handling easy and gives the sheets ample strength. They make form work unnecessary for concrete floors, and serve as an ideal base for plaster in partitions and ceilings.

Contractors without previous experience have broken all speed records with Berloy Building Materials. Dept. F-3, our nearest office, will gladly send complete information.

### THE BERGER MFG. CO., CANTON, OHIO

Boston  
Chicago  
Minneapolis  
Dallas

New York  
St. Louis  
San Francisco  
Roanoke

Philadelphia  
Kansas City  
Los Angeles  
Jacksonville

# BERLOY RIBPLEX AND METAL LUMBER

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

# "In One Working Day

**—One Man and a Helper Can  
Apply 20 to 25 Yards More  
Elastica than Ordinary  
Stucco."**

**T**HINK of the saving that this brings to the Contractor—a big saving in time, a big saving in money—all rolled into bigger profits for you.

Elastica is a material of permanence and quality. Its record is clean. Its manufacturers are responsible.

It is popular—a *preferred* material. It has the public confidence, because the public knows it as a dependable material.

Save more money—make more money—with Elastica.



*Manufactured by*

AMERICAN MATERIALS CO.	-	NEW YORK
ART STUCCO MATERIALS CO.	-	DETROIT
NORTH WEST MATERIALS CO.	-	ST. PAUL
U. S. MATERIALS CO.	- - -	CHICAGO

# ELASTICA

THE WATERPROOFED STUCCO

© U. S. Materials Co., July, 1924.



# SAND'S LEVELS

**Have Told the Truth for Twenty-Nine Years—Why Experiment?**



Get a Sand's Level and you get a tool with a record of satisfied users extending over twenty-nine years. You get the original—the level that was first to come out with a dozen improvements—the level that has won popularity with experienced craftsmen everywhere, because they've found it absolutely accurate, and most convenient on the job.

## You're Safe in Buying a Sand's

Sand made the first aluminum level, the first level to have lens-protected spirit tubes, the first to have the spirit tubes crowned to make the bubbles stop quicker—in fact Julius Sand invented the combination plumb and level in the first place, and was first to build in absolute permanent accuracy. Sand's Levels are the leaders—insist on the genuine.



**At Good Hardware  
and Tool Stores  
Everywhere**

If yours can't supply you,  
order direct mentioning  
your dealer's name.

## Look for the Name "Sand's"

None are genuine without it. The aluminum models have it cast in the end of the frame inside, —the wood levels have it burned in the one end. **SAND'S** this oval wood near We're proud of our name on every level. We put it there for your protection. Look for it! It's worth looking for.

# SAND'S LEVEL & TOOL CO.

**Owned—J. SAND & SONS—Operated**

**5843 Fischer Avenue**

**Detroit, Michigan**

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



14" high instead of 12"

10" wide—  
2" more than  
the ordinary in-  
dividual shingle

Self-spacing

## Investigate—Then Profit By Using Ruberoid Giant-shingles

These illustrations show some of the advantages you will gain by using the new Ruberoid Giant-shingles.

If you are working on a development proposition of your own, they will increase the saleability of your houses by giving them better, longer lasting and more attractive roofs than the usual, standard-size, composition shingle *without any increase in cost.*

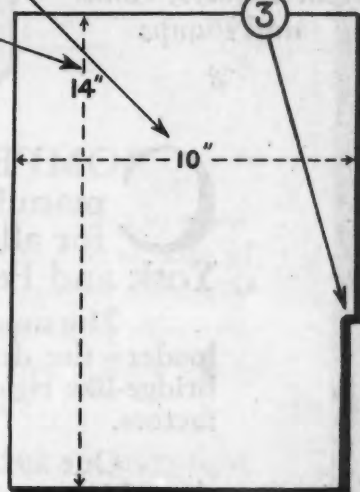
If you are building on contract, you will give your client greater satisfaction for the same reason.

Notice the extra large size—10 inches by 14 inches—and the cut-out which makes them self-spacing. For an average roof (say 15 squares) you have 2000 fewer shingles to lay, 4000 fewer nails to drive, fifty per cent. saving in time and labor of application.

That's why you have a better roof. The saving goes into the

materials. The finished roof is 900 pounds heavier—900 pounds of greater protection and durability.

Before you do another roofing or reroofing job you owe it to yourself, as a progressive American builder, to investigate Ruberoid Giant-shingles. See the Ruberoid Dealer near you or write us for a sample and our nearest distributor's name. The coupon is for your convenience.



1. The length of fourteen inches provides a five-inch exposure and a four-inch head-lap.
2. The ten-inch width gives proper proportion and makes an attractive roof.
3. This is the only individual Giant-shingle on the market which is self-spacing.



There is but  
one Ruberoid.

Look for the Man  
on the Label.

The RUBEROID Co.  
95 Madison Ave., N. Y.

Dept. 1

Gentlemen: Please send me a sample and full information regarding Ruberoid Giant-shingles.

Name .....

Address .....

The RUBEROID Co.  
95 Madison Avenue, New York

Chicago

Boston

# RU-BER-OID

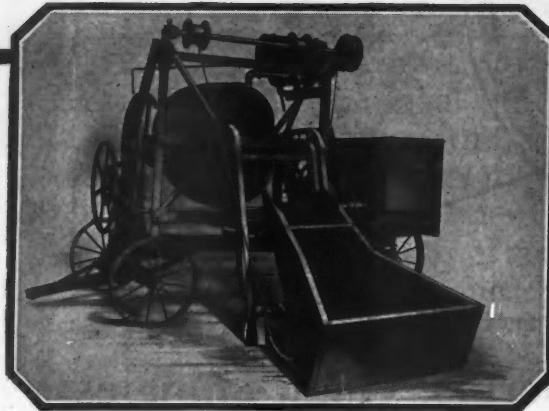
## GIANT - SHINGLES

# Pennsylvania & New York State Highway Departments Choose **WONDER MIXERS**

PENNSYLVANIA

33

Wonder "7's"  
With Loaders, Tanks  
and Pumps



NEW YORK

23

Wonder "4's"  
With Loaders



**C**OMPETING with practically all other Mixers manufactured, WONDER won the entire award for all side loader model mixers from the New York and Pennsylvania Department of Highways.

The superiority of design of the WONDER track-extension loader—the dependable Fuller & Johnson power unit and the bridge-like rigidity of WONDER general design were the deciding factors.

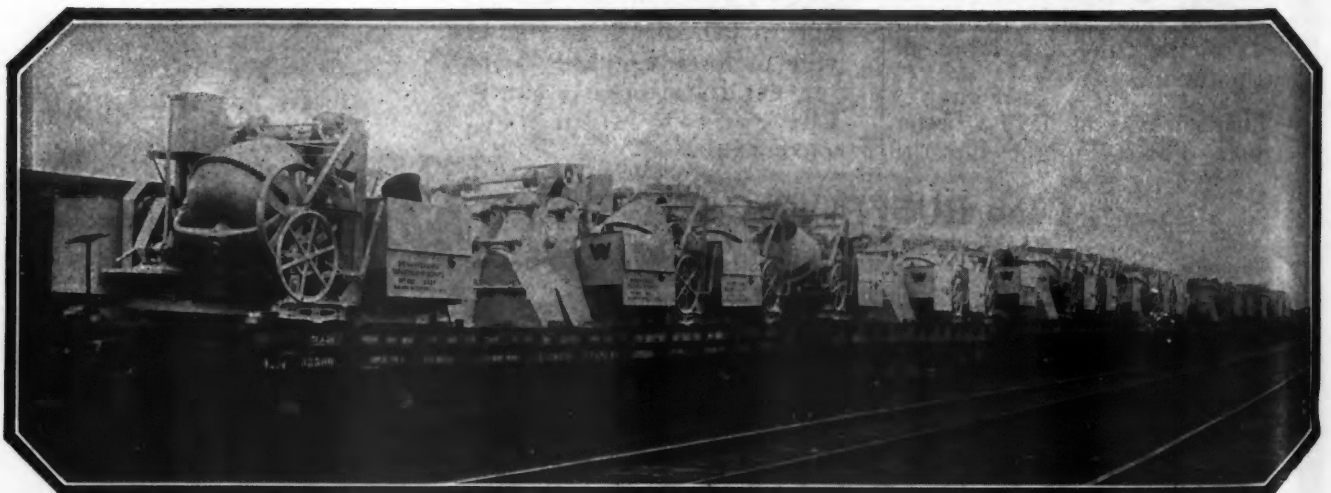
Our 1924 prices and catalog are both attractive. Yours for the asking.

## CONSTRUCTION MACHINERY COMPANY

EASTERN OFFICE  
Widener Bldg., Philadelphia, Pa.

MAIN OFFICES AND FACTORY  
WATERLOO, IOWA

WESTERN OFFICE  
455 E. 3rd St., Los Angeles, Calif.



PENNSYLVANIA DEPARTMENT OF HIGHWAY'S SHIPMENT





## The Shadow Chaser



*The New Liggett Building,  
Madison Avenue and Forty-  
Second Street, New York.  
Installed with Ainsworth  
"Archer Model" MONAX.  
Carrere & Hastings and R.  
H. Shreve, Architects. Fred  
T. Ley & Company, Build-  
ing Contractors.*



*"The  
Shadow  
Chaser"*

**MAKING** your new building a better place in which to work or live depends on what you have done to lift dull shadows or eye-straining glare from its daily tenants. No plan is complete, no building efficiently lighted until you have written very definite specifications for illuminating glassware.

MONAX GLASS, "The Shadow Chaser" sprays light *uniformly* in all directions yet absorbs almost none of it. A beautiful commercial glass in a wide variety of designs.

*Have your specification writer send for illus-  
trated catalog and professional specification  
sheet in ready-to-file form.*

MACBETH-EVANS GLASS COMPANY  
CHARLEROI, PENNSYLVANIA

# MONAX GLASS

*for Commercial Lighting*



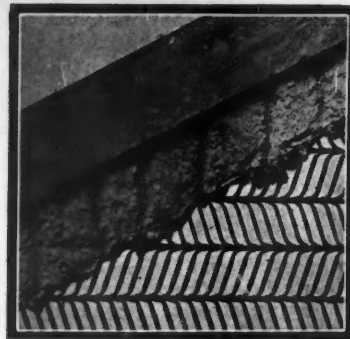
*Furnished apartment, Wardman Park Hotel, Washington, D. C. This 1200 room hotel is Herringbone construction throughout.*

## Free Forever From Unsightly Cracks

**I**NTERIOR walls constructed with GF Herringbone retain their good appearance. Cracks, sagging and spalling of plaster are eliminated. Original beauty becomes a permanent thing.

The economies possible with Herringbone are worth noting. It is self furring and requires less plaster. Its rigidity makes it easily handled and erected. Labor costs are reduced. And due to the economies of volume production, Herringbone costs no more than ordinary "Key" lath.

You will find the "Herringbone Handbook" filled with usable information. We will gladly mail you a copy on request.



### Other GF Materials

- Self-Sentering—A combined form, lath and reinforcement.
- Trussit—A reinforcement for solid partitions.
- GF Expanded Metal—A concrete reinforcement.
- GF Steel Tile—For concrete floors.
- GF Steel Lumber—Used in place of wood joists and studs.
- GF Steel Channels—For fireproof partitions and ceilings.
- GF Peds—Spot grounds for attaching trim to concrete and plaster.
- GF Waterproofings—For concrete and masonry.

*Write for illustrated literature.*

**THE GENERAL FIREPROOFING CO., Youngstown, Ohio**

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Dealers Everywhere

Export Department: 438 Broadway, New York City—Cable Address: "Genfire-New York"



# Herringbone

## Rigid Metal Lath

*Approved by the Underwriters' Laboratories*



## Depend on Garland For Your Winter Comfort

Insure winter comfort by installing a Garland Furnace, with its eight distinctly superior features which any Garland authorized installer will gladly point out to you.

These features are the

reasons why the Garland excels in the qualities most essential to ideal heating service.

Ability to provide ample heating comfort with a minimum fuel consumption

and a minimum amount of attention — these are the fundamental requirements sought by every thoughtful home-owner, and provided in generous measure by the Garland Furnace.

*No matter what your heating problems may be, you will find the solution in the Garland catalog which explains these eight points of superiority. It will be sent, with the name of your Garland installer upon request.*

The Michigan Stove Company, Detroit, Michigan

# GARLAND

## HEALTHFUL HOME HEATING

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# WHALE-BONE-ITE TOILET SEATS



Whale-Bone-It Toilet Seats are sold by all leading plumbers and jobbers. There is a model for every type of bowl. If you cannot secure data and costs conveniently, write for our catalogue and prices.

## Construction of WHALE-BONE-ITE

## The Strongest Yet Lightest Wood Construction Known To Science

From the laminated wood construction in the core of the Whale-Bone-It Toilet Seat is obtained the greatest possible strength, yet the lightest weight. That core is sealed in a covering of Whale-Bone-It, moulded to shape under hydraulic pressure and vulcanized into a solid unit.

There are no joints to open. The seamless Whale-Bone-It finish forever remains the same as when new—in fact, Whale-Bone-It seats are guaranteed not to split, crack, craze or warp.

Whale-Bone-It Toilet Seats are also moisture and acid proof—absolutely sanitary.

Manufactured by



No. 21-91 Seat and Cover



No. 24-91 Seat and Cover



No. 18-59 Seat and Cover

**THE BRUNSWICK-BALKE-COLLENDER CO.**  
1623 D SO. WABASH D AVE. G CHICAGO G

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CRANE BEAUTY IN THE OPEN; CRANE QUALITY IN ALL HIDDEN FITTINGS

## A "TARNIA" BATH FOR THE AVERAGE POCKETBOOK

The *Tarnia* bath of cream white enamel on iron has won wide acceptance in thousands of fine homes and apartments. Yet actually it is a low cost fixture, easily within the building budget of the small home owner.

In the attractive bathroom pictured above, it is installed with sides of Vitrolite, the same inexpensive material used on the walls.

Every individual taste can be satisfied with the *Tarnia*. It fits anywhere: either right or left corner, alcove, along the wall or in the open. The *Tarnia* can be set in marble, tile or tile substitutes, to harmonize with or match the walls. The Crane branch near you stocks it in 5, 5½ and 6-foot sizes. Any plumbing contractor can supply it and install it for you.

# CRANE

GENERAL OFFICES: CRANE BUILDING, 836 S. MICHIGAN AVENUE, CHICAGO  
CRANE LIMITED: CRANE BUILDING, 386 BEAVER HALL SQUARE, MONTREAL

*Branches and Sales Offices in One Hundred and Forty-five Cities*

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

*Works: Chicago, Bridgeport, Birmingham, Chattanooga, Trenton and Montreal*

CRANE EXPORT CORPORATION: NEW YORK, SAN FRANCISCO

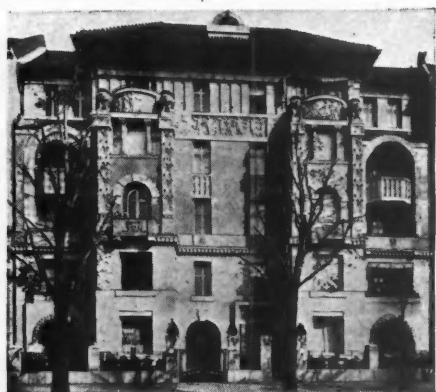
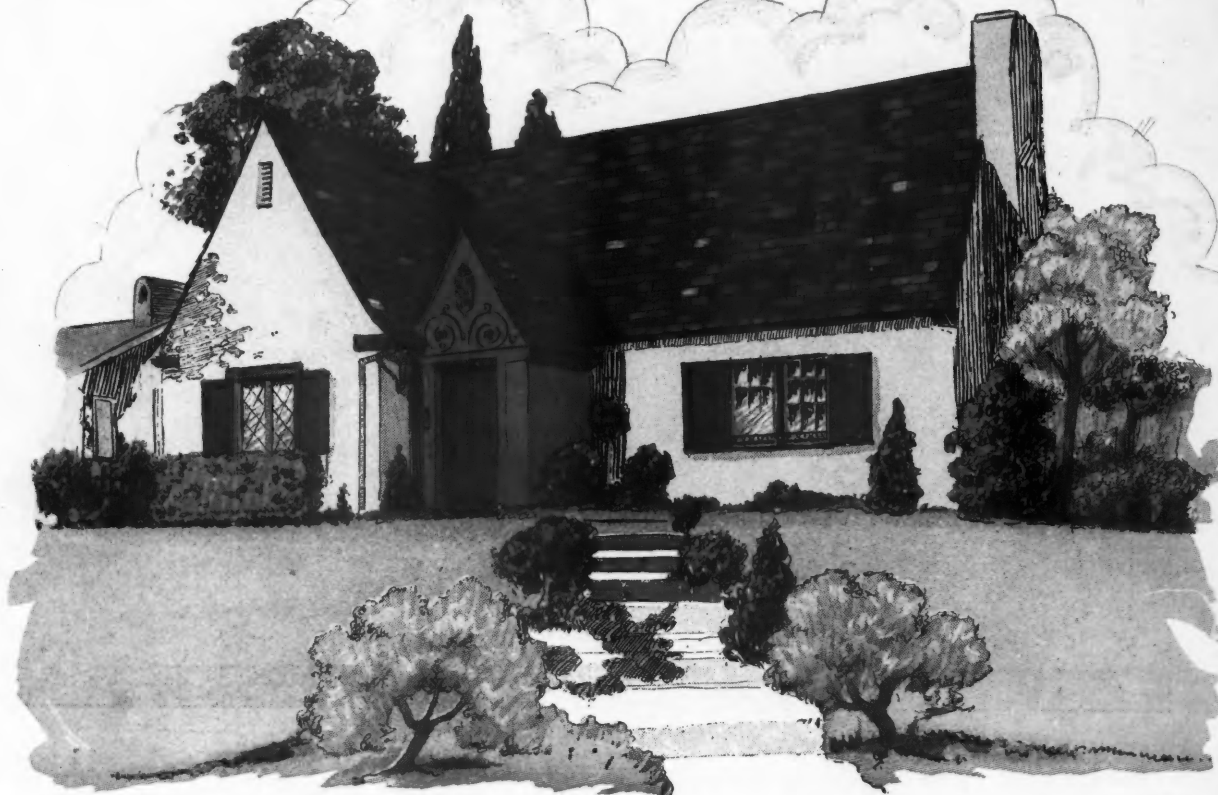
CRANE-BENNETT, LTD., LONDON

C<sup>IE</sup> CRANE: PARIS, NANTES, BRUSSELS



Crane durable branch elbow

# TERRANOVA



**Apartment House:** Here Terranova is seen at its best; this entire front including the decorative ornaments and figures are Terranova. In this building Terranova is also used on the interior walls. This will demonstrate the remarkable possibilities of the use of this building material.



**Sales Department of a Furniture Factory:** In which Terranova has been used throughout; first as a beautiful wall surface that is as perfect as natural stone and again in the decorations which were cast in the same material to harmonize with the architecture of the building.

## A Plaster Building Material in Colors that incorporates many new qualities and economies

Architects and builders welcome the advent of Terranova in America; those who have studied European building and architecture know that Terranova is the outstanding exterior and interior plaster material on the continent.

It is made in three grains and may be had in any desired color; Terranova is waterproof and is proven impervious to any climatic condition; it has been used extensively in the coldest climate of Russia and in the tropical heat of South America. The color will not fade; Terranova may be washed down and mellows beautifully.

Terranova compares favorably in durability with brick or natural stone; but is applied in a coat of only  $\frac{3}{16}$  inch thickness, on a  $\frac{1}{2}$  inch undercoat of lime and cement mortar.

Terranova is prepared in more than 100 tints ready for use and only requires being mixed with water before its application on the undercoat; thereby saving much time and labor.

*Samples and full information upon application; please state kind of work you are interested in. This material is used in every kind of building, including apartments, hotels, churches, factories and fine homes and small dwellings. Give name of your building supply dealer.*

**Dealers:** Write for special proposition. Terranova is going to play a big part in all classes of American building operations, and dealers first in the field will have an opportunity never before equalled.

**Terranova Corporation of America**  
25 Beaver Street Phone Broad 1490 New York City





SINCE permanence is usually the prime objective in the selection of building materials, consider this: There is no more permanent metal for roofing and roofing accessories than Horse Head Zinc.

But if economy is the prime objective, then consider this:

Horse Head Zinc is the cheapest of all permanent metals in first cost, and the cheapest of all metals, permanent or temporary in up-keep cost and final cost.

It is the supreme material for conductor pipes, gutters, trim and standing seam roofing.

## The New Jersey Zinc Company

*Established 1848  
Products Distributed by*

## The New Jersey Zinc Sales Company

(INCORPORATED)  
NEW YORK • CHICAGO • PITTSBURGH • CLEVELAND • SAN FRANCISCO



## A "One-Sack" Concrete Mixer ~The Jaeger 5-L

**J**UST what you have been waiting for—the concrete mixer that takes one sack of cement to each mix. Jaeger has again solved the needs of the builder and contractor and given them exactly what they want. The No. 5-L saves time because the full sack is emptied—instantly. It saves cement; no partly emptied bags are left around while their contents waste. It holds easily the right proportion for the ideal capacity mix, viz: 1-3-5.

### Stocks Carried in All Principal Cities

*Write us for the name of  
the distributor nearest you.*


All tilting-drum mixers are not Jaegers. The "Jaeger" is far superior to any mixer made and should not be confused with inferior machines even though they be of the tilting drum type. Protect yourself by getting the "genuine Jaeger." Look for the name on the drum.

This superior mixer is equipped with all of Jaeger's latest labor saving devices, including Side Loader, Tip-Over Accurate Measure Water Tank and the Gravity or Balanced Automatic Device for turning the drum to the discharge position. With these improved features the No. 5-L is the most efficient and economical concrete mixer of its size that you can buy. It is a complete, self-contained concrete producing unit that will be a money maker wherever used.

Ask your dealer to show you this "one-sack" Jaeger Mixer. Notice the famous "Jaeger Tilting Drum" that insures "A Mix-a-Minute" speed. Have him tell you all the facts about this splendid new addition to the Jaeger line.

**The Jaeger Machine Company**  
318 Dublin Ave. Columbus, O.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



## Barriers Not Burned Away

IN the great conflagrations of the last quarter century Natco Hollow Partition Tile has won signal distinction as a thoroughly fire-proof wall material in buildings large and small. By preventing the spread of fire it has in innumerable instances proven superior to flimsier and less durable materials. Moreover it forms a wall that is positively waterproof and that can be easily altered or removed.

Natco Bulletin 171 giving standard sizes and weights of Natco Partition Tile should be in your file. Write for a copy today.

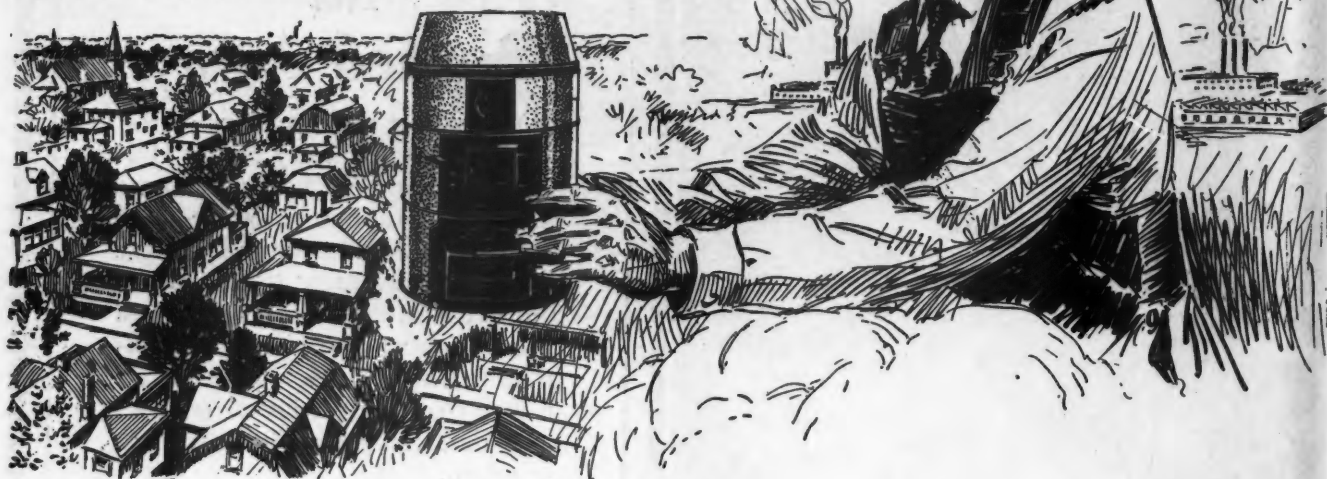
**NATIONAL FIRE-PROOFING COMPANY**  
523 Fulton Building · Pittsburgh, Pa.

# NATCO

## PARTITION TILE



# Delegate Heating Responsibility to Those Who Guarantee Performance ~ ~



## Buy Holland Furnaces

*Efficient Engineering  
Guaranteed*



Builders who formerly considered the heating plant as a necessary evil probably get more good out of Holland Heating service than any other buyers.

They find themselves as willing to pay for service as some buyers are to pay for comfort.

It used to be just a selling game when people figured that a furnace was a furnace and that's all there was to it. But a lot of builders found that home buyers were getting altogether too curious about the amount of heat a furnace would deliver. A cheap, undersized furnace poorly installed got to be a real sore spot. The less a salesman knew about the furnace the better off he was.

Builders in large numbers are now delegating heating responsibility to the Holland Furnace Company with its hundreds of direct factory branches, maintained by the Company. Branch personnel is directly responsible to the Home office, subject to its broad policies and firm guarantees—trained to do the work in accordance with the standards that have made Holland the world's largest installers of warm air furnaces.

Write for our book "The Whole House Comfortable and Clean." Consult the nearest Holland Branch. Learn how satisfying it is to delegate heating problems to heating specialists who do the work right and who can deliver the transferable Holland Bond insuring Home Comfort.

WORLD'S LARGEST INSTALLERS  
OF FURNACES

General Office: HOLLAND, MICHIGAN

**HOLLAND FURNACE COMPANY**

Two Factories: Holland, Michigan, and Cedar Rapids, Iowa

Central Chicago Office: 1810 Straus Bldg., Michigan Ave. and Jackson Blvd.

## Holland Furnaces Make Warm Friends

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# NORTON FLOORS

## NORTON CERAMIC MOSAIC TILE

### *For Store Entrances*

It is made durable and slip-proof by the same Alundum abrasive used in all Norton Floors and in Norton Grinding Wheels. The shapes, square and hexagonal, and the colors, brown, buff, gray, white granite, salmon and green, allow a variety of attractive designs.

One large chain store system which recently adopted the Norton Ceramic Mosaic Tile as standard to date has it installed in over 50 entrances.

### NORTON COMPANY WORCESTER, MASS.

NEW YORK      CHICAGO      DETROIT  
PHILADELPHIA      HAMILTON, ONT.

T-114



## Forty homes for fifty cents

—homes of permanent materials that build permanent reputations for builders and contractors. Send fifty cents today for

### *"Plans for Concrete Houses"*

This new book, just off the press, shows forty ideal homes ranging in cost from \$3,000 to \$10,000—the work of prominent architects in every section of the country.

Through advertising in the national magazines, this book is being brought to the attention of thousands of people who are looking for an ideal home at a moderate price.

Through this book, and the house plan service back of it, you can get plans for wide lots and narrow lots; cottages, bungalows and two story houses; farm homes and city homes; houses with and without basements.

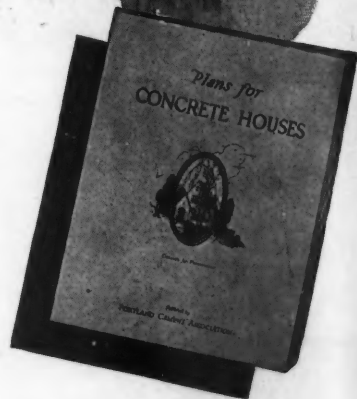
Remember, permanent materials build permanent reputations. Send fifty cents today for "Plans for Concrete Houses"—while you think of it.

### PORTLAND CEMENT ASSOCIATION

111 West Washington Street, Chicago

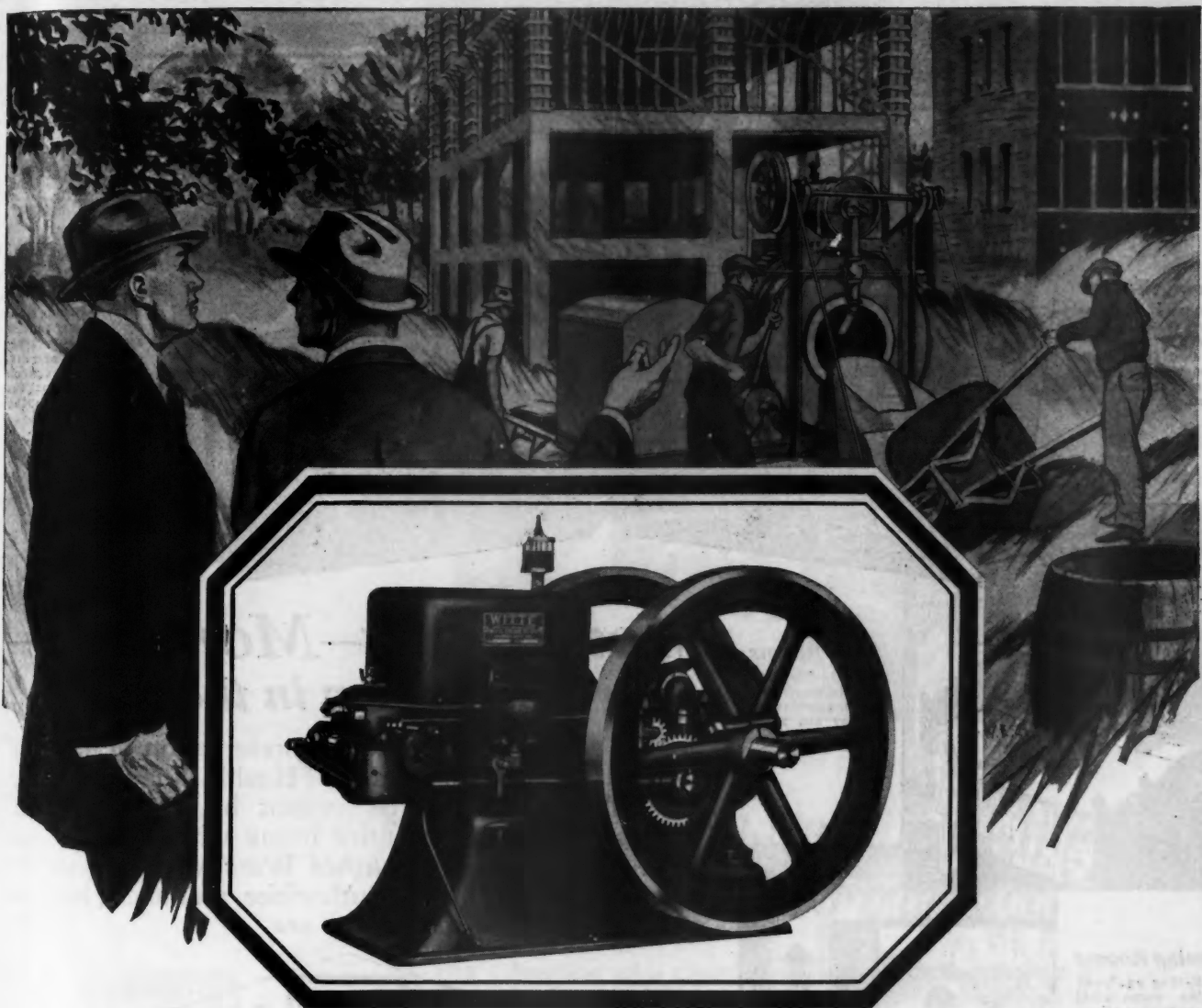
*A National Organization to Improve and Extend the Uses of Concrete*

Offices in 29 cities



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER





## INSURE YOUR PROFITS ~

### *Specify Witte Engines on Your Mechanical Equipment*

#### **Equipment**

#### **Manufacturers:**

We welcome any competitive tests, anywhere and under any operating conditions. We will be glad to send a WITTE Engine for such a test in your plant at our expense and at no obligation to you.

**T**HE motive force that drives your contracting machinery is more vital to profits than any other mechanical factor.

The engine is the "heart" of your outfit—the rest of the equipment is muscle, bone and sinew. A breakdown of the engine paralyzes the entire outfit and runs up costs tremendously.

This is the reason why contractors everywhere insist on their machinery being equipped with the dependable WITTE Throttling-Governor Engine. They want an engine that will give steady day-in and day-out performance, on a low consumption of fuel and oil. They want an engine that is simple to operate, easy to start under

all weather conditions, and which has a reliable ignition system that is weather-proof and water-proof. And of importance too—they want an engine that is built by a financially responsible concern.

The WITTE Engine has proved it stands the acid test on all these points. Known all over the world as the standard of economical, dependable power—more than 100,000 WITTES are in daily use.

Let us tell you more about the WITTE. We will be glad to send you free and at no obligation an interesting booklet, "50 Good Points On WITTE Engines," telling some of the pertinent facts about America's lowest-priced, high quality engine. Merely send a postcard for it today.

**WITTE ENGINE WORKS**

KANSAS CITY

PITTSBURGH

SAN FRANCISCO

# WITTE ENGINES

WHEN WRITING ADVERTISERS' PLEASE MENTION THE AMERICAN BUILDER

QUALITY LEAVES

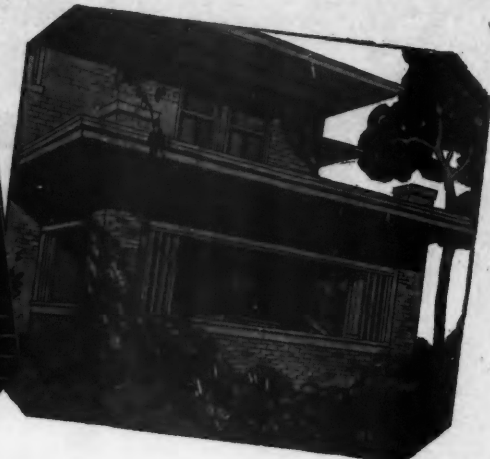
ITS IMPRINT

**Living Rooms**

*AiR-Way* equipped living rooms may be thrown wide open to the cooling breeze whenever the thermometer begins to climb.

**Sun Rooms**

Plenty of fresh air or absolute protection against the weather combine to make *AiR-Way* the most perfect enclosure for sun rooms and sleeping porches.

**Bed Rooms**

The *AiR-Way* equipped bedroom is a warm, sunny nook by day and an airy sleeping porch at night.



## More Light—More Air— for every room in the house

"In the support of life and the preservation of health," says Chicago's Commissioner of Health, "the importance of sunshine and fresh air cannot be overestimated." Because it floods the entire home with sunshine and fresh air, *AiR-Way Multifold Window Hardware* has been endorsed by health authorities, architects, builders and home owners from sea to sea.

**Dining Rooms**

*AiR-Way* equipped dining rooms afford all the comfort of outdoor dining while retaining the conveniences of the indoor dining room.

**Kitchens**

*AiR-Way* equipped windows enable the housewife to quickly convert her hot, stuffy kitchen into a pleasant, breezy porch.



*AiR-Way* equipped windows slide and fold inside, leaving an unobstructed opening the full width and depth of the frame. They open at a touch, without interference from either screens or draperies, and are absolutely weather-tight and rattle-proof when closed. *AiR-Way* windows may be partially opened, for ventilation, at any point desired.

Write today for Catalog G-4, which explains how easily *AiR-Way* windows can be installed in new homes or used to replace old-fashioned double-hung windows. Most hardware and lumber dealers sell this newest and best of window hardware.

Also makers of "Slidetite"—the original sliding-folding garage door hardware

New York  
Boston  
Philadelphia  
Cleveland  
Cincinnati  
Indianapolis  
St. Louis

# Richards-Wilcox Mfg. Co.

A Hanger for any Door that Slides

AURORA, ILLINOIS, U.S.A.

RICHARDS-WILCOX CANADIAN CO., LTD.  
Winnipeg LONDON, ONT. Montreal

Chicago  
Minneapolis  
Omaha  
Kansas City  
Los Angeles  
San Francisco  
Seattle

(220)

# PEERLESS

## Dome Damper



*for True Liveability Nothing  
Can Equal the Fireplace*



With the Peerless Automatic Ash Trap (above) and Peerless Ash Pit Door (right) the fireplace is given the final touch of convenience that makes its use a constant delight.

Write for catalogue showing full line of Peerless Fireplace Equipment.



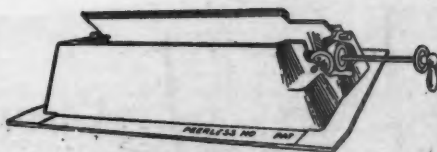
**A**DD a fireplace, with cheerful, crackling, burning fire, to a house, and it acquires that indefinable spirit which makes it a home; to be really lived in.

And no longer need you, nor your client, approach the subject of the fireplace doubtfully, wanting its charm and attraction in the new home but fearing its efficiency.

Equipped with a Peerless Dome Damper an open fireplace can be controlled and will heat as satisfactorily as any other heating method. Nor must it be used in conjunction with another form of heat. If the fireplace is correct in proportion to the room size, it will furnish all the heat needed; moreover, the Peerless increases its radius so that instead of warming but a small area directly in front of the fire, the whole room is heated.

The advantages of the Peerless, in controlling every condition of draft, and regulating the fire from kindling to ashes, are numerous; and all are thoroughly practical.

Let us send you working dimension tables, and full particulars concerning any detail of construction, installation or operation.



Peerless Dome Damper No. 21 is shown above. Operated from opening of fireplace by brass-handled, notched control rod. Other types operated from face and breast of fireplace. Made of finest, heat-resisting materials, with simply constructed working parts, the Peerless calls for no attention and once installed is there forever.

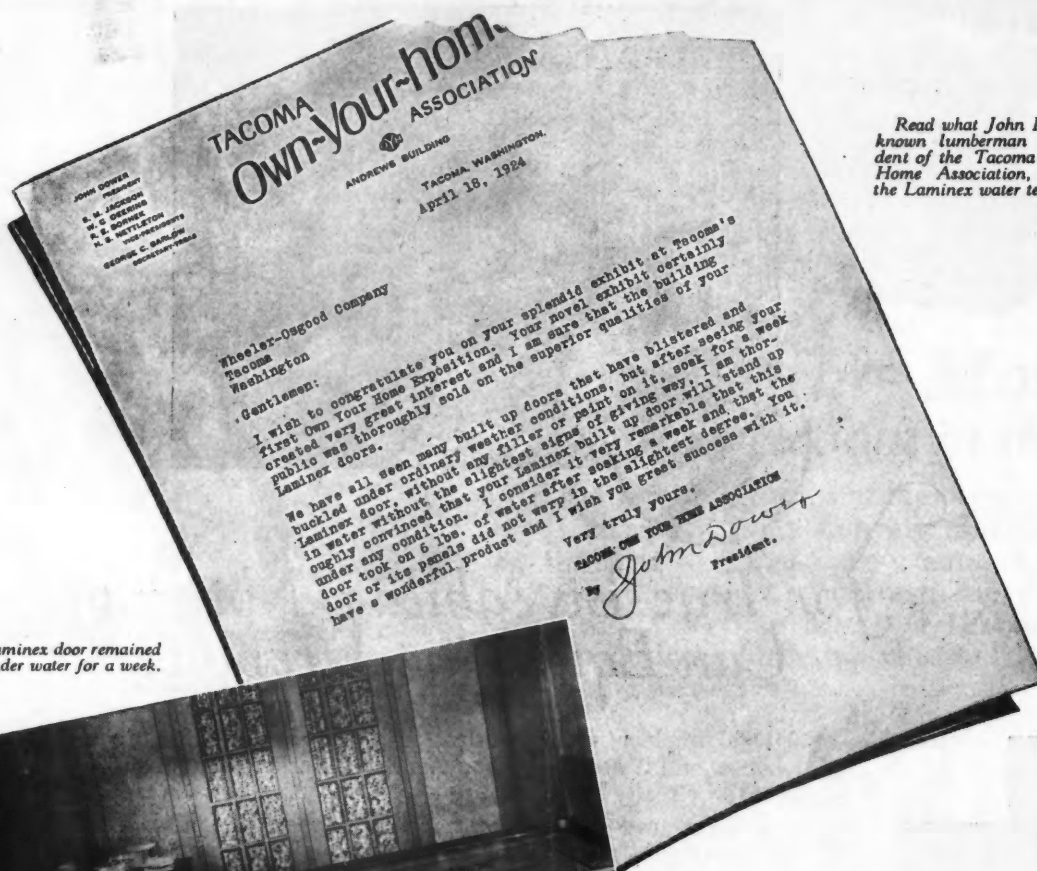
**DOMES DAMPERS  
COAL CHUTES  
ASH TRAPS  
ASH PIT DOORS**

**PEERLESS MANUFACTURING CO.**  
INCORPORATED  
LOUISVILLE, KY. U.S.A.

*Largest Manufacturers of Fireplace  
Furniture in the World*

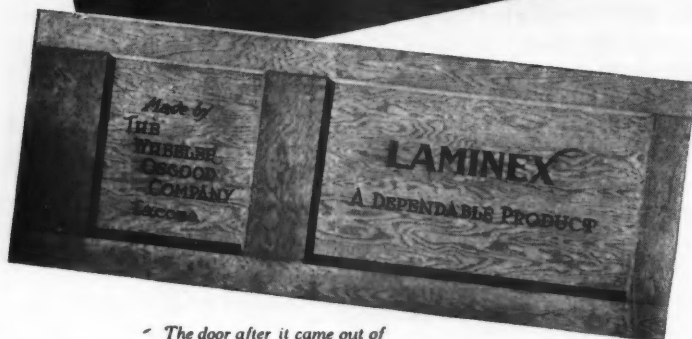
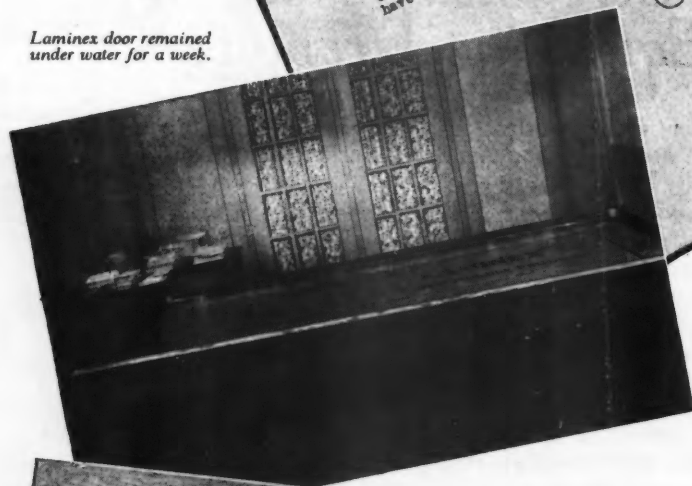


# Now a Laminex door absorbs 6 $\frac{1}{4}$ lbs. of water without warping or separating!



Read what John Dower, well-known lumberman and president of the Tacoma Own-Your-Home Association, says about the Laminex water test.

Laminex door remained under water for a week.



The door after it came out of the water and had dried out

**T**HINK of keeping a door under water for a week! What ordinary door could absorb nearly a gallon of water, dry out, and not show the slightest signs of warping, buckling, checking or separating?

Besides unheard-of scientific and accidental tests, over a million Laminex doors are now in use throughout the country—in climates where no built-up door ever successfully stood.

Look for our gold label replacement guarantee on every genuine Laminex door. If not obtained readily, write us for name of nearest distributor. Ask for architects' monograph.

## The Wheeler, Osgood Company

Tacoma, Washington, "The Lumber Capital of America"

Sales Offices:  
Chicago, Memphis,  
Los Angeles,  
San Francisco, Spokane



Manufacturers of  
"Woco"  
Douglas Fir Doors and  
Fir Sash

# LAMINEX DOORS

WILL NOT SHRINK, SWELL OR WARP

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

# He wanted shingles that would curl! We couldn't supply him.

A New York State dealer in Ambler Asbestos Shingles had an odd experience recently. A gentleman, who later turned out to be a member of an artists' colony, inquired:

"Have you Asbestos Shingles?"

"Yes, indeed," replied our dealer, ready to explain their good qualities.

"Will they curl?" inquired the prospective customer.

"Heavens, no," responded the dealer confidently.

"Then I don't want them," came the unexpected reply of the property-owner. "I must have singles that will curl."

He had in mind a very definite type of little house and he wanted it to look ancient and weather-beaten quickly. Curling shingles, he thought, would soon look slightly out of repair and give a cozy, artistic sort of appearance.

The market is full of flexible shingles that curl up quickly under the sun. But such shingles develop leaks with equal speed, they flake off, and their inflammable qualities place dwellings at the mercy of every spark and wind-blown ember.

## Artistic Roofs That Endure

are produced with Ambler Asbestos Shingles, made in a wide range of beautiful, subdued colors. Combining several of these colors produces a variegated effect that may be varied indefinitely to meet individual tastes. Shingles with broken-butt edges are the most recent development of Ambler Asbestos Shingles. Rugged weathered beauty, a deep shadow line—all that is needed to achieve picturesque, quaint-looking roofs—is obtainable with this latter type of Ambler Asbestos Shingles and with this is combined utility and moderate cost. These shingles will not curl; they can't burn and there is no surfacing treatment on them to flake off. They actually grow stronger with age.

If you are interested in roofs that eliminate repair expense, that will add to the resale value of the house and that combine utility and moderate cost with beauty, write us for samples and general information about Ambler Asbestos Shingles. Service Sheet on request, giving approved methods for laying these shingles.

## Asbestos Shingle, Slate & Sheathing Co.

Dept. A

Ambler, Penna.

Branch Offices:—Baltimore, Boston, Buffalo, Chicago, Cincinnati, Detroit, Cleveland, Minneapolis, New York, Omaha, Philadelphia, Pittsburgh, Washington, Wilkes-Barre; Toronto, Canada; Havana, Cuba.

Southwestern Distributor:—R. V. Aycock Co., Kansas City, St. Louis, Tulsa, Houston.

California Representative, J. A. Drummond: Los Angeles, San Francisco, Fresno.

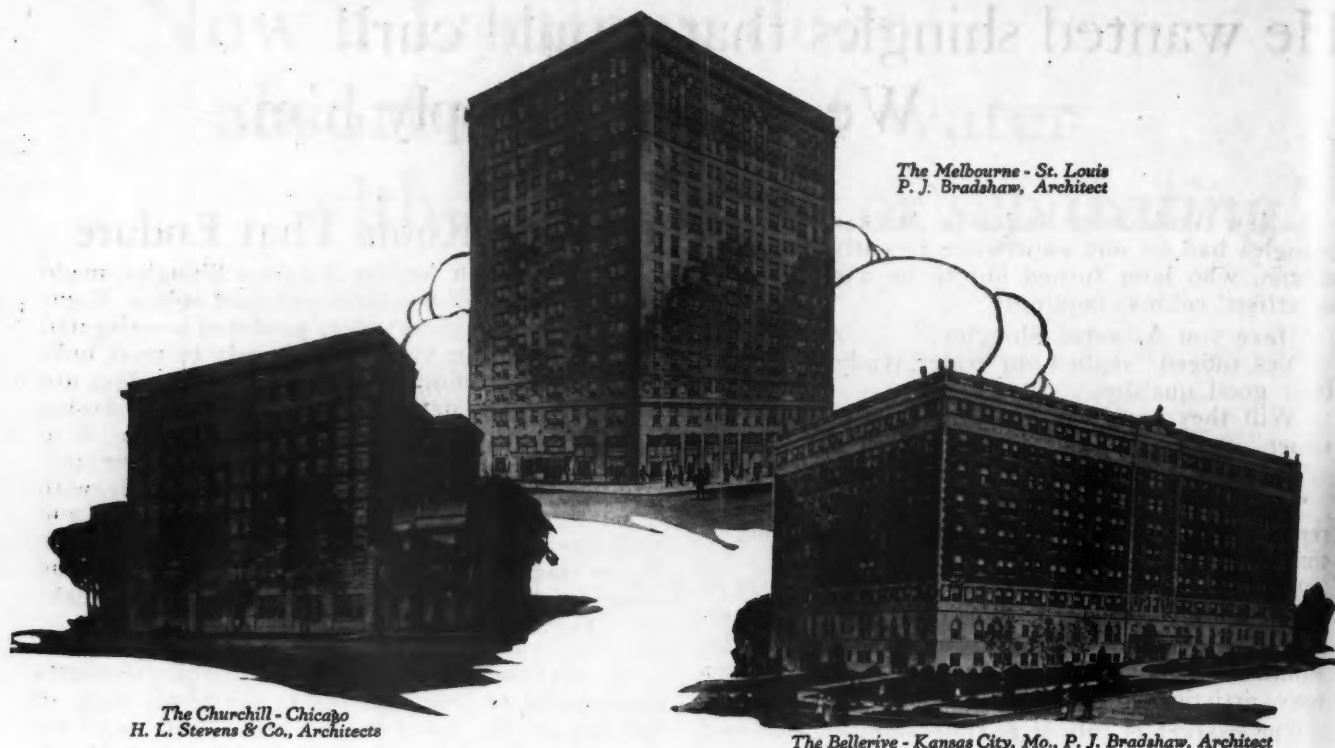
H. G. Sperry & Co., Utah, Idaho, Nevada & Washington Representative: Offices, Salt Lake City and Seattle.

F. T. Crowe & Co., Washington Representative: Offices, Seattle and Tacoma.

Other distributors throughout the country.



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



## Murphy Beds with Box Spring Mattresses

*give the utmost in sleeping comfort to guests at these magnificent hotels*

In the finest apartment hotels of Chicago, St. Louis and Kansas City—as elsewhere throughout the country wherever the comfort of the guest is held as important as the serviceability of the equipment—you will find Murphy In-A-Dor Beds with Box Spring Mattresses.

One Murphy Bed gives to each apartment all the comforts and convenience of an extra bedroom without the extra cost of building, decorating, furnishing, heating and lighting or the household care of an extra room.

Being the original In-A-Dor Bed, the Murphy has certain exclusive features of construction.

It is made in twin types and standard full sizes up to and including 4' 6" x 6' 4". It is furnished in all colors of enamel or in wood to match any kind of furniture or woodwork. Pivoted to the jamb and threshold of a standard closet

door, the Murphy swings out of the way and out of sight with great ease. It is perfectly balanced by spring tension having no counterweights. It cannot close up accidentally from any position. The bed clothing is held in place by friction clamps at the foot. When upright in the closet the mattress and linen hang loosely from the top, receiving perfect ventilation.

The box springs on the Murphy In-A-Dor Bed are demountable and are made exactly like the best box springs on ordinary beds—the same size—the same number of springs—the same sleep-inducing qualities.

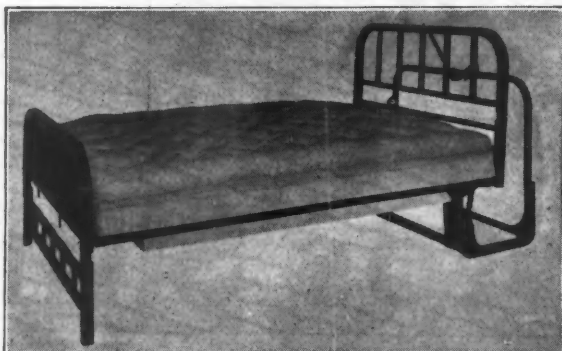
We have prepared a usable book of Murphy In-A-Dor Bed specifications for the convenience of architects and builders. If you have not received your copy call our attention to the fact. The Murphy Door Bed Company.

### *A Clearing House of Building Ideas*

The latest ideas—practical suggestions—valuable experience of builders throughout the United States are offered to you through our Technical Service Department. A wealth of material is at the disposal of representative architects and builders. This free service is in the interest of efficient floor planning. No obligation. Write for details.

## The MURPHY IN-A-DOR BED

WITH BOX SPRING MATTRESS



### *Offices and Display Rooms in all Principal Cities*

22 West Monroe St., Chicago  
1534 Blake Street, Denver  
Crocker Building, San Francisco  
1140-42 Hanna Bldg., Cleveland  
204 Peach Tree Arc., Atlanta, Ga.  
Chemical Bldg., St. Louis  
1410 Kresge Bldg., Detroit, Mich.  
Terminal Sales Bldg., Seattle  
1114 Grand Ave., Kansas City  
469 Fifth Ave., New York City  
205 O'Connor St., Ottawa, Can.  
220 N. St. Paul St., Dallas, Texas  
309 Third Ave. N., Nashville  
1807 S. Main St., Los Angeles  
10 St. Antoine St., Montreal, Can.  
Neff-Stiles Building, El Paso  
319 Dryades St., New Orleans

THERE IS ONLY ONE IN-A-DOR BED—THE MURPHY



# Did you ever

see a more complete sales campaign behind a product like this?



## The sign of a better built house

Here is an idea for a special window which can be placed in the wall in the cellar stairway to show that Johns-Manville Housline has been used. We will furnish you with placards telling that "this house is insulated with Housline." There is a space for your name as builder on each one. This is of considerable assistance to builders in selling their houses because this window plan is nationally advertised.

## National advertising

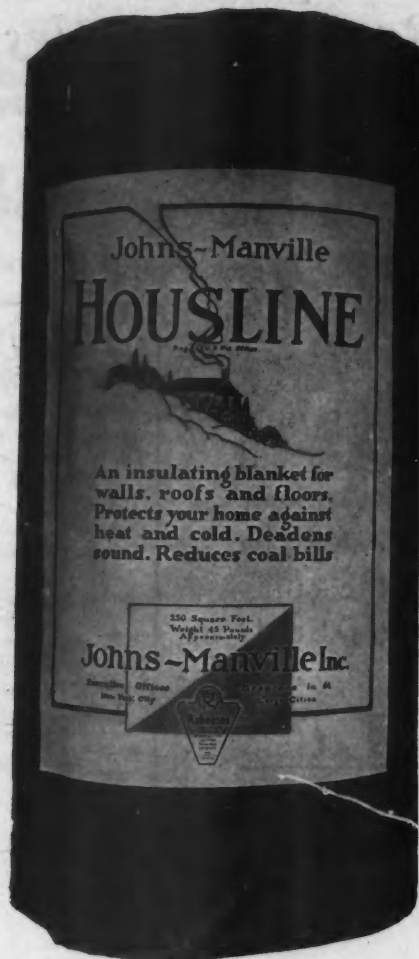
Johns-Manville is running full page advertisement in Literary Digest this year on Housline. These advertisements are building a reputation for builders who apply Housline and for dealers who sell it.



## Consumers' booklet

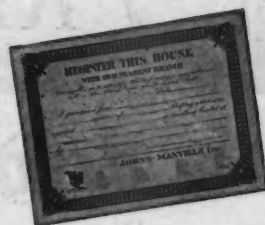
This interesting sixteen page booklet, containing sample of Housline ought to be on every dealer's counter. We would be very glad to

send copies to any of your prospects, whose names and addresses you send us.



## Register the house with us

This proves to your prospective customer that the house is completely insulated with Johns-Manville Housline, and is so registered with us. A remarkable sales asset!



## Dealer ads.

Get some of these ads in your local newspaper. They'll get attention and bring good business. We will furnish



you with the cuts and text free. The newspaper will insert your name.

## Kraft Sign

This very attractive sign can be used on houses while in course of construction. It immediately notifies passers-by that the house is being insulated with Housline.



## Lantern Slides

A couple of these lantern slides shown in your local theatre, will bring your name before hundreds



of people, as a dealer in superior building materials.

**WHETHER** you are a builder or a dealer, Johns-Manville Inc. is behind you in applying or selling every square inch of this "highest efficiency" building insulation.

JOHNS-MANVILLE Inc.  
292 Madison Ave. at 41st St., N. Y. City  
Branches in 62 Large Cities  
For Canada: Canadian Johns-Manville Co., Ltd., Toronto

# Johns-Manville Housline

**Answer  
Here**



I am a { Builder  
Dealer

Name .....

Address .....

A. B. 9

Johns-Manville Inc.  
292 Madison Ave.  
New York City

I am interested in your Housline proposition. Please send me further details.

# "Ruff-Stuff"

The Sandpaper that Satisfies

**FREE** *Send for this  
Book of Samples*

IT CONTAINS ten 2¼x4 inch pieces of Wausau Garnet Paper, one each of grit Nos. 000, 00, 0, ½, 1, 1½, 2, 2½, 3, and 3½.

Your eye will immediately note the uniformity of our grits and when you test the cutting power of these samples, you will be quickly convinced of the superiority of Wausau Ruff-Stuff Garnet.

Full size 9x11 sheets of any grits you name will be sent free on request.



## WAUSAU GARNET

is furnished in the following forms:

*Wausau Garnet Paper*—In 50 yard rolls suitable for floor sanders, drum sanders, spindle sanders, etc., all widths from 6 in. to 36 inches, grits 6/0 to No. 3½.

*Wausau Garnet Cabinet Paper* in 9x11 sheets packed in ¼ ream, ½ ream and full ream (480 sheets) packages. Grits 6/0 to No. 3½.

*Wausau Garnet Finishing Paper*—7/0 to No. 1—single and double faced.

*Wausau Garnet Cloth*—in 50 yard rolls—3½ inch to 28 inch widths. Grits No. 4/0 to No. 3.

*Wausau Garnet Paper Discs.* Full range of sizes and grits.

*We are liberal with free samples to quantity buyers.*

Send for our Garnet Circular.

## Wausau Abrasives Co.

Wausau Wisconsin

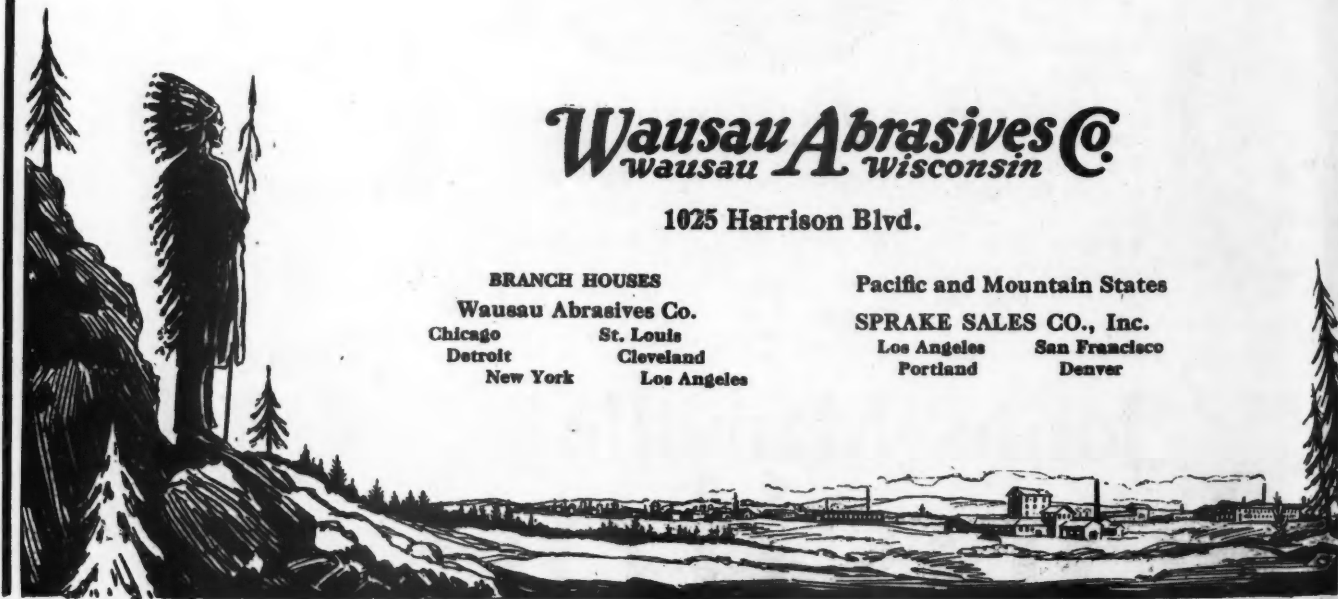
1025 Harrison Blvd.

### BRANCH HOUSES

Wausau Abrasives Co.  
Chicago      St. Louis  
Detroit      Cleveland  
New York      Los Angeles

### Pacific and Mountain States

SPRAKE SALES CO., Inc.  
Los Angeles      San Francisco  
Portland      Denver



KOEHRING

DANDIE

## Send Back the Coupon!

**R**IGHT there at the bottom of this ad! The coupon will bring back to you the Dandie catalog—giving you full details of this Koehring light mixer. It's light, easily portable, but it's every inch a *Koehring*.

You'll find this catalog downright valuable to you in showing what Koehring experience, Koehring standardization, and big volume make possible in the way

of giving you a strong, no-stop, long service mixer, and still stay within the price range for light mixers. You'll discover not only that the Dandie is an extraordinary mixer, but an extraordinary, unapproached value.

What is dependability worth to you in dollars and cents? What is long service life worth? That's what it's worth to you to send back this coupon.



### Dandie Capacities

4 and 7 cu. ft. Mixed Concrete. Steam or gasoline power. Power charging-skip or low charging platform with hopper, light duty hoist, automatic water measuring tank. Standard or flanged rim steel wheels, or disc wheels, rubber tired. Mixes mortar as well as concrete.

### KOEHRING COMPANY

PAVERS, MIXERS, CRANES, DRAG-LINES, GASOLINE SHOVELS  
MILWAUKEE, WISCONSIN

Sales Offices and Service Warehouses in all Principal Cities

Foreign Dept., Room 1370, 50 Church St., New York.

Canada, Koehring Company of Canada, Ltd., 105 Front St., East, Toronto, Ontario.

Mexico, F. S. Lapum, Cinco de Mayo 21, Mexico, D. F.

## Send Back this Coupon!

KOEHRING COMPANY, Milwaukee, Wisconsin

Please send me by return mail catalog of Koehring Dandie Light Mixer. Also price with equipment as follows:

Name \_\_\_\_\_

Address \_\_\_\_\_

A 2299-1

D-1





*Henry Offerdinger's Residence, Washington, D. C.*  
*A. P. Clarke, Architect*      *Clarence Small, Builder*

## A Credit to the Architect, Contractor and Owner

Every man who had anything to do with building this home has a right to be proud of the result. It is well designed and well built. It looks and is substantial and permanent.

In selecting porch columns care was used to choose those which would be in keeping with the balance of the structure. These Plain Doric Union Metal Columns, design No. 200, harmonize perfectly and they will never rot, split, warp, or open at the joints. Made of copper bearing steel, they last a lifetime.

The owner is protected against expensive replacements and has the satisfaction of knowing that the attractive appearance of his home is permanent.

Union Metal Porch Columns have been in wide use for over 17 years and as architects and contractors have become acquainted with their advantages the demand has grown steadily. We have a beautifully illustrated book showing our designs, many buildings where these columns have been installed, and suggestions for porches and entrances. This book will be sent free. Ask for the "Colonial Entrance" book and please mention this magazine.

If you are in a position to handle Union Metal Columns write for particulars of our attractive agency proposition.

THE UNION METAL MANUFACTURING COMPANY  
 CANTON, OHIO

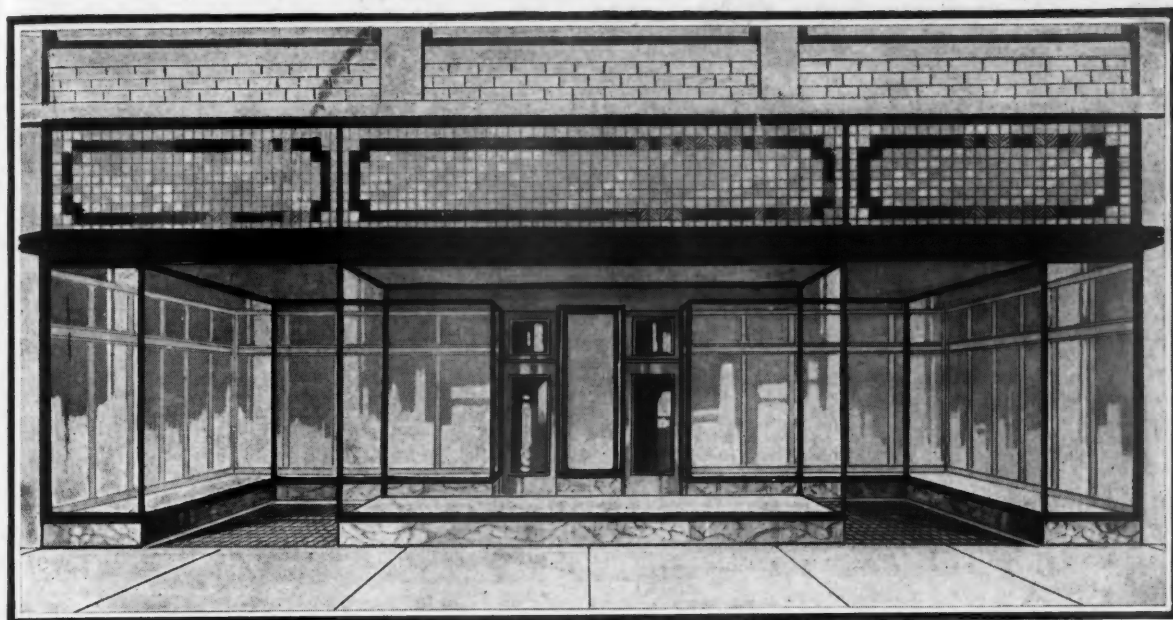
# UNION

## METAL COLUMNS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

# Kawneer

SOLID COPPER  
STORE FRONTS



## Makes Sales Increase by Leaps and Bounds

This is what C.D. Simmonds of Burlington, Vt., says of his Kawneer Store Front: "There is no question in our minds in regard to the actual worth of our Kawneer windows as *our sales have been going ahead by leaps and bounds.*" Contractors need no introduction when they talk Kawneer Store Fronts. Three Hundred Thousand merchants are being told of the merits of Kawneer Solid Copper Store Fronts every month. Why not cash in on this publicity by adding Kawneer Store Front work to your line of operations? Kawneer work is not difficult, but soon builds prestige for high class work. Why not let us show you more about this profitable work?

Just fill out the coupon and pin it to your letterhead. This places you under no obligations, but merely gives us a chance to submit further proof for your consideration.

Kawneer fronts pay for themselves  
in increased sales and profits—

**This Free Book Tells Why  
Send for it NOW**

THE  
KAWNEER  
COMPANY,

1926 Front Street,

Niles, Michigan:

Please send me, without

obligation, your new Book of

Designs of Modern Store Fronts.

Name



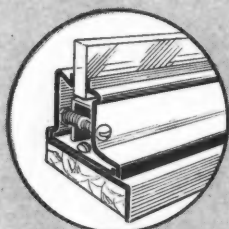
What care we for wind or weather? Say Kawneer!



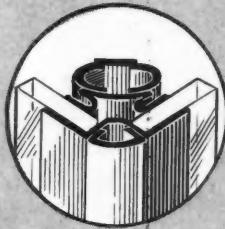
# Ventilation and Drain Control -and What it Means to You

In the circle above you will see that Kawneer Store Front Sash is provided with a slide which operates in the back or gutter member. This slide makes it possible to open or close the small holes in the gutter which correspond with the holes in the lower edge of the face of the sash. During dusty weather this slide may be closed. In the colder months this slide may be opened so as to permit the cold air to pass in and along the inside surface of the glass, thereby reducing condensation and frosting to a minimum. *This control of Ventilation is an important feature that makes Kawneer Store Fronts give satisfactory service.* Note the other five features in the circles below.

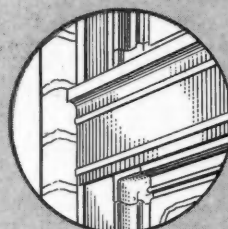
Use this  
Coupon  
for getting  
Back Issues



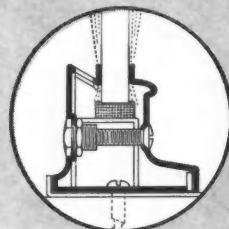
PERMANENCY



RUGGED STRENGTH



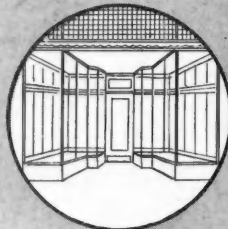
BEAUTY of DESIGN



RESILIENCY



VENTILATION



EASE of INSTALLATION

Send  
me back  
numbers  
of inserts  
on Superior  
points of  
**Kawneer**  
SOLID COPPER  
STORE FRONT

Read what Mr. Simmonds says  
on the other side of this page-





## The Profit that Can be Yours

There are hundreds of new buildings being planned in your locality at this moment. And every one of those buildings must have a roof. Think of the thousands of square feet of roofing it will take to cover those roofs.

There is a tremendous profit right within your grasp. Through acquiring an **AMBI** Concrete Roofing Tile Machine at a comparatively reasonable investment you will be enabled to manufacture beautiful, permanent, fire-proof **AMBI** Tile. Here is a glowing opportunity to become identified in a rapidly growing business.

### Roofing—A Tremendous Industry

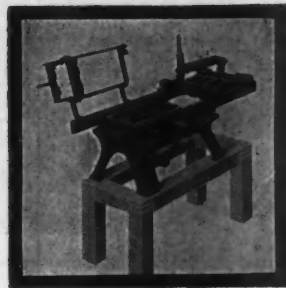
When you consider that million dollar concerns have been developed through making roofing material alone you will realize the tremendous possibilities in the manufacture and sale of **AMBI** Tile. Every house has a roof—and millions and millions of square feet of roofing must be produced to cover them.

**AMBI** Concrete Roofing Tile can be made in four attractive shapes. Every one of those shapes can be made on **AMBI** equipment in a variety of colors and tones to meet every artistic and architectural requirement. And the operation of the **AMBI** Concrete Roofing Tile Machine is simplicity itself. An unskilled operator can produce uniform, perfect **AMBI** Tile with practically no training.

You have an opportunity right now to become identified with one of the fastest growing industries in the world. Grasp it! There is an **AMBI** outfit suited to every locality whether large or small.

**American AMBI Corporation**  
218 West 40th Street New York City

**A M B I**  
**CONCRETE ROOFING TILE MACHINE**



**AMBI MACHINE WITHOUT MECHANICAL COLOR SIEVE**

*Fill in and Mail this Coupon Now!*

**American AMBI Corporation**  
218 West 40th Street  
New York City

Please send me without obligation complete information regarding the **AMBI** Concrete Roofing Tile Machine.

Name \_\_\_\_\_

Address \_\_\_\_\_

**AMBI**  
TRADE MARK

*Valuable Territory Open for Reliable Agents*

Write for prices on **AMBI** Imported Cement Colors and **AMBI** Color Mill. Complete line of accessories including molds for special forms.

# Re-roofing results

## with Johns-Manville Asbestos Shingles

The Newman Brothers Grain Company of Rochester, N. Y., circularized 1310 names and sold 1127 squares of Johns-Manville Asbestos Shingles and Roofing.

\* \* \*

One re-roofing job brought in seven more for the Duncan and Goodell Co., Worcester, Mass.

\* \* \*

Mr. John P. Schock, Marietta, Pa., writes: "I am enclosing my order 1380. You will note this is for a re-roofing job. It is wonderful with what ease we are able to sell Johns-Manville Asbestos Shingles on jobs of this sort."

\* \* \*

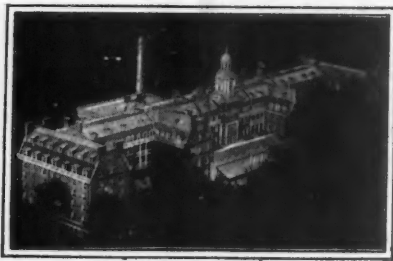
Mr. P. J. Fleming, St. Mary's, Pa. (a town of 7000) got 25 jobs from 250 circularized prospects.

\* \* \*

The Pen-Mar Company, Baltimore, Md., writes: "It is surprising the number of replies we have been receiving from an ad recently inserted in a local newspaper on the application of Johns-Manville Asbestos Shingles over old wood roofs."

\* \* \*

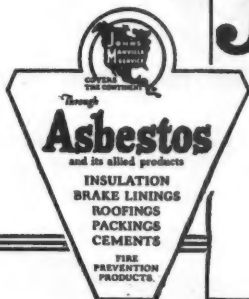
One re-roofing job sold three carloads of Johns-Manville Asbestos Shingles for Mr. E. J. Cohoon, Elizabeth City, N. C.



Over twelve years ago Johns-Manville Asbestos Shingles were applied over the old wooden shingles of the Garden City Hotel, Garden City, Long Island—the original test that proved the practicability of this type of re-roofing.



To-day the re-roofing idea is the biggest sales getter in the roofing business. Thousands of buildings are re-roofed with Johns-Manville Asbestos Shingles by this method every year. Let us give you details.



## JOHNS-MANVILLE Asbestos Roofings

JOHNS-MANVILLE Inc.

292 Madison Avenue, at 41st Street, New York City

Branches in 62 Large Cities

For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto

# Between them and high fuel bills



**T**HE BASEMENT that is walled and ceiled with Sheetrock, the *fireproof* wallboard, enables a good furnace to do a better job.

Sheetrock gives your home buyers the natural insulating qualities of solid gypsum rock. It seals the heat in and keeps the cold out. It makes thick, tight-jointed and permanent walls and ceilings, proof against cold and damp and fire.

What Sheetrock will save in fuel is not its only economy either. Its

first cost is low; it is inexpensive to erect, comes all ready for use—you just nail the broad, high sheets to the joists or studding—and costs nothing to maintain. Equally economical, in new construction, alterations and repairs.

Sheetrock takes any decoration—wall paper, paint or panels—best of all, Textone, The Sheetrock Decorator. Sold by your dealer in lumber or builders' supplies. Made only by the United States Gypsum Company. Write for a sample and free copy of our 48-page Time Book.

*Sheetrock is inspected and approved by the Underwriters' Laboratories, Inc.*

UNITED STATES GYPSUM COMPANY

# SHEETROCK

Reg. U. S. Pat. Off.

## The **FIREPROOF** WALLBOARD

..... Clip and mail this coupon today! .....

UNITED STATES GYPSUM COMPANY, General Offices: Department A, 205 W. Monroe St., Chicago, Ill.

Please send me the Sheetrock sample and the free Time Book.

Name .....

Address .....

Sheetrock comes in standard sizes:  $\frac{1}{2}$  inch thick, 32 or 48 inches wide and 6 to 10 feet long

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



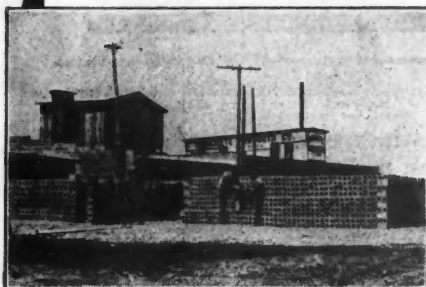
# Follow Their Examples!

Let Your Very Moderate Investment Establish You in The Remarkably Profitable Business of Manufacturing

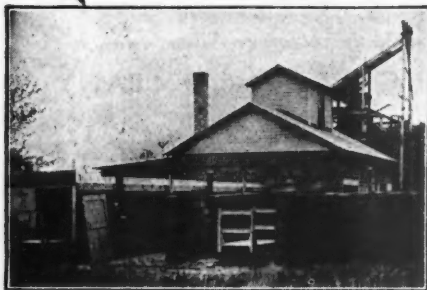
## DUNTILE



A DUNTILE plant in the State of New Jersey which has doubled its production in less than one year.



This prosperous Ohio manufacturer started a DUNTILE plant 2½ years ago, another a year ago, and has a third plant under way.



DUNTILE is favored in every section of the country. This Oregon manufacturer reports hearty support of architects, contractors, masons and builders.

**Y**OUR town, in fact every town in the country, is a logical location for a plant to manufacture DUNTILE—the Perfected, All-Purpose Concrete Building Unit. This approved lightweight unit *reduces the cost of finest construction to the level of frame or 1/3 cheaper than brick.* Because of this it always wins quick popularity wherever it is introduced.

### Will YOU Supply This Vast Waiting Market?

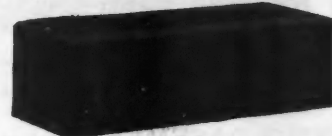
There is not a contractor or builder in your community who would not welcome the opportunity to substitute first class *permanent* construction for frame when it can be done at no increase in cost.. Well, that is exactly what you have to offer when you become a DUNTILE manufacturer.

DUNTILE is the one building unit of any kind that can be satisfactorily used for the complete construction of every type of building. The proven methods of construction that are exclusive with DUNTILE cause it to be used from foundation to roof in buildings ranging from residences to huge commercial and public institutions.

### A Standardized Product Made in Your Own Standardized Plant

The manufacture of DUNTILE has been standardized to the last degree. In fact the problems that usually confront the new manufacturer have all

been worked out for you in advance. Through the combined experience of DUNTILE makers the country over, this unique manufacturing process



has been so simplified that you can secure quantity production on any of the eight standard sizes of DUNTILE at extremely low operating costs.

### Ask Yourself These Very Important Questions!!

Do you want to engage in a business that is paying others an unusually handsome return on their moderate investments?

Do you want to go into a business that has an unlimited future?—that will steadily grow larger?

Are you willing to consider all the facts that you need to know before making your decision? Then send for our book **BASIC FACTS**. This guide to prosperity is **FREE**. Write us.



**W. E. DUNN MANUFACTURING CO.**  
415 W. 23rd Street, Holland, Michigan



## Better Heating for the Home Without a Basement

Homes without basements are no longer impossible to properly heat. You can now safely guarantee adequate heat—in such a small home—if you use the Sunbeam Cabinet Heater.

This modern heating plant has all the advantages of the famous Sunbeam Warm-Air Heating system on a smaller scale. It circulates heat, evenly, into every part of every room. It leaves no cold corners or drafty hall-ways but keeps the whole house comfortably heated and healthfully ventilated in any weather.

The Sunbeam Cabinet Heater is small and compact, and is so attractively finished in olive green or black that it adds to the appearance of any room. It has an extra-large fire pot and combustion dome, and is scientifically designed to utilize every heat unit produced by the fuel. The result is more heat than could be produced by two or three stoves and yet with a one-third saving in fuel.

The tremendous saving in first cost and fuel cost make the Sunbeam Cabinet Heater the ideal heating plant for the five to seven room home. We will be glad to send you the name of a near-by dealer who can show this heater to you and quote prices.



THE FOX FURNACE COMPANY, ELYRIA, OHIO

Largest Makers of Heating Equipment

Boston Atlanta Cleveland Chicago Denver San Francisco

# SUNBEAM

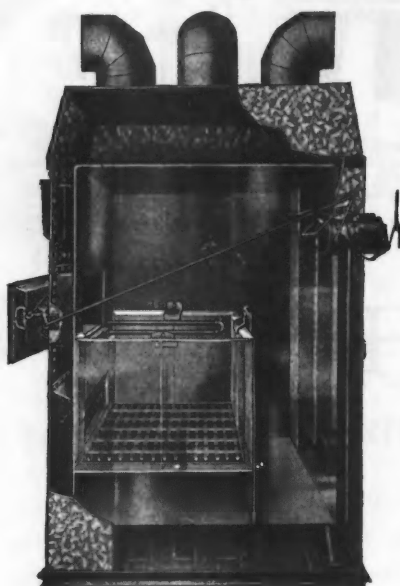
## CABINET HEATER

TRADE MARK

# Why a HESS!

Reason No. 13

## Welded Steel Radiator



"Every  
Inch a  
Furnace"

**Guaranteed  
Never to Per-  
mit Escape of  
Dirt, Soot,  
Smoke nor  
Gas to Rooms**

**T**HE Hess Welded Steel Furnace is the only furnace which permanently makes impossible the escape of dirt, soot, smoke, or gases to the living rooms of the house.

The fire box, ash pit, and smoke outlet are all enclosed within a large sheet steel radiator, having all seams and joints securely riveted and welded—fused into one solid piece.

These seams can never open, thus it is absolutely impossible for dirt or gas to escape into the air chamber surrounding the radiator, through which heated air circulates to the rooms above.

This type of radiator makes possible the use of a rectangular fire-box with fire brick lining, the most efficient, fuel-saving type. It also provides an extra large quick-heating radiating surface and a maximum of delivered heat from the fuel consumed.

Write for "Modern Furnace Heating," a book of heating system information; comparing ALL methods and fully describing the Hess method.

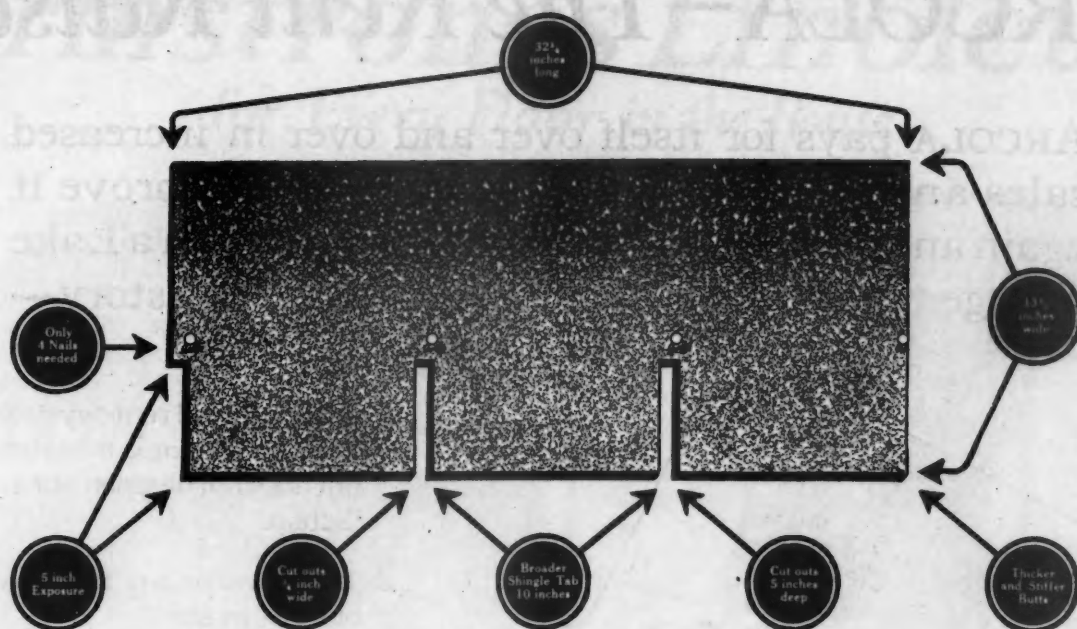
**HESS WARMING AND VENTILATING COMPANY**  
1220-D South Western Avenue - Chicago

Branch Offices: Brooklyn, N. Y.; Detroit; Cincinnati; Milwaukee; Minneapolis.

Local Distributors: B. M. Huntington, Walla Walla, Wash; H. Taylor & Sons, Jacksonville, Fla; H. Cable, Falls Creek, Pa; J. B. LaGesse, Garden City, Kan; F. Mezera, Eastman, Wis; C.E. Shingledecker, Clarion, Pa; J. E. Good & Son, Harrisonburg, Va

# HESS *Welded Steel* FURNACE





## The shingle that "took"

SINCE we announced Winthrop Tapered Asphalt Shingles in strip form, they have fairly leaped into popularity.

You builders made this 3-in-one Shingle. That is, requests constantly came to us for the famous WINTHROP Tapered Asphalt Shingle in this form. We have now expanded our facilities, perfected the machinery and produced the 3-in-1 Shingle.

To you who know so well the WINTHROP—with its thick butt built up of extra heavy coatings of everlasting asphalt—little need be said about the quality of this new WINTHROP 3-in-1 Tapered Asphalt Shingle.

You know it is thick where the wear comes. The thick butt shadow line breaks up the

monotony of a flat roof. You know the beautiful non-fading crushed slate surfaces in the tile-red, sea-green and blue-black. They lay perfectly over old roofs.

You can lay this 3-in-1 Shingle with one-half the nails. You can lay this shingle without chalk lines, and it spaces automatically. These features represent a big saving in labor.

THE WINTHROP 3-in-1 Tapered Asphalt Shingles come packed in bundles, three bundles to a square. Use them for fall jobs.

### Write for Sample

We want you to examine this shingle for yourself. Send for a sample; specify what color you wish—tile-red, sea green or blue-black.

### BECKMAN-DAWSON ROOFING COMPANY

832 F. C. Austin Bldg., 111 W. Jackson Boulevard, Chicago, Ill.

Factories at Argo, Ill., and Detroit, Mich.



# ARCOLA—The Rent Raiser

ARCOLA pays for itself over and over in increased sales and rental value. Actual instances prove it again and again. Such letters as this one from a Lake George tenant put a sharp point on the old story—

P. O. Box 215,  
Lake George, N. Y.  
March 9, 1923.

American Radiator Company  
New York, N. Y.

Dear Sirs:

It was 12 degrees below zero on my front porch when I cross this morning but it was 70 degrees inside. The answer? Arcolal

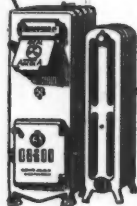
Everyone knows gorgeous Lake George in Vacation Time but a mere handful of us are privileged to feel the secure sting of winters here.

Last winter we baked around the usual "Parlor Stove" while water froze in the adjoining room. This winter the landlady (we are only tenants) installed an Arcolal with American Radiators in the living room and bath on the floor above. The results are unbelievable. Our coal bills cut one third; and even, moist heat the whole house through. The increased rental does not dampen our satisfaction and provides an annual return of twenty-two per cent on the investment for the owner.

I am away to business in a nearby city all day and the convenience of having the heater in the living apartments together with the comparatively small fuel consumption takes the drudgery out of keeping comfortable for my wife; to say nothing of eliminating the anxiety of keeping the children from sudden changes in temperature as was unavoidable with the stove.

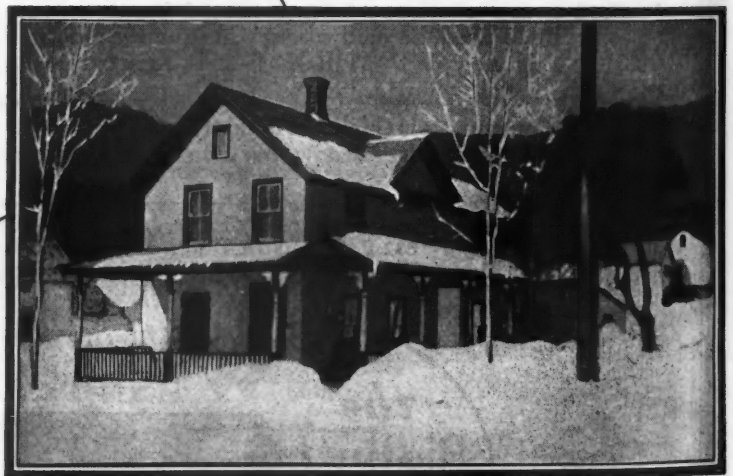
We are so enthusiastic over our Arcolal as we are about our Radio, and want you to know it.

Yours truly,  
*H. O'Brien*



- 1 Our increased rent pays owner 22% on ARCOLA investment but does not dampen our satisfaction.
- 2 12° below on my front porch but 70° inside.
- 3 Results are unbelievable. Coal bills cut one-third.
- 4 Convenience of heater in living apartment takes drudgery out of keeping comfortable for my wife.
- 5 Even heat whole house through; no sudden changes for children.

Write for illustrated catalogue



## AMERICAN RADIATOR COMPANY

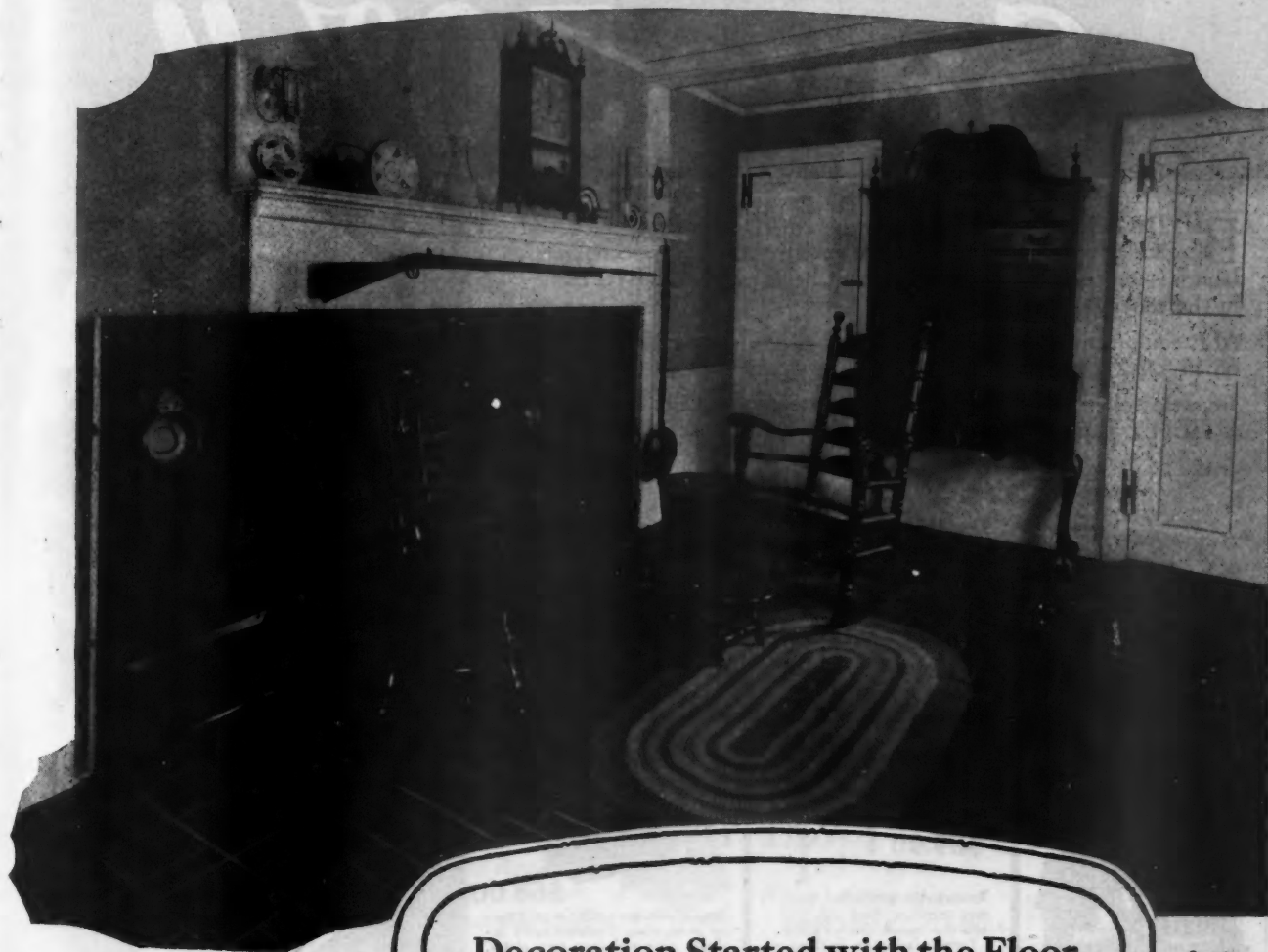
*IDEAL Boilers and AMERICAN Radiators for every heating need*

Dept. T221, 1803 Elmwood Ave., Buffalo, N.Y.

Branches in all principal cities

# Armstrong's Linoleum

## for Every Floor in the House



### Decoration Started with the Floor

MRS. E. F. LILLEY redecorated an 119 year old Colonial home in Milford, Mass., last fall, and used linoleum throughout. She started her decorative plan with the floors, using Armstrong patterns to give just the atmosphere and color effect she wanted for each room.

This is one end of the dining-room, long and narrow, running the full width of the house. The floor is red tile linoleum, pattern 3050, and the effect is that of the old Colonial kiln-burnt tiles—an appropriate base for the highboy, ladder back, and rag rugs.

But there is more than beauty and atmosphere to a modern linoleum floor. Linoleum is quiet, comfortable, and easy to care for. Moreover it is long wearing and very moderate in cost. A floor like this, for instance, should run well under 40 cents a square foot completely installed.

You should know the many designs in Armstrong's Linoleum which may be readily adapted to your own needs. Our Contract Department is prepared to send samples and advise you on any job for which you may contemplate using linoleum.

Armstrong Cork Company,

Linoleum Division,

Lancaster, Pa.

Look for the  
CIRCLE "A"  
trademark on  
the linoleum book



This is the residence of Mrs. E. F. Lilley, Milford, Mass., built in 1805. In redecorating the house, Mrs. Lilley installed permanent floors of Armstrong's Linoleum over the old, Colonial wide-board floors.

Have You the 1924 Specification Book? The fourth, completely revised edition of "Armstrong's Linoleum Floors," the architect's linoleum handbook, contains 36 pages of data, including specifications for laying, tables of gauges and weights, and colorplates. Bound in 8½x11-inch manila folder. Free to any architect upon request.

The Armstrong specifications are also contained in the Eighteenth Edition of Sweet's Architectural Catalog, pages 498-503.



# Deal Direct Save 30%!!

**B**UYING direct from *Concrete Equipment Headquarters* saves you practically one-third. And you get the best, most economical, labor-saving equipment—the kind that helps you make BIG money in the concrete business.

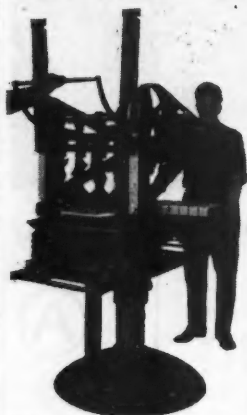
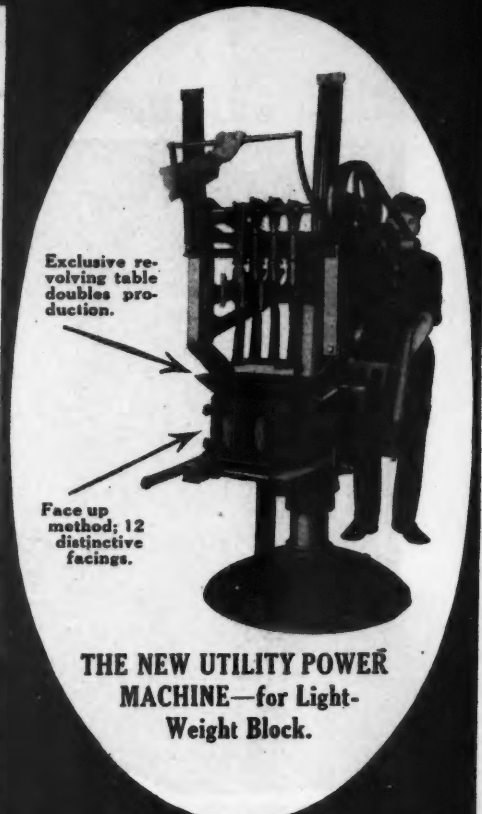
ALL equipment absolutely guaranteed to give satisfaction: shipped on 15 DAYS FREE TRIAL.

Investigate! Learn why the way to greatest profits is through UTILITY Equipment.

## SAVE 30%!

Order Direct or Send for  
MONEY—SAVING CATALOG  
Free on Request.

**Concrete Equipment Company**  
500 Ottawa St. Holland, Mich.



**NEW UTILITY POWER MACHINE FOR FACE and COMMON BRICK**

Operates on same principle as Power Block Machine; face up method; exclusive facings at low cost.

**UTILITY HAND BRICK MACHINE**

**\$69.90**

Remarkably profitable one-man machine. Uses wet process for speed and quality. Permits facings in machine. 2,000 face brick per day.



**UTILITY HAND BLOCK MACHINE**

**\$68.00**

Simple, efficient outfit for economical production. Complete outfit includes plain and rock face plates, cores, tampers, etc.



**PORCH and CHIMNEY MOLDS**

All sizes, various designs. Makes posts, piers, chimneys, etc. Interchangeable mold plates.

**\$6.00 up**

**PORCH MAKING OUTFIT**

Special offer on this combination of molds for porches and other blocks brings you outfit complete for

**\$59.80**



**VASE MOLDS**

Quickly and cheaply made command excellent prices. Many good styles; all sizes

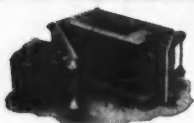
**\$24.80 up**



**FLOWER BOX MOLDS**

Big market and enormous profits in ornamental flower boxes. Several styles. All sizes

**\$23.00 up**



**COMPLETE BLOCK OUTFIT**

Makes regular, corner and half blocks; both smooth and rock face. No pallets needed

**\$15.00**



**UTILITY SHOVEL MIXERS**

Best and most economical for all concrete work. Operates on exclusive shovel principle; produces better, stronger, more plastic concrete; quicker with less labor, cheaper.

**\$69.00 up**



**\$100.00 up**



**PIPE and CULVERT MOLDS**

Make dense, uniform pipe. All standard sizes for sewer pipe, double-strength culvert pipe and drain tile.

**\$16.80 up**

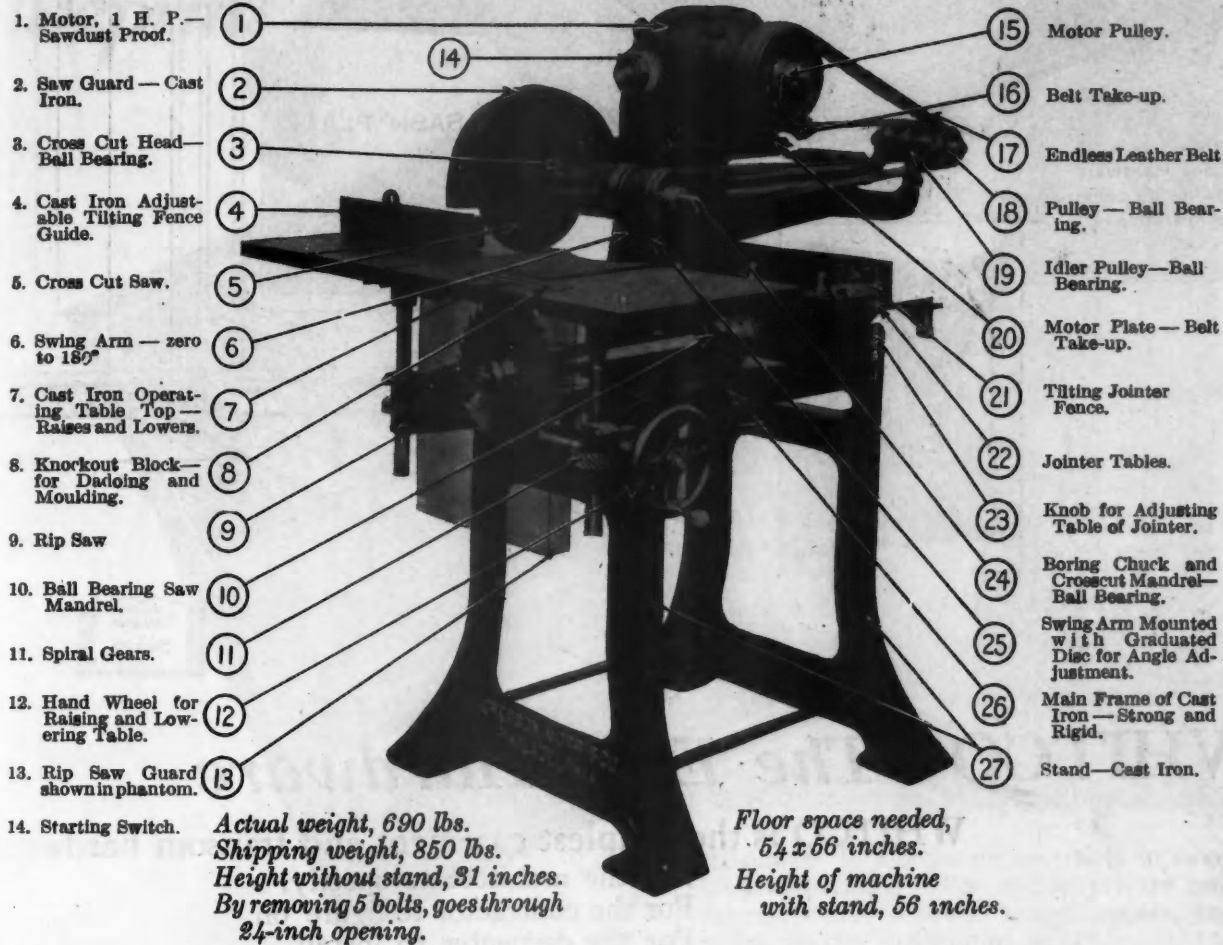
# 15 DAYS FREE TRIAL

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

# The 20<sup>th</sup> Century Woodworker

Licensed under U. S. Patent No. 1432631, Feb. 5, 1924

## The New Machine That Is Making New Records



1. Motor, 1 H. P.—Sawdust Proof.
2. Saw Guard—Cast Iron.
3. Cross Cut Head—Ball Bearing.
4. Cast Iron Adjustable Tilting Fence Guide.
5. Cross Cut Saw.
6. Swing Arm—zero to 180°
7. Cast Iron Operating Table Top—Raises and Lowers.
8. Knockout Block—for Dadoing and Moulding.
9. Rip Saw
10. Ball Bearing Saw Mandrel.
11. Spiral Gears.
12. Hand Wheel for Raising and Lowering Table.
13. Rip Saw Guard shown in phantom.
14. Starting Switch.

15. Motor Pulley.
16. Belt Take-up.
17. Endless Leather Belt
18. Pulley—Ball Bearing.
19. Idler Pulley—Ball Bearing.
20. Motor Plate—Belt Take-up.
21. Tilting Jointer Fence.
22. Jointer Tables.
23. Knob for Adjusting Table of Jointer.
24. Boring Chuck and Crosscut Mandrel—Ball Bearing.
25. Swing Arm Mounted with Graduated Disc for Angle Adjustment.
26. Main Frame of Cast Iron—Strong and Rigid.
27. Stand—Cast Iron.

*Actual weight, 690 lbs.  
Shipping weight, 850 lbs.  
Height without stand, 31 inches.  
By removing 5 bolts, goes through  
24-inch opening.*

*Floor space needed,  
54 x 56 inches.  
Height of machine  
with stand, 56 inches.*

## You Can Pay It On Easy Terms From the Saving It Will Make on Your Work

The 20th Century Woodworker is a universal woodworking machine which will do almost anything that can be done in wood.

It requires less effort from the operator and less power from the motor, and will give longer service because of the reduction in friction and vibration. With a 10-inch saw and 1 H. P. Motor it will rip or crosscut 3-inch hardwood. With a 12-inch saw and 1½ H. P. Motor it will rip or crosscut 4-inch hardwood. For ease of operation there is nothing to compare with it, for in crosscutting with the 20th Century, there is

### No Motor to Pull!

The motor remains stationary and the operator pulls the saw only. This feature alone justifies selection of the 20th Century, but close study will reveal it is an efficient machine superior in many ways. You can try it on your work at our risk. Mail the coupon now for full particulars.

## Cresson-Morris Company

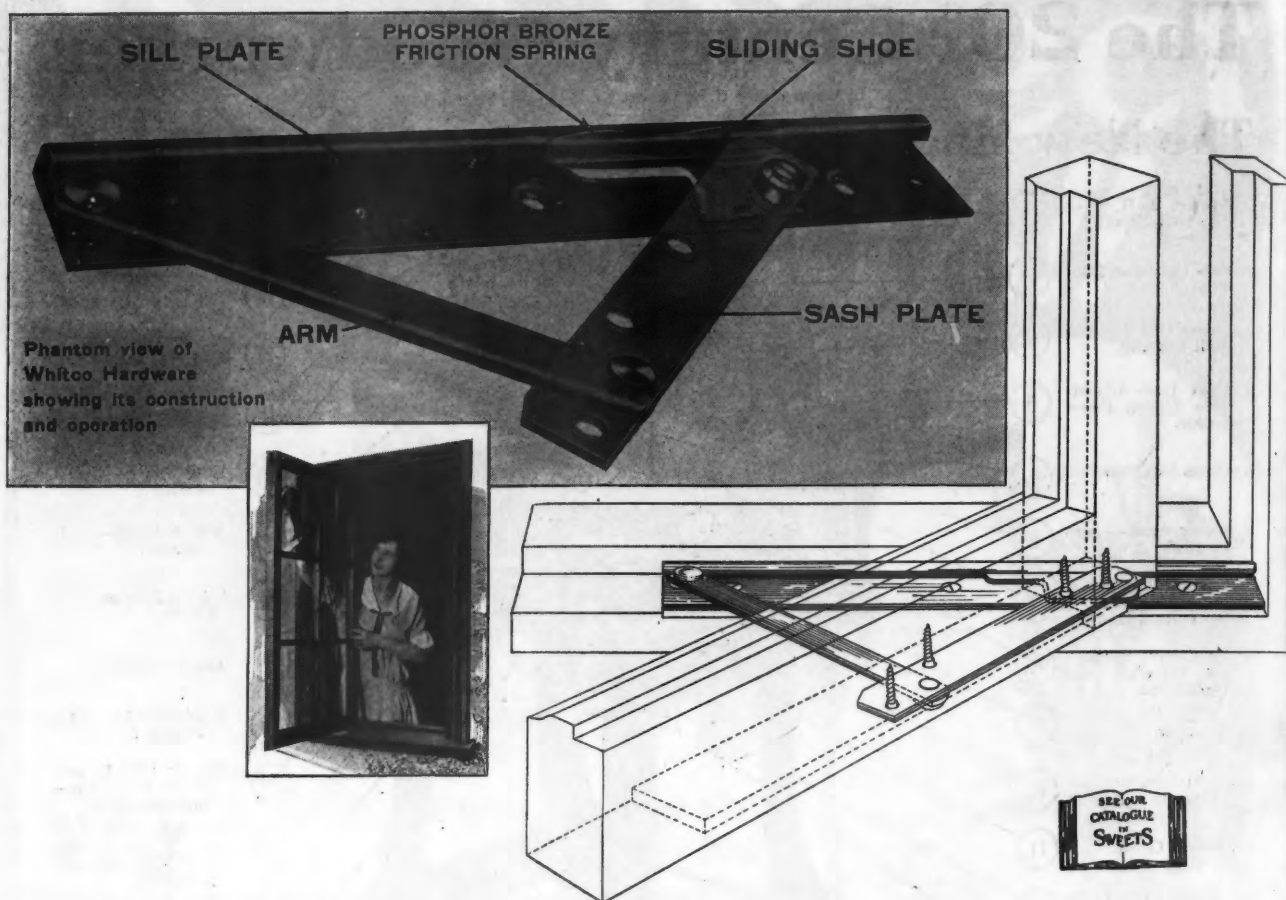
Allegheny Ave. & 18th St. PHILADELPHIA, PA.

**Mail Coupon  
and Arrange  
for Trial  
On Your  
Work**

Please send full particulars on the 20th Century Woodworker.

Name \_\_\_\_\_  
P. O. \_\_\_\_\_  
St. or R. D. \_\_\_\_\_  
State \_\_\_\_\_

## STANDARDIZE ON WHITCO HARDWARE FOR CASEMENTS AND TRANSOMS



## WHITCO—The Easy Hardware

WHITCO is the simplest casement and transom hardware:

For the architect to specify.

For the contractor to figure on.

For the carpenter to install.

One size fits all sash.

WHITCO can be applied to a single sash, a pair of sash, or to multiple sash in wide openings without mullions.

WHITCO is ideal for transoms.

A set consists of two pieces, one the reverse of the other.

Any set may be used to swing a sash either to the right or to the left.

The detail above shows the application of WHITCO to the bottom of a casement sash swinging out and to the left.

Turn the page upside-down and you see its application at the top of a casement sash swinging out and to the right.

Turn the page sidewise and you will see it on one side of a transom swinging in from the top or out from the bottom.

Could anything be simpler—or better?

In specifying casement hardware, just say "WHITCO." In ordering just say how many sash. There is nothing more to do. No special sash or frame detail is required. No special finish need be considered, as WHITCO is entirely concealed.

*We shall be glad to send full information regarding Whitco Hardware on request.*

Retail price, per set in  
Solid Brass . . . \$2.25

In Rust-Proofed Steel  
(Brass trimmed) \$1.75



You can buy Whitco from  
your Hardware Dealer

**VINCENT WHITNEY COMPANY**  
MANUFACTURERS HARDWARE SPECIALTIES

Western Office  
365 Market Street, San Francisco

Eastern Office  
444-447 Mass. Trust Bldg., Boston

*Send all inquiries to nearer office.*



**How to build  
Closets like this  
is shown in this  
Blueprint Portfolio**



Adaptable to clothes closet needs in every kind of building. For use in private residences, clubs, schools, lodges, offices, factories, stores, cloakrooms, etc.

Explains graphically just how you can include in your plans and specifications Knappe & Vogt Modern Clothes Closet Fixtures, save closet space, provide better and unlimited facilities for the care of garments and save on building costs.

Knappe & Vogt Clothes Closet Fixtures are

carried in stock by hardware stores. They are immediately available in multiples of 2 inches from 12 inches to 60 inches in length. Special lengths can be made to order. Send specifications for our quotations. If no dealer in your city, your requirements will be taken care of direct.

## **Knappe & Vogt Manufacturing Company**

GRAND RAPIDS, MICHIGAN

**KNAPE & VOGT MFG. CO.,  
GRAND RAPIDS, MICH.**

Please send me copy of your blue print folder free to contractors, home builders, architects and others interested in building, showing how easily your fixtures can be included in building plans for any type of buildings.

(Check)

Name ..... ( ) Contractor

St. & No. .... ( ) Architect

City ..... State ..... ( ) Builder



## Get in the Band Wagon

**A**LTHOUGH our 1924 campaign to "BUILD, RE-PAIR, RE-ROOF NOW" was announced to the trade less than a month ago, hundreds of lumber dealers have already enlisted, and in hundreds of cities and towns the campaign has already started.

—But it has done more than start. Already dealers who enlisted in the campaign are reporting improved business and sales are materially increasing.

Get into the band wagon. Enlist in this campaign.

Benefit by the advertising that The Lehon Company is doing to millions of consumers through advertisements in farm journals, newspapers, other publications and over principal radio stations.

This great national movement to "BUILD, RE-PAIR, RE-ROOF NOW" is going to help thousands of dealers finish 1924 with profit.

Why not you?

It is not too late to enlist now.

*Your set of materials  
for the campaign is waiting for you.  
Write for it today.*

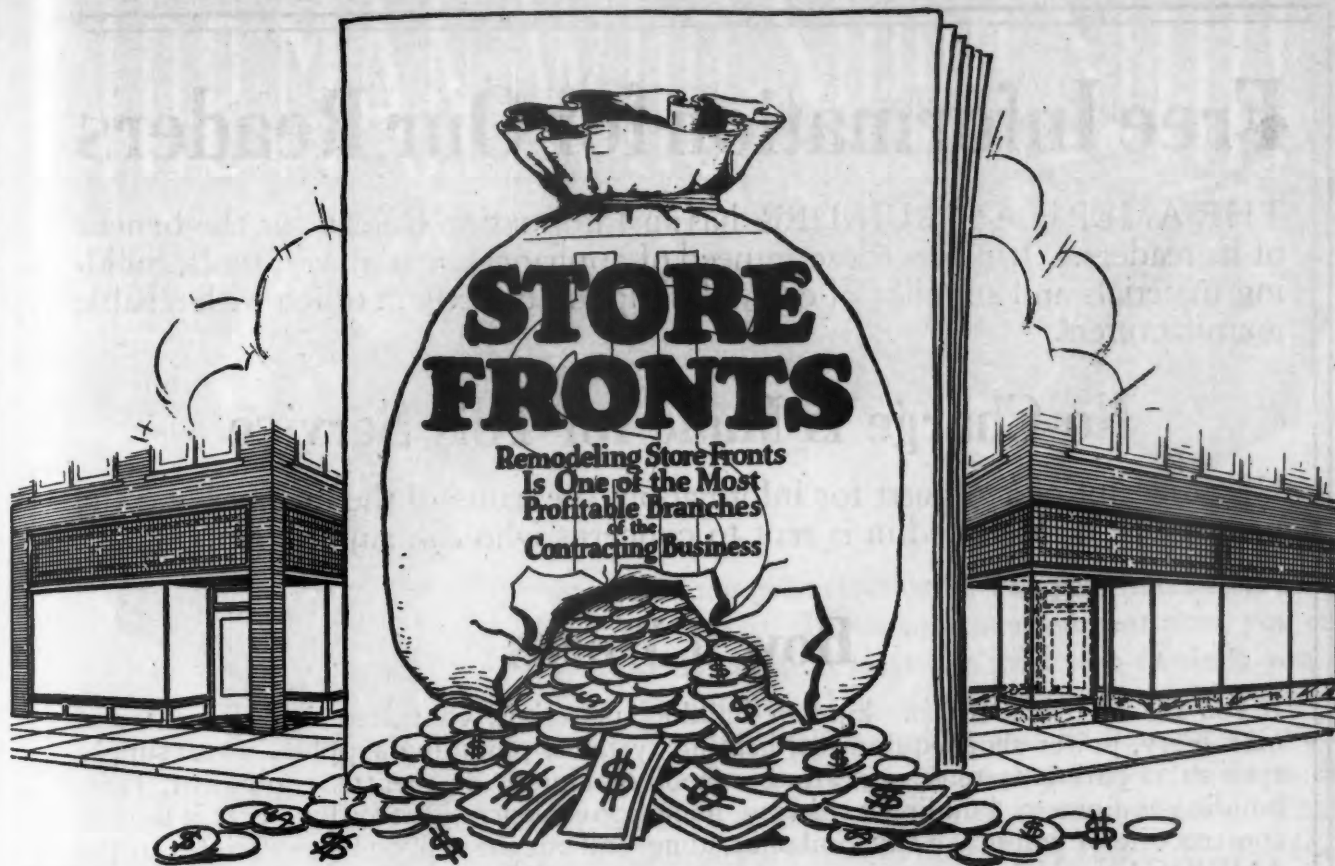


Manufactured by

*The*  
**Lehon Company**

44th to 45th St. on Oakley Avenue

CHICAGO, ILLINOIS



# How to Get Contracts ~at your own price

Are you working a territory where bids must be cut to the bone in order to secure contracts? Are you tired of taking jobs at prices that pay you mere wages? Then get into the store-front field.

Here's a branch of contracting that is not crowded. Contracts are readily secured at a profitable figure. The work is simple and can be handled by an inexperienced crew.

An hour or two of your time with our free

book on Desco methods will tell you how to enter this interesting and profitable business. Cut-throat competition will no longer cut into your profits. Tear out the coupon below and get into this branch of building while the field is open.

*Write us for the name of the nearest "Desco" Distributor.  
Additional information in Sweet's Catalog.*

**DETROIT SHOW CASE COMPANY**  
1654 FORT STREET WEST, DETROIT, MICHIGAN

181

## Money Making COUPON

Detroit Show Case Company  
1654 Fort St. West, Detroit, Mich.  
Without obligation on my part you may send me your book on "Desco" store fronts.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City and State \_\_\_\_\_  
Business \_\_\_\_\_

**Desco**  
METAL

A complete stock of "Desco" construction materials carried in our New York City warehouse, 562 West 52nd Street.

# STORE FRONTS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# Free Information for Our Readers

THE AMERICAN BUILDER has an Information Bureau for the benefit of its readers. It places those in need of appliances, machinery, tools, building materials and supplies of every description directly in touch with reliable manufacturers.

## No Charge is Made for This Service

Upon receipt of a request for information, the name of the inquirer and the product he is interested in is sent to concerns who can supply him.

## How it Works

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 or church or theatre equipment, farm building equipment, building hardware, home conveniences, or anything that is used in constructing or equipping any kind of building—fill out the coupon below, send it to the AMERICAN BUILDER and we will take the matter up at once with the proper parties who will send you their catalogs, prices and any other information you desire.

## Help for the Benefit of Our Readers

If you need anything that is or is not advertised in the AMERICAN BUILDER or want something that is not used in building just let us know and we will gladly help you.

## Please Help Us to Help You

In order to get the best and quickest results please be sure to print or write your name and address plainly and also check your occupation in the coupon below. Remember—This service is ABSOLUTELY FREE to American Builder readers.

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**American Builder, 1827 Prairie Ave., Chicago, Ill.**

Gentlemen: I am in the market for the following items: Please put me in touch with manufacturers whom you know to be reliable and can furnish goods promptly:

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Name \_\_\_\_\_

Address \_\_\_\_\_

☐ Building Contractor    ☐ Dealer in Building Materials    ☐ Architect    ☐ \_\_\_\_\_?

# The MAN Who Stood Still!



**T**HE man who stood still! You pass him on the street every day. If you take one moment now, you can easily recall at least one man who reminds you of this picture. Day after day he follows in the same groove. In good health and in bad he has got to work. Growing older and older, he sees ahead no relief from the ceaseless toil that he has known all through his life. There is no opportunity for him to cease for a single day the everlasting "humdrum" that he has known for so long. He is the man who stood still.

When he had the chance he failed to seize it. He allowed other men, no smarter, no abler, no better than he, to crowd him out. One by one his fellow workers passed him by to better and more profitable work. They left him always 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.

And now at sixty, at seventy or at eighty years you may see him any day if you care to look—a good carpenter, a good builder, a good contractor perhaps—but that's all; good in the sense that he can do certain things simply because he has done the same thing over and over again—but not good enough to try the new difficult work, the modern up-to-date jobs; the kind that pay good money. No, he cannot do these things—he never learned how. He is the man who stood still.

You don't want to stick to the plane, the saw and the hammer all your life. If you are a contractor or a builder don't you want bigger work than just barns, sheds and now and then a house or two?

If you are a draftsman, an apprentice or assistant in an architect's office you don't want to remain in your present position any longer than you have to; you want to make your present work the stepping stone to a bigger position, which will be your life's work.

You don't want to stand still and see your friends step ahead to enjoyable, well paid, independent work simply because they "snap up" the same opportunities, the same chances that are offered you. It is the natural ambition of man to want to keep up with his fellows.

The only way that you or any other man can keep up is through study—study of your chosen work. If there is a certain part of your work that you don't thoroughly understand then some time when that kind of work has got to be done some other man is going to step up ahead of you and do it. He learned how. **KNOWLEDGE IS THE GREAT LEVELER.** There is no true independence where there is lack of training.

You have the chance now within your grasp to get this necessary training. This advertisement is an absolutely direct appeal to you. No matter how good a position you hold now—no matter how much work you are getting—no matter how well you are paid for it—this advertisement holds as much interest for you as the man who is actually looking for work.

At no risk to you—without the slightest obligation on your part—we offer you the really great opportunity of perfecting yourself in your life's chosen work. Don't pass this page by until you have made up your mind to give the rest of this advertisement careful study. Look at the picture again at the top of this page—look at it carefully. You owe it to yourself and to those who may be dependent upon you to take advantage of every possible chance for bettering yourself.

*You cannot afford to be the man who stood still*

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Essentials of Success.  
Lettering.  
Blue-Printing.  
Architectural Drawing.  
Working Drawings.

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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.  
Octagonal or Hexagonal Roofs.  
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.

#### BUILDING CONSTRUCTION.

Foundations.  
Materials for Walls.  
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.  
Testing Steel.  
Factor of Safety.

#### CLASSES OF STRUCTURAL MEMBERS.

Design of Girders.

#### MANUFACTURE OF STRUCTURAL MEMBERS.

Shop Work.  
Forge Shop.  
Painting Structural Steel.  
Cost of Steel Structures.  
Erection of Steel Buildings.  
Bridge and Viaduct Construction.  
General Theory of Steel Construction.

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History of the Square.  
Uses of the Figure, Lines and Scales.  
Testing the Square.  
Diagonal and Octagonal Scales.  
Board, Plank and Scantling Measure.  
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.  
Heel and Plumb Cuts.  
Linear Board Measure.  
Framing a Circular Porch.  
Framing a Gambrel Roof.  
Miter Cutting.  
Hip Roof Framing.  
Finding Length of Rafters.  
Octagonal and Hexagonal Roofs.  
Bevels for Cuts.  
Hoppers and Hopper Bevels.

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Strings and Finishes at Top and  
Bottom.  
Treads and Risers.  
Balusters and Brackets.  
Square of the Newel.  
Combination Squares.  
Universal Square.  
Bevel Try-Squares.  
Topp's Framing Tool.

#### KEY TO THE STEEL SQUARE.

Rafter Table.  
The Revolving Disc.  
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Location and Size of Flues and Registers.  
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Furnace Ventilation.

### ELEMENTS OF STEEL CONSTRUCTION.

The Raw Material—Iron Ore.  
Properties of Ore.

### MANUFACTURE OF CAST IRON.

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

### COVERING OF ROOFS.

Method of Shingling.  
Covering of Circular Dome.

### MASONRY CONSTRUCTION.

Easy Method of Testing Stones.  
Results of Reliable Tests on Various Kinds of Building Stone.  
Kinds of Stone Work.  
Rubble Masonry.  
Cut Stone.  
Bonds and Joints.  
Mortar for Stonework.  
Stone Cutting.  
Stonecutters' and Masons' Tools.  
Dictionary of Masonary Terms.  
Foundations.  
Walls.  
Abutments.  
Culverts.  
Piers, Arches.

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Manufacture of Brick.  
Brick Making Machinery.  
Effects of Manufacturing Processes.  
Color of Brick.  
Strength of Brick.  
Porosity, Density, Etc.  
How to Test Brick.  
Results of Standard Tests.  
Mortar for Brickwork.  
Bricklayers' Tools.

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Advantages of Reinforced Concrete.  
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Fire-resisting Properties.  
General Principles of Reinforced Concrete Design.  
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Hand Mixing.  
Machine Mixing.  
Continuous Mixing.  
Batch Mixing.  
Wetness of Mixture.  
Leanness or Richness of Mixture.  
Mixing Tools.  
Time of Setting.  
How to Regulate Setting.  
Difference between Setting and Hardening.  
Characteristic Properties of Concrete.  
Strength.  
Durability.  
Fireproofing.  
Cost of Concrete.  
Standard Specifications for Portland Cement, Sand, Etc.

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Metal Forms.  
Construction of Forms.  
Collapsible Metal Forms.

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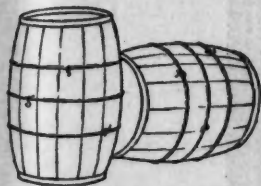
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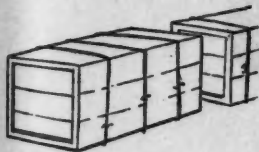


# Wire Binding

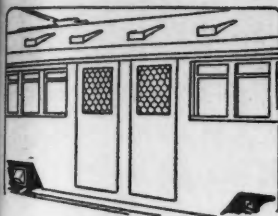
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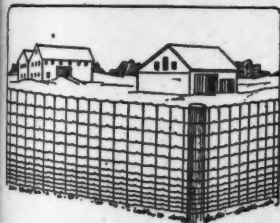
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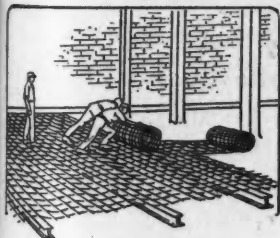
Boxes are Bound with Wire.



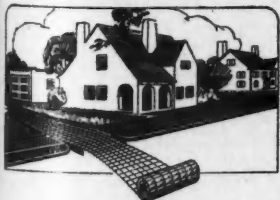
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*Further details are given to the right.*

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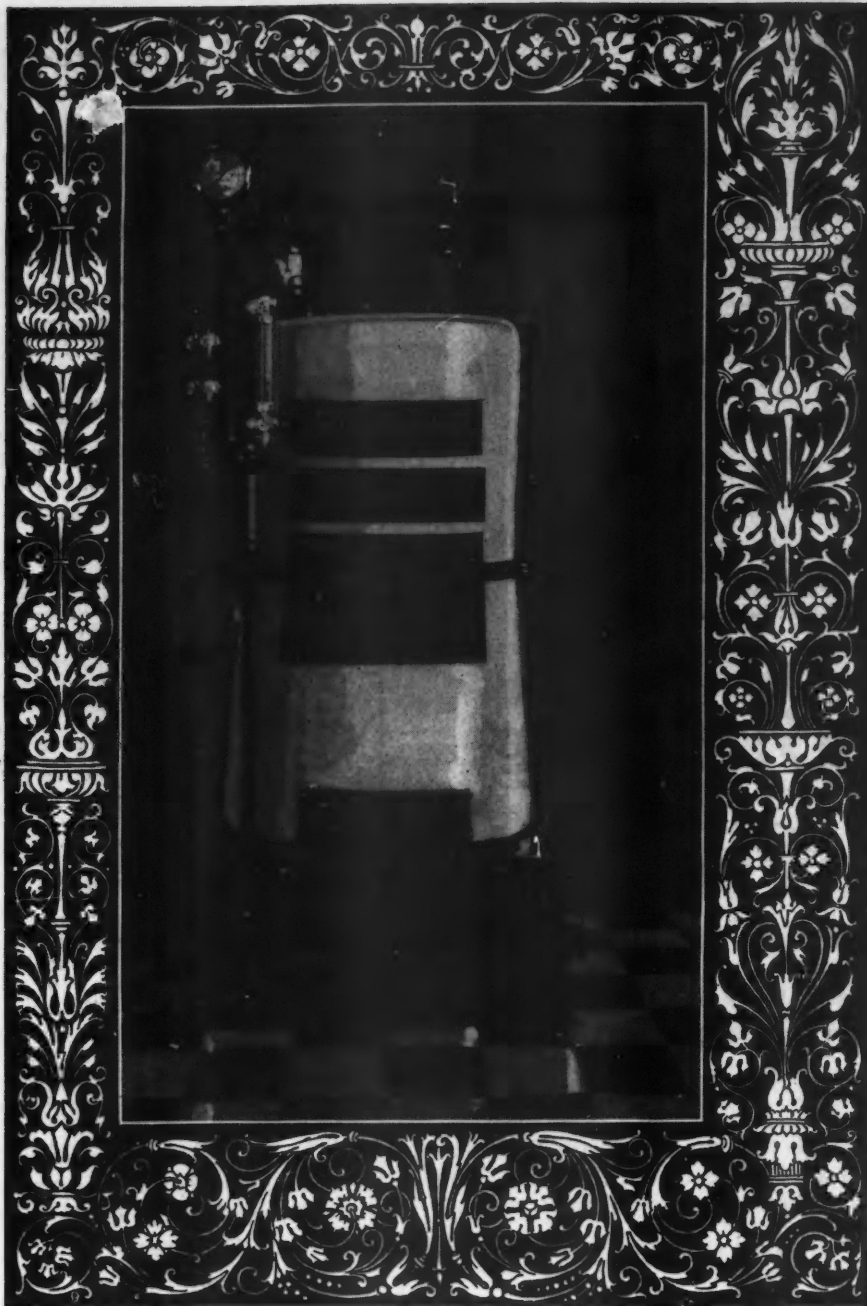
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## A. S. ALOE CO.

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WOOD FRAME CONSTRUCTION

## OVER SHEATHING.

Metal Lath shall be Expanded Cup 25 lb. per square yard Painted; Expanded Cup 3 lb. per square yard Galvanized; Expanded Cup 34 lb. per square yard Painted; Expanded Cup 34 lb. per square yard Galvanized.

Note: The Manufacturers recommend the heaviest weight of lath, but Expanded Cup 25 lb. per square yard Painted, is more generally used on residence construction than any other type of lath made.

## ERECTION:

Waterproof building paper should be applied over the sheathing, commencing at the bottom of the wall and lapping upper sheets one inch over lower.

Commence lath at top right hand corner, one stud away from corner. Bend sheets around corner, no joints should occur on corner. Continue around wall lapping sheets one inch at ends. Lower sheets should lap upper at least one-half inch.

No furring strips are required with Expanded Cup Lath.

Use 6d. nails or 1 1/4-inch 14 gauge staples. Drive nails 1/4-inch and bend over to grip lath. Lath should be nailed or stapled every 9 inches in each direction.

Stucco over sheathing shall be not less than 1 1/2-inch total thickness of approved material, applied in not less than two coats.

## BACK-PLASTERED:

Metal Lath shall be Expanded Cup 25 lb. per square yard Painted; Expanded Cup 3 lb. per square yard Galvanized; Expanded Cup 34 lb. per square yard Painted; Expanded Cup 34 lb. per square yard Galvanized.

Note: See not above regarding weight of lath.

## ERECTION:

Metal Lath is erected in the same manner as for over sheathing, with the exception that side laps should be tied between each stud with No. 18 soft annealed wire.

CATALOGUE  
and HANDBOOK

OF

Metal Lath  
and Steel

## Building Specialties

WITH  
SPECIFICATIONS  
AND  
USEFUL INFORMATION

THE SYKES METAL LATH CO.  
NILES, OHIO

# Do You Want This Free Handbook?

HERE are complete specifications for metal lathing and furring, with construction details and erection data.

The book contains general information on plaster and plastering.

There are given important data on foundation walls for stucco buildings.

Tables of quantities of materials are convenient for reference and estimating.

We believe that this is the most complete handbook of information ever published on the use and application of metal lath, plastering and related general building information.

Write for your copy today.

Sykes Metal Lath Company  
504 Walnut St., Niles, Ohio

Of the many fine homes erected in Toledo, this new residence of Franklin B. Jones, president of The Acme Coal and Builders' Supply Co., is an outstanding example of modern construction. Mr. Jones has incorporated many of his ideas of progressive construction in the building of his home, a feature being that it is absolutely fireproof. Alfred A. Hahn, Toledo, was the architect who drew the plans according to Mr. Jones' ideas. White Enamel Finish Hydrated Lime was used for the putty coat.



**White Enamel  
Gold Medal  
or White Lily~**

**finishing  
hydrated lime**

TONS of White Enamel, Gold Medal and White Lily Hydrated Lime are being used daily for finishing jobs. *The reasons are numerous—*

The lime is pure—*absolutely pure*—it is burned from rock that *possesses unusual physical qualities* and rare properties which make a putty coat of *unusual plasticity, extreme whiteness and exceptional strength.*

Any one of these brands will save you time, trouble and money.

There is a building supply dealer in your vicinity who handles either White Enamel, Gold Medal or White Lily Finish Hydrated Lime.

The Woodville Lime Products Co.  
639 Madison Avenue  
Toledo, Ohio

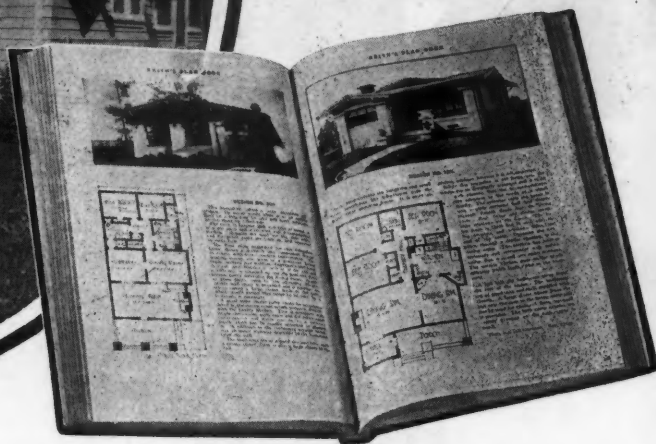




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\$15.00

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# Build From Tested Plans

**THIS** big 144-page Plan Book contains 115 photo illustrations and floor plans of 115 artistic bungalows. Here you will find a home to satisfy the personal tastes and family requirements of any home builder. There are plans for the three-room frame bungalow of moderate cost and for the larger home in brick or stucco, containing six, seven or eight rooms. The Keith Bungalow Plan Book gives you a wide range of selection and designs which embody the newest and most approved details of bungalow construction.

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The plans offered in this valuable book have been tested—homes have been built from them and proven accurate in every detail. Contractors and carpenters can use these plans with the fullest confidence that every detail has been proven by practice; that possibilities for costly mistakes have been eliminated, and that they will make possible the maximum economy of materials and labor, thereby helping the builder to obtain contracts.

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The expert knowledge of arrangement, design, construction and selection of materials which characterize these tested plans has been gained by members of the Keith organization over a period of twenty-five years, during which time thousands upon thousands of homes of every character have been successfully designed and built. Hundreds of contractors and carpenters have



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Send me at once a copy of Keith's Bungalow Plan Book and Keith's Magazine for one year for which I agree to pay postman \$2.50 plus a few cents postage on delivery of book. Money back if not satisfied.

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A MAN who wants to build a house or a store or an office building is careful to insist on strength and stability to combat stresses. The architect who gets up the plans safeguards his client by drawing upon a vast store of information and experience in securing the result desired.

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prevent glass breakage during installation or from distortion after the glass is installed.

Murnane Self-Adjusting Setting Blocks bring the glass into firm and even contact with the full face of the rigid rabbet. Zouri Key-Set construction holds it there.

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1608 East End Avenue, Chicago Heights, Illinois

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FEDERAL RESERVE BANK OF CLEVELAND  
Atlas White Portland Cement mortar used  
for setting, backing and pointing the stone.

# ATLAS WHITE

## Portland Cement

### For Non-Staining Mortar!



**A**TLAS WHITE PORTLAND CEMENT contains no elements that will stain, and for that reason it is in itself absolutely non-staining.

Atlas White Portland Cement mortar is the most perfect mortar that can be used for pointing, setting and backing stone or other materials subject to stain. Its absorption is extremely low. It is permanent, weatherproof and will not disintegrate.

It is essential where white joints or clearly tinted or colored mortar is wanted, that Atlas White be used, for it affords a neutral, permanent, economical base for every desired tint and color.

ATLAS WHITE is a true *Portland Cement*, meeting all the requirements of the Standard Specifications of Portland Cement and of the United States Government.

Architects are invited to write our Technical Department for detailed information as to its many uses.

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MATERIALS furnished by  
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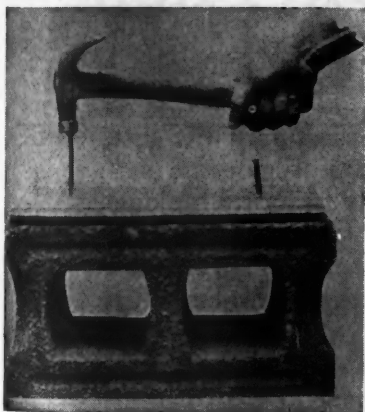


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For Churches, Hotels, Theatres, Hospitals, Apartment Houses, Residences, Garages, Barns, Ice Houses, Dry Kilns, Factories, Warehouses, Office Buildings, etc. Ideal for Bearing, Foundation and Partition Walls.

For exterior work, which is to receive stucco, and for interior walls and partitions, to which the plaster may safely be attached direct without furring and lath, and because of its nailability, there is no material on the market which can equal it.

The blocks are uniformly made, are light weight and lay quickly. One standard block displaces twelve bricks and requires less than one-third the mortar. They are *absolutely damp-proof*, fire-proof and sound-proof; qualities thoroughly attested in more than eight thousand buildings of every description.



As good as wood for nailing  
and the nails hold.

Responsible parties will be licensed to manufacture  
and sell in open territory.

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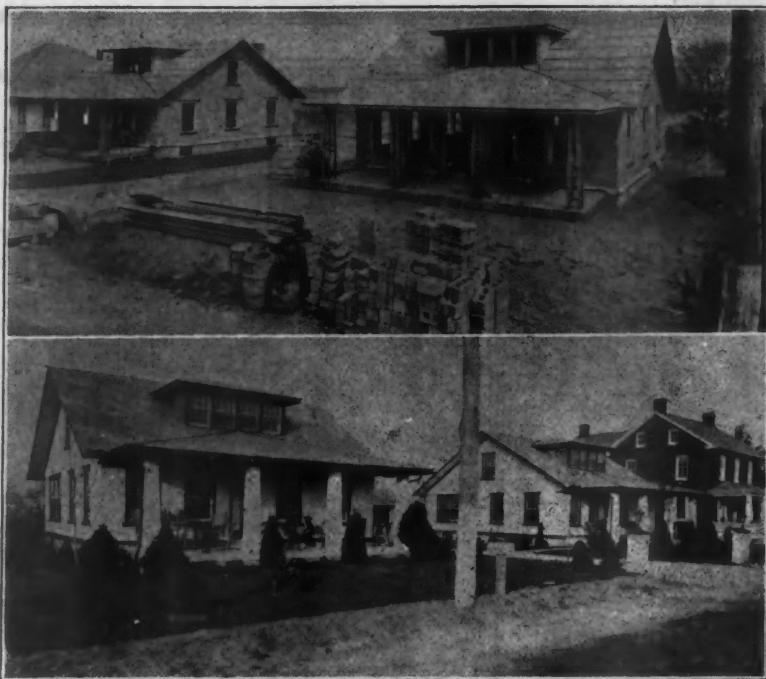
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New York, N. Y.

On account of their numerous unique properties, resulting in superior walls at reduced costs, Architects, Contractors and Builders say *Straub Cinder Blocks* have revolutionized the building material industry.

Tested and passed with high official rating by National Board of Fire Underwriters' Laboratories.

We have 50 plants in successful operation. We invite Architects, Contractors and Builders to visit and inspect our plants. Write for address of plant nearest you. Ask for our complete circular matter, test reports, etc. Your inquiry will be given prompt attention.



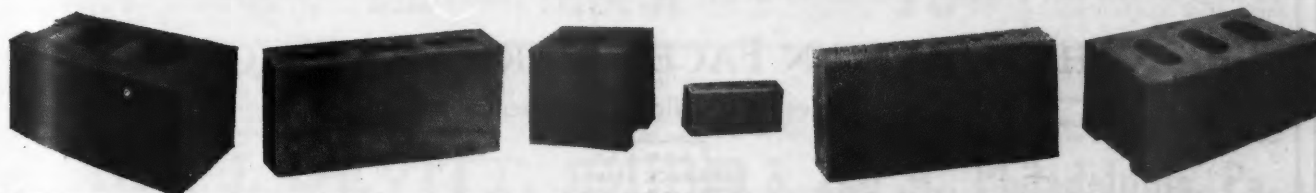
*Residences of Ray Clark, Contractor, and H. M. Knissley on Lincoln Highway, Lancaster County, Pa., under construction and complete.*

*Walls, including foundation, constructed of 8-inch STRAUB Patented CINDER CONCRETE Blocks.*

*Ray Clark, Contractor.  
Fred Krug, Architect.*

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- 1—Damp-proof, moisture-proof and frost defying.
- 2—Sound-proof.
- 3—Tenacious with great strength.
- 4—Non-conductor of heat and cold.
- 5—Perfect key for inside plaster and outside stucco. (No wood or metal lath required inside or out.)
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- 7—As good as wood for nailing. Nails can be driven into it with ordinary hammer as easily as into wood and the nails hold.
- 8—Rot and vermin-proof.
- 9—Does not sweat—therefore requires no furring or lathing. No mold.
- 10—Great Saving in Cost.





*These two attractive, four-apartment, brick buildings vividly show what a little remodeling and Face Brick veneer accomplished for the two old frame buildings shown at the right, in a row, seen above, on Rhode Island Street, Gary, Indiana. Contractor and Builder, Marcello Gerometto.*



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Painting and repairing will only have to be repeated, and the house will continue to depreciate. Once and for all, cover the house with a durable and beautiful veneer of Face Brick, with the result that future repairs will be eliminated, while the painting will be confined to doors and windows.

You can convince him how the Face Brick

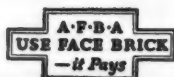
veneering will, at comparatively low cost, convert his house, now a drug on the market, into a permanently beautiful building with an enhanced rental or sale value far beyond the cost of the improvements. Owners are quick to see these gains when pointed out to them.

Veneering an old building, either frame or stucco, is no more difficult than veneering a new structure, and is accomplished in much the same manner.

Our "Manual of Face Brick Construction," presents complete technical information on all Face Brick problems, including veneer work. Sent for \$1.00; your money refunded if you are not satisfied.

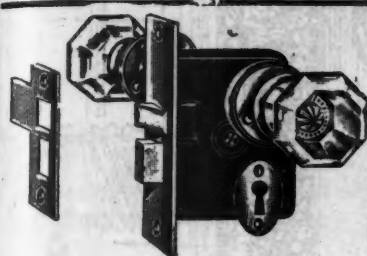
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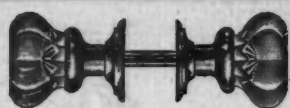


## Glass Knob INSIDE LOCK Set

- 1 Lock, Japan case, 3 1/2 x 3 1/2 x 7-16, steel plated face.
- 1 Pr. Glass knobs, with solid brass roses.
- 2 Solid brass escutcheons (key plate).

**\$1.39**  
Per Set

P. P. charges 15c  
Per dozen sets, \$15.95



## Glass Door Knobs

### Solid Brass Roses

A price of a high quality glass knob never heard of before.

P. P. charges 10c  
Per dozen pairs, \$11.00

**98c**  
Per Pair



## Closet Latch Set

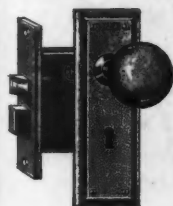
### With Glass Knob

- 1 Mortise latch reversible.
- 1 Glass knob with brass rose.
- 1 Inside thumb turn, steel with steel rose.

P. P. charges 10c  
Per doz. sets \$11.00

**98c**  
Per Set

## Inside Door Lock Sets STEEL BRONZE PLATED



- 1 Mortise lock 3 1/2 x 3 1/2 x 3/8.
- 2 Escutcheons 7 x 2 1/2.
- 1 pr. Steel bronze knobs.

**60c**  
PER SET

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Per dozen sets, \$6.25



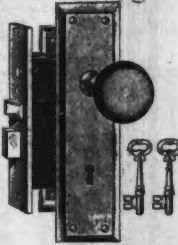
## PITCHER HANDLE FRONT DOOR LOCK SET Cylinder

- 1 Mortise lock, Japan case 5 1/2 x 3 1/2 x 3/4 with cast brass face.
- 1 Cast brass pitcher handle grip with wrought brass plate.
- 1 Brass thumb turn and knob.

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## STEEL FRONT DOOR LOCK SET

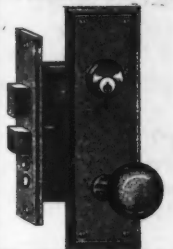


- 1 Mortise lock 5 x 3 1/2 x 3/4.
- 1 Steel escutcheon 10 1/2 x 2 1/2.
- 1 Steel escutcheon 7 x 3 1/2.
- 1 pr. Steel knobs.

**\$1.69**  
PER SET

P. P. charges 20c  
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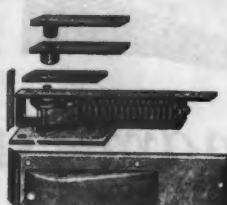
## CYLINDER FRONT DOOR LOCK SET Solid Brass



- 1 Mortise lock, Japan case, 5 1/2 x 3 1/2 with cast brass face.
- 1 pr. Wrought brass knobs.
- 1 Wrought brass escutcheon, 3 x 12.
- 1 Wrought brass escutcheon, 2 1/2 x 7 1/2.

**\$5.98**  
PER SET

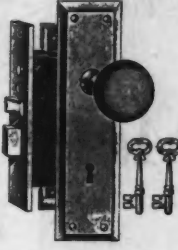
P. P. charges 25c



## FLOOR HINGE

**72c**  
PER SET

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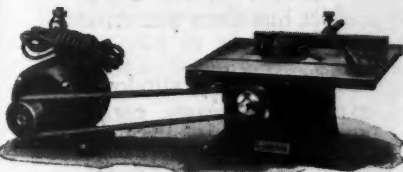
## BIT KEY FRONT DOOR LOCK SET Solid Brass

- 1 Mortise lock, Japan case, steel front.
- 1 pr. Brass knobs.
- 1 Brass escutcheon 3 x 10.
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**TABLE** Delivered prepaid anywhere in the United States.

**Motor** This heavy duty motor can also be furnished separately for ..... **\$15.90**  
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We can ship one or a thousand, the same day order is received.

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COLUMBUS, OHIO

WESTERN FACTORY BRANCH, FT. DODGE, IOWA  
AGENCIES IN ALL PRINCIPAL CITIES

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DIAMOND METAL WEATHERSTRIPS  
for Windows and Doors.

## Diamond Metal Weatherstrips

We manufacture the largest and most complete line of weatherstrips on the market, each different type designed to meet peculiar requirements.

**Types**—The types made include:

Six different types for double hung or sliding windows.

Five different types for doors.

Four different types for casement windows.

Special type for hollow metal sash and frames.

**Materials**—Weatherstrips are made of zinc, spring bronze, brass and aluminum.

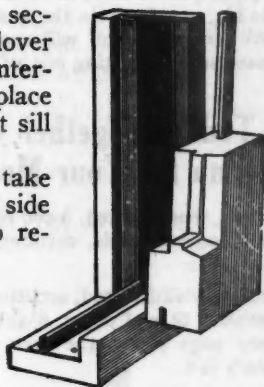
**Special Features**—*Flexibility*—Diamond metal weatherstrips are so made as to adjust themselves to meet and overcome the objections of sticking and binding, caused by the warping, swelling and shrinking of sash, and by the swelling of parting stops and dividing strips which are exposed to the weather.

Windows equipped with Diamond weatherstrips always slide easily.

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The runway or side strip is made in two sections, a base with a foldover under which the rib interlocks and is held in place by a screw and miter at sill or top.

To remove sash, take out screw. Only one side need be removed. To replace sash, just reverse operation. After rib is removed, if it is necessary to get into weight pocket, it can be done without kinking or damage.



SECTION SHOWING  
REMOVAL OF SASH  
AND STRIP SIMUL-  
TANEOUSLY



REMOVABLE  
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TRADE-MARK  
Registered U. S. Pat. Off.

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Estimates will be cheerfully furnished by our nearest agency. Write home office for address.

## Manufacturing Facilities

This company has been manufacturing and installing weatherstrips for 15 years.

Our plant is equipped with special machinery to turn out finished product in large volume accurately.

A high standard of efficiency is maintained both in the manufacturing and installation of our products.

## Guarantee

All weatherstrips are guaranteed against imperfection in workmanship and material for a period of 10 years from date of installation.

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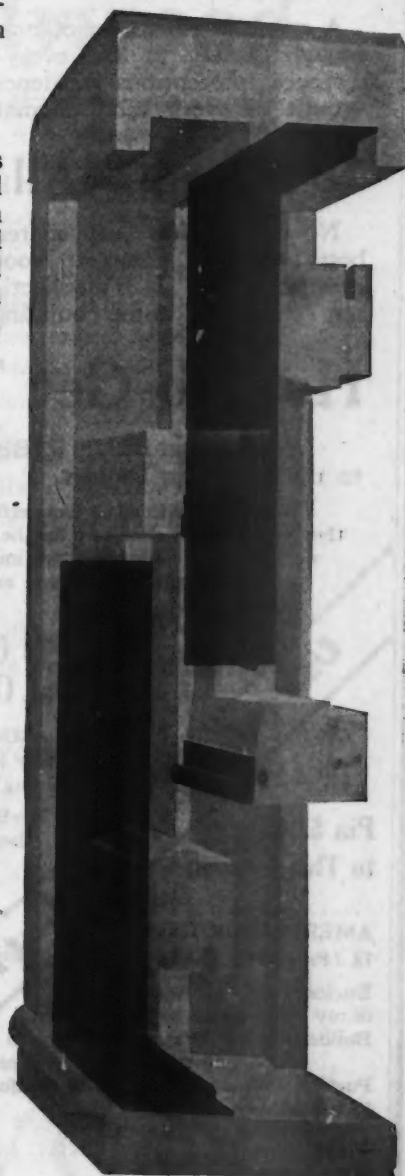
Our trade-mark is your protection against inferior material and workmanship, and assures of being scientifically correct in principle, practicability in use and efficiency in service.

## Agencies

We have 468 territorial agents in 38 states and are adding to this number as we find proper representation.

## References

Thousands of buildings in all parts of the United States and Canada have been equipped with our product. A list of installations in your particular section is yours for the asking.



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DIAMOND METAL WEATHERSTRIP  
INSTALLED

## Service

A practical engineering department is maintained for solving difficult problems in our particular line.

All material applied by skilled mechanics under personal supervision of our established agencies.

Shipments made immediately upon receipt of order.

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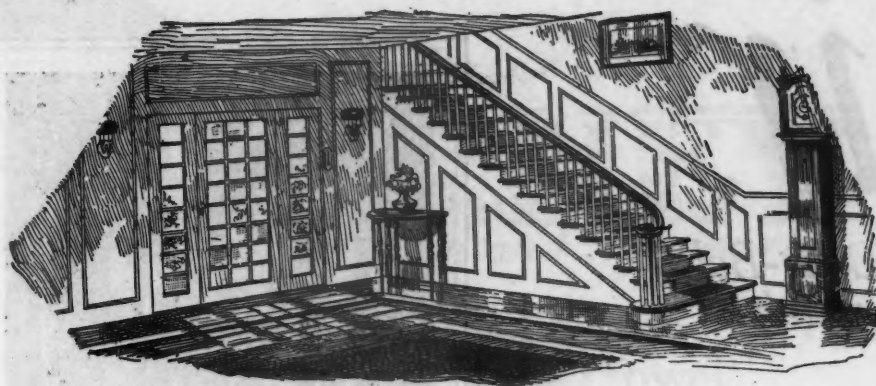
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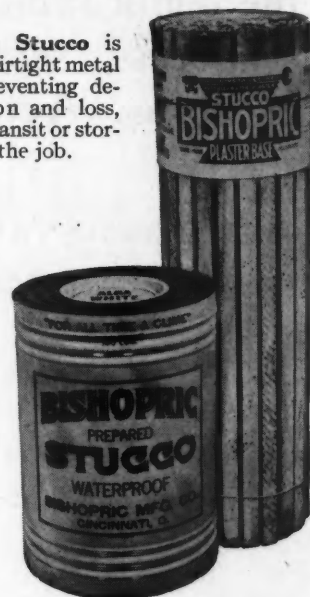
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