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TRUSCON
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The type of Foltel-Way illustrated here is adapted to wide openings, with doors folded to either side, leaving an unobstructed view between rooms.

To right is shown how doors slide and fold in hinged pairs. Overhead hangers and track serve as a guide, with weight supported on floor track and ball bearing rollers.

Closed, the doors form a practically dustproof and soundproof wall which quickly reverts the enlarged room into its original units.
the size of any room

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EVERY so often, in churches, auditoriums, lodge halls, gymnasiums—wherever people assemble—additional space becomes an urgent necessity. A moment is sufficient to supply this space, provided FOLDER-WAY is installed. With scarcely an effort, you can slide and fold the doors away—just like folding up an entire wall and changing two or more rooms into one. It is the economical solution to the space problem, because it puts rooms to double use, with so little time and effort and such great convenience. Doors move silently and easily on ball-bearing rollers, without sticking, sagging or rattling.


Use an R-W Door Check and Closer and you’ll have a closer without an equal. Its ease of application—no taking check apart—is an exclusive feature. Built for a lifetime of trouble-free service—and that’s what it delivers.
The stone home that used to be a luxury can now be built at medium cost. New ways of producing, handling and using Indiana Limestone bring amazing change. Write for free plan books.

IMPORTANT changes have taken place in the stone industry that every contractor and builder should know about. Indiana Limestone is now just as economically practicable a material for residence wall construction as brick, stucco or wood. New methods have been applied to the use as well as to the quarrying of stone. Indiana Limestone is now coming into extensive use as a veneer applied to stud-frame walls. Or it may be used as a structural facing over hollow tile or brick. It is secured to the frame with galvanized metal ties, the same as a veneer of face brick work.

Houses built of Indiana Limestone used in this way are moderate in cost. No expensive stone-cutting is required. Carefully prepared drawings for jointing and laying up are not necessary.

Indiana Limestone for Random Ashlar facing is supplied in sawed strips. The stone is sawed on four sides—face, back, top and bottom. The strips are usually 4 inches thick. We prepare Indiana Limestone in this way right at the quarry. Then we ship it all over the United States as required. Right on the job, these strips of Indiana Limestone are broken, jointed and laid up in the wall. A stone mason or a bricklayer can do this kind of work.

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New tools have been devised to speed up stone construction. Jointing is done with an electric carbide-rundum saw instead of the old-time mallet and chisel. One man with this efficient device can keep six stone masons busy laying up stone. The saw is used to cut a groove in the face of the stone. The stone is then turned over and a tap with a mallet breaks it cleanly on a line with the groove.

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The total cost of a house with stone-faced wall construction of the sort described here is only 5% to 6% more than when walls are faced with other materials. Obviously, a stone house has a big re-sale value. It immediately stamps its owner as having the best there is.
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1306 Snowden Street, Andrews, Indiana
If in Canada, address Branch Office, Waterloo, Ont.
"Well I've been a bull headed son-of-a-gun"

McINTOSH grinned, as Flaherty the contractor sputtered on:

"Guess I ought to have my head examined. Here I've been seeing those ads on the Clarke Sander guaranteeing 800 to 1600 square feet of floor in eight hours—but I never thought to investigate. "Worse'n that, Clarke salesmen have tried to show me a demonstration but I was too pig headed. Said I had the big machines—and that it took a lot of weight to sand a floor. Strike me pink for a barnacled old Moss back"—and red-faced Flaherty stopped for lack of breath. "Ah weel—tis an ill wind that blows naebody guid" quoted McIntosh with a twinkle in his eye. "Yes" broke in Flaherty, "my mule-headedness gave you the profits on a job I could have put in my own pocket."

"Well, Flaherty, ye hae nae kick comin', you delivered your job on time with no penalty—thanks to me and The Clarke, and ye hae learned a lesson so ye'll not be caught in a jam again. And for guid measure I'll add some free advice and that is, when ye air employing men or buying machinery, pay for the work they do, not their size!"

For a second Flaherty looked as if he would explode and then said with a laugh. "Mac, advice is the only thing you ever did give me, but I'll admit that if you'd given me that advice a year or two ago and I'd taken it, it would of saved me a heap of money. But at that I'm not so bad off. As you said, 'tis an ill wind that blows nobody good."

"If I had not had this penalty job—or if I had had power wires connected up, I would probably have finished the job same way with my big machine and would probably gone on using it for months to come instead of doing more work at less cost with the Clarke. "But I was up against it—and you showed me that the Clarke—easily carried with one hand, and attached to any lighting circuit could run rings around the big machine. "So instead of beefing about the profit I paid you, I'm going to thank you for teaching me the best lesson I've ever learned. I'm ordering a Clarke by air mail tonight."

There's many a contractor like Flaherty who is saving money by discarding obsolete machines and investing in the latest light, powerful, fast cutting Clarke. Remember it is the only Sander with a definite written guarantee of performance. 800 to 1600 square feet of new floor in 8 hours, or 300 to 800 feet of old varnished floor in the same time. No varnish remover or neutralizer necessary. It's almost as easy to operate as a vacuum cleaner and as dustless. In quality work—quantity work—close work or open work—floor work—bench work—finishing or trim work, it has no equal. The Clarke surfaces more feet per dollar. It keeps plugging day in and day out—year after year. You need the work this Clarke will do. We will show you the work it will do and guarantee it to keep doing it. Can you ask for anything more? While it's on your mind lick a stamp and send the coupon.

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Contractors and Jobbing Carpenters all over the country are picking up thousands of CROMAR orders from owners — for re-laying and new construction work on homes, apartments, hotels, and similar semi-public buildings.

Read the "ad" here reproduced — it explains some of the important CROMAR advantages which cause owner or builder to give preference to Factory Finished Oak Flooring over hand-finished hardwood flooring.

Let me send you a free sample of CROMAR. Then go and get prices from your Lumber Dealer.

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Sales Manager
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"It Has No Equal"

I've Used It For Years
And I Know!

"I have been a carpenter and builder for more than 30 years. I bought a 'Master Woodworker' several years ago, and I never knew till then what it was to have all the hard work taken out of a job. Since then I have had demonstrations of other machines, but I must say the 'Master' is by far the best. It is the fastest, truest and most dependable woodworker on the market. I recommend it above all others."


Profit By This Man’s Experience

Don’t experiment. Buy the "Master Woodworker." You will find it the most satisfactory and profitable machine on the market. Twelve years the leader, though often imitated. IT WILL PAY FOR ITSELF ON THE FIRST JOB, then make money for you thereafter. It will save you the cost of five expert carpenters’ time, speed up your production and eliminate waste. Always ready to work; reliable, powerful, efficient. Not a saw rig, but a complete woodworking outfit, 12 MACHINES IN ONE. It crosscuts, rips, dadoes, does routing, planing, rabbeting, boring, grinding, moulding, mitering, mortising, etc. No vibration; work always in plain sight. SOLD ON EASY TERMS. A small down payment; then pays for itself from profits earned. Sixty-day money-back guarantee protects you. Machines in stock for quick delivery. Send coupon for full details now.

The "MASTER WOODWORKER"

Congress and Brush Streets, Detroit, Michigan

(Established 1917)

Mail this Coupon

Pictured is the portable No. 12 "Master Woodworker." Driven by electric motor or gasoline engine. It is also made in two larger models for job and millwork, and in one smaller size.

Congress and Brush Sts.,
DETROIT, MICHIGAN

Send me your FREE catalogue and easy-payment plan.

NAME

ADDRESS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
In 1900 Ludwig Hatschek invented the process for making asbestos-cement products and coined the name Eternit. In 1928 that industry, started by Hatschek, reaches its summit in the great new Eternit factory at St. Louis.

LUDWIG HATSCHEK, an Austrian, wanted a better building material. Something entirely different! He knew—and for that matter, everyone else did—that asbestos was absolutely fire-proof. He was equally familiar with the durability of Portland cement—its wonderful resistance to time and weather. Working with these two products, he combined them in an exceptional manner. Thus the process for making asbestos-cement products was perfected and the name Eternit born.

Other Eternit products

Shingles were but the first step. Soon came Eternit Asbestos Lumber—made of the same fine materials and in the same manner, but in larger sheets for roofing and siding. Then corrugated roofing, which lately reached its finest development in Eternit “Big-Seven” Corrugated Sheets—a much stronger, more economical roofing for industrial buildings, which is rust-proof, fire-proof and never needs painting.

All Eternit factories work under the Eternit process. Every invention of one becomes the property of the others. Every achievement is passed on, every discovery shared.

The great St. Louis factory

Now comes the great new American factory at St. Louis—building on the firm foundation of all the Eternit experience—using the identical Eternit process.

The Eternit process is different. It contains more than the ordinary mixed mass of asbestos fibers and cement. It distributes the choicest fiber evenly throughout Portland cement—just as steel is used to reinforce concrete. Because of this process, all Eternit products are tougher and stronger—more resilient. They won’t curl or raise or warp. They won’t rot. Unlike wood or asphalt products, they are absolutely fire-proof.

Eternits—exclusively colorfast!

An exclusive color process, recently developed, makes Eternit shingles absolutely colorfast. An exclusive method of shingle application was perfected—the Eternit Horizontal, which obtains unusual shadow effects. Other Eternit products which will have unusual interest for builders, dealers, roofers, and industrial engineers will be announced in the near future.

Test out Eternit Asbestos products for yourself at nearby Eternit dealers. Let us send you more information about any of these products. Mail the coupon. Eternit, Inc., 15th and Locust Streets, Philadelphia. Offices and warehouses at Boston, Jacksonville, Houston, New Orleans, St. Louis, Factory at St. Louis.

ASBESTOS SHINGLES

ABSOLUTELY COLORFAST


Eternit “Big-Seven” Corrugated Sheets have extraordinary strength—made possible by the 7” corrugation span.

Eternit—exclusively colorfast!

An exclusive color process, recently developed, makes Eternit shingles absolutely colorfast. An exclusive method of shingle application was perfected—the Eternit Horizontal, which obtains unusual shadow effects. Other Eternit products which will have unusual interest for builders, dealers, roofers, and industrial engineers will be announced in the near future.

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Are We Going Color-Crazy?

A Check-Up of the Present Buying Trend Among Home Seekers Points That Way

By BERNARD L. JOHNSON,
Editor, American Builder

The American public is color mad and period crazy and the builder who does not study these tendencies or hire someone to do it for him will not sell his houses as quickly in the future as the builder who meets this demand, according to L. Porter Moore, president of the Home Owners' Institute. The Institute is engaged in building, in key cities throughout the United States, model homes that are open for public inspection under the auspices of local newspapers. This organization completed a program of 74 model houses in 28 cities last year and during this time made a careful analysis of the demands of the average home buyer and builder in cities from New York to San Francisco. The Institute plans for 1928, including the architectural designs to be used, the equipment to be specified, and the furnishings to be selected are based on this survey.

“A desire for pale pink bathroom fixtures, apple green washing machines, scarlet furnaces, and bright blue walls is sweeping the country,” says Mr. Moore. “The public wants colored roofs, brilliant interiors and tinted gas ranges. Material and equipment manufacturers anticipated this trend with uncanny foresight for most of the bright wares on the building material and equipment market have been developed during the past year, but not a minute too soon; in the opinion of the merchandising experts who produced them.

“It is interesting to trace the history of this rise of color and style which is not the flair of the moment, but a demand that will be sustained for many years to come. Color probably originated twenty-five or thirty years ago in our rural districts where the farmers painted their houses in ugly red and lemon yellow tones. Late, in California appeared the brilliantly colored stucco house, but it was necessary for the public to change from Puritanical and Early Settler ideas on architecture before the color age really began.

“It is here that the relation begins between the development of style and color. A dozen years ago, except for small areas on the western coast, American architecture was a cut and dried affair. The Colonial and the variations
of the Colonial called for only white and green tones. The squat brick houses of that time required no colors at all.

"Ten years ago, thousands of young draftsmen, architects, and future architects, serving with our army overseas, were favorably impressed with French and English architecture; and it was this influence principally that brought the English cottage and the Norman and French designs to our western plains and to all parts of our country.

"These architectural styles demanded color and more color as the public developed a broader appreciation of Old World architecture. Close on the heels of this architectural upheaval, came the material manufacturer with the vari-colored roof, the steel casement windows, the period lighting fixtures, and the softly tinted walls, necessary for this new—for America—design.

"The feeling for interior color began, as was natural, in a very subdued and modest way. Women who did not know whether it was quite nice to tint kitchen and laundry walls, began with faint tones, and ended this year with bright blues and vivid greens. It is interesting here to note that the influence of the early Dutch kitchens, combined with the other factors described above, has carried the decoration of our kitchens around a cycle. The old fashioned kitchens, especially the early Dutch ones, were gay with chintz, and blue and yellow china.

"Then came the efficiency experts who produced the sanitary, dazzling white kitchens and for years it was considered all wrong to have a spot of color in this room.

"With the advent of the new architectural designs and the consequent use of color on the exterior, came the modest border of decorative colored tile for the bathroom, kitchen, and laundry. Today, bathroom walls are frequently made entirely of colored tile, worked in beautiful and intricate patterns, resembling mosaic work, or finished in colored murals. The fixtures vary from pale pink to soft yellow and the fittings can be gold plated, hand hammered, or inlaid with colored enamel to match or contrast with the walls or fixtures. Style has been developed also by the manufacturer of bathroom materials and equipment to keep pace with the architectural changes and the desire for color. The cold, straight edged plumbing fixtures have been abandoned and curved corners, decorative inlays, and graceful contours have been developed in the past twelve months by these progressive interests because these styles appear 'softer' and harmonize better with the flower covered walls and orchid rubber shower curtains.

"Manufacturers do not experiment for months and go to the tremendous expense of putting new products on
A Modern Bathroom with a Mural Background Painted in Soft Green, Pink, Yellow and Orchid. The bathtub is of yellow, green and orchid tile, combined to harmonize with the walls and is on a raised dais of yellow tile.

the market if they are not convinced that huge sales will follow. It is true that sometimes such manufacturers make mistakes, but there has been no miscalculation in the production of colored materials and equipment. A large manufacturer is now perfecting an apple green dishwasher because the old dishwashers look out of place in the vivid kitchens of today, another manufacturer is now selling brilliant red heating boilers because of the vogue to use the basement as an extra room, and so the heating plant will not spoil whatever decorative scheme may be undertaken.

"And the surprising thing is that all of this new style and color is obtainable for the average man of average means who buys or builds a small

home, which is the reason why the builder must keep his ear to the ground and be informed on what the public knows it can have. There are now available stock lines of period equipment and fixtures, made of quality materials, priced low enough for the small and modest home. Many of these items, such as wrought iron lighting fixtures, have had such enormous sales, showing the trend of public taste, that it is now possible for the average man to purchase the kind of equipment that was formerly only made to order, and consequently high in price.

"Many builders have realized the importance of the facts I have set forth above and these builders will sell their houses quicker, in small towns and big towns, than the builder who disregards them.

"One of the officials of the sale agents for the Van Sweringen Brothers, the famous developers and builders of Cleveland, Ohio, told me early in May
too much of it. The public has developed an amazing good
taste and it wants the unusual rather than the freakish,
some slight variance rather than the bizarre."

Included among members of the Home Owners' Institute
who are manufacturing materials and equipment in accord-
ance with the public demand described by Mr. Moore, and
whose materials and equipment will be used in the Institute
1928 model homes are the following: Johns-Manville Co.,
originators of color in roofing materials; Truscon Company,
steel casement windows; Standard Sanitary Manufacturing
Co., colored bathroom fixtures and fittings; Kerner Inciner-
ator Co., chimney fed incinerators; Paine Lumber Co., Ltd.,
painted or lacquered miracle doors; Kelly Island Lime &
Transport Co., materials for wall finishes that may be
colored in the mixture or painted later; American Radiator
Co., red boilers; General Electric Co., colored electric refrig-
erators and concealed colored lighting effects; McKinney
Mfg. Co., who first produced wrought iron hardware;
Cephas B. Rogers, Inc., wrought iron lighting fixtures, first
organization to produce for national distribution.
Windows of Beauty

NOW AVAILABLE

MODEL NO. 5 TRUSCON CASEMENTS
in Single and Combination Units.

Truscon announces a new and distinctive type of steel casement, Model No. 5, in factory-built single and combination units. These Casements are a forward step in casement window equipment possessing a high degree of beauty, utility, permanence and economy.

Model No. 5 Truscon Casements are delivered complete ready to fill the opening and can be set up in place for the glazier with a minimum of field labor.

These Casements provide the latitude so desired by the architect and builder in the execution of his design and assure to the owner lasting satisfaction and the greatest investment value.

Illustrated Catalog and Architectural Details for Model No. 5 Truscon Casements will be sent on request.

Truscon Steel Company, Youngstown, Ohio
Established 1893

The World's Largest Manufacturer of all Types of Steel Windows, Warehouses and Offices in all Principal Cities
UTILITY and ECONOMY

Single and Combination Units for Practically any Window Opening

Truscon Casements are not only architecturally beautiful but are especially practical for any building. The combination units, completely assembled at the factory, and the various types of single units, together with rectangular and semi-circular transoms, provide for all desired window openings.

Truscon Casements are easily and quickly installed in any type of wall construction saving labor and time in the field. Priming coat applied at the factory reaches every part of the metal assuring protection and it is only necessary to attach hardware, shipped complete with the casement.

Write for Illustrated Catalog and Architectural Details on Model No. 5 Truscon Casements.

TRUSCON COPPER STEEL BASEMENT WINDOWS
Installed in any type of foundation. Open and close silently; easily operated, necessary tools or gear required. Never and even in severe winter winds without rattling or creaking. Can be given any desired finish in standard colors or any desired combination, with hangers or hooks, allowing of glass to frame and no priming coat of paint to apply. Cost no more than ordinary windows and add 50 to 70% more daylight.

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO
ESTABLISHED 1890

The World’s Largest Manufacturer of all Types of Steel Windows. Warehouses and Offices in all Principal Cities.
Quality refrigeration can
—this "years ahead" refrigerator

This is the new de luxe apartment house model... finished in porcelain, inside and out. It has the same mechanical perfection as the larger models. While only 24 inches wide and occupying but 3½ square feet of floor area, it has 6 square feet of food storage space.

ONE of the strongest selling points you can give a house is the lasting comfort and economy of a General Electric Refrigerator. It is the one refrigerator that is radically different from all others in its construction, its operation... and its results. It is indeed "years ahead" in design.

Architects are specifying them

The better architects and the most progressive builders, after carefully considering all electric refrigerators, have chosen the General Electric. The prestige of the General Electric Company is one important factor in their choice. They know that any product which is the result of fifteen years of research in the General Electric laboratories must be most efficient in operation.
They are influenced, too, by its revolutionary simplicity. There is no expensive installation cost. The General Electric Refrigerator is installed by plugging it into any convenience outlet. No plumbing, soldering or extra wiring are needed. It is unusually quiet. It has no drain pipes, belts or fans. All its mechanism is enclosed in one hermetically sealed casing—forever safe from dust and difficulties. It is completely assembled and tested in the factory.

Send for Complete Catalogue AB6

To get an idea of the wide range of models—the various sizes and finishes—just send for Catalogue AB6. It gives complete specifications of these refrigerators which are developed, made and guaranteed by General Electric.

This is the standard 5 cubic foot model. It has a shelf area of 9 square feet for food. It is ideal for the average family of four or five. Other General Electric Refrigerators in 7, 9½, 13 and 17 cubic foot sizes.
Today the desirability of a home is far greater than ever before. A fresh flowering of genius in home decorative treatment has come at last to that long neglected room—the bathroom. It has found its inspiration in the new "Standard" styled fixtures and fittings. In the bathroom design here illustrated the "Templeton" lavatory is the essential factor around which a harmonious decorative scheme has been developed.

It is modeled in one-piece Genuine Vitreous China—with a grace of line and form in dressing table effect and a convenience never before available in a lavatory.

The fittings are as original as the lavatory.

Today no home is truly modern without a bathroom as colorful and beautiful as it is convenient. Prospective tenants and purchasers often use the plumbing fixtures as the yardstick by which to measure its value. Because of this, these contractors and builders install "Standard" Plumbing Fixtures and Fittings in kitchen, laundry and bathroom. They know the "Standard" trademark which is impressed in every product of "Standard" manufacture is recognized the world over as a symbol of highest quality and distinctive style.

Kitchen work centers at the sink. Of all home fixtures, prospective tenants and home owners demand that it should give the utmost in cheerfulness and convenience. Today housewives want as much

"Standard" PLUMBING FIXTURES
that fits under a low window. They want a sink with a compartment that is deep enough to prevent over-the-rim splashing and allow plenty of working room under the spout.

The "Standard" "Three 8's" Sink—with 8-inch low back, 8-inch deep sink compartment, and 8-inch wide front—meets every requirement. The "Three 8's" is the ideal sink. Kitchen cleansers, mineral waters, even fruit and vegetable acids cannot mar its glistening beauty. They cannot roughen or discolor its Acid-Resisting Enamel.

The "Three 8's" Sink in all needed patterns and sizes and other new plumbing fixtures and fittings are on display at "Standard" Showrooms in principal cities. The trademark "Standard" is impressed in every "Three 8's" Sink. Be sure to see them before you build or remodel another home or apartment. They are available in several beautiful colors as well as white. Write for the new book "Standard" Plumbing Fixtures for the Home. It contains a wealth of ideas and suggestions for the planning and arrangement of bathroom, kitchen and laundry and is sent on request.

PITTSBURGH
Nine Duplexes in a Row—and not a Single Garbage Can!

When a builder uses the Kernerator for one building that's interesting. Of course, he may only be experimenting—learning if it really does make sales and rentals easier.

But when a builder like Mr. J. T. Mathis of Baltimore puts the Kernerator into every one of nine duplexes—that's proof!

Here's why Mr. Mathis finds the Kernerator profitable to include: back lawns are not strewn with refuse by stray cats and dogs and are therefore as clean as the front lawns—and that's clean! Complaints from the tenant in the lower flat, and ensuing strained relations are eliminated, because the stairways and pathways have no scraps of garbage dropped on visits to the garbage can—and that means renewed leases from satisfied tenants!

There's no feeding ground to attract roaches and rodents—no obnoxious odors from stench-filled garbage cans—no attraction for germ-laden flies before they frolic in kitchens and bedrooms! And basement trash piles (cause of 75% fires) are ended. All garbage and waste are dropped through handy hopper doors in the kitchens of both flats and fall to the combustion chamber in the basement. An occasional match burns the air dried accumulation without odor and sterilizes bottles, tin cans and other metallic objects for removal with ashes. No fuel or upkeep necessary. Lasts as long as the building.

Duplex Models as low as $150 ($75 per family)—and the masonry adds but little more when regular chimney is used. See Sweet's, write for catalogs or phone local representative.

KERNER INCINERATOR COMPANY
715 E. WATER ST. (Offices in 89 Cities) MILWAUKEE, WIS.
Profits are Greater, Sales Quicker with
Johns-Manville Asbestos Shingles

The Johns-Manville national advertising campaign is seeking out the prospective house builder in your neighborhood. It will give him new information about the importance of roofs. It will help him to choose his roof from materials that will provide safety from fire, permanent beauty, and long wear. To the prospective house builder, Johns-Manville Rigid Asbestos Shingles mean that the house is well built from top to bottom.

Try Johns-Manville Asbestos Shingles on your next job, and let them help you sell your houses. Send the coupon for full information concerning the way in which Johns-Manville Rigid Asbestos Shingles have been successfully used by builders everywhere.

JOHNS-MANVILLE CORPORATION
New York, Chicago, Cleveland, San Francisco Branches in all large cities
Canadian Johns-Manville Co., Ltd., Toronto
(Mail this coupon to branch nearest you)

Please send me information about using Johns-Manville Asbestos Shingles on houses built for sale.

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

R-14
Hang a Door in 10 Minutes

with this new McKinney “Non-Mortis” Butt

It makes light work of what has always been a tricky job. You can hang a door without cutting a single mortise. The doors go up like magic—a third the former time. When in place, there is no difference in appearance from the usual job. The barrel of the hinge is not changed in any way.

The leaves of the McKinney Non-Mortis Butt close one within the other, to the thinness of a single leaf. (See illustration.) On any job where you do not have to work to a knife-edge fit between jamb and door, you can use the Non-Mortis Butt—and you’ll breeze through with a speed that will surprise you.

For operation houses, for average single houses where you are holding a tight rein on time and costs, you’ll find nothing to equal this new McKinney product.

It is now ready in all standard finishes, in two weights. Sizes for doors: 3"x3½"x4"x4", for cabinets: 2½"x2",2½"x2½".

Begin now, take advantage of the profit-earning features of this hinge. Write for information, to McKinney Mfg. Co., Pittsburgh, Pa.

Send Today

for full information about the new McKinney Non-Mortis Butt.
Most people think a house of common brick costs twice as much as a frame house. Few of them know that there is an actual first cost difference of approximately one or two cents per square foot.

Anyone would rather have brick. A charming, attractive house of common brick, that costs twice its cost, looms up as a wonderful investment. This simplicity in selling.

From the standpoint of pure economy, the use of common brick cannot be equalled. Common brick is made, low-cost brick, available everywhere in colors which vary according to the locality and nature of the clay. Architects and builders have just re-discovered the possibilities of it for obtaining superior architectural effects. They now that a common brick wall can be made to fairly sparkle with color and interest when the bricks are set with appropriate bonds and mortar joints.

And with all this permanent utility, there is the economy in reduced painting costs, fewer repairs, lower insurance, and slower depreciation.

Common brick meets all architectural demands for surface effects and type. It may be used in the best homes in combination with slate or tile roofs, copper and zinc gutters and down spouts, metal casements, and sash, exposed oak timbers and plate glass.

There are several practical books offered by the Association of untold value to builders. One on skintled brickwork, covering the new methods of obtaining interesting surface effects, will prove extremely helpful. A 72-page book, illustrating 120 different small brick houses actually built, with accompanying floor plans, is offered at cost.

Check the coupon below now and mail it today. A dollar bill brings all of them. The services of the Association are available to all dealers and builders.

Are you taking advantage of the service behind Brick?

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

Check coupon below—send cash or stamps to nearest office—

- Homes of Lasting Charm—25c
- Skintled Brickwork—15c
- Multiple Dwellings of Brick—10c
- Farm Homes of Brick—5c
- Brick, How to Build and Estimate—25c
- The Heart of the Home (Fireplaces)—25c

Check above books wanted or send $1.00 for all of these books.
Quick Sales and Lasting Satisfaction

Master Model Homes
Pay Bigger Profits

E. B. MacDonal d, Realtor-Bu ilder, says—

"The experience of Realtor-Builders in many cities throughout the country shows that Master Model Homes, built under the supervision of Home Owners Institute, and containing nationally advertised materials, and sponsored by leading newspapers, not only bring sales to the Realtor-BUILDER but also provide better homes at a lower cost to the individual purchaser."

Only Nationally Advertised Products Go Into Master Model Homes

To encourage home ownership based upon high standards and known values, prominent Realtors in various cities are building Nationally Advertised Model Homes under Home Owners Institute supervision, and sponsored by leading newspapers.

For the materials used and equipment demonstrated in these Model Homes, supervised by Home Owners Institute, the architect's specifications call for only those products with nationally known trademarks and established reputation, as advertised, including:

- Anaconda Brass Pipe, Gutters, Rain Poles, and Flashings of Anaconda Copper, Screws of Anaconda Bronze Wire
- New Ideal Boilers, New Ideal Hot Water Heaters, Corto Radiators
- Common Brick
- G-E Wiring System, G-E Refrigerator, G-E Vacuum Cleaner, G-E Fans
- Rigid Asbestos Shingles; Improved Asbestos Pipe Insulation
- Tiger Finish (Hydrated Lime) Walls; Lime for Plastering and Brick Mortar
- Kernerator Chimney-Fed Incinerator
- Forged Iron Hardware, Hinges
- Metal Lath for Better Plastering
- Miracle Doors
- Plumbing Materials
- Cephos B. Rogers Decorative Lighting Fixtures
- Truscon Steel Casement and Basement Windows

HOME OWNERS INSTITUTE, INC.
L. Porter Moore, President
441 Lexington Avenue
New York City
for Those Who Follow These Standards

No waste of valuable space here. The basement has become a useful, livable place—an asset to the home owner.

© Underwood & Underwood

Model Basement Adds a Room

Raymond M. Hood, Architect, says—

“Billions of dollars are invested in basements of American homes. In most of them the bulk of basement space is wasted. Basements can be studied so that this tremendous waste will be overcome or obviated.

“The widespread movement of the Home Owners Institute is one of the strongest factors in stimulating the interest of the public in the quality, comfort and beauty of its homes. Just as the automobile industry has had a tremendous expansion, due to its effort to develop a pride of ownership through the utility and beauty of the present day motor car, so should the building industry profit from the efforts of the Home Owners Institute.”

To Help You Sell Your Homes

Any Realtor-Builder can get direct benefit from this national Model Homes program. To adopt the Home Owners Institute nationally and locally advertised quality specifications will help sell the homes you build; enable you to maintain prices and at the same time give you a reputation for selling quality houses and property at fair prices. A model basement installation is an additional selling and efficiency feature, adding another room without extra cost.

Write for further information or use the coupon attached.

HOME OWNERS INSTITUTE, INC.
441 Lexington Avenue
New York City

HOME OWNERS INSTITUTE, INC.
441 Lexington Ave., New York City

☐ I enclose $1.00 (cash, check or money order) for the "Home Owner's Safeguard Policy".
☐ I enclose $1.00 (cash, check or money order) for the 234-page Vol. 1 "The Books of a Thousand Homes", containing 500 attractive homes of all types.

Name
Address

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
An Important development in the door industry

A group of leading Douglas Fir door manufacturers, with a belief in the public’s preference for a standardized trade-marked product, have perfected an organization known as the Western Door Manufacturers’ Association. The purpose of this organization is to encourage and increase the use of Douglas Fir doors by the adoption of uniform grades and standards; by maintaining improved methods of manufacture; to encourage and assist distributors and dealers through cooperative advertising, and by other lawful plans for the general development and improvement of marketing and manufacture.

The letters WDMA on Douglas Fir doors, made by member mills of this Association, will provide architects, dealers, builders and users with an always available guarantee of quality. It means that the official inspectors of the Western Door Manufacturers’ Association have inspected the manufacture and grading of the product bearing this trade mark, and that such doors conform to the standard grades established by the Association. Copies of WDMA standard grading rules for Douglas Fir house and garage doors mailed upon request.

Douglas Fir Doors
That Are Grade Marked

WESTERN DOOR MANUFACTURERS’ ASSOCIATION   TACOMA, WASHINGTON

Clear Fir Lumber Co. - - Tacoma, Wash.  Albany Door Co. - - Albany, Ore.

Large and selective stocks carried by distributors in all sections of the country

FOR ADVERTISERS’ INDEX SEE NEXT TO LAST PAGE
The house of your dreams—how will you heat it?

EVERY one planning a new home has an ideal. Within the limits of his means he does all he can to embody that ideal in the actual finished house. And ideal heating is one of the first requirements.

What is an ideal heating system? Is it not one that takes care of itself so far as possible—that provides you with even temperature without your having to bend your back in dirty, menial toil? Is it not a system which keeps you warm automatically, not only in freezing weather but during those chilly in-between days of spring and fall?

Just imagine yourself in your ideally heated new home. No matter whether outside temperature rises or falls, your heating plant responds instantly and automatically. It keeps the house comfortable all day, and while you sleep. Warm rooms will greet you in the morning.

What is the ideal heating system for the home of your dreams? Does not oil heating meet all the requirements? Thousands of enthusiastic users prove that it does. They say that no other modern convenience is so beneficial to the health and comfort of the entire family—that it has become indispensable to the full enjoyment of their homes.

An oil heating system also helps to economize in building the new home. The excavation for the oil tank is made at very little cost when the ground is being dug for foundations and basement. Coal bin space is all clear gain, and gives the house valuable additional room.

Be sure to consider oil heating for your new home. Get all the facts you can. Be guided by the experience of friends. And don’t neglect to send for a copy of Oil Heating Institute’s authoritative non-technical books offered in coupon at right.

OIL HEATING INSTITUTE
350 Madison Avenue, New York

The Oil Heating Institute is prepared to furnish special information on the heating of churches, theatres, hotels, apartment houses and office buildings, and on the various heat treating processes of industry.
Adequate wiring adds a selling point to every room in the house

Home buyers no longer see four walls and a floor when they look at an empty house. They see it as it will be when they live in it. And if there aren't enough outlets for every electrical need and switches accessible to every door, they know that it can't be a really comfortable home.

Our consistent national advertising has awakened everyone to the importance of completely planned wiring. The General Electric name is accepted as a standard of quality. A G-E Wiring System clinches the sale of many a house.
Everywhere, Radiators are Giving Way to Trane Concealed Heaters

The modern demands for spaciousness — beauty — comfort, have established this trend in room heating

Some builders seem to have an uncanny sense of what will “take” with the public. These builders were first to recognize the introduction of Trane Concealed Heaters as a big step forward in improving the appearance and comfort of rooms.

Today, with thousands of these up-to-date heating units in successful service, you can no longer afford to be out of touch with this important development.

Write today for Bulletin 24. Learn how Trane Concealed Heaters are installed between standard walls, completely hidden from sight — how the damper grille provides instantaneous control — how the Trane all-copper heating element eliminates heating troubles. Attach the coupon to your letterhead or business card.

HEAT CABINETS

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

Send Bulletin 24, “How to Select and Install Trane Concealed Heaters.”
This is a NEW ERA IN THE BUILDING INDUSTRY

THIS is a time when greater values are being demanded in the homes you build. Model Home exhibitions, Own-Your-Own-Home shows and other influences have taught home-seekers how to discern real values—what to demand in homes. Everybody wants more nowadays, and they're willing to pay a few extra dollars to get what they want. Progressive builders are cashing in on this desire for greater value. In homes built on contract and in homes built to sell, they're installing extra features of quality, convenience and comfort—products of known value and merit such as the Majestic Coal Window, Milk and Package Receiver, Underground or Built-in Garbage Receiver, Fireplace Damper, etc. Modern homes with features like these don’t have “for sale” signs on them long.

Majestic products meet every demand of builders who know it is good business to put exceptional value into the homes they build. Write today for our catalog.

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

Majestic Coal Window and BUILDING SPECIALTIES

FOR ADVERTISERS’ INDEX SEE NEXT TO LAST PAGE
There's a **Morton Steel** Cabinet for every type of Bathroom

The "Venetian," "Venetian Venetian" and "Georgian" Models, illustrated above, are especially recommended to those who wish to add a touch of unusual distinction to the bathroom. They have all-mirror doors, artistically etched, which completely conceal the cabinet. Many exclusive features of construction.

The Morton Line of Steel Bathroom Cabinets is complete! Regardless of the type of bathroom, be it in a modest residence or a pretentious mansion, a hotel, apartment or club, there is a Morton Cabinet to satisfy every requirement.

There are 11 models from which the architect, builder, realtor and owner may choose the exact cabinet to fit any decorative scheme. While usually finished in a pure white enamel, permanently baked on, Morton Cabinets may be obtained in any selected color to harmonize with whatever artistic effect is desired in the bathroom.

Special finishes are made to order for a nominal extra charge. Write for catalog and prices.

**Morton Manufacturing Company**
5102 West Lake Street-Chicago, Ill. U.S.A.

Send the coupon for a Morton Catalog.
ASK ANY group of women their general specifications of "the ideal kitchen" and you will find that practically all will stress these five points: 1. Efficiency; 2. Attractiveness; 3. Ease of cleaning; 4. Lighting; 5. Ample size.

For Efficiency women insist that the kitchen have the most modern equipment. And since cooking is the most important of all household tasks women want the most efficient cooking appliance available.

No cook stove made is more efficient, economical and saving of time and labor than a Red Wheel Gas Range.

These famous gas ranges are the nationally preferred type of cooking appliances; first, because the Red Wheel provides automatic control of the oven heat and any desired temperature—thereby making perfect baking-results possible every time; second, because Red Wheel Gas Ranges have been widely advertised in leading national magazines for the past nine years.

Red Wheel Gas Ranges are used in more than 2400 schools and colleges to teach the art of cookery.

Red Wheel Gas Ranges will bring added beauty to your kitchens. Will make your houses more salable—your apartments more rentable. And—tenants will be apt to remain longer.

The following brands of gas ranges made by American Stove Company are alone privileged to use the Red Wheel: Clark Jewel, Direct Action, Dangler, New Process, Quick Meal and Reliable. Each of the six lines offers the widest possible selection of sizes, styles and finishes for kitchens ranging in size from the smallest to the largest. For specific data, see Sweet's Catalog, 22nd Edition, pages C3245-C3254, inclusive.

AMERICAN STOVE COMPANY, 233 Chouteau Avenue, St. Louis, Mo.
LARGEST MAKERS OF GAS RANGES IN THE WORLD

LORAIN

UNLESS THE GAS RANGE HAS A RED WHEEL IT IS NOT A LORAIN
No more closet doors in living rooms

Cut down your construction costs—save space, lumber and labor—sell and rent more quickly! You can do so by standardizing on the Seng Duofold Roller Bed—a modern bed for two so compact that it can be kept in a small closet, and so easy to move it can be rolled anywhere with one hand.

It thus does away with closet doors in living rooms and provides larger, more comfortable quarters at no extra cost.

In fact, builders of big apartments have found that this modern bed for two often adds a room to each floor!

Mail the attached coupon for the full story of the Seng Duofold Roller Bed. It offers you an exceptional opportunity to increase your net profits. The Seng Company, manufacturers and patentees, 1452 Dayton Street, Chicago.

SENG-Duofold
ROLLER BED
Bates Multi-Wall Paper Bags are made by the Bates Valve Bag Corporation in 8 modern plants throughout the country.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE
Away!
with cooking odors and excessive heat
make the kitchen a joy spot

Ventilate it with an

ILGAIR

Electric Ventilator

If you are planning to build a really modern home don’t forget to provide for ventilation in the kitchen — install an ILGAIR Ventilator. It’s the one outstanding built-in feature of present day model homes — specified and recommended by leading Architects and Contractors everywhere.

No other electrical convenience will add so much to the sales and rental values of a home as a built-in ILGAIR Ventilator — a quiet running exhaust fan that removes excessive heat, objectionable cooking odors and greasy fumes. The change it makes in the atmosphere is delightful. It’s a joy to work in the kitchen that’s ventilated with an ILGAIR, and the cost of operation is only a few cents a day.

The new and improved built-in ILGAIR Ventilator can be installed at a surprisingly low cost. It comes complete with cabinet, ventilator, automatic shutter and all necessary hardware. It’s automatic in operation — simply open the glass paneled cabinet door and the ventilator starts; close it and it stops. The entire outfit is made, tested, sold, and guaranteed as a complete unit — it’s the only ventilator manufactured with a fully enclosed self-cooled motor.

We urge every builder of modern homes to send for the new ILGAIR bulletin. It pictures and describes this equipment in detail including data, charts, photographic illustrations and installation suggestions and instructions. Ask for this new bulletin and a copy of our 48 page condensed catalog — clip, sign and mail the coupon — NOW.

ILG ELECTRIC VENTILATING CO.
2852 North Crawford Avenue Chicago, Illinois

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

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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
THE YEARS MARCH BY
--- BUT NATCO HALTS
DEPRECIATION

Each year depreciation takes its toll, in beauty and in value, from buildings not built for permanence. What was some builder's pride—and a valuable advertisement for him—becomes an eyesore. What was a paying investment becomes a liability.

But structures built of Natco Hollow Building Tile are left untouched by time. Natco is made of special clay, mined, molded, and burned in great kilns to the density of flint, the durability of granite. Blood brother to the ever-lasting rocks, it partakes of their permanence.


No matter which of these Natco Products you use, you can be sure of a job free from contingencies—a product free from defects and uncertainties—a structure that will be a permanent source of pride and satisfaction to you and to the owner. For while the years march by, Natco halts depreciation.

NATIONAL FIRE-PROOFING COMPANY
Branch Offices: New York, Flatiron Bldg., Chicago, Builders’ Bldg.
Philadelphia, Land Title Bldg., Boston, Textile Bldg.
In Canada: National Fire Proofing Co. of Canada, Ltd., Toronto, Ontario.
It is not within our province to plan a home. But we have studied kitchens and kitchen procedure for many years. We've developed workable and advanced ideas on kitchen design which greatly increase sales and rental value of homes and apartments. Feel free to ask for them. There's no obligation. Coupon brings facts on our architectural service.

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Gentlemen: Please send me full details on your free architectural service.
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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
“THEY ARE VERY GOOD LOOKING”

Ambler Asbestos Shingles

The Ideal, Fireproof, Weatherproof, Roofing were selected by the Lehigh Portland Cement Company for the roof of their Prize House. The enlarged insert of an actual close up photograph shows the definite charm and distinctive effect of this unique product, the "English Thatch" in random widths, irregular courses and rough texture that completely eliminated hard and fast lines and sets a new roofing standard giving a novel beauty to the modern home and an added degree of serviceability to a roof.

First of all, Tapered Ambler Asbestos Shingles have the taper of the old wooden shingles. They come in random widths 6 in. to 14 in., 1/8 in. thick at the top and 5/8 in. at butt and 20 inches long. They are strong, rigid shingles, not paper or rag felt, never curl or warp, not affected by the blasts of winter, the heavy rains of spring and the blazing heat of summer, year in and year out, for they are made of Asbestos and Hydraulic Cement—Nature's imperishable materials.

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

FIREPROOF

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

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

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

or Branch Offices in large Cities

"ASBESTOS CANNOT BURN"

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE
It is easy to sell what people want. Ask any builder of Holland-heated homes. His business is good and selling cost low because he takes the shortest route to the dotted line. Holland Vaporaire Heating is deep in the public's confidence. People know its outstanding advantages and want it in the homes they buy. Everywhere today the demand is for those vital features of heating comfort, cleanliness, convenience and economy that Holland alone guarantees. Obsoleting all other types of home-heating equipment and representing the greatest dollar-for-dollar value on the market, Holland Vaporaire Heating—planned, installed and permanently serviced under factory supervision—has won overwhelming leadership and become one of the greatest single sales inducements that a builder can incorporate in a house. Our files are filled with hundreds of letters from prominent builders expressing appreciation of Holland's active help in the sale of their houses.

HOLLAND VAPORAIRE HEATING

"HOLLAND FURNACES MAKE WARM FRIENDS"

World's largest installers of home-heating systems. 524 direct factory branches and service stations. Look in your telephone book for address of nearest branch.
If You Build To Sell—

Cash In on This Preference for Steel

More and more, Sheet Steel is playing a conspicuous part in residential building. The modern housewife demands a modern kitchen and that means steel, glistening white or in colors. The in-built steel cupboard-cabinet illustrated is a typical use. It has surpassing advantages, yet its cost is moderate. It is moisture and odor proof. It is sanitary and easy to keep clean. Its doors and drawers never stick or warp. It enhances fire safety. Ants and other insects find the reception too cool.

Thus, throughout the house, in both interior and exterior applications Sheet Steel serves similarly in innumerable forms. As roofing, gutters and spouts, as interior trim, as kitchen equipment, as colorful wall tile, and even as bedroom furniture of rare beauty, Sheet Steel is enhancing the value and livability of modern homes. Investigate before you build. For particulars, write the Sheet Steel Trade Extension Committee, Terminal Tower Building, Cleveland, Ohio.
Winthrops, ingeniously laid, produce strikingly beautiful roof

It doesn’t require the colors of Slatefield Blend—heather blue, heather green and purple—to show that this is a beautiful roof, devised by Rowe, Dillard & Rowe, Chicago architects, for the Fisk Filling Station in Park Ridge, Illinois. About 20% of the Winthrops used on this roof were cut on the job to quarter, third, half, two-third and three-quarter widths. The shingles were then laid, without any spacing, with from one-half inch to five and a half-inch exposure.

Further distinctions were gained by bunching the shingles up on the ridge, itself unusual because of its ancient-looking sway, and by giving a graceful curve to the valley. The result is a roof of beautiful distinction and one that harmonizes with the brick, stucco and timber of the structure, and helps fit it into its surroundings.

And this roof is as good as it is different. The thick butts of the Winthrops give double the wearing thickness where exposure comes and add attractive shadow lines to the blended colors of the roof. Winthrops are the only tapered asphalt shingles made. There is beauty as well as wear in Winthrops that do not curl, rot, split, crack, rust, nor saw through their nails. They bear the Class C Label of Underwriters’ Laboratories. Winthrops are made in a score of non-fading colors—all natural colors of slate.

Write for Samples
Most good lumber dealers sell Winthrops but we will send you a complete set of Slatefield Blend, free. There is no building in any surroundings that can not be beautiful with the right selection of Winthrops. There are many ways to lay them. Unequaled over old roofs. Ask, too, for sample of Argotex Building Felt, noted for insulating value.

BECKMAN-DAWSON ROOFING COMPANY
1632 Brooks Bldg., 225 W. Jackson Boulevard, Chicago, Illinois
Factories at Chicago, Detroit and Lockport, N. Y.
Floors for world's largest hotel

In providing suitable floors for the world's largest hotel, the architects made liberal use of Goodyear Rubber Tiling.

In this one material they found the rare combination of beauty and durability, variety of color and pattern, a surface lending itself to laboratory cleanliness.

Because of these qualities, Goodyear Rubber Tiling was used in elevator lobbies, ballroom balcony, lunch-rooms and other places subjected to hard use. Quality considered, the cost was found to be surprisingly low.

You will find this modern flooring well adapted to business structures, clubs, hospitals and also dwellings of the better class. For kitchens, bathrooms and hallways, it offers the most satisfactory treatment obtainable at moderate cost.

Comes in a variety of authentic designs, including many rich marbleized effects and various other two- and three-color combinations.

Complete architectural data with illustrations will be gladly forwarded upon request. Address your inquiry to Goodyear, Akron, Ohio, or Los Angeles, California.

The Greatest Name in Rubber

Goodyear

Rubber Tiling

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE
THE GUIDE TO LOWER HOISTING COSTS

One Minute
An Envelope
And a Stamp

—virtually take you to 34 typical hoisting jobs

The Novo Hoisting Handbook was written especially for contractors who want to get everything possible out of their hoisting units.

It is full of interesting pictures, facts and information on practically every type of hoisting work. This data is a compilation of hundreds of jobs in every section of the country. Thirty-four typical hoisting jobs are shown. Fill out and send the coupon today—it takes only a minute, an envelope and a stamp. You'll find it a worthwhile investment. And no obligation.

NOVO ENGINE COMPANY, 202 Porter Street, Lansing, Mich.

CLARENCE E. BEMENT, Vice- Pres. & Gen. Mgr.

Service, parts and sales in 65 cities

HOISTS
Hoists from 300 to 10,000 Pounds

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NOVO ENGINE CO.,
202 Porter Street, Lansing, Mich.
Without obligating me in any way, please send a copy of the Novo Hoisting Handbook.

Name
Address
City
State
I am interested in a hoist for
At the time The Slater Manufacturing Company planned its new mill at Slater, S. C., it also had a village laid out, where it erected attractively comfortable homes for its employes. And, with its usual foresight, The Slater Manufacturing Company had each and every one of these houses permanently protected with Careystone Asbestos Shingles!

It will be a long time before a roofer will get a repair job out of this village, for these shingles are just as durable as they are beautiful—they actually improve with age. Made from enduring cement, shot through and through with fire-proof, rot-proof asbestos, they cost but little more than ordinary shingles, and there’s no upkeep to worry about.

Builders and home-owners, too, know that roofing a house with Careystone Asbestos Shingles adds to its value, makes it more salable. Write us now for samples, prices, and details.

THE PHILIP CAREY CO., Lockland, Cincinnati, O.
HERE'S a Timken bearing, full one bag tilter, with Automatic Skip Shaker and "Flat Spot" Drum, for the usual price of a half bagger. It's built of the best—steel and forgings and semi-steel gears—light, portable and 50 per cent stronger.

Has Jaeger Accurate Measure Water Tank; gives you faster loading, a better mix and a 5 second automatic discharge.

Jaeger Timken Tilters Guarantee More Batches per Day - Used by over 75,000 users

MAKE fast hauls on any roads with this trailer—built for heavy duty with Timken bearings, spring shock absorbers and oversize cushion tires.

Get more batches a day with the "Flat Spot" remixing drum, 5 second discharge and semi-automatic dump. It's powered with Hercules engine, Wico magneto. It's built to last.

The Jaeger Machine Co.
521 Dublin Avenue Columbus, Ohio

Send Coupon for Catalog, Prices and Terms

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
HERE is an insulating plaster base, sheathing and sound-deadening board which has astounded the building industry.

Builders and contractors all over America are ordering it by the hundreds and thousands of feet, and it is speeding up their business all along the line.

In fact, Masonite not only helps to sell homes much quicker, but it enables you to build at a bigger net profit.

And remember that millions are reading the advertising about this Thermostatic Wood in a big list of newspapers and magazines.

We are also ready to supply you with free job signs and direct mail campaigns.

Write for sample of Masonite and for book of Specifications.

MASONITE CORPORATION
Dept. 168, 111 W. Washington St., Chicago, Ill.
Mills: Laurel, Mississippi
Why install ordinary doors that may have to be taken down, planed off, refinished and rehung? Read how Laminex doors, because of their scientific, built-up, waterproof welded construction cannot shrink, swell or warp.

Look at the reinforced construction of this Laminex door

Here's a cut-a-way view of a Laminex door. Note how the stiles and cross-rails are built up on a core of blocks. This is the famous Laminex construction, which nullifies the destructive forces of expansion and contraction. Any attempt of one block to warp, swell or shrink is immediately neutralized by forces in the opposite direction, exerted by neighboring blocks. All parts of a Laminex door, including the plywood panels, are held together firmly by secretly compounded Laminex cement, which is absolutely waterproof and actually stronger than wood.

You can soak this door in water without hurting it

Laminex construction is so substantial that a Laminex door may be soaked in water for days without warping, buckling or blistering.

Laminex doors are guaranteed trouble-proof

Every genuine Laminex door is guaranteed. The success of Laminex has tempted others to offer veneered doors, outwardly resembling Laminex doors, but lacking the moisture-resistance that only Laminex water-proof cement can give. For your own protection, insist on doors that bear the yellow replacement guarantee label and the name "LAMINEX". Progressive millwork and lumber dealers can supply you with popular designs of Laminex doors at a price that will make you wonder why you ever took a chance on ordinary doors.

Fill in and mail coupon below for new book about the scientific construction of Laminex doors.

Laminex doors are now being manufactured of Philippine Hardwood (commonly known as Philippine Mahogany), as well as of Douglas Fir

LAMINEX DOORS

Will not shrink, swell or warp

THE WHEELER, OSGOOD CO., Tacoma, Washington

Gentlemen: Please send the illustrated Laminex door book and instructions for finishing doors.

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ADDRESS  

CITY  STATE

I buy  doors per year

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
For Safety and Saving
Build with

ARCH LATH

Today you may offer the home builder fire-safe walls and ceilings at no greater cost than for inflammable construction! Arch Lath—the fire-safe plaster base—makes this possible.

Arch Lath is a plaster saver! Due to a distinctive arch design, only the correct amount of plaster is permitted to squeeze through the openings for perfect "key". There is no piling up of plaster between walls, the hidden waste that runs up the plastering bill.

Arch Lath is a time saver! Immediately after application, the first coat of plaster may be scratched and made ready for the second coat. There is no delay, waiting for plaster to dry. There is no need to remove and re-erect scaffolding.

Arch Lath is a labor saver! Because it is nearly a solid sheet of steel, Arch Lath is very rigid and therefore easy to handle and erect. One man can place the sheets and nail them up. Nail hole starters facilitate application.

Arch Lath—the ideal plaster base! A firm scratch coat is possible on Arch Lath because the arches "grip" the plaster at many angles. This security is best demonstrated by the fact that one sheet of Arch Lath (27"x96") grips the plaster at 8064 points. It is because of this perfect anchoring that the new plaster texture effects are properly executed on Arch Lath at low cost.

Let us send you additional information and a sample of Arch Lath for close-up inspection.

WHEELING CORRUGATING COMPANY · Wheeling, West Virginia
Branches: New York Philadelphia Chicago Minneapolis St. Louis Kansas City Chattanooga Richmond Des Moines

Arch Lath is a labor saver! Because it is nearly a solid sheet of steel, Arch Lath is very rigid and therefore easy to handle and erect. One man can place the sheets and nail them up. Nail hole starters facilitate application.

Arch Lath—the ideal plaster base! A firm scratch coat is possible on Arch Lath because the arches "grip" the plaster at many angles. This security is best demonstrated by the fact that one sheet of Arch Lath (27"x96") grips the plaster at 8064 points. It is because of this perfect anchoring that the new plaster texture effects are properly executed on Arch Lath at low cost.

Let us send you additional information and a sample of Arch Lath for close-up inspection.

WHEELING CORRUGATING COMPANY · Wheeling, West Virginia
Branches: New York Philadelphia Chicago Minneapolis St. Louis Kansas City Chattanooga Richmond Des Moines

Have You Seen the New Spanish Metal Tile?

 Beautify your home with a roof suggestive of picturesque old Spain. Specify Wheeling Spanish Metal Tile. It is proof against lightning, rust and leaks. Lowers rates of insurance and is practical and permanent, artistic and beautiful. Write for full information.

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Wheeling Corrugating Company

Building Materials Backed by a Generation of Experience

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

[June, 1928]
They say it is easier to rent or sell—

**WHERE**

**doors lock without keys**

Don't overlook the value of convenient door locks as a talking point in selling and renting. Think of the number of times people turn a door knob every day. Appreciate how forcibly the buyer or tenant must be impressed by Schlage BUTTON Locks. They eliminate the old-fashioned nuisance of inside keys. They lock without keys. They unlock automatically with the turning of the inner knob. Manley & Mensch, Builders of Yeadon Manor Homes, shown above, declare: "We have been using Schlage Locks 2 years, and never had a complaint. They have proved such a big attraction to buyers we are going to put them in 135 houses at Lansdowne. We can install them in one-third the time it takes to put in old style locks, and save money." Ralph T. Lee, Owner and Builder of the Lee Plaza Apartments, shown above, says: "During the past few years we have used Schlage Locks as the inside trim in some of the finest and most up-to-date apartment buildings in Detroit. They are our idea of modern hardware, and have been one of the most popular features with our tenants." Over a million in use. Eight types. All U. S. standard finishes. Over 2,000 dealers in U. S.

**SCHLAGE Button LOCKS**

Mail this coupon now—

TO LOCK: just press the button in the knob

TO UN-LOCK: just turn the knob

Mail This Coupon NOW—

to SCHLAGE LOCK CO., SAN FRANCISCO, CALIF., for prices and complete information on SCHLAGE Locks for

Mail this coupon now—

TO LOCK: just press the button in the knob

TO UN-LOCK: just turn the knob

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to SCHLAGE LOCK CO., SAN FRANCISCO, CALIF., for prices and complete information on SCHLAGE Locks for

The MODERN Lock for MODERN Buildings

**SCHLAGE LOCK CO.**

Manufacturers
San Francisco, Cal., U.S.A.

NEW YORK CITY—
71 Murray Street

CHICAGO—
549 W. Randolph Street

PHILADELPHIA—
4401 Chestnut Street

DETROIT—
439 Penobscot Building
under the rafters where cobwebs used to embroider grandfather's trunk and the old horse-hair sofa, there now is this beautiful bathroom. As the children were growing up it was only a dream. Today this extra bath is giving the family the comfort and convenience such a room always adds. Only a cottage bath, it is modest in cost; but mellow, tranquil, and lovely with its prevailing hue of soft green, its floor of russet cork tile, its varicolored rag rugs, its painted linen closet, and figured curtains of Aqua-Silk. . . . Every builder will be interested in New Ideas for Bathrooms, an inspiring book of practical suggestions, illustrated with miniature blue prints, floor plans, and color schemes. Write for it, without obligation. And consult a responsible plumbing contractor.
FINISHING LUMBER

"A" and "B&Better" (which combines "B" with "A") are the highest grades of Arkansas Soft Pine. They are the grades you should designate for a clear, fine quality of interior woodwork and best grades of flooring in Edge Grain (quarter sawn) or Flat. They are the correct grades for exterior finishing such as window casings, lap siding, clapboards, cornices, etc.—items which comprise the exposed surfaces. "A" and "B" grades are used for the same purposes. They contain minor defects such as small sound knots, pin worm holes, slight surface abrasions, etc. These defects often may be removed by cutting to meet measurements during installation, or they are hidden by paint. They do not detract from strength or usefulness, but are sufficient to classify the grade as slightly below strictly clear.

FRAMING LUMBER

"No. 1 Common" is a sound grade of common lumber. It is the best quality suitable for framing, scantling, joists, boards, ship-lap, sheathing, fencing, shelving, false flooring, etc. It contains some knots and admits slight splits, shakes, barky edges, etc., but incurs no waste. "Nos. 2 and 3" Grades are respectively lower in quality and higher in number of defects permissible. These grades are economically practical and properly used for framing, roof sheathing, steps, false floors, etc, and are widely used.

WRITE FOR THESE BOOKS—Complete grading rules will be sent you free on request—also literature on finishing and painting. If you are planning to build or remodel, send for a copy of our splendid plan book which shows 25 prize winning home designs. Just enclose 25c with the convenient coupon below and the book will be sent postpaid.

--TEAR OFF AND MAIL--

ARKANSAS SOFT PINE BUREAU
628 Boyle Building, Little Rock, Arkansas

Enclosed find 25 cents Coin or Stamps, for a copy of your book "Houses of Wood for Lovers of Homes."

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

FREE! □ Grading Rules □ Painting and Finishing Book

Arkansas Soft Pine is trade-marked, grade-marked and sold by dealers east of the Rockies.

GRADE MARK
This Grade Mark Protects You. It Plants to Identify the Correct Grade on Each Piece and Prevents Substitution of Inferior Lumber.

MAIL THIS NOW
TOP THE STYLE-TREND IN WALL SWITCHES

Etched Art Plates
Advanced design in electric switches finds its outer expression in the new Art Plates. The hand-etched design bespeaks fine artisanship — in the plate, in the switch beneath it, in the wiring system behind it. The style-element, here, suggests the latest — in wall plates, in switch-mechanisms, in wiring plans. Unusual decorative value ties up with the thought of unusual value all through your installation. It “sells” the job.

Enclosed Tumblers
The Enclosed Switch has proved the neatest embodiment of what the builder wants in a finished job. The all-composition top — and bottom — completely encloses the mechanical parts. As a protective measure, it's one more safeguard to perfect functioning of the lighting system. Dust, grit and plaster are permanently shut out. Dependable service is permanently sealed in. Your responsibility ends there.

Specification-data sheets are available both on the new Art Plates and the Enclosed Tumbler — No. 1611. Reference to them will help you definitely to keep “atop the style-trend” in electrical work.

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

FOR ADVERTISERS’ INDEX SEE NEXT TO LAST PAGE
"Increasing Home Enjoyment" — is ready for you

One of the reasons why Insulite, the wood-fiber insulating board, has won favor among contractors and home builders is due to the fact that insulation is not a test of the fevered skill and ingenuity which it requires, but a test of the labor-saving and applied. The light weight of Insulite along with the uniform size of the various units, makes it easy to handle the insulating or plaster base. A half-hour can be covered with just the taking of the plaster base in a fraction of the time. Insulite Sheathing and Insulite Wall Board are made in various sizes, 4 feet long. Sheathing and wall board are packed in bundles of 8 pieces each, covered with heavy wrapping paper.

A booklet showing the advantages of good insulation in homes. For builders, owners, and all who are interested in better-built and more comfortable houses.

PEOPLE want strength, character and comfort built into their homes. Houses insulated with INSULITE are sources of unending satisfaction. They sell more readily, assure contented buyers, and prove to be a great asset for the builder by reinforcing his reputation for building good homes. Use the coupon and send for complimentary copy of "Increasing Home Enjoyment."

THE INSULITE COMPANY
1202 Builders Exchange, Minneapolis, Minn.
Please send me your new booklet, "Increasing Home Enjoyment."

Name
Address
City State

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
More Profits
For the Contractor
-On Every Job

In these days of close bidding with a small margin of profit to work on, the contractor must be even more cautious than ever when buying his materials.

The money-saving advantages common to Kalman products are often the difference between a profit and a loss.

Kalman products help to speed up erection—often making it possible to use fewer men or to transfer men to some other part of the job. They also save on materials when plastering—they avoid plaster waste.

And with all these money-saving advantages you get high quality products. The Kalman line of building products are built to give the contractor more profits on every job.

In addition you can get delivery when and where you want it—your job need never be held up.

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The easiest, quickest way to hang windows

ACCO No. 8 Sash Chain comes packed in bags —100 feet to a bag, enough for seven average windows, with necessary attachments to fasten to weights and window frames. No knot tying —no waste.

ACCO No. 8 Sash Chain operates perfectly with any cord pulley

It is made of copper-bearing steel, which is rust resistant—and to further protect against corrosion, it is coppered or galvanized.

Fill out the coupon below and we will send you a sample length of ACCO No. 8 Sash Chain for testing. If your lumber yard or hardware specialty dealer cannot supply you with ACCO Sash Chain, give us his name and we will see that you have a convenient source of supply.

ACCO No. 8 Sash Chain

AMERICAN CHAIN COMPANY, Inc., Dept. A-6, Bridgeport, Connecticut

Gentlemen: Please send me a sample length of ACCO No. 8 Sash Chain for testing.

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I would buy ACCO Sash Chain through  (Name of dealer)

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"With the Pistol Grip and Trigger Switch"

Part of the equipment of every up-to-date builder.

It is very significant that Black & Decker Electric Tools were used in the construction of the Moffatt Tunnel, the Holland Tunnel, Conowingo Dam, and in practically all of the major engineering projects of the age.

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The BLACK & DECKER MFG. CO.
TOWSON, MD., U. S. A.

Black & Decker, Limited, Slough, Bucks, England
As contributing to adaptability, note ease of cutting on the job to fit around openings. Illustrated are—A, bond tile; B, standard tile; C, half standard tile. No special shapes or sizes required to build a tight, workmanlike job.

This picture shows how light weight and smooth surface of tile contribute to ease and speed of placing. Wide side walls contribute to ease of placing mortar and materially reduce mortar loss.

As shown in this picture, header brick bonding is easily accomplished with Structolite Tile. Practically all patterns of bonding are easily adaptable to a simplified construction without requiring continuous brick work clear through the wall.

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\textit{this tile outranks other masonry}

With insulating value as its outstanding characteristic (Heat conductivity per square foot per hour 8" tile, 352 B. T. U.—Peebles) Structolite Tile offers to the architect and builder a number of advantages not to be found in any other building material.

Manufactured “neat” of Structolite cement—no sand or other aggregate being used—it is: Very light in weight. Pure white in color. Uniform in strength and appearance. Accurate in dimension with no warping. Easily cut with trowel or saw—no shattering. Nailable—no wood strips or blocks required. Fireproof of course. Better construction and more thorough insulation with no added cost.

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\textbf{UNITED STATES GYPSUM COMPANY}

\textit{Fireproofing Dept., 300 W. Adams St., Chicago, Ill.}

\textbf{NOTE:} Air space between face brick and tile, also between end of bonding brick and tile. This method is an assurance of a dry wall to keep insulation value at a maximum. The finished construction is better than ordinary masonry in that it gives the effectiveness of an additional separate insulation without the added cost.

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\textbf{INSULATING LOAD-BEARING TILE}

\textit{Made by the United States Gypsum Company}

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Joy of the Newel.
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KEY TO THE STEEL SQUARE

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 Encyclopedia of Construction—This is a Very Books Yourself


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A.R. 6-28
There’s no trick about it. Just plug SKILSAW in the nearest electric light socket, put the blade to the wood, press trigger and ZIP — SKILSAW rips or crosscuts thru 2” dressed lumber as fast as you can mark it with a pencil. The motor is $\frac{1}{2}$ H.P., and yet this SKILSAW (the new model J) weighs only 10 lbs.

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Without obligation I will gladly watch a 5 minute demonstration

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Address
Steelcrete Diamond Flat Rib Lath

Not a Cheap Lath—but Economical!

Steelcrete Diamond Flat Rib Lath is decidedly more economical to use because it costs less per square yard to plaster than ordinary metal lath.

This saving is accomplished by a distinctive rib design which sets up a resistance against the entire field of lath and prevents an excess of plaster from keying through the mesh. This rib also serves to give unusual strength to the entire sheet of lath and acts as a guide for the plasterer.

Steelcrete Diamond Flat Rib Lath is not only a plaster saver of the first rank but a superior reinforcement as well, providing two-way reinforcement. This insures sound construction—at lowest cost.

The sheets of Steelcrete Diamond Flat Rib Lath are fully expanded from end to end and corner to corner. They are clean and will not cut the hands. Rigidity of sheet makes for easy erection and rapid, efficient plastering.

Steelcrete Diamond Flat Rib Lath will produce profitable repeat business for you. Let us send you samples and prices together with results of recent plastering test.

Specifications

Size of sheet 24" x 96". Packed 9 sheets per bundle, 16 square yards. Weight painted 3.4 lbs. per square yard.

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Steelcrete Building, Wheeling, W. Va.

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You may obtain, on request, samples of the Steelcrete Time Tested Building Products described in this advertisement and complete information on other Steelcrete Products, including Arch Lath, Diamond Lath, Rib Lath, Wall Tie, Cornerite, Metal Base Ground, Curved Point Base Screed, Metal Picture Mould, Cold Rolled Channels, Corner Bead, T-Rail Bead, Bull Nose Bead and Expanded Bead.

Write to us today.

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Whether your building operations are small or extensive, you can protect and beautify inside walls and ceilings with Sanitas. Sanitas is a cloth wall covering with an oil color surface that can be cleaned with a damp cloth. Obtainable in a wide variety of colors, styles and finishes to meet any wall decorating problem.

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Write our Architect's Bureau for samples and literature

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THE AMERICAN FACE BRICK ASSOCIATION
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FACE BRICK

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE
How Many Times

Do You Open and Close Your Garage Doors Each Year?

A Good Door Should

1. Stay Open.
2. Stay Closed.
4. Open Out of the Way.
5. Not use valuable space.
6. Be easily and quickly operated.
7. Not scrape on the floor.
8. Not wedge or jam in ice or snow.
9. Seal opening at top, sides and bottom.
10. Not twist, pull or sag out of shape.
11. Lock and unlock from either side.
12. Require no change in building to install.
13. Harmonize with building.

The "Overhead Door" meets all these requirements."

"Overhead Doors" are an absolute necessity to the modern garage. The old type of swinging and sliding doors are as obsolete as acetylene lights on your car. Home builders everywhere are realizing the advantages of this perfected door. "Overhead Doors" are built of the very best materials available and the entire "Overhead" organization is schooled to the idea that workmanship must be perfect.

Do yourself the favor of learning more about this great door. You must see its smooth operation, its space saving features, its inherent beauty, its all-around efficiency, to really appreciate its value. THE COST IS NO MORE THAN ANY GOOD DOOR! Get in touch with the nearest "Overhead" distributor TODAY—or write direct to the factory. Distributors Everywhere.

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Write for our new illustrated catalog, which contains blue prints and complete information about the perfected "Overhead Doors."
FACTORY FLOORS
Repaired with
HIGH EARLY STRENGTH
ALPHA
Concrete

By J. G. Bragg
Service Engineer, Alpha Portland Cement Co.

When it was found necessary to replace a part of the second floor in the Frank H. Lee Hat Factory at Danbury, Connecticut, the inventive genius of Mr. Bernard J. Dolan, contractor, was called into play.

The major requirements of the Frank H. Lee Company were: (1) permanency, (2) waterproofness, and (3) as little as possible delay in their factory operation.

Mr. Dolan considered the use of special early hardening cements and also ordinary ALPHA PORTLAND CEMENT. Finding that he could best obtain the desired results at a considerable saving in cost to the owner, he decided in favor of ALPHA.

Although the old floor of unreinforced concrete was still in good condition after 15 years of uninterrupted service, the supporting wood sub-floor had decayed, due to the seepage of water around the edges of the concrete. After removing the old sub-floor, the wood cross-beams were reinforced with 12-inch steel channels. Some of the old wood columns were repaired or replaced with concrete and steel. For forms, 2-inch by 10-inch wood joists, spaced 16 inches apart, were used to span the 10-foot distance between cross-beams, and a 1-inch rough plank floor was laid over the joists. This was covered with tar paper to prevent water from the fresh concrete running through to the lower floor. This was covered with tar paper to prevent water from the fresh concrete running through to the lower floor. The lower of the two views shown above illustrates the method of reinforcing the 7-inch concrete floor with steel rods.

The concrete was mixed for two minutes in proportions of one part ALPHA PORTLAND CEMENT, one and one-quarter parts sand and two parts screened gravel. Just sufficient water was used to produce a concrete of easily workable consistency. Some idea of the consistency of the mix may be gained by observing the lower view closely.

Mr. Dolan reports that with a one-bag mixer the concrete for a 33-foot by 40-foot section was mixed and placed in eight hours. Factory machines were set in place the following morning, at which time he tested the floor by pounding upon it with a nail hammer without making a dent in the surface.

It was necessary to elevate the concrete about 15 feet. The upper view shows how the contractor solved this problem by employing an ordinary belt conveyor gravel loader.

In this case, by the use of ALPHA CEMENT, the saving to the owner was $225.00 for each 33-foot by 40-foot section. It is of interest to note also that although vibration from the line shaft driven machinery was noticeable, all machines were operated during the working hours, except those which were removed from the immediate section under repair.

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Plumbers can do better work in less time with one of the pipes tested. It requires less effort to work. Strong statements? Certainly... but the facts in this book prove it. We shall be glad to send you a copy.

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Please send me a copy of your book, "Blind Tests of Brass Pipes."

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Position
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City

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Flat Sheets, Boxed Roofing Plates.
Get Into Manufacturing

That's where the Big Profits are Made

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Many contractors have been studying the situation. Perhaps you have felt in your business, as Lyons of Norwalk, Conn., did, that new methods must be adopted to keep abreast of the times if big profits were to be made.

Lyons became convinced that the country was swinging toward Permanence in building. He saw the necessity for a better permanent material—lower in cost. He realized the big profits that could be made in manufacturing the right kind of material.

THE PERFECTED ALL-PURPOSE CONCRETE BUILDING UNIT

Lyons saw in Duntile a material that brought permanence within the reach of all. He started out to make it in a small way. He soon found he had a whip hand on competition. Using the output of his Duntile plant, he could underbid on all types of permanent construction and still make a very satisfactory profit. Two profits, in fact; one on his manufacturing business and one on his contracting.

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Lyons' success reads like a romance of business, yet records of other Duntile manufacturers prove it not unusual. There are over 400 Duntile manufacturers today in all parts of the country. The Duntile proposition is clean cut. Its basic soundness is clear to any progressive man who has the initiative to investigate. You, like Lyons, will readily see that Duntile is truly a super material. That it is adapted to all kinds of buildings—homes, factories, garages, filling stations, hotels—for foundations, sidewalks, partitions. That it has great strength and splendid insulating qualities. That the manufacturing process is so standardized that men from all walks of life can make amazing successes with it.

NOW—Color!

Now, Duntile achieves an even greater advantage in Mat Glazing, which gives this low cost permanent material a range of color and texture unapproached by any other masonry material on the market. Forty different tones and colors! Beauty indescribable! A wider market and multiplied profit opportunities! Don't wait until someone else in your locality seizes this opportunity. Do as Lyons did. Get the facts. Send for the book which describes the whole proposition in clear, unbiased, commonsense terms. It may open for you, too, the straight road to manufacturing independence. Use coupon.

415 West 23rd Street
Holland, Michigan

This BOOK TELLS HOW

415 W. 23rd St., Holland, Mich.

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Show me how I can build permanent insulated masonry walls at cost of frame and make more money for myself.

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Street Address
City
State

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Copper and bronze of unusually heavy gauge is used in the fabrication of Zouri sections—gauges that experience proves are necessary. After specifying, Architect and Contractor in considering substitutions should demand samples.

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Factory and General Offices: Chicago Heights, Illinois

Send for this data book and helpful detail sheets
Written for the practical architect, builder and contractor, this material gives generous plans and diagrams for suggested methods of window and display space. Detailed drawings will prove helpful to specification writers. Valuable to keep on file. Send for your copy.
Fast, rugged mixers that knock out the work in record time—that is the general reputation of Ransome 7-5 and 10-5 among mixer "guts". Look over the measurements of the 7-5; then you'll see why it has the "guts" to stand up and "take" it.

**FRONT AXLE**—built of two 4" Channels, width 1½" cold rolled stubs.

**MAIN FRAMES**—made of two 6" Channels.

**MAIN ROLLERS**—12" in diameter.

**In This Corner We Have**

The Ransome 10-5

**DRUM**—31" in diameter by 39" wide.

**DRUM ROLLERS**—12" x 2"—car wheel iron, Timken Roller Bearings on Drum Rollers.

**CONTROL**—One set of levers located at drum end of mixer.

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**WATER MEASURING TANK**—16" x 40"—capacity, 37 gallons.

Ransome—the first mixer in the ring
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Because of Non-Support

The rapidity with which houses are being built nowadays—springing up almost over night, like mushrooms—reminds us of a story that is going the rounds of the building trades. A certain contractor was putting up a flock of small frame houses on a new subdivision. The work was being rushed—every man willing to work who could handle a saw and hammer was put on the job—in order that the houses might be ready to occupy before winter. Early one morning the foreman telephoned the contractor at his downtown office.

"Say, boss," he began, excitedly. "One of them new houses fell down last night."

"Fell down?" replied the astonished contractor. "How did that happen?"

"Well, as near as I can figure it out," explained the foreman, "some of them bum carpenters took down the scaffolding before the paperhangers got the paper up."

He Got It

Our office boy wanted a raise. He went to his boss and asked for $2.00 a week. "Do you think you are worth it?" he was asked. "I do," was the reply.

"I've been thinking so for three weeks, but have been too durn busy to say so."

Traffic Laws in Japan Are Few But Funny

The following rules of the road, copied literally as they appeared in English at police headquarters in Tokio, have been brought back by an American visitor to Japan:

1. At the rise of the hand of policeman, stop immediately.
2. Do not pass him or otherwise disrespect him.
3. When a passenger of the foot hoves in sight tootle the horn, trumpeting at him melodiously at first, but if he still obstructs your passage, tootle him with vigor and express by word of mouth the warfing, "Hi! Hi!"
4. Beware the wandering horse that he shall not take fright as you pass him by. Do not explode an exhaust blow at him. Go soothingly by.
5. Give big space to the festive dogs that shall sport in the roadway.
6. Avoid entanglement of dogs with the wheel-spokes.
7. Go soothingly on the slippery mud and avert the skid demon.
8. Press the brake on the foot as you roll around the corner to save collapse and tie up.—Nation's Traffic.
Colorful

Sellers Kitchen Equipment

catches women's favor-

Color in lovely, cheering hues is the important factor now in designing kitchens to catch women's favor.

Sellers Sectional Kitchen Equipment, in Jade green, Spanish gold, Colonial ivory, or "Sellers" gray, offers the basis for many popular, colorful kitchen effects about which millions of women are reading in Sellers' beautiful national advertising.

And always, in every "Sellers" installation, are the specialized time and labor-saving devices that have made Sellers the preferred kitchen cabinet in millions of homes throughout the country.

The Sellers "Sectional" line comes in forty different units. It is adaptable for the simplest or most elaborate "built-in" job. Just a few bolts to slip in holes provided, a quarter round for finishing, and this beautiful kitchen equipment is ready for use.

Skilled cabinet-making and careful selection of materials distinguish Sellers Kitchen Cabinets. Yet the price is moderate. Often it is lower than the "average" built-in equipment.

These are reasons why "Sellers" means THE BEST to women and why prominent builders find that "Sellers" equipment is a profitable selling feature.

Send for our special book described on the left.

G. I. SELLERS & SONS CO., Dept. 806, Elwood, Ind.

SELLERS
Sectional
Kitchen Equipment
Construction Records Broken

APRIL construction contracts in the territory east of the Rocky Mountains broke all previous monthly records, according to F. W. Dodge Corporation. Building and engineering work contracted for last month in the 37 eastern states (about 91 per cent of the total country) amounted to $643,137,100. August, 1925; March, 1926; August, 1926; March, 1927; April, 1927, and June, 1927, are the only other months on record showing as much as 600 million dollars for construction contracts. June of last year held the previous high record of $632,478,000. The April increase over March of this year was 9 per cent; over April of last year, 6 per cent.

Last month's contract total made another record. It brought the amount of new construction work started in these states since the first of this year up to $2,128,204,100, which is the largest total on record for the first four months of any year. The increase over the first four months of last year was 6 per cent.

Analysis of the April building and engineering record showed the following important classes of work: $276,886,200, or about 43 per cent of all construction, for residential buildings; $117,401,000, or 18 per cent, for public works and utilities; $85,093,400, or 13 per cent, for industrial projects; $82,757,700, or 13 per cent, for commercial buildings; and $32,885,400, or 5 per cent, for educational projects.

Will Study Tax Revision

THE working out of a unified and comprehensive program for the modernization of state tax systems will be brought before a joint meeting of the States Council of the National Association of Real Estate Boards and the national board of presidents and secretaries of the state real estate associations. This meeting will be held in Louisville, Ky., June 18, immediately preceding the annual convention of the National Association of Real Estate Boards which is to be held in Louisville, June 19 to 22, inclusive.

Many Zoning Acts Passed

LOCAL zoning ordinances must be based on authority granted to the city or town by the state government, and hence the enactment last year of zoning legislation in 23 states is of underlying importance to the zoning movement, according to Dr. John M. Gries, chief of the division of building and housing of the Department of Commerce, speaking through a bulletin recently issued by the department.

The division's canvass of the situation, which involved the searching of the laws passed by more than 40 state legislatures which met last year, also revealed the fact that the standard state zoning enabling act, which was prepared five years ago by a committee of eminent men appointed by the Secretary of Commerce, has now been used wholly or in large part in laws enacted in 29 states.

The zoning legislation adopted during 1927 ranges all the way from complete state acts applying to all classes of municipalities, to acts that apply to a single city. By the end of the year 1927, zoning laws had been enacted by 45 states and the District of Columbia, while in another state it has been held that zoning is permissible under home rule provisions of the state constitution.

The Home as Loan Security

THE home and farm are good security for loans in the eyes of the insurance company. A survey of the loan policies of 61 American life insurance companies made jointly by the brokers' division and the mortgage and finance division of the National Association of Real Estate Boards, shows that out of the 61 companies reporting their individual loan requirements 52 will make mortgage loans on homes, detached dwellings, and 42 will make them on farms. Out of the nine companies listed who do not make loans on homes, six are companies which specialize on farm loans, one is a company which has a policy of making loans on apartment buildings only, and one makes loans on apartments, stores and industrial buildings only.

Detailed and authoritative information as to the loan requirements of insurance companies was asked by the association in order to facilitate the financing of real estate development for the individual realtor and for his clients.

Cities—1928 Pattern

IN preparation for the forthcoming census of 1930, seventy-two cities are defining the metropolitan regions in order that the returns may be compiled hereafter to show the rate of growth of such units. It is recognized that the American City has spilled over its limits and is now an aggregation of municipalities.

Among the cities defining such areas, reports the Civic Development Department of the Chamber of Commerce of the United States, are New York, Chicago, St. Louis, Philadelphia, St. Paul-Minneapolis, Dallas, Buffalo, Rochester, Kansas City, and others. Twenty-one metropolitan area maps are in preparation or have been made.

Nearly all the cities have recognized the purpose of the metropolitan regions and have drawn boundaries which conservatively outline areas that are urban in character and that are closely associated in the work of the central city. In one or two cases, after maps had been received and the accompanying data studied, it has even been suggested to those cities that the boundaries should be enlarged in order to include an area evidently of an urban character.

In only one case so far has a city definitely suggested including territory that did not fall clearly within the purpose of the work. Apparently it is recognized that a metropolitan region means responsibility as well as opportunity and that grasping at too much would not only arouse ridicule outside the community but would tend to bring discredit upon the undertaking at home.
Here, Briefly, Are the Advantages You Receive thru using High-Early-Strength Universal Concrete (made without the use of special materials or equipment)

During the last two years High-Early-Strength Universal Concrete has been used on hundreds of jobs of many sizes and types. Here, in brief, are the advantages the builders received:

Early use of the improvement. High-Early-Strength Universal Concrete is as strong at 3 days as ordinary concrete is at 28 days.

Permanently Stronger Concrete. In addition to a higher initial strength, High-Early-Strength Universal Concrete has a much higher ultimate strength than concrete as ordinarily placed (see diagram). As a result, it often is specified where extra-strong concrete is desired.

Early stripping of forms. Because of its quick-hardening properties, High-Early-Strength Universal Concrete permits the early removal and more frequent re-use of forms. These savings alone often justify its use.

Service to Customers. High-Early-Strength Universal Concrete satisfies the owner's call for speed and provides, in addition, a permanently stronger and better job.

Avoidance of Penalties. Frequently, thru unavoidable circumstances, the builder finds himself behind in his schedule. High-Early-Strength Universal Concrete enables him to catch up and avoid penalties.

High-Early-Strength Universal Concrete is used wherever early use, quick removal of forms or unusually strong concrete is desired. For full details send in the accompanying coupon.

Universal Portland Cement Co.
208 South La Salle Street, Chicago

Comparative Strengths

**No Special Materials or Equipment Required**

High-Early-Strength Universal Concrete is made by approved methods with the usual materials, usual equipment, usual labor and usual Universal cement.

It may be made as workable as desired and used on all types and sizes of jobs. The accompanying coupon will bring full details.

**Concrete for Permanence**

Permanently Stronger Concrete. In addition to a higher initial strength, High-Early-Strength Universal Concrete has a much higher ultimate strength than concrete as ordinarily placed (see diagram). As a result, it often is specified where extra-strong concrete is desired.

Without obligation, send me detailed information on methods of securing strong concrete in 3 days with the usual materials, usual equipment, usual labor and usual Universal cement.

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FOR ADVERTISERS’ INDEX SEE NEXT TO LAST PAGE
FOREIGNERS are amazed at the wealth being piled up in America. We ourselves are puzzled and astonished by the speed with which the United States has attained world pre-eminence. Back of this remarkable achievement are stories of accomplishments that entailed the exercise of surpassing ingenuity.

There are stages in human progress when the results of thought and effort are most apparent. First comes the conception of a problem, then its study and finally the practical application of the solution. We are now in one of these third-stage periods when people are cashing in on the work and plans of yesterday. A million minds have been turned to the one big job of revolutionizing practices.

For 5,000 years men built houses of brick without effecting any material improvement in either the tools or methods employed. This continued practically up to the time when the late Frank Gilbreth started on a study of the movements involved in laying brick. The outcome of this research was a reduction of the motions from 18 to 5, and an increase in the hourly output of nearly 200 per cent per worker.

Now we have come to recognize that the big profits are in producing finished articles.

It is the little things—the ultimate refinements that count. The World war taught us this lesson. It opened our eyes to the necessity of going in for details. The value of a ton of metal increases a hundred times by turning it into watches and jewelry. A pound of cotton thread worth 25 cents may sell for $1,500 when converted into lace. We became a creditor instead of a debtor nation when we started to capitalize all the opportunities that lay in the utilization of the most remote by-products. Our money had been going to buy back in finished form the cotton, copper and other materials we had sold in bulk to foreign peoples.

In the era we have now entered each disclosure of new knowledge is quickly adapted to a multiplicity of uses. Certainly no one expected a few years ago that by means of the X-ray we would be able to breed a new kind of cotton which would grow so fast that the boll weevil would not have much of a chance to damage it, and yet the experiments of Dr. Muller of the University of Texas appear to make this seem feasible.

Today we utilize the power of the X-ray to penetrate the innermost secrets of matter. These mysterious vibrations tell us if the castings of a great gun or a piece of machinery contain hidden flaws; if the cores of golf balls are symmetrical; if automobile tires are perfect; if a variety of coal runs high in ash; and if hidden knots or resin pockets are present in the center of a large piece of airplane timber.

Photographs produced by means of ultra-violet rays not only disclose the character of a rare stone, but stamp the individuality of the jewel very much as a finger-print marks the identity of a person. Under ordinary white light the photographs of diamonds lack definite distinction, but when made with violet rays the pictures render it possible not only to grade the gems with exactness, but to identify them even if stolen and recut.

Two scientists at the University of Iowa have found a way to measure the sound waves created by messages which travel over the network of nerves in the human body. Recently this sound of a nerve current was magnified 800 times and broadcast from a radio station. Experiments have indicated that there is a correlation between the speed of the nerve impulses and the intelligence of the individual. It is becoming more and more difficult for us to hide our ignorance.

In the field of wireless the new high-speed "beam" system of communication is tending to render obsolete the dot-and-dash signals of the Morse code. Beam wireless throws its message only to the receiving station for which it is intended. The speed of transmission under this system will soon be at the rate of 250 words a minute, and this will insure secrecy because it is too fast for the human ear to record. Messages sent in this way could only be caught by a receiving apparatus.
LA MAISON NOUVELLE—A Wanamaker creation in the very modern mode inspired by the Stuttgart Exposition (Germany). The circular rug on which the table rests, the old gold, black and sienna mottled floor and broad easy rising steps blend themselves to make a tranquil mood.

The windows and their draperies are so cut as to please the eye and serve the useful purpose of admitting the greatest amount of natural light.

Architects and builders who aim to lead the procession will be using these modern motifs more and more.
Trends of the Times—by Parsons

placed in the narrow path of the beam. No longer will it be necessary to broadcast to the wide world a strictly private communication.

A few years ago people regarded synthetic materials with suspicion. They held the notion that no imitation could be as good as the original product. How different the attitude today! In some places substitutes have almost entirely displaced the real articles.

Out in Iowa they found it necessary to collect corn cobs and stalks in order to prevent the spread of the borer that threatened their chief crop. In searching for ways to dispose of the cobs and stalks they finally hit upon the plan of converting this agricultural waste into paper, wallboard, humber and brick. Who would have believed a short time ago that the farmer would soon become a factor in the production of building materials?

Millions in wealth are now created each year by utilizing all kinds of waste. Most of our woolen suits contain 10 to 15 per cent of used wool reworked into them. Paper-pulp is employed in the manufacture of small barrels, pipes and coffins. Japanese men and women wear clothes made from this substance, and while the resulting fabric lacks much in durability, it is light, fairly tough and very cheap.

Oil of good quality is secured from the seeds and stones of various fruits. Tomato seeds that were once thrown away by catapult factories and now made to yield another kind of oil that is easily digestible. The fruit industries of California get a considerable income from the oil and charcoal obtained by the treatment of huge piles of fruit pits. The refuse resulting from the manufacture of cider is converted into a jelloy agent for housewives who put up their own jams and jellies.

Picture frames and toys are made from wood flour converted into a paste. This same substance also enters largely into the manufacture of linoleum. A dustless excelsior that is excellent for packing purposes is made by shredding old newspapers. A number of glossy parts of radio sets are constructed from phenol, once a coal-tar waste, mixed with formaldehyde, a product obtained in the distillation of wood waste. A big automobile company transformed the wood and metal of 200 wartime ships into motor cars, tractors and various kinds of machinery. A railroad corporation found it profitable to substitute worn-out steel rails for ordinary wooden ties, and a forging concern has made a business of converting this waste steel into anchors for ships.

A new German fabric is made of hemp fibers instead of flax with the result that the material is cheaper, does not soil as readily as cotton, nor wrinkle as easily as linen. The fabric can be spun on a regular cotton machine and mixed with cotton if so desired. Even more interesting is the fact that old automobile tire casings are sold to companies in Greece, and there converted into crude but durable footwear for the peasants. One old casing will yield three pairs of shoes.

A few years ago hardly more than a dozen articles were made from the mineral known as asbestos. Now this strange rock with its myriad fibers is being transformed into composition floors, electric appliances, phonograph records, switchboards, tapers, rubbers, ladders, mailbags, shingles, theater curtains, brake linings, pipe coverings and fireproof clothes. Charley Chaplin in one of his films sets his baggy trousers afire, but saved himself by wearing asbestos underwear.

Marine leather is now being manufactured on a considerable scale. The skin of the shark when treated and tanned is not only of beautiful hue but that is extremely durable. Leather produced from large fish contains no expense for pasturage or superstition. The hide from the shark of medium size is about one-half as large as that from a grown steer. The by-products obtained in this process include oil, glue, insulin, walking sticks and various kinds of trophies. It is not unusual for one company to capture as many as 300 sharks in a single night.

The present chemical revolution will produce results of greater importance to life and industry than did the steam revolution which started more than a century ago. Only two or three dozen alloys were available in 1900. Now we have about 1,700 with more coming almost daily.

Heavy metals are giving way to new varieties that are strong, tough and light. We may look forward to the time when an able-bodied man will find it possible to carry a 100-horsepower engine on his shoulder. Typewriters and other common machines will weigh a fraction of what they do at present. Knowing the construction of atoms and the molecular arrangement of crystals, the chemical engineer will produce the precise alloy he desires by drawing up plans on paper in quite the same way as sketches for a house or bridge are prepared.

The fact is we have only just entered an age of metallurgical miracles. Many people have tried the experiment of greasing a needle and placing it on water where it will float. This same idea carried into practical use has given us a comparatively new process which makes it possible to reclaim millions of dollars worth of metals which were formerly thrown away on slag dumps.

By practically reversing the law of gravity, the modern metallurgist is now getting as much as 95 per cent of the values out of ores that were yielding only 60 per cent a dozen years ago. Millions in precious metals are being obtained from properties that were abandoned because they could no longer be worked with profit. A few people got together and bought an old mine in British Columbia about 1917, paying only $250,000 for the entire property. Last year this mine produced net earnings of more than $12,000,000.

Wealth that comes from saving what we already have is no less real than that which results from the production of things entirely new. Losses from rust have been totaling tens of millions of dollars annually. As a consequence, brass pipe is replacing corrodbile pipe, and bronze screens are being substituted for the shorter-lived galvanized ones. Rustproofing is bringing a multitude of changes. New uses are springing up. Copper is finding a market as a roofing material. When properly grounded it provides protection against lightning. In some cases shingles are merely given a copper coating on their upper surface to prevent gutters and fixtures in a home cause prospective buyers to assume that the rest of the construction is equally sound.

If the dreams of scientists are realized, wood will gradually find more valuable uses than as a structural material. Quarried stone will give way to rustless alloys incased in cement or some other artificial plastic substance that can be poured. Even furniture will be made largely of synthetic materials, and rubber will come from various bases such as petroleum, potato starch, calcium carbide and coal tar derivatives, instead of being made from the milk of millions of hevea trees.

While I have hardly scratched the surface of the subject, sufficient has been set forth to indicate the character of current achievements and the probable nature of future trends.

Inventions Wanted

FREISE & Vogel, Incorporated, 383 Milwaukee St.,
Milwaukee, Wis., state that one of their clients is looking for some articles to manufacture and market in the building field, preferably made of metal. Any reader of AMERICAN BUILDER who may have ideas or inventions of this nature and wishes to arrange for their manufacture and sale, is invited to submit his idea to the company mentioned.

Inventions Wanted
ARCHITECTURAL CONCRETE COLUMNS, FIVE FEET IN DIAMETER AND 28 FEET HIGH, BUILT UP OF CORED DRUMS, FOR THE ENTRANCE OF THE CAYUGA COUNTY COURT HOUSE, AUBURN, NEW YORK.

Wyatt B. Brummitt

It was but a short step, in the logical development of building materials, from pre-cast concrete structural units to pre-cast concrete decorations. But once having taken that step, the building industries gained a new and effective medium for the realization of architectural goals.

The development of concrete architectural ornament has come, in part at least, as an answer to a definite need. Utility, regardless of beauty, was the keynote of most American building up to the beginning of the 20th century. Up to that time, and for some years after, beauty in a building was generally considered a non-essential, something to be tacked on later, if at all.

Building has advanced a little since then. There are still plenty of thoroughly unbright buildings, buildings which do not even come up to the possibilities inherent in strict utilitarianism. But, in general, the trend is toward buildings of excellent design and intelligent decoration.

One of the basic truths of good building is that the decoration must be integral with the structure, not something applied as an afterthought. It is for this reason that natural stone or concrete cast stone is so effectively used. The decoration in stone is a definite, useful part of...
Concrete stone trim and decoration have created their own particular sphere of usefulness because of their easy adaptability to shapes and forms which could otherwise be attained only at great cost in materials and workmanship. Concrete has been called "stone that you can mold"; it is this characteristic, added to the fact that it can also be cut and chiselled which has made an important place in building for concrete trim.

The use of pre-cast stone began with such simple pieces as sills and lintels, particularly adapted for use where concrete masonry was the structural medium. Such pieces were made in sizes to conform with the type of masonry used. In most instances simple steel bar reinforcing was imbedded in the casting. The sills were particularly designed to protect the walls in which they were incorporated, with a fairly steep "wash" or slope to the weather and a drip groove underneath.

From such relatively simple forms, architectural concrete cast stone has advanced to a state of development in which nothing is too delicate, intricate or complex for successful realization. The output of a single factory, today, may range from simple face slabs to column capitals which involve sculptured effects as subtle as those achieved by the master craftsmen of Old World cathedrals.

This type of work, of course, cannot be done by unskilled labor. The making of the wooden patterns, the plaster and glue molds requires expert workmanship. And the undertaking of this type of work implies an understanding of architecture and the demands of architects.

The preliminary work, in many of the larger plants which make cut cast stone, involves direct co-operation with architects. On receipt of an order the drafting room goes into action, preparing setting drawings on a large scale, correctly interpreting the architect's plans and showing the jointing and relative position of the units. These are submitted for approval. Then clay models are made up, to be approved either by actual inspection or by photographs.

On the acceptance of the clay model, molds are made in either plaster or glue, the latter if duplicate casts are required. Into these molds the plastic concrete is cast. After it has thoroughly hardened the molds are cut away, leaving the casting to be finished off by skilled carvers.

For some types of work, usually the less complex jobs, wooden patterns are used, the castings being made in well compacted sand. This requires, however, precision wood-working of the sort which cannot be done by beginners. As a consequence the pattern shop is a highly important adjunct to any cast stone plant.

The value of concrete architectural stone is dependent on its adaptability, its uniform strength and its appearance. High quality cannot be obtained in any of these characteristics unless particular care is taken in the choice of aggregates, the proportioning of the mixtures and the finishing treatment given the exposed surfaces.

Although the choice of aggregate depends somewhat on (Continued to page 97)
The Small Town Beckons
Offering Success to Manufacturer of a Popular Building Unit

By S. STUART SHACKELTON

There time honored story of the youth who, seeing no chance in the small home town, turns his face toward the big city to seek fame and fortune, is a familiar one.

The usual vivid word picture portraying him penniless and among strangers bravely overcoming pitfalls and disheartening obstacles, but by grit and perseverance finally climbing to the top of the ladder of success, never fails of applause.

The theme is dependable and popular material for "human interest" articles that can invariably be found occupying prominent positions in the pages of the month's best sellers. A success story is "sure fire stuff." It bores into the "heart strings" and strikes a responsive chord that suggests "go thou and do likewise"—a sort of challenge to the backbone. The story of a winner has a compelling appeal in that it arouses the finer impulses and is conducive to the thought, "if he can I might if I try." In a word it is—inspiration.

A well known quotation is that "the exception proves the rule." And so, while this narrative has to do with the exception, a sort of "reverse English" of the more popular conception of the regulation procedure, a new angle is presented that has much to offer, too, of inspirational worth.

Undeniably the quiet and serenity of the small town with its cool, shaded streets, its velvety green lawns decidedly unattractive and "too slow" to "flaming youth," has an irresistible appeal to the man of maturing years. Particularly is this emphasized after he has "arrived"—on the din and tumult of the big city, does he cast his eyes toward the more restful environment. Perchance, too, a survey of a number of small towns adjacent to large cities indicates that there is a decided tendency toward the locating of new industries in these places in preference to large industrial centers. Likewise because of manifold advantages many old established concerns are moving to "the sticks." So today the small town seems at last to be coming more and more into its own.

An appraising eye for values trained through many years of experience in the real estate field, an intimate knowledge of manufacturing and marketing gleaned through the successful operation of a manufacturing plant in Chicago, formed a fitting background for Edward F. Bessey when he recently launched his new venture, the Duntile & Concrete Products Co., in Crystal Lake, Ill.

Although but an infant industry, this new concern having started up late in the fall of '27, has gotten away to a running start and is reported to be doing a "capacity business."

"How did I come to locate a plant here in Crystal Lake?" said Mr. Bessey, as he smilingly repeated the question, "well, in the first place, Mrs. Bessey quite unconsciously played an important role in that phase of the situation. Together with the children we had spent considerable time at various lakes and resorts during summers, but in all instances there were far away to permit of more than only per-week-ends with no chance of commuting. Then she discovered Crystal Lake and 'sold me' on it—a lovely spot and just far enough out to permit me to run back and forth from Chicago each day. Then after about three summers of this I began to think that if Crystal Lake was good enough to spend the hot-weather season in, why not make it our home the year round? We had all sort of learned to love the place, as it was real living, not just existing you know,--cooped up in a big constricted apartment.

"About the only thing that held me back from moving out 'bag and baggage' was the lack of some sort of business that would fit in with the place. Just about then my attention was called to this new concrete building unit and that settled it. It had a double appeal to me, both from the manufacturer's angle and the builder's. My real estate experience was a determining factor in going into the making of this building material, as I knew what the contractor and builder required. I felt, too, that a building unit which would permit of permanency, beauty, because of colors, and economy would be an incentive to home building and thus stimulate the growth of my town."

"You see my business in Chicago consists chiefly in stamping out metal products and the method of turning out these building units with an automatic machine was sort of right along my line. So I investigated which other manufacturers of this same unit were doing and made up my mind it was a good thing for me and a good thing for Crystal Lake," said Bessey. "Then as long as I had decided to go into this business I figured I might as well move the Howe Auto Products Co. business out here, too, and so we've built a new factory for that purpose and will

Edward F. Bessey, Who Left Chicago to Establish the Duntile & Concrete Products Co. in Crystal Lake, Ill., a Small Town, and Achieved an Outstanding Success

June, 1928
bring a good many of our force of forty men and their families to Crystal Lake this spring," he continued.

"Of course," went on Mr. Bessey, "while the building of homes and schools and business blocks has a certain fascination, and it is a nice sentiment to feel that you have had a hand in the tangible growth and development of a community, it has its practical side as well and must be profitable if it is to succeed. This particular product suggested advantages over the general line of building materials in that it was made close to the job; and, by obviating long transportation charges, certain initial economies could be effected that would quite naturally tend to encourage and stimulate construction. I knew it would find a ready home market and that meant sales. In a word, I saw money in the business.

"Apart, however, from making money in this enterprise, I take a lot of downright pleasure in seeing the town grow," he said with enthusiasm. "Just within the last two months three new stores, two manufacturing plants, one large residence and various other structures have been erected because of our new building unit being made available. Besides I have orders for the material to put up still another new factory building, an imposing home fashioned after the Mt. Vernon home of Washington and a modern metropolitan theater. From the remarkable experience I have had here," remarked Mr. Bessey, in conclusion, "I am convinced that similar opportunities beckon at the doors of countless so-called small towns all over the whole country. Just what I have accomplished here in so short a time has set me to thinking about establishing more of these Duntile plants spotting them in towns five to ten miles apart. It sure looks to me like mighty good business."

One does not have to be in the company of Edward Bessey long to sense why he is a success or why he makes a success of whatever he undertakes. He is dynamic, energetic and practical. Although a product of the big city, the grinding process of relentless competition, which has a tendency to develop the "iron" in those enlisted in the constantly waging industrial warfare to a degree where it produces a hardened or gruff exterior has, however, left none of these usual telltale marks on him. An engaging personality, sociable and with an abundant sense of humor, he is endowed with a natural buffer to better meet the hard knocks of everyday business strife.

Not alone a natural appraiser of values in land and merchandise, but an appraiser of men as well, is E. F. Bessey. He apparently has an uncanny ability at picking efficient men for his factories; and once he has engaged a man you will find that man "filling the job." They evidently enjoy working for him and the atmosphere of co-operation is apparent on all sides. To a recent visitor to his Crystal Lake tile plant the foreman, in reply to the remark that everybody worked as busy as bees, quickly come back with the rejoinder that "we are all just as anxious to hit our full quota and make new production records as Mr. Bessey is. Every one of us feels that the success of this business depends a whole lot on what each individual accomplishes."

One does not have to inquire further what manner of man these shop fellows are working for. So in the final analysis, is this not success, and likewise, is it not—inspiration?

Cast Stone

(Continued from page 95)

The kind of stone desired, marble is generally used. First class marble is crushed and then, by an expensive but important process, freed of all dust. The appearance of the finished job depends on the clean-cut quality of the ingredients.

Either standard or white portland cement is used in the making of the stone, proportioned with only enough water to give required plasticity and maximum strength. Metal reinforcing is carefully designed for each job.

After casting has been made it is cured under ideal conditions for at least two weeks. By that time it has gained sufficient strength to permit further treatment exactly in the manner of natural stone. That is to say, it may be rubbed, honed or machine grooved by mechanical means. Or it may be bush hammered, crandalled, axed, pointed or otherwise treated by hand. Naturally, the finishes obtained by hand are somewhat more expensive that the others because of the expert workmanship involved.

All castings are made a little over-size so that they may be finished down to precisely the dimensions required. Carborundum saws and planers, the latter usually being laminated especially for each job, trim the castings down to exact size.

The results of this modern cut, cast stone work may be seen practically anywhere, from the plain stone facings of skyscrapers to the intricate stone tracery framing church windows. By varying the kind of aggregate used or by adding mineral pigments to the stone mix, it is possible to obtain a practically unlimited number of colors and textures.

One of the most appreciated characteristics of this architectural stone is that it can be used in long, load-bearing spans. The internal steel reinforcement plus the carefully designed mix employed make the finished job a structurally correct reinforced concrete beam. Many decorative arches have been constructed in this manner.

While the concrete cast stone industry may no longer be classed as an "infant industry," particularly as that term applies to technical development, it is fairly obvious that the trend of architecture implies a wide expansion of the market. The increasing emphasis on well executed architectural orders, on significant decorative detail and on utility as well as beauty carries with it implicit reliance on cut, cast stone. The willingness of the makers of this product to keep abreast with structural and architectural progress signifies a future of real usefulness for them.
Houses Built by Boys?

Is This Method of Training New Recruits to the Building Trades as Effective as the Apprenticeship System?

By RICHARD M. VAN GAASBEEK

Head of the Department of Woodworking, School of Science and Technology, Pratt Institute, Brooklyn, N. Y.

Editor's Note: Various articles have appeared from time to time in American Builder on the construction of houses by high school and technical school students for the purpose of training in the building trades. It seems probable that varying methods of training are best adapted to varying conditions and communities. In this article Richard M. Van Gaasbeek, of Pratt Institute, presents his opinion on the comparative value of this type of training and the apprenticeship system, as successfully developed in that institution.

In 1921 the Apprenticeship Committee of the New York Building Congress was established for the purpose of conducting an apprenticeship system that would meet the need for developing skilled and properly trained mechanics in the building trades. Quoting from a bulletin issued by the Congress in order to emphasize the thought that the writer has in mind, we read:

"A trained mechanic is a man who has had practice, experience and instruction in the various processes of the trade. The factors of expertise are accomplished by the co-ordination of the hand, the eye and the brain, and the proper functioning of these factors is only brought about by well directed apprentice training.

"Employers are in favor of apprentice training as they know a trained mechanic is an asset to the industry. He earns the wages he receives, he goes about his work in a business-like way without the necessity of a highly paid foreman directing every few minutes what to do and how to do it. He can stand on his own feet.

"Organized labor is in favor of a well directed apprenticeship plan as well-trained workers can maintain wages commensurate with the quality and quantity of work performed. Such workers take a pride in their work and raise the standard of their trade to a higher plane whereby the craft has the respect of the community.

"The public favors well-trained workers because it knows that when work is performed by trained journeymen, it receives full value for money expended."

It is very evident that the policy of the committee is to co-operate with employer, educator and labor equally and alike for the good of the apprentice and the industry. Apprentices are hired by employers, there they get their experience. Part of each week is spent in school, there they study principles and their application, together with such technical training as the type of work may require. Employers are bound to discontinue the employment of an apprentice who does not fulfill his obligations so far as school attendance is concerned and likewise the unions are bound to exclude from membership apprentices for the same reason. Here we have an ideal situation, employee, employer, labor and industry all working together for the common good of all, each having a task to perform. Having analyzed one form of trade training let us look at another.

A Practical Exercise Problem in Roof Framing as Taught in the Evening School at Pratt Institute.
at another type of training that seems to be gaining head-
way in many localities and compare notes. I have before
me a publication, "Boy-Built Houses—A School Project
Method of Training Boys for House Building," by Blanche
Halbert and as I study the publication I wonder if a
movement is on foot for certain types of school to under-
take the job of training all by themselves, ignoring employ-
ners, labor and industry and thus sacrificing the interests
of the future employees.

For the past 14 years the writer has been a strong advo-
cate for productive work or the project method of teaching,
believing that it had advantages over the exercise method
for teaching certain types of shop work. The idea being
to have the students do things under the exact conditions
that they will find in real life; and having done them, teach
them to think about what they have done, so that their next
efforts may be better. Teach them to observe everything,
that they may apply ideas to what they do. Teach them
to think consecutively, to reason, to plan their work so
that they may become masters in what they set out to do.
These are things that schools can do and do effectively
and probably better than any one else because they have
more time than the average employer and are therefore
not infringing upon the duties of any one.

House building is a trade that does not lend itself to
the school shop as many other kinds of work do. Prin-
ciples can be taught and a limited amount of practice
given, but industry is needed to furnish the experience.
Schools can develop a limited amount of skill, they can
develop initiative and place responsibility, they can teach
organization and the value of commercial accuracy and
time, but industry must supply the repetition which is
the law of memory and likewise a developer of skill. Let
us not worry about students with this background giving
a good account of themselves as they are thrown on their
own resources in the industry and watch them pass over
the heads of those who have been less fortunate and have
not been able to take advantage of a similar technical
education.

After careful study the writer has come to the conclu-
sion that any project that cannot be carried out success-
fully within the limits of and under the direct supervision
of school authorities should not be undertaken by them.
Why not let us work together for the common good of
all rather than attempt to do that which we are not properly
organized to handle? There are too many problems involved
in erecting a building that schools should not be called
upon to face and most of these would probably fall upon
the shoulders of the instructor in charge of the class.
Financing, sales, time element, weather conditions, work-
manship, equipment, hazards and many other complications
that might be mentioned in connection with actually com-
pleting a building.

Student labor is not all that it is cracked up to be. There
is no use for instructors to fool themselves by saying and
believing that student labor is as good or far superior
to the workmanship on the average community house.
Many students do better work than a certain class of
mechanics and it may be said that workmanship on boy-
built houses in many cases would be rejected, while if
the same work done by men in the industry although
inferior would be passed without comment.

Is not too much expected of the prospective new recruit
to the industry? Why not let us co-operate and we all
do our assigned task in the training of the boy? Even
perfect joints or workmanship do not make a building water-
tight and fireproof, or help it to withstand the elements
and the unusual strains likely to come upon the structure.
Leaky roofs, bulging walls, squeaking stairs, sagging floors,
cracked plaster, draughty and rattling windows and doors
are unpleasant facts which carpenters must understand and
reduce to the vanishing point.

All work must be done in accordance with the local
building code, sanitary code and fire laws. This puts school
authorities under the supervision of outside influences, for
they must satisfy the various inspectors representing these
departments of the community. If they should happen to
be in sympathy with the work of the school, everything
may work harmoniously, but they can cause endless trouble if they so desire.

The time element is a big factor. The longer it takes to put up a building the higher the cost will run. The longer it takes to put up a building, the more damage it will get. It is a mistaken notion that time is not a factor in productive work because it is a very decided factor in woodworking. A student working on a piece of work today will find that the elements have affected his work over night. Work of this kind should be kept continuously moving toward completion and then protected with a covering of some kind.

Boys working on these houses are not paid for their labors, therefore they do not come under the jurisdiction of the child labor law or the workmen’s compensation law. What then happens if they are injured? What protection has the public from accidents, either while passing the building or being near it during construction? What, then, happens to these boys if they are injured? There are many hazards peculiar to the building industry, is it just the thing to do, to subject these minors to such dangers?

Quoting from Theodore G. Joslin in the Boston Transcript: "Surveys made by the Children’s Bureau and the Bureau of Labor Statistics clearly reveal that under identical conditions the danger of accidents to boys employed in industry is considerably greater than it is to adults. The investigations disclose, in the first instance, that even with the exercise of the same degree of judgment, a child has not the same co-ordination of muscles and parts of his body that a mature person has. The muscles do not react so quickly to the knowledge of dangers as they come through the eye and brain. In the second place, there is not the same degree for judgment for, after all, judgment is largely a product of experience and it can be assumed that under the same circumstances the hazards of accidents necessarily are greater to minors.

"Another thing which tends apparently to increase hazard, especially for young persons, is the tendency to push production to the highest possible point by improved machinery, mechanical appliances, conveyors, power hoists, trucks and by speeding up the workers. Again it must be emphasized that the child has not the same muscular control and the co-ordination of body and mind as a mature person. In consequence the new speeding up devices are more dangerous to the child than an adult."

If the instruction is to be effective it must be done exactly in the same way as it is done in industry so that a student can go from school into industry in much the same manner that a mechanic goes from one employer to another. If a student has to start all over again when he goes into the industry than he did while in school, then he has wasted a great deal of time and his earning power has been reduced instead of increased.

Why not let the schools do their part in the training of the boy and let industry do its part instead of trying to monopolize the boy’s entire time to his disadvantage?

Schools are public institutions and as such must remain neutral, and avoid entangling alliances. They need the advice, co-operation and support of the students, labor organizations, employers and all others concerned. As new problems arise they should have a free hand to study the needs of both employer and employer, to develop the necessary instructional material to satisfy the new need and should be judged by the results obtained.

There are a great many trades affected in erecting a building and it is very doubtful if the average school can complete a building satisfactorily without some aid from the outside. Here is a chance to mix men and boys, union and non-union, together which is not going to be workable in the long run.

Labor organizations are backing the schools all over the country and in localities where schools are not to be found are organizing classes of their own to help the younger members as well as many of the older ones to improve their knowledge of their trade. They realize more and more that a trained man makes a better union man and they are for it. Mr. William Green, President of the American Federation of Labor, writes that “labor is whole-heartedly in support of industrial education and vocational training.”

From personal contact with Mr. Green, the writer knows what he says he means. The general and local officers of the United Brotherhood of Carpenters and Joiners endorse his statements which is manifest by the active interest they are taking in the work of the schools and the work of the apprenticeship system, but they take the position that schools have their place in society and should not branch out into other business foreign to them. Let us not forfeit this good will by antagonizing them.

Wherein does the trade or technical school function? Probably a good answer is to fit the student for the fullest life possible. This is a big job and fits the worker not only into the trade but into the home and community life.

The school increases the promotional opportunities of its students and gives them a real start toward the goal of the trade which should be their ambition. Let us analyze the word TOP and make a study of some of the things that the young people want and the schools can supply better than any one else.

First—T is for Think, systematic thinking. Students get a mental picture of what it is that they want to do before actually beginning an operation. The successful completion of their work requires that the first step must be done at the proper time and in the proper way before the second step can be properly begun, and so on with each successful step. The work must be thought (Continued to page 134).
The TAUNTON

Aaking beauty and impressiveness for a house of this size. It is really not very large, 28 x 29 feet, but the high gable and the commanding chimney give this home a real air of distinction.

Key to Equipment

- Kitchen Ventilating Fan
- Electric Range
- Mechanical Refrigerator
- Incinerator
- Thermostat
- Mirror Door
- Bookcase
- Fireplace Throat and Damper
- Coat Closet
- Mail Box
- Oil Burner
- Water Supply System
- Hot Water Supply
- Water Softener
- Radiant Gas Heaters
- Electric Wall Type Heaters
- Casement Windows
- Dishwashing Sink
- Automatic Cellar Drainer
- Radiator Covers or Furniture Disappearing Stairway

First Floor Plan

Second Floor Plan
The TANGIER

SPANISH architecture continues its conquest of the American home building situation unabated. Here is a little gem of five rooms. Details of the commodious closet are presented in the sketch to right.

Key to Equipment

- Kitchen Ventilating Fan
- Kitchen Cabinet
- Mechanical Refrigerator
- Gas or Electric Range
- Built-in Ironing Board
- Incinerator
- Thermostat
- Linen Closet
- Towel Closet
- Medicine Case
- Moth Proof Closet
- Mirror Door
- Bookcases
- Fireplace Throat and Damper
- Built-in Mail Box
- Weatherstrips
- Storm Sash

- Lighting Fixtures
- Convenience Outlets
- Electric Panel
- Washing Machine
- Ironing Machine
- Clothes Dryer
- Coal Chute
- Heating Plant
- Oil Burner
- Water Supply System
- Hot Water Supply
- Water Softener
- Radiant Gas Heaters
- Electric Wall Type Heaters
- Casement Windows
- Dishwashing Sink
- Automatic Cellar Drainer
- Radiator Covers or Furniture
- Disappearing Stairway
The TOLEDO

Here is a perfect example of the straight gable Colonial as applied to a small house 24 x 26 feet. The exterior is typical but the interior has been rearranged to save space, the customary central stairway being moved back to the end of the living room.

Color sketch to right shows what an attractive feature of the living room this stairway has become.
Limestone Veneer for the Modern Small Home Is Not Only Beautiful and Appropriate but Also Available at an Entirely Reasonable Cost

In Our Front Cover Home may be seen substantial evidence of the all too little known fact that stone is not only a highly desirable, but also an entirely available material for the construction of small and medium sized houses, as well as for those mansions of the very wealthy with which it has always been associated in our minds. Here is a six room house, from a design by A. Raymond Ellis, architect, of Hartford, Conn. It is faced with Indiana limestone in random ashlar and, over the years of its life, the owner will find it far from being a costly investment.

This house is typical of what may be done in the line of home building with this beautiful and exceedingly permanent material. The construction is frame with a four inch veneer stone, as may be seen by reference to the sectional drawing shown on the next page. On the same page is the first floor plan, while other floor plans and elevations will be found on three pages which follow it. These plans are all drawn to a scale of one-eighth inch equals one foot and furnish complete working data for building a similar house.

On this page is reproduced a photograph of the exterior, giving a clear cut idea of the appearance of the finished house, while on the front cover will be found a reproduction in full colors suggesting the beautiful color tones which are to be obtained in this material.

The Color Tones of the Stone Work in This Beautiful Home May Be Seen from the Full Color Reproduction on Our Front Cover, While Complete Working Plans, Drawn to Scale Are Reproduced on the Pages Which Follow This.
The Sectional Drawings of Our Front Cover Home Show the Treatment with a Four Inch Veneer of Limestone, While Below We See a Most Satisfactory First Floor Arrangement.
On the Second Floor Are Three Well Planned Bedrooms. The elevation shows how the veneer of random ashlar is handled, while on the pages following are other working plans.
The Basement Space in Our Front Cover Home Is Well Planned. Above, a side elevation shows some points of construction as well as the treatment of windows and roof lines.
These Two Elevations More Fully Explain the Roof Lines, Placement of Windows and Similar Details, the Correct Handling of Which Makes This Home Most Effective.
“Easy as Laying a Sidewalk!”
Walls Are Molded Flat of Reinforced Cinder Concrete and Then Raised, Producing a Better House at a Big Saving

Instead of erecting walls upright—the conventional way—Samuel P. Carroll, an army engineer and successful inventor, builds them as pavement is built—flat on the ground; then elevates the completed wall into upright position where it stands immovably straight and firm. He devised this unique method back during the war. Precious hours of time were saved on each barracks building. Vast areas were dotted with Carroll method buildings in a week. Engineers from all the allied armies came to watch the Carroll crews at work, to study the methods’ Carroll employed.

American home-building has recently been coming more and more to the European types of architecture. Unfortunately, however, in many cases only the appearance of the Old World prototypes has been followed. The structural staunchness that has enabled many of these distinctive houses across the sea to survive for centuries has not been duplicated—largely because of prohibitive cost.

All necessity for half measures is now overcome with the perfection of Mr. Carroll’s method of construction. The strength as well as the appearance of Europe’s best house types can now be secured at a cost always as low, and frequently lower, than for conventional construction.

For the Carroll process, utilizing the least expensive and most readily available materials establishes a substantial saving at the very outset that is increased as each step in the building goes forward.

The process of constructing a Carroll house is very simple. The excavating and pouring of foundation footings is done in the usual way. A form made of 2 by 8-inch lumber, the height and length of the foundation wall is next laid on the ground with the bottom of the form paralleling the inside of the footing, so that the foundation wall when raised into final position will rest squarely on the footing.

On the bottom of this form is placed tar paper. A very thin layer of cinder concrete is then poured over the tar paper. Next 1/2-inch vertical steel rods with the ends bent back are laid in the form at two-foot intervals and blocks of wood are placed in the location where the steel floor joist will be.

Two 1/2-inch horizontal rods the length of the wall are then placed near the top of the wall and to these are attached eye bolts and nuts, the eye bolts extending up through the wall for the purpose of giving the lifting derricks something to grasp when the wall is lifted into place.

In the Foreground, Unskilled Workmen Are Embedding Stone Slabs in the Soft Mortar to Make the Outside Decorative Face of One Side of the House. In the background we see the inner face of the adjacent side wall, already raised.
Four inches of cinder concrete is then poured in the form and over this is placed a steel mesh 6 by 12 No. 7. After this operation mortar is poured into the form and into it is embedded the exterior finish, rock, stone, brick or whatever it may be. If concrete is to be used for the exterior, the color desired is mixed in and the concrete (two inches of it) is poured in the form and given the finish desired by a concrete finisher.

The foundation wall is now allowed to dry for two or three days. It is then hoisted to a vertical position and cemented to the footings. The ends of the walls are laced together with the horizontal rods and steel mesh and the corners poured in a form of two 2 by 10-inch nailed together. The wood blocks are then removed and the ends of the steel floor joist are placed in the slots that remain. When the wall is in place the bolts used for lifting are unscrewed and the holes filled with mortar.

This completes the foundation.

The next step is to cover the floor joist with a fine metal mesh over which 4 inches of cinder concrete is poured for the floor. It is finished off and the side walls are then built in exactly the same manner as the foundation walls with the following exceptions: 1. One of the many prepared insulating fibre boards on the market is placed in the form first instead of the tar paper used in the foundation wall construction. 2. The window sash and door frames are set in place, additional reinforcing rods are placed around windows and doors, spaces for plumbing and heating pipes and any desired niches are blocked out.

Mr. Carroll summarizes the advantages of these homes thus:

BEAUTY—This method enables you to have a real "dream" home—designed and furnished exactly as you have always wanted a home to be. There is no limitation as to architectural style or effects.

ECONOMY—It saves you money on building time. The process gets the job completed quicker. It saves you money on materials—exquisite surface effects, for instance, can be (Continued to page 116)
THE Greek Sphinx was supposed to be a strangler. That is, if a mere human couldn't guess her riddle she, supposedly, promptly strangled him. But the Egyptian Sphinx, he of the lion's body and man's head (Androsphinx) is a more social creature. He invites folks to pass along the way he guards. If there are two of him, then pass between in safety.

In front of the Egyptian Court, San Diego, Calif., there are two of these Sphinxes, each perched atop a box-like "signboard" that is covered with very interesting (?) writing. After some moments of consideration I decided that the strange little men and women, and their playthings, really meant an invitation. Glancing between the gaily colored pillars of the entrance it was plain that the invitation was to enter the inner court where flowers and foliage made gay the scene.

The exterior of Egyptian Court which is unusually well done, was designed by the owner, Nellie G. Edgan, while the plans and construction are the work of Paul Carle, of

The General Plan of the Egyptian Court Provides for Nine Apartments Overlooking a Secluded Court Yard and Pool.

The Architecture of the Egyptian Court Apartment Is, at Once, Unusual and Charming While Avoiding Any Suggestion of Being Blatantly Novel, Much of the Effect Being Achieved by the Skillful Use of Color.
Egyptian Architecture for Bungalow Apartment

Coronado, California. The stucco, brown in color, is marked off to represent large building stones. There is just enough colorful decoration to give the desired atmosphere, and not so much as to make the place appear like cheap imitation. The two thick columns supporting the entrance are set with zigzag bits of green, white, yellow, red, blue and brown. The lower portions of the columns are dark brown, and a band of hieroglyphics divides the brown from the brilliant colors above.

The inner court is well landscaped with tropical plants. In the center there is an oblong pool in which are gold fish.

The doors of the nine apartments open to this court yard, and an outside stairway of concrete leads to the two upper apartments at the rear of the court. An ornamental iron stair railing and two standing lanterns are the making of this artistic corner of the yard. Under the balcony to which this concrete stairway leads is a passageway to the rear of the apartment at the end of the court. A colorful frieze of glazed tiles, in a conventional design, bands the upper portion of the rear apartments and the two corner balconies as well.

There are two garages, one at each extreme side of the front of the court. Service walks lead past the sides of these garages to the rear doors of all apartments. The two upper apartments have outside stairways at the rear.

Although the floor plans differ somewhat, the sketch shows a typical layout for one of the side apartments. All of the apartments are very completely furnished, and much equipment for the solid comfort of two people and extra service for six, has been built in. The plot of ground measures about 96 by 120 feet.

The idea of building bungalow courts, with special emphasis on having the architecture distinctive, has proved to be successful. As all of the apartments are for rent furnished, the class of renters is usually above the ordinary. That is, they are the class that want hotel-like comforts yet with the feeling of home at the same time. In the natural course of things, this type of renter is not usually long in one place. The court, therefore, must appeal to those sophisticated people who are moving around.

J. Harold Hawkins.
Pawtucket's Senior High School
Cost $1,700,000

Monahan and Meikle, Architects—Cruise Construction Company, Builders

SPLENDIDLY conceived and executed, Pawtucket's new senior high school stands, today, though not the largest, at least one of the best designed and equipped high schools in the United States. The building is 338 feet long, four stories and basement high and the weather vane on the tower is 196 feet above the ground level.

The architecture takes its inspiration from Colonial days and is strongly reminiscent of Independence Hall. Its site on the Pawtucket River, from which the grounds are terraced up, is commanding and conspicuous. The building is of steel and concrete, faced with special texture face brick. Some idea of the size of the building may be gained from the fact that 2,200,000 brick were required. Granite composition stone and terra cotta were used for the impressive columns and trim.

There are class rooms in the basement, which is at ground level as well as on four other floors of the building. The main floor of the auditorium is on the basement level and, in the opposite wing, is the large swimming pool.

The building contains 43 class and recitation rooms of various sizes and a cafeteria which seats 500 at a time. By an ingenious arrangement of movable partitions, most of the cafeteria space may be used for study rooms, as soon as the luncheon hour is over. As the space thus utilized includes no steam tables, counters or tables—simply chairs—the change can be quickly made.

There are four main stairways connecting the different floors—two exclusively for girls and two for boys. Toilet rooms are located adjacent to most of these stair landings.

A large gymnasium occupies the wing of the building opposite the auditorium wing, which can be divided into separate gymnasiums for boys and girls by means of a folding partition. The swimming pool, at the basement level, is one of the largest in the state, with a capacity of 90,000 gallons of water. In front of both swimming pool and gymnasium, there are bleacher seats for spectators.

There is one great advantage in having the main auditorium floor at the basement level, in that, when entertainments or community gatherings are held in the school auditorium, the audience passes directly into the lobby of the auditorium at the ground level, thus avoiding a long walk down corridors or up stairs through other parts of the building. This arrangement also provides much needed class room space on the third floor.

The lobby is finished in old ivory color with Tiffany finished plaster walls and the floors are made of inlaid basket pattern tile in red and white panels. We find that, like other parts of the building, the colonial style of the Adams period has been the principle upon which the decorative scheme has been carried out with pleasing effect. Off both ends of the lobby, are the ticket rooms which may also be used as cloak rooms for the student workers. The ceiling has been finished in colonial style with ornamental plaster done attractively. As in other parts of the auditorium there are special circular fixtures under which the lights are hidden.

Next to the lobby is the foyer. There are elliptical arches between the foyer and the auditorium orchestra floor. Mirrors recessed in the wall, and special lighting fixtures

---

New Senior High School at Pawtucket, Rhode Island, Which Has Facilities for Between 1,500 and 2,000 Students. There are especially equipped class rooms for physics, biology, sewing, domestic science, business courses, music and applied arts. The auditorium is particularly fine and the swimming pool is the largest in the state.
Ground Floor or Basement Plan of the Pawtucket Senior High School. The auditorium floor is at this level and extends through two of the floors above. Completely equipped wood and metal working shops, boiler room and swimming pool are also on the ground floor.

are particularly attractive. All of the walls in the hall and the foyer are done in ivory white, buff and leather brown with sponge effect giving a rich and subdued tint with colors blending harmoniously. Leather covered chairs in the orchestra and balcony mezzanine are set in the concrete, arranged in three sections with wide aisles which are covered with sound-deadening linoleum.

Grills for the supply of fresh washed air into the auditorium are recessed into the walls and the used air is drawn out through openings on either side of the orchestra pit by means of powerful exhaust fans.

In the orchestra pit is the console of the $10,000 concert organ and this console can be moved and played from any part of the orchestra pit.

The whole front of the stage is a replica of a colonial entrance, with its two pilasters on the sides and the ornamental frieze and fan-spread overhead decorated in rich colors. In the center at the top of the proscenium is a reproduction of an open book with the official city seal done in colors similar to the school's class pin in gold, red and blue and lettered with the name of the institution.

Rich red velour curtains, trimmed with gold, drape the windows on the south side of the auditorium and also the duplicate windows on the north side which are mirrored. Not a light can be seen by anyone standing on the upper tier of seats as they are all shaded by the beams. There are no posts in the auditorium; one can get a clear view of the stage from any seat.

At each side of the proscenium and on the olio curtain are paintings by artists of local fame, which add greatly to the color and attractiveness of the auditorium.

Class rooms and special equipment have been provided throughout the building for the study of chemistry, biology, typewriting, bookkeeping, physics, applied arts, industrial
An Interesting Feature of the Second Floor Plan (Second Above the Ground Level) Is the Large Cafeteria, Two Sections of Which Can Be Transformed Quickly Into Study Halls. On the floor above are sound-proof music rooms and especially equipped class rooms for teaching applied arts.

drawing, music, library, sewing and domestic science, woodworking and metal machining, as well as the regular courses in English, mathematics and languages. Recessed in the corridor walls are 1,400 steel lockers besides those adjacent to the gymnasium and swimming pool. There are also many special exhibit cases with glass fronts which are recessed into the corridor walls for the display of pupils' work. The applied arts course includes hammered brass work and the making of certain types of jewelry.

The four music rooms on the fourth floor have been sound-proofed by special sheets of insulation in the walls and by the use of special doors.

The shops in the basement contain circular saws, planers, sanding machine, variable speed lathe, mortisers, small planer and tool grinder for woodworking and three lathes, two milling machines, large upright drill, small upright drill, power hack saw, wet grinder, buff wheel, electric furnace, forge and high speed furnace combined, small metal furnace, blower for furnace and tool grinder, for metal working.

There are three 200 H.P. low pressure boilers and one 50 H.P. high pressure boilers in the boiler room and these are all fired by oil burners, with special emergency coal bunker, arranged for gravity feed. There is a completely equipped laundry with all mechanical appliances in the basement and steel racks for more than 2,000 towels and 1,000 bathing suits.

Marble enclosures are used for the shower bath compartments and cork inlaid linoleum, non-slip stair treads and tiling are used throughout corridors, stairways and entrances.

"Easy as Laying a Sidewalk"

(Continued from page 111)

obtained by the use of the natural field stones in your vicinity, available for little or nothing. It saves you money on maintenance, on fuel and on interior upkeep. The actual building cost is invariably considerably less than you expect to pay.

INSULATED—This construction by its very nature is a fine kind of natural insulation. The cinder concrete keeps winter heat in and summer heat out. It is sound-proof and moisture-proof—a more comfortable, more healthful home in which to live.

BUILD QUICKLY—This construction gets your house completed and ready to occupy in a minimum amount of time. Whole sections of these houses can be erected in a little more time than it takes to build one house—making the process of inestimable advantage to the area developer or speculative builder and giving him houses that are readily saleable.

Since perfecting this new building method and testing it through several years of actual use on the job, Mr. Carroll has now arranged to offer it to other contractors and builders. Any reputable competent building contractor can now obtain this license on application.

The corporation will assign a supervisor to each job so that the completed structure can be accorded its guarantee. No specialized mechanics are necessary. The contractor uses his own crews, and buys his materials as usual from the supply dealers with whom he is accustomed to deal.

Display Colored Refrigerators

ELECTRIC refrigerators, pink ones, gray ones, tan ones, and even bright red ones, were to be seen among the usual array of white ones at the Third Annual Electric Refrigeration Show in the sales rooms of the New York Edison Company. The colorful refrigerator has burst in full bloom on the country in recent months and a great variety of shades are being produced by the manufacturers who are keeping up with the new fashion of color in the kitchen.

As there are now kitchens done in red, white and black, suggesting travel in rural France, or in yellows and greens, or a multitude of other combinations, the refrigerators are made to harmonize and to add a livelier touch to the room which must be occupied a large portion of the day and which has become as much of an eating place as a cooking place since the breakfast nook became popular. The new colors are being provided in shades to suit many and widely varying tastes, from those with a futuristic leaning to the delicate and flower-like tints that appeal to the more conservative women.
Two Denver Filling Stations
Same Design—Different Materials

One design is of terra cotta construction with metal tile roof, metal sash and pressed metal ceilings and the other design is made entirely of sheet metal. These two designs have been adopted by the Continental Oil Company as standard for their stations throughout Colorado, Wyoming, Utah, Arizona and New Mexico.

As shown in the photographs, there are projecting canopies over the driveways. As may be fitting for the location of the station, these canopies are also added to the sides or rear of the building proper, thus making the design adaptable for almost any size or shape of lot.

Keeping Pace With Progress

"The importance of equipment in construction operations in this day and age cannot be over-estimated. The proper application of modern equipment to construction work is a big factor in the successful completion of any job and no contractor can well afford to use antiquated machinery. An up-to-date contractor is constantly in search of new labor saving machinery and methods," says the Monthly Bulletin of the National Association of Building Trades Employers.

Two Canopy Filling Station Designed for the Continental Oil Company, at Denver. It is built of terra cotta. Designed by the Huntingdon Architect Company, Denver, Colorado. They have also a three-canopy design on the same general lines.

Another Two-Canopy Filling Station Designed for the Continental Oil Company and Built at Denver of Sheet Steel. This design by the Huntingdon Architect Company has been adopted as standard by this oil company.
Originality of Design is Seen in Los Angeles Library
BERTRAM GROSVENOR GOODHUE, Architect

Like Much of the Architecture of Los Angeles, Calif., the New Public Library Building Shows the Spanish Influence, Yet There Is Also a Noticeable Trace of What Might Be Called the Southwestern or Aztec in the Piling of Mass Upon Mass.

You have no doubt heard of an actor being laughed off the stage, but have you ever heard of a public library being laughed out of rented quarters in an eight-story office building and into a magnificent structure of its own, costing $2,500,000? It sounds like an expensive joke—and it was—but the laugh turned into a sigh of relief and a chorus of admiration on the part of 1,000,000 people.

The newly completed Los Angeles Public Library stands not only as a monument to the genius of its designer, the late Bertram Grosvenor Goodhue, but as a symbol of progressive thought and the solid determination of a city to turn the sneers and jibes and jokes that made it hang its head into a volume of praise for having created something altogether new in library architecture, construction and convenience.

The architect himself believed that he had reached a goal in true American architecture, expressed in truly American materials and by American artists. And hundreds of thousands of patrons are not only sure but have the "goods" to prove that their new library is vastly different and better than the two floors of the downtown office building which their beloved books formerly occupied.

Los Angeles, like some other American cities, grew almost more rapidly than the ability of her citizenry to meet the bond issues covering the various development programs. Harbor, streets, public utilities, new bridges, water power and a dozen industrial demands seemed always to take precedence over culture and the arts. And while the "more important" projects got under way or were completed the central library sat huddled on the seventh and eighth floors of a building in the very midst of all the confusion and jangle of street car, automobile and pedestrian traffic, not unmixed with the rat-a-tat-tat of the
A Distinctive Library

A bevy of riveters at work on newer buildings on all sides.

But after several years of this incongruous situation, a considerable body of the million inhabitants began to see the joke, the newspapers and other public prints took up the cause and the laugh was on. Articles, paragraphs, quips, cartoons and conversation followed and it was not altogether complimentary to the library's quarters, either. The library, in the words of the movie director, was always "good for a laugh," which no doubt accounts for the widespread use to which the joke was put.

Fortunately, of course, the hundreds of thousands of regular patrons constituted not only an enormous publicity committee, but a voting body of tremendous power, with the result that when a bond issue was proposed it was forthwith carried. The worm will turn if you give him time enough.

Today, with the new building complete, it is an interesting fact that the per capita circulation of books in Los Angeles is greater than that of any other of the five largest cities in the country. Perhaps that shows how serious the people were despite their laughs at the expense of the library.

Mr. Goodhue's work for the San Diego Exposition no doubt showed its influence in his selection of a distinctive type of architecture which is already being flattered by rather wide imitation. The design carries the Spanish feeling, and yet it includes also a noticeable trace of what one might call the Southwestern or Aztec in the method of piling up mass on mass in a most interesting way. Architecturally, there are few buildings of its size and character that compare in originality of design with the Los Angeles Public Library. Its elemental strength of conception and execution make it outstanding if not unique.

Of monolithic concrete construction, surfaced with stucco and limestone trimming, it presents a great massed pile of harmonious proportions, rising from all four sides to a pyramidal climax in the square tower, with tiled crown, 188 feet high. The three-story main building has dimensions of 200 by 239 feet, and the two-story wing is 89 by 129 feet. The site covers two city blocks from east to west, with a total of 200,000 square feet of floor space.

In the floor lay-outs a plan was adopted unlike any other library except the Cleveland building which is built around a hollow square with reading rooms on the exterior areas of the building. The first two floors are devoted to public reading rooms built around a central opening beneath the tower, from which radiate passages to the reading rooms forming the outside circle of the building, and provided with many windows. The book-stacks, instead of occupying one end of the building and utilizing valuable lighted space, are divided into four tiers and placed between the reading rooms and the central rotunda, each stack serving the adjoining rooms.

All rooms have been arranged with consideration for the comfort and convenience of patrons. The school and teachers' and the children's rooms, in the first floor wing, have separate street entrances; the exhibit and lecture hall also have a special entrance. The newspaper and magazine room can be shut off from the other portions of the building, with a special opening for Sunday entrance. On the mezzanine above the second floor are provided small study rooms for students, writers or business men who wish to make use of the library's reference material. Accommodations also are provided for clubs and committees of a civic character.

The noteworthy decorative features of the exterior of the library are, of course, the sculptures by Lee Lawrie, the New York sculptor. The scheme of both the sculpture and the inscriptive arrangement is based on the image of the light of learning—the torch of knowledge, together with the seers of literature who have held aloft the torch and, through the printed word, have recorded the progress and thought of the world.

The sculptural conceptions were modeled in the Lawrie...
A Corner of the Main Reading Room of the Los Angeles Library, Showing the Mural Decorations by Julian Garnsey.

The building required 18 months to complete under the direction of Weymouth Crowell, general contractor, and is unique in point of its substantial construction. The specifications called for concrete testing 2,000 pounds in strength rather than any particular mix. In casting the foundations it was necessary at one corner of the building to excavate a prehistoric strata of sea shells and build up a broad footing to prevent slipping, but this was the one and only difficulty of any size encountered in the entire project.

There is a verse from Lucretius on one of the panels of the library to the effect that "Thus the runners of life hand on the torch" and those who have watched and participated in the slow but steady movement toward the new Los Angeles Public Library can even see the smile of triumph on the runner's face.—Marc N. Goodnow.

Realtors Publish Advice

In line with the declaration of principles which it adopted last year, the subdividers' division of the Milwaukee Real Estate Board has this year issued a pamphlet called "Suggestions to the Public When Buying Subdivision Property." Ninety thousand copies of this pamphlet have been distributed to every realtor, building and loan association and bank in Milwaukee County. Here are the suggestions:

"Due to the increasing demand for annexation of new territory to the City of Milwaukee, during the past five years, the buying public has looked upon the purchase of subdivision lots as a good investment. The officers of the Milwaukee Real Estate Board are constantly asked for information regarding the values of certain subdivision lots and the methods and reputations of certain firms. "

"We ask that prospective purchasers take into consideration the following questions:

1. Is the lot situated a reasonable distance from an area which is developed and where homes and buildings are now being constructed?
2. How soon will improvements be made by the City of Milwaukee or by any other municipality in the county?
3. Have you compared prices with other improved and unimproved lots within the same area?
4. Is the price of the improved or unimproved lot more than the average price in the same territory? If so, it pays to investigate.
5. What are the methods of the salesmen? Do they use high pressure methods? High pressure methods are costly to the lot buyer.
6. Does the salesman guarantee a profit? Has the salesman authority to guarantee a profit. If so, is the guaranteed profit deposited in a trust company or in a bank?
7. Does the salesman guarantee public improvements? If so, check this information with the proper public officials.
8. Have you answered a blind advertisement?
9. Is the salesman licensed under the laws of Wisconsin?
10. Have you consulted a realtor concerning land values?

"If you are investing your life savings, make your investment in accordance with the opportunities of the land to develop and make a reasonable profit for you."
William A. Radford
President and Editor-in-Chief of the Radford Publications,
says that the following pages contain the greatest money-saving and trade-getting combinations it has ever been his privilege to offer. They will create and stimulate business for the Building Industry.
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(These Offers Are Open to Your Friends and Associates in the Building Industry)
Plastic Paint Decoration

This New Material, Now Thoroughly in Vogue, Offers
Almost Unlimited Decorative Possibilities

In every community there are those who want homes of distinction and personality and can afford to have the best and most modern throughout in building construction and appointments. These, as well as the various other persons who are interested in the decoration of ultra-fashionable apartments, theatres, hotels, public buildings and exclusive retail shops, will be interested in the comparatively new plastic finish.

This relief or textured treatment, sometimes known as the "roughing process," or "jazz plaster," and also called by various trade names by different manufacturers who have the plastic paint materials for sale, has grown in popularity to the point where it is an accepted standard for wall decoration, and is exceeding in demand any other type of wall treatment offered to the public in recent years. The reason for its sudden rise to popularity is the fact that plastic finishing permits greater expression of individuality and offers a larger field of decorative color schemes than other forms of wall treatment yet developed, at a cost quite reasonable enough to be within the reach of all who have a real desire for individuality of decoration.

Plastic finishing provides actual texture, which in most forms of wall decoration is only simulated through color manipulation, and at best is only partially attained in rough or sand finish plaster. The relief effects produced with plastic paint materials, colored, bronzed or glazed as may be desired, and the ceaseless changing of the shadows and highlights, provides never-ending interest to the occupants of the building.

In brief, plastic decoration consists of applying a coating of plastic paint over the plastered walls or other surfaces to be decorated, and—before it sets—modeling swirls and fanciful designs, soft stipple, or other patterns, in the material, with various implements ranging from a coarse stippling brush to a common kitchen spoon.

Plastic paint may be applied wherever ordinary paint can be applied. It is put on with a brush, oven spread on with a broad knife or spatula, in a heavy coating varying from 1/16 to 3/16 inch or more in thickness, according to the effect to be produced. One coat is applied, instead of two or three coats as with ordinary wall paints. When used on new buildings, the white plaster coat may be eliminated, the plastic paint being readily applied over the rough or "putty coat" of plaster, the saving thus effected partially absorbing the cost of the decoration—usually at least taking care of the difference between plastic finishing and the ordinary forms of wall decoration which would otherwise be employed.

A certain amount of preparation is necessary before the application of plastic paint, the same as with ordinary flat wall paints, varying somewhat according to the particular make of materials used, and the kind and condition of the surface. On new or unpainted walls, many of the finishes require the use of a size coat of some sort to seal the surface and stop the suction in the wall. When plastic finishes are applied over enamel surfaces of high gloss, the surface should be properly sanded to provide "tooth" for the new coating.

Generally speaking, there are two types of plastic paint on the market. One comes in dry powder form to be mixed with water before use. The other is the stiffened oil paint type supplied either ready for use, or in semi-ready mixed form, with the oil paint and the stiffener separate, to be combined before use. Some decorators make their own by mixing regular flat wall paint with suitable stiffeners. When this is done the painter should

(Continued to page 129)
A Department for Passing "Life Savers" along to other Builders

$2 for an Idea

Dan is an ingenious cuss. Nothing ever stumps him. He always knows the way out when he runs into a tough problem out on the job or in the office. Dan is editor of this Department and will pay $2.00 each for every good idea he can use here to show and tell other builders "how to do it." Send him a rough sketch and a short description of what the tough job was and how you handled it.

Address Dan-Do-It, care of American Builder, 1827 Prairie Avenue, Chicago, Ill.

Framing Door Openings

Here are a couple of ideas that may prove useful.

When framing-in rough openings for doors, let the shoe project into the opening a few inches on each side, instead of sawing them off in line with the jack studs. Then, when setting the jambs, saw the shoes off square and nail the feet of the jambs directly to the same, with 10 or 12 penny finish nails, and save shimming with shingle. Incidentally this will make a more rigid job.

This Way of Nailing the Jamb to the Shoe Saves Shimming and Makes a More Rigid Job.

The common method of filling nail holes in fibrous wall board, now being used to such an extent in interior decorating, where the wallboard is to be painted, is to use putty, but I have found the following method of filling holes more satisfactory. I tear off a few corners from waste pieces of wallboard and grind them up in the palm of my hand, to as fine particles as possible. This I mix with prepared glue and using this mixture to fill the holes I get rid of that glossy spot which putty makes. In using this method be sure to hold the putty knife nearly at right angles to the board on the last stroke so as to slightly roughen the spot.

L. W. Pike, 17 Brattle St., Brattleboro, Vt.

Repairing Rafter Joints

When rafter joints have opened underneath, due to shrinkage of the wood and settling of the roof, they become dangerous members if neglected. The entire weight rests on the toe, whereas the main pressure should come on the heel. The result may be a split of the holding toe sufficient in size to allow the rafter to slip past and come down with a crash, or at least allow the roof to sag badly.

But it is easy to overcome this danger if taken in time. If the cut has been made wrong in the first place the gap may be large. Cut a hardwood wedge, the width of the rafter in thickness. Pound it well up into the opening and secure it in place with heavy nails. Then the strain on the toe will drop back to the heel as should be, its force acting across the wedge.

H. Rossiter Snyder, Guilford, Conn.

Non-Slip Hammer Handle

With an ordinary straight hammer handle, when a mechanic drives a spike he finds that the handle slips through his hand and he has to regrip it during the operation. I have seen many mechanics wrap tape around the hammer handle to prevent slipping; in fact, I have done it myself. The handle shown in the sketch, however, does not slip. It assures a perfect grip in any position. I made this handle myself and have found it perfectly satisfactory. It has to be used to be appreciated. I and all my men have been using these handles for some time so they have had a thorough test.

Edward Zitzman, Pacific, Mo.

The Slipping of the Hammer Handle Through One's Hand While Nailing Can Be Eliminated by Grooving the Handle as Shown Here.
Laying Out Correct Arches

I NOTICED in the March issue a method of laying out an arch. This method was all right for small openings, but cannot be used for the wide ones that are used so often these days. I have noticed many arches that were laid out too flat or too high in the center, having too sharp a break at the side jambs or continuing too far down on the jambs. The following method of obtaining an arch will give good results and can be used quite easily on the wide openings.

Nail two laths or strips of wood together to form a 90 degree angle, using a square to make sure the angle is correct. The length of these strips as well as that of the third strip will depend on the size of the arch to be scribed. The third strip is not attached, but is used to slide along the edges of the first two as shown in the sketch.

Three nails are driven into the third strip and allowed to protrude through it. The two nails nearest the ends of the strip are placed at a distance from each other equal to one-half the width of the arch. The center nail should be placed at a distance equal to the depth of the arch from the nail marked "Nail No. 2."

Now start the loose strip with the center nail in the center of the cord of the arch and No. 2 directly above it. Slide both nails along the edges of the nailed strips, keeping the nails tight against the edges of these strips. If the nail No. 2 protrudes just far enough to mark on the board it will describe a perfect arch. If desired, a pencil can be used in place of nail No. 2.

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Here is a Simple Way of Laying Out Wide Arches to Obtain an Arch Which Is Neither Too High Nor Too Flat.

Use a Plumb-Bob

THE best tool for plumbing the outside walls of a building is the plumb-bob. If the framing has been accurately done, two corners opposite each other on a diagonal, are all that need to be plumbed. The other two corners will automatically be brought to a plumb position. One man handling the braces and one man to handle the plumb-bob, is all that are necessary to plum a building in this manner. Here is the way it is done.

Stick a nail at the outside upper corner of the top plate, say eight inches from the corner. Then toss the plumb-bob over the plank, and with the bob in one hand and the end of the cord in the other, slip the cord toward the nail until it hits. Now let the plumb-bob down until it hangs within an inch or so above the bottom plate. The edge of the bottom plate will give the plumb-point for one direction, and a mark eight inches from the corner corresponding with the nail above, will give the point for the other direction. Repeat this operation on the corner diagonally opposite to the one just plumbed, and the skeleton is plumbed.

Quick Way to Build Doors

I RECENTLY had to supply several odd size doors for kitchen cupboards so it was up to me to make them instead of buying the mill product. I found that by planing the tongue off of 3/4-inch flooring it would serve very satisfactorily for the stiles and rails of the doors. The groove was just the right size to hold panels of wallboard and in this way I was able to turn out excellent doors in quick time and with a minimum of labor.

Stud Cutting Pattern

T HE sketch shows a studding cutting pattern which I have used to good advantage. First make two patterns. Then take a plank that is the same length as the studs and square a line across it about six inches from one end. Then set the two patterns on this plank, on edge, and put another piece of two by four between the two patterns. Place one end of the patterns at the mark squared across the plank and fasten each pattern to the plank with two nails.

Now nail a board across the ends of the patterns as shown. It is now possible to place a piece of studding between the patterns and saw it off at the end, getting the exact length. The notch for the ribbon can be cut, using the notches in the patterns as a guide. After the studs are all cut the nails can be pulled and the pattern pieces used along with the others.

With Two Studs as a Pattern, Handled as Illustrated, the Work of Cutting Studs Is Simplified and Reduced to a Minimum.
When is a Check Certified?

The builder flipped the ledger card across the desk. "Nothing would please me better than to give you a check for my account right now, but I haven't got that much to my credit," the customer stated.

"Well, give me a postdated check, payable when you will have sufficient funds," the builder proposed, the customer accepted the suggestion, and departed, leaving a check dated 10 days "away.

"Now, hustle down to the bank with this check and see if you can get it certified," the builder ordered, and the bookkeeper returned in due course, with the check properly certified by the president.

"Now, we'll hold the bank for it, we're dead safe," the builder averred.

When the check fell due, however, the bank refused to pay, and the builder threatened suit.

"The maker has no funds on deposit to pay the check, and did not have at the time the check was certified," the cashier explained, "and our president had no right to certify."

"I had no knowledge of the lack of funds or of any want of authority on the president's part, and I'm entitled to hold the bank responsible on the certification."

"No, the fact that the check was postdated was notice to you that the president had no authority," the banker urged, and the Nebraska Supreme Court, in case reported in 154 N. W., 233, ruled that the holder could not collect.

"The president of the bank undertook to guarantee that the checks would be made good by the maker thereof, and that the bank would pay the amount to the payee of the checks. The payee not only had notice of this, but participated in this arrangement, and was bound to know that such a transaction was beyond the power and authority of the president of the bank," said the Court, and the New York courts have arrived at the same conclusion.

On the Dock

A CONTRACTOR had bought certain goods f. a. s. (free alongside) a certain vessel. At the time and place specified the vessel, through no fault of the contractor, was not there to receive the goods.

"Well, put the goods on the dock, and I'll take chances on getting a ship," the contractor suggested.

"No—if the named ship is not there to receive the goods, that relieves me from my obligation to deliver," the seller reported.

(The price of the goods had gone up in the meantime.)

"As long as the absence of the ship puts no additional burden on you, you can't crawl out that way," the contractor maintained, and the United States Circuit Court of Appeals ruled in his favor in 279 Fed., 203.

"Of course, if there was a stipulation that delivery is to be f. o. b. a certain vessel, and the contract could not be performed without the presence of the ship, the case would be different," the Court stated.

approximate Only

THE builder had ordered flooring to be delivered on March 1st.

"Owing to existing conditions we have a clause in our confirmation slips that 'delivery dates are approximate only,'" the salesman pointed out.

"That's agreeable," the builder told him, the flooring was not delivered until March 19th, and the builder sued for damages.

"When, therefore, it was stipulated that the delivery dates were 'appropriate only' it was intended that delivery should be made 'near' or 'shortly after' the month of March, but not necessarily during that month, and in determining what would be a satisfactory compliance with that undertaking we should ascertain what under all circumstances was a reasonable time for the shipment, because since the time of performance is not definite (and the use of word 'approximate' excludes the idea of definiteness and exactness), there is no other standard upon which we can rely than that fixed by reason and common experience," said the Maryland courts, in ruling against the builder in the case of Bagley vs. Walker, 27 Atlantic, 1033.

A Kentucky Defense

"I CAN'T pay now," the debtor protested.

"Give me your note, and I can discount it at the Brick Bank," the contractor urged. The note was signed, and the contractor attempted to discount it.

"Can't touch it unless you get X to endorse it," the bank stipulated, X endorsed the note, the note was discounted, and the latter set up a novel defense when case came before the Kentucky Court of Appeals as reported in 277 S. W., 310.

"When the contractor got a third party to endorse the note without my knowledge or consent, that was a reflection on my financial standing, and relieves me from liability," the debtor maintained.

"We are unable to understand what principle of law the maker relies upon to absolve him from liability if the truth of the facts pleaded by him be conceded. The note sued on shows for itself that he was the maker of the note or that he signed it. He seeks to
be relieved of the consequence of having done so solely upon the ground that after he had signed and delivered the note to the payee, the bank declined to purchase it, and that thereafter, without his knowledge or consent, the contractor procured an indorsor satisfactory to the bank, and it thereupon purchased the note. Manifestly, that contention cannot be upheld," said the Court in deciding that such a defense should not prevail.

+ Is it an Acceptance?

"I'll pay you $10 for that article," the buyer proposed. "I'll take it," the seller agrees, and this is a very simple illustration of an offer and acceptance which constitutes a binding contract.

Suppose, however, that a builder gives an order to a traveling salesman, and it is understood that the order is not binding until accepted by the manufacturer. The salesman forwards the order in due course, and the manufacturer writes the builder, acknowledging receipt of the order.

"This same will receive our attention," the letter of acknowledgment states.

Does this acknowledgment constitute a binding acceptance of the order?

The law on this point is not exactly clear, but the weight of authority is that it does not constitute a binding acceptance.

"In the absence of a further showing of the intention of the parties, the better view seems to be that a letter acknowledging the receipt of an order, coupled with the words, 'The same shall have prompt attention' or 'prompt and careful attention,' is not of itself an acceptance which will prevent a withdrawal of the order by the buyer, or bind the seller to fill the order, though it may be evidence to be considered with other circumstances," says one state court in the case on the point, quoting from a standard textbook.

A New York case along the same line is a little stronger, as in that case the acknowledgment stated, "the same shall have prompt attention," but the courts of the state ruled that it did not constitute a binding contract.

"Promise to give the proposal attention was not a promise of acceptance; it was not an assent to it. It was no more than a courteous promise to give it consideration, and this, we do not doubt, is the sense in which it is generally, if not universally, employed in transactions of this character," was the reasoning of the New York courts.

M. L. Hayward.

Plastic Paint Decoration

(Continued from page 121)

know absolutely that the proper stiffeners and proportions are used to produce a properly balanced finish that will work properly without liability to drying out, cracking, imperfect adhesion and other troubles experienced in the use of improperly made finishes.

After the relief texturing is completed and the plastic material has become thoroughly hardened, the rough edges and projecting nibs are knocked off by shoving a straight-edged board back and forth over the surface or by sandpapering. This final smoothing up of the surface is also sometimes accomplished by pressing a smooth board against the surface before the plastic composition has thoroughly set. For some effects the material is flattened down with the palm of the hand.

Color is sometimes introduced into the plastic finish by mixing dry colors with the water mixtures, or oil colors with the oil paint mixtures. Any desired color treatment may also be given the surface after the plastic finish has been applied. The most general method is by "Tiffany" motting or glazing with oil colors reduced with a special glazing liquid, or by dusting on bronzes of various shades and wiping from the high spots as in polychroming. The plastic paint should, of course, be thoroughly dry before the color motting or bronzing is done—and with many of the plastic finishes on the market, which are particularly porous and absorbent, the application of a special size is required before the color treatment is started.

Another method of coloring sometimes employed is blowing coloring material onto the surface before the plastic composition has dried. Where two or more colors are used, each is blown on separately. Colored or "Florida" sand is often used for this purpose, especially with what are known as sandswirl effects.

The effects which can be produced with plastic finishes are as varied as the decorators who produce them. The competent painter who understands the use of these materials, studies this subject and experiments on his own account, can with very ordinary tools produce an almost unlimited range of reliefs, swirl and sunburst effects, stipplees and pebbled effects, Travertine finish, raised tile effects, imitations of oaken stencils, and effects such as leather and combinations of these effects. Spanish, Italian and English textures can be developed, and craftsmanship found in old Greek and Roman cities copied. Raised stencil effects of unique beauty may be produced by means of linoleum stencils.

The range of possibilities offered by this highly versatile method of decoration makes it possible to obtain practically any desired texture and color scheme. Finishes may be readily developed, appropriate for the small cottage, moderate priced home or palatial estate—for the den, breakfast nook or sun room where individual effects are desired, for clubs or public buildings where the most modern in architectural and building practice is demanded, for large office buildings, for the retail store catering to quality trade, and for the fronts of picture shows, restaurants and shops of the de luxe type, backgrounds of store display windows, and a multitude of other uses. Where properly used, plastic decoration is a most valuable decorative medium.

Berton Elliot.

Stuart Succeeds Greeley as Chief of Forest Service

THE policies that have governed the Forest Service of the United States Department of Agriculture under its outgoing chief, Colonel William B. Greeley, who has resigned to accept the management of the West Coast Lumbermen's Association, will be continued, without any radical innovations or departures by his successor, Major R. Y. Stuart, according to a recent statement made public by him.

"Our administrative and educational policies and procedure are the product of many years of experience," said Major Stuart, "and have become pretty well stabilized. They are the outcome of the constructive minds of my predecessors, Pinchot, Graves and Greeley, and of the teamwork of the Forest Service organization itself. I shall continue the tradition that is handed down to me from my predecessors and shall strive to keep on in the course already marked out.

"From is inception, the Forest Service has concentrated on the task of having the forest lands of this country made productive and kept continually so. To it was assigned, in 1905, by the administration, protection and improvement of the national forests, now aggregating 159,000,000 acres. Its field was later broadened to include co-operation with the states, with public organization, with industries, and with individuals to better protect and utilize our forest resources, and to derive from them the maximum benefits in watershed protection, in public health, and in public recreation."
Planning the Cornices

By JOHN T. NEUFELD

Our readers will pardon if we deviate from the subject of roof framing for one month. A subject that has much to do with roof framing is the subject of cornices.

A carpenter is not ordinarily asked to design the cornice for a very large building, but he has to plan very many small cornices. The small cornices are really as difficult as the more complicated ones; because on a small building the owner does not expect to waste any money, and he expects the work to go ahead fast. It is therefore better to plan a very simple cornice and then to take time to do it right; rather than to try to build a more complicated cornice in a hurry. It is to meet the needs for a cornice for the small building that some of the types shown in the illustration have been developed. Some have been developed during the severe competition between builders specializing in garages and remodeling work.

Among the points to consider when planning the cornice we might mention the following:

- Good appearance.
- Simplicity of making.
- Good bearing for rafters.
- Good tie to wall.
- Accessibility for painting.
- Air tightness.
- Use of standard mouldings.
- Standard widths of boards.

It will not be necessary to go into detail on each of these points, but a few points will be dwelt upon. It is not necessary to make a cornice wide to make it look well, the width depends on the style of the house and the climatic conditions; however, in general the lower building does not require as wide a cornice as the high building, again a steep roof requires a narrower cornice than a flatter roof. A steep roof with a wide cornice will look top heavy. There are exceptions to this rule in certain styles, but these do not generally enter into consideration so much for small buildings.

Simplicity of making and the use of standard mouldings or stock materials go hand in hand. As a rule, a cornice is easier made by making it before the roof boards are put on.

The point of obtaining good tie to the main wall has been given more attention of late on account of the many storms and the interest in building to resist such storms. A tie can usually be effected by tying the rafters to the ceiling joists; however, good nailing is also very important. Fig. 5 shows a cornice used at present on porches in remodeling work. Here the tie is very poor; the method of fastening the soffit is also rather poor.

Fig. 7 is a decided improvement on this method, and it does not use any more lumber—only a little more time. Carrying the sheathing past the plate and nailing it to the rafters as shown in Figs. 1, 2 and 10 helps to tie the rafters to the wall.

Figs. 14 and 15 show the difference between the work of a good craftsman and one who depends on the moulding to cover up his cheap work. When the moulding in Fig. 14 dries up or lets off from the soffit there is a good crack for the cold air to get in. By the method shown in Fig. 15 all chance of air leakage is eliminated.

The use of the sheet metal gutter has almost eliminated the wooden gutter shown in Fig. 12. There are, however, certain regions where the sheet metal gutter will not last very long, on account of the atmosphere; in such localities the wooden gutter may be used with satisfaction. If put on with care and kept properly painted it will last for many years. If shaped like a moulding it adds greatly to the appearance of the cornice.

Cornices as shown in Fig. 13 are used in certain styles of buildings and in some cases add to the appearance of the building; they are, however, not so good in regions where there is much snow. The snow and ice will find a resting place in the curve and stop the water from flowing off, thus resulting in leaks in the roof at this point.

Correct Your Data

The article appearing in this department, on page 170 of the April, 1928, issue, under the heading, "Rafter Details for a Hip Roof," contained, in the tabulations of data, several typographical errors. Those readers who save this department for reference may have the correct figures by writing in the following corrections on their copies. Under "Common Rafter 'A,'" the third line, the figure 13.27 should read 13.42 and the figure 73.94 should read 93.94. Under "Common Rafter 'C,'" the third line, the figure 6 feet 10 inches should read 6 feet 8% inches. Under "Jack Rafters 'T' and 'J,'" the second line, the figure 3 feet 6% inches should read 3 feet 4% inches.

Agency Takes Larger Office

On May 12, Fecheimer, Frank & Spedden, Inc., of Detroit, Mich., moved its offices to new and larger quarters at 1224-30 Maccabée Building. The new telephone number is Northway 1750.
Cornices Which Have Been Developed To Meet the Needs for Small Buildings and Which Are the Product of Development Under the Conditions of Severe Competition.
Lumber to be Merchandised in Package Form

The Weyerhaeuser Organization Introduces, in the Lumber Industry a Method Which Has Been Widely Successful in Selling Other Quality Products

When I. N. Tate, of Spokane, Wash., general manager of Weyerhaeuser Sales Company, announced last month that the affiliated mills represented by his organization had begun to manufacture a quality-line of sawmill products and to ship them in packages, many lumbermen wondered just how it could be done. Here is a pictorial answer to their questions.

This is the way the plan in its entirety evolved: First, it was recognized that lumber needed a label, to improve selling conditions in the business by enabling the producer and the merchant to advertise and promote lumber by the same methods employed by the competitive specialties; and to improve the status of lumber on the building lot by carrying a consumer guarantee that would prevent substitution. During 18 months of experimentation and testing, it was found that a fibre end-cap was the ideal package to carry the label. But this package required that both ends of each piece be absolutely smooth and absolutely four-square.

This necessitated the invention and installation of machinery costing tens of thousands of dollars.

One of the illustrations shows the new re-butting saw being tested in one of the mills at Potlatch, Idaho, one of the important white pine producing centers of the Weyerhaeuser affiliation. The distinctive feature of the new equipment is the circular saw, of which every tooth is so set that it does an equal part of the work. The saw is mounted in the center of a re-trim bench 36 feet long. Each group of boards is held against the guides by pneumatically operated clamps which are rubber-faced to prevent even the slightest damage being done to the edges and corners of the lumber. The saw itself is operated, in this case, by an electric push-button.

Each end of each package of boards is trimmed separately. This machinery was built in the Pacific Northwest and has already been set up in several of the 17 Weyerhaeuser-affiliated mills in that region, Idaho and Northern Minnesota, and also at the great Eastern distributing plant of Weyerhaeuser Timber Company at Baltimore. It is expected that additional plants will be installed later.

Another contrast between the new and old type of lumber is shown in the picture showing the finished product. This, also, was taken at Cloquet, Minn., and shows A. J. Taylor,
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with the

TIME CUTTING SAW

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Helps Win More Jobs
You cannot meet competition and use hand sawing when competitors are saving 10 per cent on labor cost by using the Time Cutting Saw. With it you can lower your bids—get the job—and still make more profit.

Portable and Accurate
Can be carried easily by one man from place to place, wherever there is sawing to be done, from cellar to attic. Portability has not been secured at the expense of accuracy. The Time Cutting Saw is sturdily built. Produces work that is much more accurate than possible by hand sawing.

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With the Time Cutting Saw you can rip 2-inch lumber with ease. It cuts cleanly, accurately and speedily.

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Rips, cross cuts, miters, grooves, rabbets and bevels. The cross cut gauges are graduated to ninety degrees and are interchangeable for right or left hand use. Gauge for grooving assures absolutely uniform work.

Sturdy and Durable
The Time Cutting Saw stands up under long use and rough service. All steel construction. G. E. high efficiency motor. Genuine Swedish SKF bearings. Disston saws. Special alloy steel saw shaft. Special endless high speed belt. Rockwood pulleys. No exposed moving parts. Motor may be used as power unit for driving other tools.

MONEY-BACK GUARANTEE
Guaranteed for one year. We know it will cut down your expense and increase your profit. In order that you may know this for yourself and see this claim in actual practice, we will refund your money if you find that it has not done everything we have claimed for it. You may return the saw within ten days and we will gladly refund your money upon return of the saw.

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TIME CUTTING TOOL CORP.
115 Loomis St., Rockford, Ill.
I enclose herewith $75.00 for which send me, prepaid, your Time Cutting Saw complete and ready for operation. I understand that if this saw does not do everything you claim for it it may be returned within ten days and any money will be refunded. I am interested in having one of your representatives demonstrate to me how the Time Cutting Saw will save time, work and wages for me in my building operations.

Name: ____________________________________________________________
Address: _________________________________________________________

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
the vigorous dean of Weyerhaeuser salesmen, and Mr. Payzant, the inventor of the rebutting saw, looking over a group of boards turned out by the re-manufacturing plant together with a group picked out of ordinary stock.

Coffee distributors used to ship their product in jute sacks. The grocer would dump 25 or 30 pounds of it into a large enameled tin container, from which he would scoop out a pound or two for each customer. That was years ago. The grocery trade has learned many tricks in merchandising since then, and as a result it now attracts customers by offering its product, ground ready for the coffee pot, in clean, bright-colored, nicely designed containers. Yet, until this new departure was introduced, the lumber industry has gone on trying to attract prospective customers with the rough dirty ends of boards—which often are the principal parts of the material which show when it is piled in a yard or a dealer’s warehouse.

As the lumber leaves the re-trim bench, and after it has been re-inspected to make certain that each piece is perfect in every particular, the package is adjusted. Attached to the labeled cap are two side-flanges and a top and bottom flange. On either side of the bottom flange are heavy wrappers which fold around the group of boards. Then the top and bottom flanges are attached to the top and bottom wrap-boards. Their faces are turned in, and the method of attaching is such that the marks left on the reverse sides of the boards are almost indistinguishable.

In short, the carton fits over the end of the package like a sleeve. There is a certain give in it, a sort of hinge-action, which enables the boards to shift slightly during handling without detaching the fibre caps. Its practicability in this respect is excellently illustrated by the picture showing the loading of the first shipment of “4-Square” lumber at the direction of lumber-owners. In each case where this process has been introduced, the new machinery has been installed near the loading platform. The re-butted lumber is placed on trucks where the package is applied. These trucks then are moved out to the platform, where the lumber is loaded for shipment. The old loading-jack method still is retained, and many carloads of the packaged goods have been loaded and shipped without the flexure of the boards breaking the packages open.

Homes Built by Boys?

(Continued from page 100)

out and the various operations done in a systematic order.

Students must have foresight and an understanding of trade principles in order for them to be able to meet the demands of industry. It is important that each student learn what he should know in order to be practical, small enough to be individual. Each student must have his own layout, mills and assemble his work on his own. Insofar as teaching the subject of carpentry to students is concerned, the writer’s only real success has been with the use of exercise methods.

The other illustration shows the method of teaching stair building. It is approximately one-third full size. Large enough to be practical, small enough to be individual. Each student makes his own layout, mills and assembles the stair complete.

"A History of Architecture," by Sir Banister Fletcher, published by B. T. Batsford, Ltd., of London, England, and by Charles Scribner’s Sons, 597-9 Fifth Ave., New York City, has been revised and enlarged and an eighth edition, which contains about 3,500 illustrations, brought out for the use of students, craftsmen and amateurs. It “aims at displaying clearly the characteristic features of the architecture of each country by comparing one style with another and by giving prominence to the special influences—geographical, geological, climatic, religious, social and historical—which have contributed to the formation of each style." Price, $12.
On Projects of Importance
WHERE COSTLY DETERIORATION AND CORROSION
MUST BE ELIMINATED, SPECIFICATIONS READ

Toch Brothers "R. I. W." Products

TOCH BROTHERS, during 80 years of exhaustive research and painstaking manufacturing care, have perfected water-proofing and damp-proofing compounds that meet every requirement in every type of structure, large or small.

America's masterpieces of construction have been protected against deterioration with Toch Brothers "R. I. W." Products.

The highest endorsement of the architectural and engineering profession has been accorded "R. I. W." Products through the many years of their unvarying high standards.

The vast Toch Brothers Laboratories are devoted exclusively to the discovery and development of products that will preserve structural materials. The resources of these laboratories together with an experienced engineering staff are at the service of architects, engineers and building supply dealers, where special materials are required or unusual conditions must be overcome.

"R. I. W." PRODUCTS for specific uses
A—Waterproofing compounds
B—Damp-proof Coatings
C—Steel preservative paints
D—Concrete and masonry finishes
E—Caulking compounds
F—Miscellaneous products for special uses

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TOCH BROTHERS, Dept. A-3
443 Fourth Ave., N. Y. (or 2600 Federal St., Chicago)

Gentlemen: I am particularly interested in further information about Toch Brothers' products for checked uses:

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Please send me complete literature on these subjects:

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LONDON

REMEMBER IT'S WATERPROOF

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
WHAT'S NEW?

Editor's Note: The American Builder does not accept payment in any form for what appears in our reading pages. In order to avoid any appearance of doing so, we omit the name of the maker or seller of any article we describe. This information is, however, kept on file and will be mailed to anyone interested; address American Builder Information Exchange, 1827 Prairie Ave., Chicago.

Invisible Extended Surface Radiators

A prominent manufacturer of radiators and ventilators has produced an "extended surface type" of radiator which is described as indestructible. It consists of a wedge shaped, aluminum alloy core, cast in one piece. Pure aluminum plates are driven onto this core and form an intimate metal contact with it, insuring excellent conduction of heat from the core walls to the extended aluminum heating surface.

Invisible Radiators of the Extended Surface Type Mark a Forward Step in the Development of Heating Equipment.

The illustration shows the wedge core radiator section after it has been completely assembled ready to install in the sheet steel cabinet which is shown just back of the core. The latter, with the core installed in the position indicated by the arrow, forms a complete invisible radiator for installation in the wall or partition.

This radiator is completely assembled before leaving the factory and is placed in the wall and connected to supply and return pipes in the same manner as the ordinary cast iron radiator.

Small Spray Painting Units

Two new spray painting units have recently been brought out by a leading manufacturer of spray painting equipment. They are especially designed for small jobs and the contractor will find them useful and economical in finishing millwork and special furnishings which are furnished in the white. They will do clean, smooth work in a fraction of the time required for application with a brush.

The first of these units is hand pump operated outfit consisting of a hand pump, tank with gauge, eight-foot hose and sprayer with ½ pint jar, forming a complete lacquering unit ready for operation. Additional jars, with screw covers can be supplied so that a separate jar will be available for each color to be used.

The other unit is electrically operated. It can be plugged into any lamp socket and is then ready for operation. It consists of a 1/6 horsepower compressor with a 110 volt, A.C. motor, gauge and fittings, a ½ pint sprayer, 12-foot hose and couplings and 108 feet of masking tape. If desired, it can be supplied for 110 volt, D.C. current at a small extra charge.

With these units it is possible to accomplish shading, blending decorating, stippling, veiling effects and stenciling as well as plain painting and lacquering.

"Jimmy-Proof" Rim Latch Lock

The illustration shows a rim latch lock set which is described as being "jimmy-proof." It embodies the clutch principle for which the company manufacturing it is well known. The front case interlocks with the strike so that both are inseparable when the door is closed. A lock of this type saves time and expense in installation and the full strength of the door is retained. It removes the need for accessory locks, saving the cost of that additional protection and eliminates the repair and replacement of mutilated doors.

Constructed as a single jimmy-proof bolt, it serves as a dead bolt and latch by reason of its latch control. The exterior knob is securely fastened to the escutcheon and cannot be pried off or worked loose. The escutcheon is firmly fastened by machine screws from the inside, eliminating wood screws on the outside, which adds to the security and attractiveness of the set. It is made of solid bronze, including cast bronze knobs and trim, and may be had in trims of various designs and furnished to match all standard and special finishes.

Either This Electrical or a Hand Pump Outfit Is Now Available to Anyone Who Requires a Small Spray Painting Unit.

This Lock Is Built on a Clutch Principle and Is Said to Be Safe Against Opening by Means of a Jimmy.
You can use one standard frame for every wall with

Andersen FRAMES

Whether you are building wood siding, stucco, brick veneer, or solid masonry buildings you need buy only one kind of window frame—the Andersen standard frame for a stud wall.

Don't you see the immense advantage of this in time, money and convenience? Your dealer has these Andersen Frames in all sizes. You can get immediate delivery of the sizes you want and then use these standard frames in any kind of a wall.

Changing the frame is A. B. C. for any carpenter. We will be glad to send you literature explaining the simplicity of this conversion and other reasons why conscientious contractors everywhere are insisting on Andersen Frames.* Fill out the coupon below.

*Look for the Andersen Trade Mark on every frame.

ANDERSEN LUMBER COMPANY
Box 2106, Bayport, Minnesota.

Please send me without cost or obligation the material checked in squares on this coupon.

□ Set of illustrated folders describing construction and uses of Andersen Frames.
□ "How to Make Your New Home More Comfortable"—an illustrated booklet of interest to all home builders.

Name
Business
City
Name Lumber Dealer

Street Address
State

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
An Ironing Board for Every Room

Hotel men have found that it is impossible to keep hotel guests from pressing clothes in their rooms and using the table for an ironing board. The result is that many pieces of furniture are ruined and much expense refinishing is necessary. It is a serious problem for hotels and even for apartment house owners, but it is a problem that is easily solved by the installation of ironing boards like that shown in the photograph. Such a board in every room makes a better and more convenient place for pressing than the table top and saves the table. The original cost is not great and the saving on refinishing bills is an important item.

This handy little board can be placed on the back of any closet door by means of six screws or it may be attached to the springs of a disappearing bed. There is a fastener at the large end and at the other end a hinged leg. When the board is lowered the leg drops into position naturally and supports the board firmly. The board is 41 inches long and 11 1/2 inches wide at one end, 8 1/2 inches at the other, big enough for the pressing of any sort of clothes.

Rough Textured Wall Covering

Rough plastered walls, now so popular, when in their original state or done with the different plastic materials, can never be papered without first replastering or resurfacing the walls. In producing the wall covering shown in the accompanying illustration the manufacturers state that they had in mind a modern craft design particul-
Why push the extra weight of wide-blade saws?

Just think how much of your sawing is in light materials, and how much easier your sawing would be if you used DISSTON LIGHTWEIGHTS

the modern saws for modern sawing. Balance, hang and "feel" just as you like them. The same patterns you have been accustomed to—No. 7, D-8, No. 16, No. 12, etc., narrower and lighter than in the models made for heavier work.

The illustration below shows the difference in width between a regular Disston D-8 and the new Disston Lightweight D-8.

Ask your dealer to show you these easier-working saws.

---

You will want these new saw files

You want saw files with the right bite, cut, and steel—files of Disston quality.

But never until now have you been able to get files such as the new Disston Special Extra-Slim Blunt Saw Files.

No taper, but the same thickness from tang to end, giving a level, uniform stroke.

File "finds its bearing" against the tooth more quickly; extra-slim, so you can see just where and how the file is cutting.

Special cut, with plenty of bite, which cuts smoothly, lasts longer.

Made of the same tough Disston Steel that Disston puts into the files used in making Disston Saws.

Your own test will prove to you that these new Disston Files will outwear two ordinary files. You can get them now at the store where you buy your Disston Saws.

HENRY DISSTON & SONS, Inc.
Makers of "The Saw Most Carpenters Use"
Philadelphia, U.S.A.
Complete Home Gymnasium

Here is a home gymnasium, combining all the essential gymnasium equipment, furnished complete and ready to set up in the home for the benefit of the health of every member of the family. It requires no further equipment to complete, no electrical connection or motors are necessary. It occupies a space 7½ by 9 feet and 7½ feet high. For smaller spaces the side extension braces can be eliminated and overhead braces used against the ceiling, taking a space only about 2½ by 6 feet. This means that it can be set up and used in a spare room, basement, attic, garage or corner of a large room.

Here is a Complete Set of Gymnasium Apparatus, Suitable for Use in the Home, Which Will Benefit the Health of Every Member of the Family.

The apparatus includes a rowing machine, chest weights, punching bag, chinning bar, parallel bars, reducing apparatus and other gymnastic equipment. It is suitable not only for homes but also for camps, community centers, hotels, welfare rooms, clubs, churches, schools, hospitals, bathing beaches and playgrounds, fire and police stations and many other similar places. All parts, except the punching bag, are noiseless in use and will disturb no one. The frame and parts are of tough malleable iron. Except the chest weight cords and punching bag there is nothing to wear out. It is possible for three people to use the apparatus simultaneously and the chest weights may be used from any of the four sides.

Concrete Wall Building Machine

A NEW, concrete wall building machine has recently been placed on the market and has demonstrated its remarkable efficiency in the construction of either solid or hollow, reinforced walls of various thicknesses. This machine is designed to build concrete walls of all designs without the use of forms. Its simplicity and great working speed make it an exceedingly economical means of constructing heavy, load bearing, fireproof walls.

In using this machine tamping is almost entirely eliminated. The operation consists of merely filling the machine with concrete, raising the lever, which compresses the concrete into a solid mass and also moves the machines forward, and lowering the lever again before refilling, when the process is repeated. All the concrete is released under pressure and one man can easily handle the operation.

Ordinary reinforcement can be used with this type of construction and the machine can be changed from one size of wall to another without changing any bolts. The price of the machine is very moderate and the economy of construction which it makes possible will very quickly return the first cost of the machine.

+ New Simple Floor Machine

The simplicity of the floor machine illustrated here should make it interesting to contractors as well as to home owners, stores, clubs and institutions. All moving parts can be inspected readily without taking the machine apart. The ½ horsepower motor is mounted with four bolts, to an aluminum casting, in a horizontal position. A small pinion gear on the motor shaft meshes with the bevel gear and the spiral, steel, bevel gears are located in a cast aluminum gear housing. This also is bolted to the large aluminum casting on which the motor rests.

The gear housing has an aluminum cover which prys off easily and permits instant inspection of the gears and the quantity of gear grease. Ordinarily it is necessary to replace the grease only once every six months. The use of the steel bevel gears makes the machine noiseless in operation and permits it to be used for both scrubbing and polishing of floors without any annoyance to those about. The inserts at the upper left shows the various brushes used.

This Simple Floor Machine Is Suitable for Scrubbing, Polishing and Removing Varnish. The inset at the upper left shows the various brushes used.
The exceptionally deep fire box permits heavy fuel charges, gives ample space for proper combustion, and makes long firing periods possible. Long fire travel promotes maximum heat transfer, boosts efficiency. A thick layer of rock wool insulation decreases heat loss.

GOOD LOOKING

BUT AFTER ALL, ITS MAIN JOB IS HEATING!

COLOR helps to sell a boiler in the showroom, helps to lift it from the drab and commonplace. Hence the durable, dirt-defying empire green finish, with trimmings of glossy black, on the National Jacketed Boiler. It's a fine looking unit—there is none better.

But, after all, a boiler's job is to keep the building warm—not just to add snap to the base-
"Certified by Centuries of Service"

CERTIFIED by Centuries of Service," the prize winning slogan adopted by the National Lumber Manufacturers Association, applies particularly to Shevlin Pine. For centuries, Pine like this has proven its worth as the nation's building material.

Colonial housewrights recognized the workable qualities of Pine and employed it to produce attractive woodwork. Many of the homes they built are still standing today and stamp Pine as the economical building material in the long run.

Today it is Shevlin Pine

Today Shevlin Pine is the ideal building material. Its close, fine grain and uniformly even texture work under tools with a willingness. Nails feel at home in its close fibre and fine texture. They readily penetrate this wood even at the very edge without splitting it. The fibre closes in, grips the nails tightly and the boards stay put.

The nation's oldest homes testify to the ability of Pine to withstand centuries of abusing weather.
A New Source of "Old Fashioned" White Pine

There is no shortage of quality Pine lumber. Shevlin has sufficient Pine holdings in selected districts to meet the demand for decades.

The new Shevlin Northern White Pine mill at Blind River, Ontario, will supply 100,000,000 feet of lumber yearly and 90% will be exactly the same species of Pine used in colonial days.

The stand is said to be the largest virgin tract of Northern White Pine on the continent. Selective logging and scientific reforestation promises an indefinite supply.

Specializing in Pine

When you select Pine make certain that it is produced by specialists as there are many kinds and many sources. For more than forty years the Shevlin interests have logged and milled selected Pine for all purposes.

You can secure Shevlin Pine from leading lumber dealers. There are five varieties: Shevlin Pondosa Pine, Shevlin California Sugar Pine, Shevlin Northern White Pine, Shevlin Norway Pine and Shevlin California White Pine.

Use Coupon for Booklet

The coupon below is for your convenience in obtaining "Specify Shevlin Pine." This thirty-two page booklet is full of information about Pine—its uses, characteristics and physical properties.

Shevlin, Carpenter & Clarke Company
903 First National-Soo Line Bldg., Minneapolis, Minn.
Chicago Sales Office: 1866 Continental & Commercial Bank Bldg.
San Francisco Sales Office: 1028 Monadnock Building.
Toronto, Ontario Sales Office: 606 Royal Bank Building
Sold in New York by N. H. Morgan, 1207 Graybar Bldg.
Small Spray Painting Outfit

This Portable Outfit Makes the Spray Method of Painting Available Even Where Only a Small Amount of Painting is Done.

New Type of Lead Headed Nail

A Nail for Use with Sheet Steel and Other Types of Roofing, with a Lead Head That Will Not Come Off.

Steel Milk Service Cabinet

Here Is a Milk Service Cabinet Which Is of Steel Construction, Cork Insulated and Protected Against Odors.

What's New?

N0 longer are the advantages of spray painting limited to the larger jobs because of the size and cost of the spray painting equipment. The portable outfit shown here makes this quick, easy and superior method available for all kinds of work where there is only a limited amount of painting to be done. It is suitable for applying paints, lacquers, varnishes, enamels, etc., to radiators, wicker and ordinary furniture, screens and hundreds of other objects.

A spray outfit for such purposes must often be operated by persons who are inexperienced or at least not specialists and therefore must be simple and reliable. For this reason simplicity has been the basic principle in the design of this outfit. It comes complete so that one need only connect the compressor unit to an electric socket, place paint or finish material in the container and, with a light pull of the trigger on the gun, a perfectly atomized round or conical spray responds.

The compressor unit is light in weight and is mounted on a castor base, making it easy to move about. The spray gun is designed to give a smoothly applied coat of paint, varnish or lacquer. It is built along sturdy lines of construction, such as used in this company's standard spray guns and will operate with a minimum of air pressure. The body and handle are a single piece, aluminum alloy casting and the adjustable nozzle head, which regulates the spray, is of brass. The material container is a standard mason glass jar of one pint capacity. The simplicity of the brush permits it to be quickly cleaned for changing color or for storing, after use, without the usual necessity of taking the spray brush apart.

Steel Milk Service Cabinet

A NEW milk service cabinet design has been announced by an organization recently formed for the distribution of a number of articles used in building construction. This cabinet is said to vary in a number of respects from other devices of this kind. Being made of steel there is no longer of warping and, being finished in enamel, which is baked on, there is little likelihood of the formation of rust.

The inside of the cabinet is lined with cork, in much the same fashion as the best grade ice boxes. The cork lining is treated with creosote, a powerful germicide and disinfectant. This prevents odors from accumulating on account of spilled milk or food. Over the cork surface a coat of lacquer is placed, which prevents the odor of the creosote from contaminating the milk or butter.

A removable bottom of galvanized iron, as shown in the illustration, is used to facilitate cleaning. This serves as a drip-pan for liquids or a small piece of ice may be placed on it to keep the compartment cool and fresh. Doors on either side are beveled to insure a close, air-tight fit. When the doors are latched the cabinet is said to be virtually hermetically sealed. It is frost-proof, dust-proof and heat-proof. The cabinet can be installed in five minutes either at the side of the service door or the grade door and it is unnecessary to cut or mar the building.

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A Bath of the Future
The Combination Bath Tub

Regular Bath, Shower Bath, Seat Bath, Foot Bath, Child's Bath. All in one piece, Patented
Semi-Vitreous Porcelain and Enamelled Iron Ware

Its Advantages:

A Seat, Foot, Shower and Child's Bath, all in one.
Comfortable because the bather assumes a sitting position.
Easy operation of valves.
No grip rails needed.
Saves space. Size of Bath Tub, 44x30 inches. For tiling in recess or corner of room.

Write Us for Descriptive Booklet Giving Measurements and Other Details

Wheeling Sanitary Mfg. Co.
WHEELING, W. VA.
Manufacturers of High Grade Plumbing Fixtures

When writing advertisers please mention the American Builder
Another Weyerhaeuser trimmed square at both ends.

The Mark of 4 SQUARE Lumber

Packaged and Guaranteed

These items can now be purchased under the 4-Square label. Each carefully manufactured for the particular purpose for which it is intended.

SQUARE EDGE FINISHING LUMBER
BEVEL SIDING
COLONIAL SIDING
DROP SIDING
SOFTWOOD FLOORING
END MATCHED SOFTWOOD FLOORING
CEILING AND PARTITION
SHELVING - STEPPING
CASING - BASE - MOULDINGS

WEYERHAEUSER FOREST PRODUCTS

General Sales Offices: WEYERHAEUSER FOREST PRODUCTS, general offices, St. Louis, Missouri.

District Sales Offices: MINNEAPOLIS - KANSAS CITY - CHICAGO - PORTLAND

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE
achievement—Wasteless Lumber!

packaged ... ready to use ...

The saving in labor buys
better quality lumber

Weyerhaeuser's new 4-Square Lumber was developed to enable you to deliver a better job without increasing your costs.

FIRST, 4-Square Lumber is finer lumber in every respect. It is properly seasoned. Then it is milled to precise standards of dimension and finish. Cut to exact lengths. Packaged. Plainly labeled with the species and grade. And guaranteed by Weyerhaeuser.

SECOND, the ends of 4-Square Lumber are cut square and smooth at the mill—ready for use just as taken from the 4-Square package. All unnecessary trimming is eliminated. The saving in labor buys better quality lumber. It gives you time to do a first-class job throughout.

THIRD, 4-Square Lumber is being nationally advertised. Builders who use it will be recognized as quality builders and will be given the preference when jobs are let.

Distribution of 4-Square Lumber is now being arranged through local lumber dealers everywhere. Ask your dealer about it or if he is unable to supply it, write us.

Weyerhaeuser Sales Company
Spokane, Washington

TOLEDO • PITTSBURGH • PHILADELPHIA • NEW YORK

When writing advertisers please mention The American Builder
Saw Table for Heavy Work

A NEW, heavy-duty, saw table has been added to a well known line of portable, electric, bench woodworking machines, to meet the demand of lumber yards and building contractors for a machine suitable for their heavier work. It is a complete, self-contained, motor-driven unit that can be moved around from place to place and used right on the job or in the shop or yard.

This saw table is fitted with a two horsepower motor and will use saws up to 12 inches in diameter. The arbor is extended so as to use dado and cutter heads up to two inches in width. The table is 20 by 30 inches and is fitted with aluminum rip-ping fence and miter gauge, so that it can be used for ripping, mitering, dadoing, grooving, rabbeting and other operations. The heavy duty motor and the ball bearing saw arbor allow the use of this machine on the heaviest sawing, up to four-inch material. It will handle this work as rapidly as it can be fed into the saw.

One of the novel features of this machine is the raising and lowering of the saw arbor by the hand wheel on the front of the machine. This permits the most accurate adjustment for depth when using the machine for grooving and dadoing. The gages are also graduated so as to permit easy adjustment for cutting any width or angle, without the necessity of using a rule or protractor.

The ball bearing arbor and idler pulleys and waste packed bearings of the motor eliminate all needs for careful attention to this machine. It is simple in operation so that it can be operated by any unskilled labor.

The net weight of the complete machine, with 2 H.P. motor, is 370 pounds. The machine has been thoroughly tried out by lumber yards and contractors and is guaranteed by the manufacturer. In addition to the regular fence this machine can also be supplied with a tilting fence for bevel sawing up to 45 degrees.

An Automatic Window Closer

YEARS ago no one ever slept with a window open for the "night air" was supposed to be very dangerous to the health. Today we have learned that plenty of good fresh air, day or night, is necessary to good health and few if any of us sleep with windows closed. However, there are times, in cold winter weather, when we all hesitate to open the window before going to bed as we picture the discomfort of getting out of a warm bed in the morning into the chill of the room. It is not only a disagreeable thing to have to do but also rather dangerous for sudden chilling is one of the most frequent causes of colds and sickness.

Now, however, there has been perfected a little device which can be attached to any bed room window in 10 or 15 minutes' time, which will permit us to open the window 7, 10 or 14 inches, as preferred, and will at a definite time in the morning close the window while you still sleep, permitting the room to warm up and become comfortable before the alarm clock calls you out of bed.

This device is a simple and reliable one containing no wires or gears, merely a small, noiseless and reliable clock, and is entirely self-contained. It is small, measuring only 4½ by 4 inches, inconspicuous and neatly finished in the best enamel of attractive shade.

Boilers With Colored Casing

IN design and appearance the new boiler, for steam, hot water and vapor systems, which is illustrated here, is a striking departure. Color has become the keynote of the modern home, for kitchen, bath room and every other room. Now it is being introduced into the basement and this long neglected portion of the house is being brightened up, made cheerful and useful. This new boiler is one of the basement fixtures which now helps to provide color and to transform the basement into a play room, billiard room, den or room devoted to any of the extra needs of the home owner.

The outer casing is finished with high lustre, blue Japan that is durable, easy to clean and will not peel or crack. The doors, ashpit front and smoke-box, in other words all cast iron pots not covered by the casing, are coated with black enamel. It is as easily kept clean as any piece of furniture and will retain its beautiful finish for many years.

This new, square cased boiler, is not an experiment but an improvement over a principle that is already successful. It retains all the time tested and proven advantages of the round boiler which is manufactured by this company and with which the company has established a wide reputation for quality heating plants. In every way this new boiler incorporates the features of this company's products, and is distributed under its usual guarantee.
Get the habit

LET the buying habits of big fleet operators guide you to real tire economy. Judge tires as they do, on a cost per mile basis.

This habit will lead you to worth-while savings in operating expense, when it is "Time to Re-Tire."

Especially when you form the habit of saying "Put On Fisk"... Only a transportation specialist can advise you in the selection of the most suitable tires for commercial vehicles and the service in which they operate. Consult the nearest Fisk distributor. The Fisk Tire Company, Inc., Chicopee Falls, Massachusetts.

Listen to the "Time to Re-Tire" Boys over WEAF and 36 stations every Monday evening.
Apartment Mail Box Units

A LEADING manufacturer of built-in mail boxes has now placed on the market an automatic, unit-locking, apartment house mail box, of the type approved by the U. S. Post Office Department. These boxes are so designed as to give a large capacity sufficient to accommodate all mail including the largest magazines, and easy delivery. They have a patented locking device on each individual receiving door, operating it in connection with the master or carrier's lock. This, with the substantial Yale lock on each tenant's door, insures absolute safety of the mail.

Though a very high quality product, these boxes are available at a low price, making them practical for installation in any apartment building. They are furnished with fronts of either solid brass or cold rolled steel. The standard finish is matted gold with other finishes furnished at slight additional cost.

New Transit for Contractors

A NEW transit for contractors has been placed on the market which combines the structural features of the former instruments made by this manufacturer with a number of departures from the usual construction. The tripod plate has a corrugated edge affording a convenient handhold for setting up or taking down. The leveling head has eight reinforcing ribs and is non-cramping. The horizontal limb, of hard bronze, is 6½ inches in diameter at the graduated edge and reinforced with 24 full length, deep, radial ribs about ¾ inch deep on the under side of the limb. These ribs afford a convenient finger-hold in setting the limb to the vernier and prevent bent plates and centers even with unusually severe handling. The figures on the limb and verniers are differentiated by both size and slant to indicate the correct direction of reading.

The top plate, of hard bronze, has a triple system of reading, insuring adequate protection for the horizontal limb and rigid support for the standards. Radial ribs extend to the extreme edge of the plate, beneath and beyond the standards. Two sets of cross ribs, about ¾ inch deep, are provided, which are carried in line with the standards on the under side of the plate, serving as trusses and giving the advantage of the one-piece U-shaped standards without the disadvantages, uncertainty of fitting and unequal tension usually present in that type.

Simple Three Bag Mixer

SIMPLICITY is the outstanding feature of a new 14-S standard building mixer which has recently been put on the market by a leading manufacturer of mixers. This mixer is capable of handling a three bag batch 1:2:4:4 concrete. The accessibility of the parts which was outstanding on this company's old model has been greatly increased, it is stated.

The drum is 57 by 42 inches with large radius corners. The feed and discharge openings are 22 inches and there is ample room for handling the three bag batch. The countershaft is of high carbon steel running in Hyatt roller bearings in self-aligning boxes. The cut gears run in a bath of oil and Alemite lubrication is provided.

The power loader takes a full load without crowding and goes up in seven seconds. There is an automatic knockout on the loader. An overhead shaft is carried in self-aligning boxes and the mixer is self-sustained with the power loader, no braces are required. All control levers are at the drum end and the operator sees both power loader and discharge.

This mixer comes equipped with either gasoline or steam engine or with electric motor. The water measuring tank is 16 by 40 inches with a capacity of 32.8 gallons and is tested to 200 pounds pressure.

A Mixer Capable of Handling a Three Bag Batch in the Design of Which Simplicity Has Been the Principal Aim.
There’s Plenty of Money to Be Made in Store Front Installations

Go after the store front business. Many contractors have found the installation of Kawneer store fronts so remunerative that they now devote their entire efforts to this work. Your prospects are easily found — Kawneer will help you sell them.

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New Ornamental Store Fronts

The accompanying illustration shows a small section of store front equipped with a new ornamental type of metal work. The chased design seen here is now used on all the quality store front construction of this manufacturer and is an exclusive feature with this company. It adds much to the beauty and character of the store front and is in line with the modern trend of improvement in the architectural design of commercial buildings.

A New Chased Design Now Being Used on All the Quality Store Front Construction of a Prominent Manufacturer.

ANew, 1928 model mixer of well known make is illustrated here. It is described as an outstanding machine of its size because of the following features: All-steel construction, alemite lubrication (gun furnished), towing tongue, disappearing type; channel section; genuine semi-steel drum with hardened teeth; well founded cast bottom with strong steel top; lip reinforced with heavy steel rod. The frame is of steel channels with gusset plates reinforcing all corners.

This heavy construction insures longer life and enables the mixer to stand the strains of being moved about from job to job over rough roads. The machine is mounted on rubber tired, disc wheels. This tilting mixer can be hitched to the back of an automobile and hauled to another job at the rate of 30 miles an hour or better without any damage to the mixer.

Mixer Built for Hard Service

A NEW, 1928 model mixer of well known make is illustrated here. It is described as an outstanding machine of its size because of the following features: All-steel construction, alemite lubrication (gun furnished), towing tongue, disappearing type; channel section; genuine semi-steel drum with hardened teeth; well founded cast bottom with strong steel top; lip reinforced with heavy steel rod. The frame is of steel channels with gusset plates reinforcing all corners.

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Combination Sink and Clothes Washer

A KITCHEN sink and an electric clothes washer, combined in a single unit, that is the latest development announced by one of the leading manufacturers of plumbing fixtures. The popularity of this company's regular combination sink and laundry trays, in apartments and homes, was taken as evidence that housewives favored a sink which would serve as a kitchen sink and also as a fixture in which children's clothes, lingerie, hose and other wearing apparel could be washed conveniently. This new fixture was the result.

The enameled tub, in which the clothes washer is installed, presents an absolutely smooth surface, with no seams, cleats, bolt heads or other projections to injure the clothes. It is available in either the regular enamel supplied by this company or in a hard, acid-resisting enamel. It is easy to clean and will last indefinitely.

There is nothing complicated about the clothes washer. It is easily installed by the plumber and its operation is simple for the housewife. There is only one exposed moving part, the impeller, which does the washing. This is a smooth, one-piece aluminum casting which runs and reverses quietly. Each sink is equipped with a hand wringer, easily removable when the washer is not in use. The compartment in this fixture has many of the features which distinguish this company's line of sinks.

The sink compartment in this fixture has many of the features which distinguish this company's line of sinks. This includes a duo-strainer drain, hand or lever operated, which enables the sink to hold water without using a pan. The removable cup strainer makes it easy to dispose of food debris. A handy hose and spray is convenient for rinsing dishes, cleaning vegetables and fruit and sprinkling clothes.

The sink is eight inches deep and serves as a place for rinsing clothes when a washing is done. The back is only eight inches high so that it will fit under the kitchen window. An apron eight inches wide adds much to the fine appearance of the fixture. The legs are adjustable to the most convenient working height and the brass fittings may be had in either nickel or in chromium plate. This electric clothes washer sink is made in various combination models in addition to the one illustrated and can be furnished in white or in any of six other colors.
These Advantages Mean More Concrete Per Day

Low, wide hopper—easier to charge.
Back to charging position faster—more batches in less time.
Discharges dry or wet concrete easily and completely.
The same proven design as in Smiths that pour the world's largest projects.

ONLY a Smith has the double cone drum that requires but a short pull of the handle to discharge—and drops back into charging position in a second. The drum rides on rollers—smooth running. No punishing strains, and the batch is always balanced at the center.

Among small mixers, only a Smith has a charging hopper—a hopper that is low, wide and easy to shovel into. Men work faster, and "stay on the job" because of this easier shoveling. Because of all these Smith advantages you get jobs done far quicker—and you can do many more jobs a month.

Coolidge Dam—Muscle Shoals—Moffat Tunnel—the BIG Projects are "Smith-Mixed"
The best construction and engineering talent in the country run the big jobs. These men choose Smiths—and in small Smiths you get the same thorough mixing action, the same speed of discharge, the same smoothness and dependability that these leading construction experts have found in the big models.

A 2½-S, 3½-S, 5-S or 7-S Smith will give you more profits—in greater production, freedom from trouble and longer life.

Have a Smith THIS Year!
Let Smith dependability start working for you now—on THIS year's work. Because a Smith is the finest mixer you can buy does not mean it is higher in price. Mail the coupon for the big NEW Smith catalog No. 528, and new prices.

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Quick and Easy to Charge
Smith Mascot is the ONLY small mixer with charging hopper

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Fireplace Units Improved

There has been on the market, for some time, a fireplace unit which is designed to assure a wholly successful fireplace that draws without smoking and eliminates drafts, really warming the room without heat waste through the chimney, by means of a special feature which is found in no other fireplace. This unit has now been improved so that it gives a greater flexibility of installation and has been so simplified and production increased that the price is reduced.

This unit is a boiler-plate form which is built into the masonry of the fireplace, a complete unit up to the chimney flue which can be installed in either new construction or in remodeling. It takes the place of the firebrick on the sides, top and back of the fireplace. It has a double wall shell with a large air chamber between the walls. The inner wall is shaped to reflect the radiated heat into the room, from top, back and sides. This reflected heat is greater than can be expected from the general run of fireplaces, many of which are poorly constructed.

This Well Known Fireplace Unit Is Now Being Made to Provide Greater Flexibility of Installation.

An entirely new source of heat comes from the double walls. The outer wall prevents heat from being wasted in brick or flue. The space between the walls is a hot air reservoir with a fresh air intake and hot air outlet controlled by a register. The outlet extends forward to the face of the mantle above the fireplace opening. The intake extends back through the chimney base at floor level or to a cold air box such as feeds a furnace and draws in fresh air from outdoors. In this way the heating efficiency of a well built fireplace plus much of the action of a furnace is obtained and no heat is wasted.

With the new model of this fireplace unit it is now possible to have intake and outlet boxes of any shape or length so that the openings fit into the design of the mantle and may be covered with masonry or grilles and may be placed at the sides, in front or wherever desired. This also makes possible an inside intake, giving the same effect as recirculation in furnace heating.

Multiple Door Operating Arm

This multiple door operating arm is adjustable to a series of three or four doors folding one way. If desired, two units may be used to operate, satisfactorily, six, seven or eight doors, three or more of which fold to one side of the openings. The arm proper consists of a hinged channel extending across the top of the doors nearest the jamb. Where four doors operate, the fourth door is simply hinged to the others and is controlled by their action. All the doors operate simultaneously, as a unit, regardless of which door is being worked.

The arm requires a space of three inches above the top hinge. When the doors are open, it projects approximately the width of one door beyond the doors. The projection from the face of the door is 3½ inches. This arm is made in two sizes, one for small, manually operated doors and the other for large manually operated doors or power operated doors.

Combination Mortiser and Router

A new combination electric tool, a lock mortiser and router, has been placed on the market by a leading manufacturer. The particular distinctive feature of this tool, it is stated, is that it will cut out all of the barrel and most of the face plate of a door lock in one operation, without stopping the machine for the purpose of changing cutters or for measurements. It will cut out an ordinary inside lock in an average time of 20 seconds and, it is claimed, will mortise an average of 60 doors an hour, counting the time required to put on and take off of each door.

Another feature is that the motor can be taken off of the mortiser and converted into a separate and distinct tool, called a router. In other words, the purchaser has two tools available at the price of one, both of which can be used in most all woodworking operations, particularly where portability is desired on job construction. The work of changing the motor from router to mortiser, or vice versa, is a matter of only two or three minutes.

The motor on this machine is a powerful, universal type, for both A.C. and D.C. current, ¾ h.p., 110 or 220 volts. When operating as a router, the motor turns over a speed of 12,000 r.p.m., thus insuring perfect work in grooving and routing.

This machine is of aluminum construction to reduce the weight, equipped with Timken bearings and all refinements necessary to make a tool of this nature practical for builders.
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AND FREE BOOK "HOW TO READ BLUE PRINTS"
Show You The Way To
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Mail coupon today.
Improved Contractors Level

The new tilting level, seen in the accompanying picture, has been designed, so it is stated, to give to the contractor an unusually high grade instrument with which he can quickly, easily and accurately establish grades, obtain differences in elevation, line up and plumb columns, walls and forms for concrete and lay off the occasional angles called for in general construction work. It presents a new idea in instruments for this kind of work and combines the functions of the engineer’s transit and level in so simplified a form that the most inexperienced user of instruments can rapidly acquire proficiency in doing accurate work with it, it is claimed.

The telescope is 10 inches long and magnifies 22 diameters. It focuses 5½ feet from center of the instrument. The horizontal circle, 3½ inches in diameter, reads to five minutes. It is equipped with accurately ground and positively adjusted level vials, clamp and slow motion screw to telescope and leveling head. It has a shifting center, trivet points and is mounted on a full-sized tripod and provided with a mahogany carrying case. The total weight of the instrument is 5½ pounds and with the carrying case 10 pounds 3 ounces. The tripod weighs 9½ pounds.

New Vertical Power Stripper

Here is a self-contained vertical power stripper which is a big capacity unit for the economical manufacture of concrete blocks and tile, and embodies a number of important features. The unit is self-contained with the tamper, feeder and stripper permanently mounted in one frame. When placed in the plant it needs only one belt connection to be ready for operation.

The power strike-off is a rugged and simple mechanism of improved design, eliminating the use of clutches entirely. It is immediately reversible so that it cannot jam or break if its operation is impeded.

An unusually simple and effective method is used in applying power to the stripping mechanism. The net result is a very rapid stripping action, bringing the block to rest gently. Here all clutches are eliminated. The only part to wear out is the rope and the wear on that is remarkably slow. Replacement is simple and rarely required.

The tamp bars, arranged in a double row and dropping independently, distribute thorough tamping over the front and back of the mold box. In making two 8 by 4 by 16 inch slabs at one time, it will be found that both slabs are tamped to a uniform density.

The power feeder consists of a divided drum rotated under a hopper. This is driven by a Geneva stop. When the clutch handle is pushed in, one shot of concrete is introduced into the mold box. If the clutch handle is held down the feeder continues to feed. The feeder is set at such an angle as to prevent the adherence of concrete and the removable galvanized bottom liner makes cleaning easy.

Central grouping of control levers makes operation simple. Every lever is within easy reach of the operator without his moving. In every detail the construction is rugged and heavy. Vibration is reduced to a minimum and particular attention has been paid to the materials and workmanship on all working parts. There is little need for adjustments and the entire simplicity of the machine’s operation insures rapid and uninterrupted production.

An Improved Radiator System

In the average American dwelling or apartment building, and also in schools, hospitals, offices and other buildings, the heat loss of almost every room is more or less the function of the windows. This is especially the case in recent years since wall surfaces have become smaller, window surfaces have been largely increased and single windows are almost exclusively used.

It is a well known and fundamental fact that radiators give greater satisfaction if they are located underneath or very near to the surfaces having the greatest cooling effect. As these surfaces are, almost without exception, the windows, the idea arose to make the radiators and the windows a unit whereby the radiator brackets form an integral part of the window and this solution has been worked out by one of the largest manufacturers of radiators.

Radiators installed in this way can be partially or totally recessed so that their flat front surface is almost flush with the wall. They can be installed in their permanent places immediately after the windows are set even if the walls and floors are not finished. The radiator brackets are supported by a rail which is part of the window construction itself. In this way no holes in the walls for radiator brackets have to be made, which results in a saving of labor expense.

What's New?

A Big Capacity Stripper for the Economical Production of Concrete Blocks and Tile.
Just what the builder has long searched for—a true Colonial floor of SOLID oak planks—that will not cup or shrink, and that can be laid and finished as easily and economically as strip flooring.

Possible only because Bruce planks are *CELLized, a remarkable chemical treatment which prevents distortion by moisture. Wide boards are specially susceptible to moisture and till now expensive laminating or veneering has been necessary to avoid the usual cupping. *CELLizing permits the use of solid oak planks—and being solid, the cost is greatly reduced. Blind nailed like strip flooring.

*CELLizing has the highest moisture-proofing efficiency of any treat for wood which permits the usual finishing process. As a matter of fact, *CELLizing improves the finished appearance of the floor. Also proof against wood-boring insects.

Colonial plank floors may now be figured into any flooring estimate. The modest home, as well as club houses and build-

Bruce *CELLized Oak Floor Planks

AMERICAN BUILDER (Covers the Entire Building Field)

The commonly used strip flooring, as well as Oak Floor Blocks are obtainable *CELLized.

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Points on Truck Maintenance

Part II—Brakes, Gaskets and Backfiring

FEW owners understand the manner in which brakes require lubrication, but this is an extremely important point in maintenance. It may be a matter of life or death.

Brake Lubrication and Relining

When the bearing surfaces of the brakes are not regularly lubricated, they will tend to bind, due to the action of rust and dirt. Eventually this will cause premature wear of the lining and the added friction will increase the work required of the engine. The mechanism of the brakes should be oiled regularly as well as the brake tubes which operate on the rear axle housing. All brake adjustments should be made by an experienced mechanic.

Dirt and grit in the brake lining will cause squeaking and chattering sounds to develop. The brake bands should be removed when this symptom occurs, and the lining cleaned by scrubbing with a wire brush and kerosene. Often, when the grit is difficult to remove, a mixture of powdered resin and castor oil applied to the lining will remedy this. The squeaking of brakes may be stopped temporarily by spraying water between the brake surfaces and the brake lining will usually be improved by wetting. It is important, of course, to replace the linings when they have been worn to the point where the rivet heads touch the drums.

Relining the brakes on a motor car is simple enough after the owner has once mastered the details. Do not be persuaded to invest in cheap brake lining any more than you would buy cheap rope for use on Alpine glaciers. Your life depends upon the action of the brakes and the best lining is none too good. The best will cost only a little more than the cheapest for the whole set of brakes, and the few pennies gained are not worth the risk involved. Cheap linings will also wear out much faster than the first quality. With the former, you will have to repeat the relining process often, while the superior quality will, in most cases, last an entire year.

Many defects that occur in motor car engines, when finally they are traced, show that they are caused by weak or poorly fitted gaskets. Gaskets are made of various materials, such as heavy oiled paper, asbestos, rubber, and a combination of asbestos and copper. The material used depends upon the place on the engine where the gasket is to be fitted and whether heat is present or not. Heated portions of the engine require a gasket that will successfully withstand high temperatures, and copper asbestos gaskets have been found best for the purpose.

When the parts between which a gasket has been used are separated, gaskets sometimes blow out. Their replacement is thus quite frequently required, especially when parts have been disassembled.

Look for Gasket Trouble

Leaky gaskets cause defects similar to carburetion and ignition troubles, and often lead the repairer to believe that these latter units are at fault when in reality leaking gaskets are causing the trouble. Compression will escape through a poorly fitting head gasket and lubricant will be lost if the gasket and fastening bolts are not drawn tight. Water may enter the lubricating system, the exhaust becomes noisy, and many other defects may occur that can be directly laid to poor fitting or blown-out gaskets which cause annoyance to the truck owner and often result in serious injury to the parts.

The Truck Which Is a Faithful Servant When Properly Handled May Become a Dangerous and Costly Machine if Its Brakes Are Neglected.
If You Are Planning an Investment in Truck Equipment… read this carefully

Important Facts regarding
INTERNATIONAL MODEL SD DUMP TRUCKS

THE International Model SD Speed Trucks were designed particularly for use with automatic dump bodies or hoists. They are ideal trucks for all kinds of material hauling in the service of builders.

Outstanding Performance...

In every department of the building industry the Model SD truck has established records for ruggedness and endurance. Long truck life is built into every model. Dependability under all conditions and loads is assured by exacting care in the manufacture of every component part and each individual unit.

Model SD trucks are powered by engines that are famous the world over for their excellence and fuel economy. The Model SD frames are made of hydraulic pressed steel channel sections, well reinforced with stout cross-members and angular gusset plates that provide tremendous strength.

Assured by These Features


Dump Bodies in Several Styles

Automatic or gravity type steel dump bodies and dump bodies with hydraulic underbody hoists are available for either SD-44 or SD-46. Can be furnished in square or round cornered, rattle-proof types. Swinging partitions for "batch mixes" or gate restricting devices for material spreading can be supplied.

If you are planning in investment in truck equipment, visit the nearest International Branch or dealer and ask for more information about the Model SD Dump Truck, or any of the seven other Internationals available for your business. Ask also for particulars about the "160 company-owned branch service stations."

Write direct for illustrated descriptive catalog.

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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
Democratic Convention Hall
Boasts Largest Wood Arch Roof

PRESENT day possibilities of wood construction reached the acme of realization when structural framework was completed for the great auditorium at Houston, Texas, which is being erected to house the Democratic National Convention. With a seating capacity of 25,000 persons this hall will be one of the largest in the world and possibly the most outstanding instance of its kind in the use of wood type of construction.

What is considered an engineering feat without parallel has been accomplished in the roof construction of the auditorium. Under a roof covering 80,000 square feet of floor space equal to the area of one and one-third city blocks in Houston, there are only 12 supporting posts. This was realized by the use of what is known as the "Lamella" type of roof construction which by a process of self-bracing eliminates the need for supporting columns.

The construction of the convention hall in its great size has attracted the attention of structural engineers and builders from all parts of the country. The lumber used throughout the roof and in the structural framework of the entire building is southern pine.

The Lamella trussless roof is constructed through a combination of two principles, that of the arch, and that of a network. Utilization of these two points permits the use of short, uniform pieces of lumber.

A large center span in the roof structure is 120 feet wide and 326 feet in length. It rises 60 feet from the floor level. Two side spans which connect with the center support are 76 feet in width and 265 feet in length. These three roof spans cover the area of 80,000 square feet, and form three large vaults in the general architectural scheme of the building.

The magnitude of the task of building the convention hall is revealed by the fact that 2,060 3-inch by 14-inch by 12-foot timbers went into the main vault. The two side vaults accounted for 3,738 2-inch by 10-inch by 9-foot timbers.

Arch spread is taken care of by steel rods extending across the 120-foot span of the main vault and the 76-foot spans of the side vaults.

Almost a mile of standard gauge railroad was laid within the hall. On these tracks moved the scaffolds on which the crews placing the lattice-like roof supports in place, worked. The material was hoisted up to the crews with a huge crane.

In describing the southern pine used in construction of the convention hall, W. H. O'Brien, field engineer of the Southern Pine Association, said:

"The Lamella construction was specified in long leaf southern pine and the roof is decked with southern pine shiplap. The roof construction of the interior will be left exposed because of the harmonious effect of the symmetrical, diamond-shaped network forms of the Lamella construction. This is truly a remarkable building and an example of what can be accomplished economically and satisfactorily in wood construction."

Mr. O'Brien called attention to the time required for construction of the structural framing as an outstanding example of the advantages of the lumber type of building. It was completed by actual construction time in 22 days. This is 18 days less than the building schedule called for.

Hot Bid

30 to 50 Minutes to Estimate this HOME

Check them all off

No Material List to Struggle Over.
No Sets of Blue Prints to Buy.
No Worry About Leaving Out Items.
No Wasted Time in Finding Comparative Costs.
No Doubts As to the Accuracy of Your Bids.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
Other HOLTBIDDERS Have Said

Clear and Accurate
"I received the HoltBid and found it perfectly clear to me after a few evenings' reading the HoltBidder's Instructions. I have checked it up and find it accurate far beyond my expectations." Exeter, N. H.

Uses While Learns
"I have finished about half of the HoltBid Instructions and like it very much. Already sold one house and figured several other buildings. I find in checking with houses we have completed that the HoltBid checks up very closely." Laceyville, Penna.

Most Complete
"In my fifty years of building, I have seen many estimating outfits but HoltBid is the most complete I have seen." Jackson, Miss.

Best and Instructions Very Plain
"I have been giving what time I could conveniently spare to the study of the HoltBid Method of estimating building costs and so far have found it to be the best method I have ever tried. I have not bothered yet about sending in any requests to your Service Department, because you have made your Instructions very plain indeed." Richmond, Va.

It's Great!
"I have just received my HoltBid System and wish to thank you for the layout. I think it is GREAT. I am enclosing $5.00 herewith to prove my satisfaction as my first month's payment." New York, New York.

HoltBids After 7 or 8 Hours' Study
"I had not put in over seven or eight hours learning to HoltBid before I figured a house and sold it and came out about 2% to the good." Logansport, Ind.

Your Questions

The worst job in contracting or carpentry is estimating the cost. It is not only the most tedious work, it is also the most important—because the profit is determined before the job is even started.

HoltBid is a system that guarantees greater accuracy in figuring costs than any method that has ever been developed.

There is no stumbling block on the road to success that trips more men than inability to make accurate bids.

That is why HoltBid has met with such tremendous success—thousands of men are using it.
Honest Words of Praise

Pays For Itself
"Sold four or five houses and many smaller buildings, due primarily to the knowledge gained from HoltBid Service, so already feel fully repaid for the money spent with you."
Waterloo, Iowa.

Lands Nice Jobs
"Local attorney says the HoltBid Forms were the best specifications for contracts that could be gotten. I feel that the HoltBid had a lot to do with my landing a couple nice house jobs last year."
Amery, Wis.

Even Easy For Beginners
"I sure appreciate your books because they explain in such detail that a beginner like myself should have little if any trouble to understand them."
Toledo, Ohio.

Promoted
"I want you to know that I feel the HoltBid System is largely responsible for my recent promotion."
Fargo, N. Dak.

Not Difficult to Learn
"The HoltBid is well organized and am convinced that it is practical and absolutely reliable—not difficult to master—very much pleased—in the beginning I was skeptical as I could not see how it was possible to fit different localities—now I know I shall obtain great benefits and save hours of hard, tiresome estimating which has been my previous experience."
Littleton, N. H.

Greatly Benefited
"It certainly is interesting and I feel greatly benefited already. Can see where it will make building a profession instead of a mere vocation."
Havre, Montana.

Answered Here

Sometimes a builder lets a profitable job slip through his hands because of lack of confidence in figuring the cost. He sticks to the ordinary jobs that he has done over and over.

Every table in HoltBid is based on actual figures. No approximating or averaging was done. A HoltBidder is competent to discuss building costs intelligently and snap up those chances that offer more than ordinary success.

One of Nature's laws is that no man may stand still—he either must progress or fall back. It is the natural instinct of every man to become independent and successful.

HoltBid will help you succeed because it increases your efficiency. HoltBidders have an advantage over all competitors that can neither be over-estimated or overcome.

Regardless of how much experience you may have had—how thoroughly you understand your work—you will admit you have got to keep up with modern methods in this day of keen competition.

HoltBid will enable you to make more money because it will assist you in keeping your business on the basis of service. It's the jobs that went to the other builder that gives you the feeling of failure.

After all, ability is the deciding factor in any profession or trade. There can be no success unless you know how to carry out your work as well as your fellow men.

We know that HoltBid is worthy of your investigation and that you owe it to yourself to give our method a personal trial. Order coupon on next page is for your convenience.
My Personal Guarantee

I GUARANTEE that the HoltBid Method of Estimating Building Costs will be satisfactory to you in every respect. All I ask is that you give it a fair trial, and that is the only condition. If at the end of thirty days you do not find the HoltBid Method exactly as represented, I will refund the small down payment you have made. During the thirty days of free examination it is understood that our corps of expert HoltBidders will hold themselves in readiness to answer any question, and to give you true appreciation of the great value of the HoltBid Method. In accepting your order I place my full confidence in your intentions to give the HoltBid Method a fair trial.

WILLIAM A. RADFORD, President,
The HoltBid Service Company.

PIN A DOLLAR BILL TO THIS COUPON AND MAIL TODAY

William A. Radford, President,
HoltBid Service Company,
1827 to 1901 Prairie Ave., Chicago, Ill.

I would like to give your HoltBid Method a personal trial. I enclose herewith $1.00 that you may send me the complete service on 30 days’ approval under your money-return guarantee. If I keep the material more than thirty days it is understood that I wish to continue with HoltBid Service and will pay you $5.00 per month until the full price of $85.00 has been paid. The shipment I am to receive includes all units and a year’s subscription to American Builder.

Name .................................................................
Town .................................................................State .................................................................
Street Address ......................................................Occupation .................................................................

Note:—The service must be entered in the name of the individual and not the firm.

(A.B. 6-21)

(Without the American Builder, we shall deduct $1.00 from the total purchase price. If you already are a subscriber, we can readily extend your subscription for a year.)
Founder of G. E. is Honored

In the presence of more than 10,000 employes, the board of directors and a few invited guests, a bronze tablet honoring the memory of Charles A. Coffin, founder of the General Electric Company, was unveiled on May 8, at the Schenectady plant of the company. Elaborate ceremonies were arranged for the unveiling, including an address of E. W. Rice, Jr., honorary chairman of the General Electric board. The fund which made the tablet possible was established 25 years ago by the company employes. The tablet was unveiled by Miss Alice Coffin, daughter of the late Mr. Coffin.

Lendon Joins Milcor

C. LENDON, formerly purchasing agent of the United Fuel and Supply Company, of Detroit, has joined the sales organization of the Milwaukee Corrugating Company as Detroit district manager of the Fireproof Material Division. Mr. Lendon has been in the building material business in Detroit for many years and has a wide acquaintance with the trade and knowledge of building materials.

Change in Ownership

On April 30, the partnership interest of W. O. Washburn in the American Hoist & Derrick Co., St. Paul, Minn., was purchased and taken over by Frank J. Johnson, the senior partner and one of the founders of the business. The business will be continued under the same name as a corporation with the following officers: F. J. Johnson, president and treasurer; Howard S. Johnson, vice-president in charge of sales; Frederic Crosby, vice-president in charge of production.

This company has also announced the appointment of J. T. Seaver, Inc., Fairmount Building, Cleveland, Ohio, as its representative for the Cleveland district.

Appoint New York Representative

The Steel Frame House Company, of Pittsburgh, Pa., has announced the appointment of Edward Moore as its district representative in New York City and surrounding territory. Mr. Moore will make his headquarters in the New York office of the McClintic-Marshall Corporation, 39 Broadway.

New Chain Belt Director Named

The Chain Belt Company, Milwaukee, Wis., has announced the election of Robert W. Baird, Milwaukee banker, as a director of the company, to fill the vacancy caused by the death of H. O. Seymour.

A NEW Wall Covering

Lintex is a new washable wall covering built up from linseed oil, lithophone, and wood flour. It can be quickly and easily applied to any smooth wall surface. It gives uniform texture to an entire room with hand decorated, multicolored effects. Simple to repair. Easy to remove. Practically everlasting.

for Down Stairs ROOMS

There's nothing like Lintex for residences, hotels, banks, stores, apartment houses or offices. Wide variety of patterns and colors. Fine for strengthening old walls—surface cracks do not show through. Contractors and builders are enthusiastic. Send now for sample and complete information about Lintex. Address: Richard E. Thibaut, Inc., Sole Distributor, 24 W. 40th Street, New York City.
Buildings Rent Faster
sell easier—when radiators are equipped with Trico

Trico Radiator furniture transforms all unsightly radiators into beautiful and useful pieces of furniture—shelves, window seats, consoles. They are furnished in any desired color to harmonize with other room furniture.

They stop smudge. Cleaning and redecorating costs are greatly reduced, often as much as 75%.

The patent Trico humidifying waterpan concealed beneath the cover maintains proper moisture in the air, making the rooms far more comfortable and healthful. This moisture is absolutely essential in preventing furniture and woodwork from drying.

Ten years of development in radiator furniture have made Trico the leader in this field. A district manager in every principal city will be glad to consult with you and serve you. Let us estimate on Trico Radiator enclosures. No charge.

Contractors' and Builders' Franchise Plan

If you haven't received a copy of the New Trico Franchise plan, fill out the coupon now. It means money to you and there is no investment on your part. A copy of the latest Trico book of ideas on interior decoration will also be sent you on request. Simply check attached coupon.

TRICO, INC.

TRICO, Inc., Subsidiary to Art Metal Radiator Cover Co.,
1719a N. Kolmar Avenue, Chicago, U. S. A.

Gentlemen:

Send New Trico Franchise Plan.

Send estimate and Trico book on interior decorating.

Name

Address

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Western Door Manufacturers Association Organized

The announcement of the newly formed Western Door Manufacturers' Association is the most recent and one of the most important developments in the door industry and the lumber trade. The growth of Douglas fir door manufacturing plants on the West Coast has been little short of phenomenal and this group of western door manufacturers, comprising the leaders in the Douglas fir industry, has been organized in a far-sighted movement to safeguard this industry by safeguarding the buyer and user of Douglas fir doors.

It will be the aim of the new association to see that every Douglas fir door bearing the trade mark WDMA comes up to the uniformly high standard. A rigid inspection service will constitute an important department of the association work. Experienced inspectors will be maintained to travel among the various manufacturing plants, constantly watching the grades and seeing that the various firm members are adhering to the standard grade rules, as adopted by the association.

Some of the objects of the association, as set forth in the form of the articles of association, are to encourage and increase the use of Douglas fir doors in the United States by co-operative advertising; to establish uniform grades and standards of products, and to constantly improve methods of manufacture.

The general offices of the new association have been established in the Washington Building, Tacoma, Wash. The officers are: George J. Osgood, Wheeler, Osgood Co., Tacoma, Wash., president; Phil Simpson, Buffelen Lumber & Mfg. Co., Tacoma, Wash., vice-president; John E. Manley, Washington Door Co., Tacoma, Wash., treasurer; W. L. Rawn, secretary and manager.

Engine Features that provide
Better Performance—
Greater Dependability
and Economy

-at these
Low Prices
LIGHT DELIVERY
$375
Chassis Only
UTILITY TRUCK
$495
Chassis Only
Prices f. o. b. Flint, Mich.

Adjustable Valve Tappets
Chevrolet valve tappets can be easily adjusted to eliminate loss of power and acceleration during life of truck.

Large Bearing Surfaces
Exceptionally large bearing surfaces provide increased dependability, quieter engine operation, greater power and longer life.

Positive Lubrication System
Chevrolet's positive vane type oil pump insure a plentiful supply of oil to the bearing surfaces at all times.

Air Cleaner
The AC air cleaner is another motor safeguard that removes dust from the air taken into the carburetor—adding life to the motor and increasing its efficiency.

Oil Filter
The AC oil filter removes dust and grit from the oil, making fewer oil changes necessary and adding thousands of miles to the engine's life.

Crankcase Breathing System
A breathing system which clears the crankcase of vapors prior to condensation, minimizes oil dilution, and adds materially to the long life of the motor.

Thermostatic Control
A thermostat in the cylinder head controls the water circulation, assuring the proper degree of cooling for any temperature.

Completely Enclosed Motor
A complete motor enclosure protects the exterior working parts against dust and dirt—adding to the motor's life and efficiency.

AMERICAN BUILDER (Covers the Entire Building Field)
Occupy New Quarters

THE Black & Decker Mfg. Co., of Towson, Md., announces that it has secured an excellent location for its Detroit branch at 11501 Woodward Ave., and has just finished moving into the new quarters. The new office space is larger, the service station has greatly improved facilities and building provides unusual display facilities. An advertising feature is a colossal cut-out of a Black & Decker drill mounted on the roof of the building and outlined with a thin red line of fiery light. The front of the building is flood lighted and makes an effective corner.

This company also announces that it has recently made several changes in its sales force and the following men are now selling the line in the territories indicated: H. L. Balke is with the Kansas City branch covering the territory around Omaha, formerly covered by S. D. Shawgo; G. F. Parr is with the Buffalo office and has taken over the territory of J. H. Hutton; G. N. McCarthy has filled the vacancy at the Buffalo office made by H. B. Austin, who has been transferred to Chicago; J. A. Murray is working in Baltimore taking over the accounts formerly sold by Curtiss Watts.

H. B. Hazerodt has resigned as manager of the Detroit branch to take up another line of work and J. H. Walker, who has been a salesman in that territory for almost five years, has been appointed manager.

T. L. Smith Names Distributors

THE T. L. Smith Company, of Milwaukee, Wis., announces the appointment of the following distributors: The Service Supply Corporation, of Philadelphia, for eastern Pennsylvania, southern New Jersey and northern Delaware, will carry a complete stock of mixers and repairs for both mixers and pavers; the Woodward-Wight Company, of New Orleans, La., for Louisiana and southern Mississippi, will carry a full stock of mixers and repair parts; the Leland Truck Equipment Company, of Tulsa, Okla., for the entire state of Oklahoma, will carrying a complete stock of mixers.

Alpha Buys Phoenix Plant

THE Alpha Portland Cement Company, of Easton, Pa., has purchased the property of the Phoenix Portland Cement Corporation, at Birmingham, Ala. This acquisition will increase the company's production capacity to 12,500,000 barrels yearly. The plant which was built in 1926 is well designed and modern in every respect and has ample reserves of material whether it is operated at its present capacity or increased in size. It is so designed that an increase of 50 per cent in capacity can be readily and economically made.

Unusual Service for the Contractor

Ryerson combined service on all steel products saves time, money and trouble

The Special Contractors and Builders Division of Ryerson Steel-Service is without parallel in the building fields. This department has its own warehouses and provides complete service on all reinforcing for concrete, Steel Joist, Metal Lath, Steel Sash, and all the various steel building products are also included.

In addition, structural, bars, plates, sheets, rivets, bolts, wire, etc., are furnished from the general steel departments. Trench braces, jacks, electric drills, and hundreds of other tools needed on every job are supplied by the machinery and small tool departments.

Contractors use the Ryerson Warehouses as if they were their own. Reinforcing steel, lath, sash and other miscellaneous materials are kept under cover until they are ready to use each item. Delivery is according to their schedule.

Large fleets of trucks and private switch tracks help provide service unequalled by any other source of supply.

All types of jobs are figured and lump sum or pound price quotations prepared.

Write for Complete Information.

JOSEPH T. RYERSON & SON INC.

RYERSON REINFORCING-SERVICE

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
The Frames That Make Friends for Dealers

The customer who buys Bradley-Miller frames from you becomes a permanently satisfied customer who knows from experience that the products you sell deliver satisfaction.

The customer who doesn’t know a good frame from a bad one today will know in six months or a year. With Bradley-Miller frames, he will still be your friend.

The genuine Michigan White Pine we use insures durability and freedom from splitting, warping and rotting. The result is frames that stay straight and true and make tight, weather-proof windows and doors.

Write for the Bradley-Miller Booklet

BRADLEY-MILLER & CO.
Marquette Street,
BAY CITY, MICHIGAN

Lehigh Holds Testimonial Dinner

A TESTIMONIAL dinner was recently tendered by the Lehigh Portland Cement Company, at the Engineers’ Club, New York City, to the educational and industrial leaders who have co-operated with this company in its dealer program. This program, which has been under way for several months, consists of aiding building material dealers throughout the country, both those who handle Lehigh products and those who do not, through scientific investigation of their most difficult problems.

The Lehigh Portland Cement Co. Entertains Educational and Industrial Leaders Who Have Aided in Its Dealer Help Program.

Hundreds of dealers have been interviewed on each problem, averages compiled and conclusions deducted. Practical solutions reached by progressive dealers are explained in detail, while special articles are written by leading “outside” experts on each subject. The total findings are then published in attractive illustrated books and distributed, free of cost, to thousands of dealers in every part of the country.

Thus far “Delivery Costs” and “Credits and Collections” have been treated in this way. Other subjects yet to be investigated include “Advertising,” “Specialties” and “Yard Layout.”

At the speakers’ table, at the testimonial dinner, were Dr. James C. Egbert, Director of the Columbia School of Business; Professor Hugh Agnew, Professor of Marketing, New York University; Dr. H. K. Nixon, Director of Advertising Research, Columbia School of Business; Mr. Ernest I. Kilcup, Director of the National Association of Credit Men; Mr. F. W. Lovejoy, Sales Manager of the Vacuum Oil Company; Mr. Fred Cyr, Credit Manager of the United States Rubber Company, and Mr. H. B. Anderson, of the Seaboard National Bank.

Take Over Steel Fixture Business

THE Northwestern Expanded Metal Co., 407 S. Dearborn Street, Chicago, has recently taken over the business of the Federal Steel Fixture Company, of Chicago, and will market the latter company’s line of high grade steel lockers, steel shelving, bins, racks, blue print cabinets and other steel equipment, under the trade name “Federal-Norwest.” The Northwestern Expanded Metal Co. has in the past been identified exclusively with the manufacture of expanded metal products. Taking over of the Federal business is in line with the trend of the times which indicates the growing possibilities afforded by the increased manufacturing, engineering and promotional facilities now available, the line should prove exceedingly interesting to dealers.
The BIGGEST SAVINGS in the BUILDING INDUSTRY can be made in HAULAGE

Dissipation of profits through unregulated haulage and unknown delivery costs is the biggest drain on business today. Haulage too often remains haphazard, despite the fact that modern efficiency methods have been applied to every other department of commerce and industry.

Federal's Certified Earning Ability has done more to put haulage and delivery into the same known controlled class with rent, payroll, etc., than any one thing in the transportation field. With 43 chassis, one to 7½ tons, and more than 100 body-and-chassis combinations, Federal offers this Certified Earning Ability to every branch of industry concerned with the moving of merchandise or materials.

ASK FOR
The Federal System of Truck Expense Control
20,000 business men have received this simple key to more economical truck operation. It gives absolute control of every item of haulage or delivery expense. You need it, regardless of how many or what make of Trucks you own or what cost accounting system you use. It's free—write for it.

THE FEDERAL MOTOR TRUCK COMPANY, 5842 Federal Ave., DETROIT, MICH.
"Leading Specialists in Commercial Transportation"

FEDERAL TRUCKS
ALL SIZES—FOURS & SIXES

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
Cool Nights In Hot Weather

Cabot’s Quilt and Stained Shingles used.

When you are building your own or someone else’s summer home, give comfort the right of way.

A roof, red-hot after a long day under the sun, will spoil the comfort of any sleeping quarters.

A roof, quickly, easily and cheaply insulated with Cabot’s Quilt will protect you against the heat, and always give you

Cool Nights in Hot Weather

Simply apply Cabot’s Quilt between the rafters.

Cut the coupon below (Roll of Quilt) and send it today for full information on Quilt.

Cabot’s Quilt
In Successful Use for Over 30 Years

FOR ADVERTISERS’ INDEX SEE NEXT TO LAST PAGE
PRODUCT OF J. D. WALLACE & CO.

Greatest Value Ever Offered

Here is a high grade machine built to take care of all cutting operations—any angle—compound meters—cutoff—ripping, dadoing—tenoning and routing, shaping, fluting, boring, sanding—practically all operations required in the shop or on the job.

Send the coupon for full description and time payment plan

Amazing low price Sold on Easy Terms if Desired

$140

Cast Iron Table 30" Extra
Cast Iron Legs 15" Extra
F.O.B. CHICAGO

J. D. Wallace & Company
136 S. California Ave., Chicago, Ill.

Send full description of Work Ace Radial Saw and time payment plan.

If interested in other individual portable machines check here

Name
Address
City
State

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
“Convenient?

Why, it works like magic!”

There’s surely no secret connected with the popularity of Higgin’s new rolling screen. It has the usual advantages of other rolling screens, with certain exclusive features of its own!

Its improved construction is based on the specialized skill of men who know their work as thoroughly as you know yours! In every detail, whether it be one of beauty or construction, this screen is a revelation of modern efficiency. There’s magic in the way it operates! And since it’s a Higgin product, you know it will continue to operate.

The coupon will bring you our new illustrated booklet on rolling screens. Mail it now.

THE HIGGIN MFG. CO.
Specialists in Screens since 1893
General Offices: Washington Ave., Newport, Ky.
Kansas City, Mo., Toronto, Ont.

HIGGIN
ALL METAL
SCREENS

The Higgin Mfg. Co.
502 Washington Ave.
Newport, Ky.

Please send complete information regarding your new rolling screen.

Screen that last longest, cost least -- Higgin Screens last!

BOOKS, BULLETINS AND CATALOGS FOR YOU

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

“Diesel and Oil Engineering Handbook” by Julius Ros-bloom, published by The Industrial Institute, Inc., Brooklyn, N. Y., has been revised and republished in a fourth edition. It is a practical book of instruction and ready reference on Diesel and other oil engines of both land and marine types. Price $5.

The United Hardware & Tool Corporation, 74 Reade St., New York City, has issued a new 80-page catalog, No. 40, covering its line of hardware and tool items.

Francis Keil & Son, Inc., 401-425 E. 163rd St., New York City, has issued a new 1928 catalog under the title “Miscellaneous Hardware and Electrical Goods.”

The Honeywell Heating Specialties Co., Wabash, Ind., offers a pamphlet illustrating and describing its various “Automatic Controls for the Oil Burner.”

Standard Sanitary Mfg. Co., Pittsburgh, Pa., offers two pamphlets in full colors, illustrating its line of colored bathroom fixtures and furniture.

“A City Planning Primer” has been published by the Advisory Committee on Zoning, appointed by Secretary Hoover, of the U. S. Department of Commerce, and may be secured from the Superintendent of Documents, Government Printing Office, Washington, D. C. Price 5 cents.

The Celotex Company, 645 N. Michigan Ave., Chicago, has issued a pamphlet containing a report made by the Investigating Committee of Architects and Engineers on an investigation of the manufacture of its Acousti-Celotex and inspected installations.

The Kolstad Mail Box Co., 318 West First St., Duluth, Minn., offers a new catalog of its built-in mail boxes containing a number of additions and improvements in the line.

The Chamber of Commerce of the United States, Washington, D. C., has published a report compiled by the Civic Development Department entitled “City Planning and Zoning Accomplishments.”

The Richards-Wilcox Mfg. Co., Aurora, Ill., has brought out a new catalog No. 44 under the title “Distinctive Elevator Door Hardware which is very completely illustrated with installations and diagrams and contains complete information.

“Second Mortgages and Land Contracts,” by Samuel N. Reep, published by Prentice-Hall, Inc., 70 Fifth Ave., New York City, is described by the publishers as “the first complete, authoritative and thoroughly comprehensive treatise covering every phase of second mortgage financing.” Price, $5.


“Cutting the Traffic Knot” is the title of a booklet published by the Universal Portland Cement Co., prepared from data issued by various state highway departments showing the facts on traffic congestion and methods of relieving it.

The Indiana Limestone Company, Box 757, Bedford, Ind., has issued a circular under the title, “The Vogue for Color—As Reflected in Building Stone.”

Geier & Bluhm, Inc., 670 River St., Troy, N. Y., offers a pamphlet describing its convertible level, Model 45, for contractors and builders.
Not Just
Mortar Color
but the best!

When you select materials, mortar colors for example, to go into the homes you build, you have but one choice. You may select "just any" colors without reference to trade name, reputation or proved worth. Or you may select Clinton Colors, because you believe that reliability, uniformity and permanence are factors worthy of consideration.

For more than forty years builders and architects have looked upon Clinton Mortar Colors as they would upon a trusted friend—a friend always reliable and long since proved worthy of their faith.

Complete information on Clinton Mortar and Cement Colors and their use will be sent upon request.

CLINTON METALLIC PAINT CO.
568 Clinton Road
Clinton, New York
Books, Bulletins and Catalogs for You

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

The W. S. Dickey Clay Mfg. Co., 200 New York Life Bldg., Kansas City, Mo., has prepared a small folder on the new Dickey Round-Square flue lining, a new product with a square exterior for easy setting and a round interior for efficient draft.

The Adenisite Company, Inc., 116 W. 39th St., New York City, offers a folder on its product, Adafint, an applied hardener for cement floors, in crystal form.

The Murray Tile Co., Inc., Cloverport, Ky., offers a folder illustrating in colors its Murtico quarry tile.

The American Enameled Products Co., Chicago, presents a folder in colors illustrating its line of bathroom cabinets in various colors.

The Fairbanks Company, New York City, publishes a catalog covering its complete line of wheelbarrows for all purposes.

Chas. Morrill, Inc., 100 LaFayette St., New York City, offers two folders, one a catalog sheet showing its various sawsets and punches and the other, a reprint of an article on "How to 'Fit' or Joint, Set and File Saws."


The Laco Gas Burner Company, Griswold, Iowa, offers a group of circulars describing the gas, or oil, burners which it manufactures for heating purposes.

"Dry-Ice—A New Refrigerant," is the title of a new booklet published by the Dry-Ice Corporation of America, 50 E. 42nd St., New York City, describing the manufacture and use of this new refrigerant, frozen carbon dioxide gas.

The Concrete Engineering Co., 1141 N. 11th St., Omaha, Neb., has published a booklet under the title, "Reinforce—With Ceco Welded and Triangle Fabric," covering the use of its product in reinforced concrete.

The Bell & Grissell Company, 3000 Wallace St., Chicago, offers a folder illustrating and describing its indirect water heaters.

The Nash Engineering Company, South Norwalk, Conn., offers its Bulletin No. 71 on the Jennings vacuum heating pump, manifold type, for return line heating systems and other vacuum work where liquid is handled with gas.

"Spray Coating—Its Hazards and Safeguards" is the title of a booklet published by the Hartford Accident and Indemnity Company of Hartford, Conn., which is the result of an investigation into the health and property hazards connected with the use of spray lacquers.

"The Story of Rope" is a new booklet published by The E. T. Rugg Co., Newark, Ohio, telling of the process of manufacture of rope and twine and of the Rugg rope products.

"Trade Ethics and Marketing Policies" is the title of a new booklet published by the Indiana Portland Cement Co., Indianapolis, Ind., a subsidiary of the International Cement Corporation, of New York. The title applies to the ethics and policies of this company in the selling of its Lone Star cement.

The Ingersoll-Rand Company, 11 Broadway, New York City, offers a condensed catalog describing such of its products as portable compressors, rock drills, paving breakers, hoists, clay diggers, pneumatic tools, hose, steel, etc.

The General Insulating & Mfg. Co., Alexandria, Ind., offers two booklets under the titles "Insulation—Rock Wool Cork" and "Insulation—Rock Wool Flexfelt." These cover the subject of insulation and the qualities of these products in a most thorough manner.

Illustrating the Comparative Hiding Power of Brushed and Sprayed Coats of Paint

The hand brush puts on an uneven coating and the thin paint in the grooves wears away quickly. . . . The DeVilbiss Spray Gun applies a strong, even paint film that covers perfectly, that is durable and that wears down uniformly.

(Illustration shows same paint applied on identical surfaces —Photograph is unretouched and greatly reduced in size.)

One brushed coat — One sprayed coat

Devilbiss
Spray-painting System

New York  Chicago  Philadelphia  Indianapolis  San Francisco

Pittsburgh  Cleveland  Cincinnati  Milwaukee  St. Louis  Minneapolis  Windsor, Ontario
That is the answer to the prospective home owner's query. A fireplace that actually functions as a heating unit presents a great appeal to all home lovers. We manufacture a complete line of fireplace equipment, from gas logs, gas heaters, andirons, portable fireplace baskets to dome dampers, etc. All are fully guaranteed. We invite you to inspect our line. Coupon below brings our illustrated catalog.

The Ohio Foundry & Mfg. Co.
Steubenville, Ohio
Established 1846

Yes
That is the answer to the prospective home owner's query. A fireplace that actually functions as a heating unit presents a great appeal to all home lovers. We manufacture a complete line of fireplace equipment, from gas logs, gas heaters, andirons, portable fireplace baskets to dome dampers, etc. All are fully guaranteed. We invite you to inspect our line. Coupon below brings our illustrated catalog.

Better Work—More Money—No Fatigue

When the 20th Century Woodworker is in use, a steady flow of accurate work is produced. More money is made, because of augmented production facilities. Back-breaking fatigue vanishes, because of the ease and smoothness of 20th Century operation. This is real efficiency.

This sturdily-built, ball bearing machine outstrips all others in performance. Gas or electric motor. There is no machine like it. Others are merely similar. Investigate it, now.

20th Century Wood Worker

THE LARGE ILLUSTRATION ABOVE SHOWS GAS MOTOR.

Electric motors furnished A. C. 2-phase or 3-phase, 110, 220 or 440 volts. Single-phase connected for either 110 or 220 volts. D. C. 110 or 220 volts. Information on other motors cheerfully furnished. This is the best combination woodworker that can be driven by electricity or gasoline.

MAIL THIS COUPON NOW

When the 20th Century Woodworker is in use, a steady flow of accurate work is produced. More money is made, because of augmented production facilities. Back-breaking fatigue vanishes, because of the ease and smoothness of 20th Century operation. This is real efficiency.

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MAIL THIS COUPON NOW
PLASTERING IS 90% OF THE VISIBLE INTERIOR

LIME — best for PLASTER

Give the plasterer an opportunity to display the artistry of his craft. He can give you the highest type of lime-plastered walls and ceilings for as little as 10% of your total building appropriation. He knows the superior working qualities of lime plaster over the many substitutes . . . Specify Gibsonburg Lime, Ohio’s Super-Finish.

Gibsonburg Finishing Lime

THE GIBSONBURG LIME PRODUCTS CO., Gibsonburg, Ohio

Books, Bulletins and Catalogs for You

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

The Sheet Steel Trade Extension Committee, Oliver Bldg., Pittsburgh, Pa., has published a new booklet, “How to Lay Steel Roofing.” It is intended for free distribution to farmers and is described as the first booklet of its kind ever produced. There is also available from this organization another booklet entitled, “Steel Roofing—Its Use and Application.”

“The Key to Firesafe Homes” is the title of a new booklet published by the Portland Cement Association, 33 W. Grand Ave., Chicago, presenting the advantages of concrete construction for homes.

The Certain-teed Products Corporation, 310 S. Michigan Ave., Chicago, has issued a folder illustrating a number of the important buildings in which its linoleum has been used, and entitled “Big Business Eliminates Guesswork from Buying.”

“Steel Doors Made Silent” is the title of a new folder prepared by L. Mundet & Son, Inc., 461 Eighth Ave., New York City, illustrating the construction by which this company eliminates vibration and annoying sounds from its doors.

The Orna-Metal Corporation, Carolina and Fourth Sts., Buffalo, N. Y., offers a folder of “Detail Specifications of Orna-Metal Lavatory Enclosures.”

The John S. Tulley Ladders Co., Inc., 100-122 Second St., Watervliet, N. Y., offers a folder illustrating its various ladders, scaffolding, trestles, window jacks, brackets, etc.

Bommer Spring Hinges

are the best to use

Millions and Millions of People are Pushing Them whenever they open a door

Follow the line of least resistance

Use Bommer Always They are the best

Bommer Spring Hinge Co., Brooklyn, N. Y.
"25 doors a day!

"WITH this Carter Door Set I can fit, hang and lock a door complete in 20 minutes easy. This whole outfit has paid for itself in less than three weeks.

"This Carter lock-mortiser, f'rinstance. It clamps on and centers itself, no matter how thick the door. Give me two minutes and I'll have this lock put in! Why it only took ten minutes to fit the door with the Carter Power Plane.

"Tired? I should say not—the heaviest tool of the three is this 23-pound lock-mortiser and it clamps on the door. The power hand plane weighs 9½ lbs., and the butt-router only 5 lbs. You don't need weight; it's the 18,000 r.p.m. of the motor and the patented Carter blades that do the work—fast and smooth."

Write for details and Folder A.

R. L. CARTER CO., Inc.
1281 CHESTNUT STREET
PHOENIX, NEW YORK
Branches in Principal Cities.

Gimco ROCK WOOL

The low cost and ease of application of Gimco Rock Wool gives it preference over any other insulation. It not only insulates against cold and heat, but also against Fire, water, vermin and Sound.

This silica rock is found only at one place—Alexandria, Ind., U.S.A.

Three Convenient Forms

1. LOOSE ROCK WOOL—Light, fluffy and easy to handle. Packaged in handy 50-pound bags.
2. FELTED ROCK WOOL (Flexfelt)—Easy-handling, blanket-like form, fabricated between metal lath, providing stucco or plastering base.

Ask your building supply dealer about Gimco Rock Wool. If he doesn't handle, write us direct.

Insulation

Send for this New Book on Insulation

General Insulating & Mfg. Co.
ALEXANDRIA, IND.

Send me copy of free book on Rock Wool Insulation.

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Company: _________________________
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Nearly half a century of manufacturing and distributing experience is back of Lansing Products. Buyers of Lansing equipment are assured of prompt shipment, efficient repair service and low freight rates. Send for our General Catalog.

"There is a Lansing Dealer in your vicinity"

LAN SING - C O M P A N Y
Factory: LANSING, MICHIGAN
Branches: Boston, Kansas City, Minneapolis, Chicago, New York, Philadelphia

SAMSON SPOT
SASH CORD
SOLID BRAIDED COTTON

SAMSON SPOT SASH CORD is made of extra quality cotton yarn spun in our own mills and is guaranteed to be free from imperfections of braid or finish. It is the most durable material for hanging windows. It can be easily distinguished by our trade-mark, the Colored Spots. Send for samples.

SAMSON CORDAGE WORKS - BOSTON, MASS.

"There is a Difference in Sash Cord"
**Now!**

**Only $95.00**

for this new portable **SYNTRON**

**Motorless Electric Hammer**

**HERE'S the lowest priced portable electric hammer on the market. It operates from the light socket, doing the work of ten men. Delivers 3600 powerful, speedy blows a minute, easily plowing its way through masonry, brick, stone, tile or marble, drilling, chipping, scaling or channeling. Type MK-60, drills up to 5/8-inch diameter at rate of 21/2 inches or more per minute. Outfit consists of Hammer, Controller, 50-ft. Extension Line, Drill Chuck, Draft Pin, 1 pint oil, carrying case and instruction card.**

**Price—net**

Only $95.00

**SYNTRON COMPANY**


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**Put THRUSH SYSTEM on your Sales Force!**

**THE HEATING plant you put in the homes you build has much to do with the ease with which the sale may be made. Nothing is quite so important in the enjoyment of a home as good heating. Hot Water heat is the best form of heating for homes and when it is Thrush equipped, it is the most economical and entirely satisfying method of heating known. Thrush Equipment saves 20 to 40% of the fuel and maintains healthful, uniform temperatures automatically.**

**If You Remodel Homes Use THRUSH SYSTEM!**

Thrush System may be put on an old Hot Water Heating plant or a new one. It makes any hot water job work better. When you remodel a home, remodel the heating plant too—inexpensively but efficiently. Put Thrush Equipment on it and you may save yourself the cost of having to put in a new heating plant.

You can build a reputation that will increase your prestige as a builder of homes—and your profit too—by adopting the Thrush System of Hot Water Heating for all of your houses.

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SYNTRON CO., Pittsburgh, Pa.

Please send me complete information at once concerning your new SYNTRON Portable Hammer at new low prices.

Name
Address

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H. A. THRUSH & CO., Dept. B
Pov, Indiana

Send your booklet "Which Heating Plant for My Home?" and more information.

Name
Address
Business

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
Never a Drop of Water in This Basement—It’s Waterproofed with “ANTI-HYDRO”

The concrete basement in this building had to be absolutely dry because it contains a restaurant, also the equipment and storage rooms for the theater. In order to eliminate the slightest possibility of dampness, the entire basement was waterproofed with a plaster coat mixed with “ANTI-HYDRO.” It is permanently dry and free from the slightest suggestion of moisture. You will find “ANTI-HYDRO” extremely easy to use. Being a liquid integral compound, it mixes easily with water without the aid of skilled labor. It waterproofs, hardens, and dustproofs concrete in one operation—accelerates the set of concrete, increases its strength, and actually saves you money.

For 24 years “ANTI-HYDRO” has proved its merit on every type of concrete work. Results are guaranteed permanent. Use it on your next job.

ANTI-HYDRO WATERPROOFING G.  
265-269 Badger Ave. 
Newark, N. J.

Re-Roofing With Natural Slate

EVERYWHERE, a common sight, is warning the public of this eventual necessity if they buy a home roofed with anything but material that is known to be durable. And what roofing material is better known to have withstood the test of time than Genuine Natural Slate?

Would not, therefore, the very sight of “A Slate Roofed House” invoke exceptional interest in the mind of your prospective buyer?

Literature on our special Quarry Cleft Slate as well as standard varieties will be mailed upon request, or return of this advertisement.
GARDEN FURNITURE
for Every Purpose

The Finishing Touch that adds beauty and distinction to the home, garden, summer resort, roadhouse, playground, etc.

We manufacture EZY KLING Trellises, Palmettos, Ornamental Wood Fences, Arches of all styles, Arbors of all descriptions, Benches, Tree Seats for around any tree, Bird Houses of Decorative Design, Stepping Stones for yards, Tufta Rockeries of all kinds, Cement Garden Furniture, Fountains, and any other kind of decoration wished. Dowell system of construction used.

We will gladly help you solve your decorating problems

EZY KLING GARDEN FURNITURE CO., Inc.
1116 Lake Street
Village 7573

Please send me more information.

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

FAMOUS ACHIEVEMENT!

Here is a machine which fills a long-felt want—a woodworker to which the individual motor drive principle has been applied.

Equipped with five motors, each with its own starting switch, it provides a complete equipment of woodworking machinery without belts or clutches. It has every good feature for which the FAMOUS Woodworker has been long noted—with the additional advantages which only individual motor drive for each unit can produce.

No belts to shorten or replace when they become worn—
No clutches to adjust—
No possibility of small pieces of waste material falling into belts or driving mechanism—

All of these features are offered at a cost only slightly higher than the belt driven machine.

WRITE FOR DESCRIPTIVE BULLETIN TODAY!

THE SIDNEY MACHINE TOOL CO.
857 Highland Ave., Sidney, Ohio

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
A NEW WALL that Makes Homes Easy to Sell

Sameness has blocked many a sale. You know it's the touches of distinctive "differentness" that makes a woman prefer your property. Sani Onyx in bathroom and kitchen costs no more than commonplace materials. It means much more. New surface textures! New colors! Modern-to-the-minute. And as easy to clean and keep clean as a china dish.

Write now for a beautiful book showing installations in full color.

SANI ONYX
A VITREOUS MARBLE

Sani Onyx, the new material for walls, ceilings, wainscoting, etc., is literally "hard as flint" because it is fused from rock ingredients. It may be had in plain sheets or tile pattern slabs.

We have some choice territory available for Construction Houses or representatives. If interested, write for particulars.

MARIETTA MANUFACTURING COMPANY
80 Brookside, Indianapolis, Indiana

KIMBALL ELECTRIC ELEVATORS

Now, a Light Electric Elevator for every class of retail store, warehouses, hospitals, apartments, bakeries, mortuaries, office buildings, factories and other institutions where fast, safe, low cost elevator service is an absolute business necessity.

It meets a need for a safe, practical, inexpensive outfit for smaller business institutions. Furnished complete. Information and prices upon request.

KIMBALL BROS. CO.
989-97 Ninth Street
Council Bluffs, Iowa
Elevator Builders for 45 Years

We have some choice territory available for Construction Houses or representatives. If interested, write for particulars.

MARIETTA MANUFACTURING COMPANY
80 Brookside, Indianapolis, Indiana
Saves 5 Men's Labor . . .

And then the Nason Construction Co., Swampscott, Mass., follow this up by saying:

"We cut sills, joists, studding, braces, frames, rout studs for belt, make Jack rafter cuts, all angle cuts of various degrees, rout for stair risers and treads, make window frames, use the machine in cutting flooring, trim and in fact from the commencement of the construction to its completion.

"We figure that we save 5 men's labor by using the DeWalt Wonder Worker and advance the completion of our job fully 25% sooner than we could without it."

Need we say more? Except that two men can easily carry it about—has direct drive—and is fully guaranteed, of course.

Let us arrange a DeWalt demonstration on your job. Send the coupon for details.

DEWALT
Wonder Worker
The Economy Wood Worker

Cash for Your Spare Time This Summer!

You can make lots of extra money in spare time this summer filing saws automatically with the Foley Filer. Think of the cash S. C. Moller, Long Beach, California, is making—"I file about 200 saws a month with the Foley. You are the logical man to get the saw-filing business from contractors, builders, carpenters, schools, factories, farmers, woodworking plants, and homes. File saws more than twice as fast as hand filers, and they'll cut better than ever. Get 50c or more for each saw.

Perfect Cutting Saws for Your Own Work

You'd find it hard to believe how smooth, fast and true a Foley-filed saw cuts until you've tried it! Users tell us the most expert hand filing can't compete with it. You'll get more work done with the same crew, and better work. The Foley Filer quickly pays for itself in wages saved and increased profits per job.

Foley Auto-Matic Saw Filer

Files and joints in one operation—all kinds of hand saws (retooth old ones)—band saws 5/4" to 4 1/2" wide and cross-cut circular saws 3" to 24" in diameter. Mechanically accurate work. Easy to operate—no eyestrain.

Special Offer!

You can make real cash with a Foley this Summer—in fact, all year round. Send the coupon right now for FREE. Plan telling how to start a saw-filing business of your own.

FOLEY SAW TOOL CO. Inc.
130 Foley Building, 9 Main St., N. E.
MINNEAPOLIS, MINN.

Please send FREE plan telling how to start a saw-filing business in spare time, and details about the Foley Filer.

Name: ___________________________
Street: __________________________
City: ___________________________ State: __________________________
GENERAL MOTORS predicts the biggest year in the history of its business. All of the "independent" manufacturers look to this as the greatest year the automobile industry ever had. What does this mean to aggressive contractors? More business—more garage contracts! It will pay you to keep your finger on the pulse of building conditions in your territory. When you get a prospect for a new garage, jot down the specifications (roughly) and send them to us. Our Garage Construction Department will be glad to draw up plans and quote delivered prices on steel building products. No charge, of course! Write for our Garage and Steel Catalog.

INTERNATIONAL STEEL & IRON COMPANY
Evansville Dept. 18 Indiana

INTERNATIONAL PRODUCTS
Steel Fronts Public Garages Steel Trusses
Steel Columns Steel Girders Steel Windows
Steel Ceilings Elevators Skylights
Sidewalk Lights Roof Ventilators Coal Chutes
Our Complete Stocks Assure Prompt Delivery

PUBLIC SCHOOL, DISTRICT NO. 1, CHESTER, NEW YORK, WHERE A BAD HEATING SITUATION WAS CORRECTED BY PUTTING IN BURNHAM BOILERS.

This Burnham Made a Better Than 1 to 5 Record in School Heat Saving

Four hot air furnaces and one large steam boiler couldn’t keep the big brick school building at Chester, N. Y., warm all winter. The hill-top location is exposed to every wind that blows, and near-zero days are frequent.

The Children had to be sent home day after day because the rooms were too cold to keep them in. Five members of the Board of Education said so in their letters stating facts.

Last summer two Burnham S-36-11 square boilers were put in, one equipped to burn oil, the other, as a reserve, to burn coal.

The second boiler was not used last winter. The oil-fed Burnham, fired for only a total period of 136 hours each day, kept the thermometer at 70 degrees all day on the coldest days.

You can get the facts of this installation from us, or from any of the members of the Chester Board of Education, who cordially invite inquiries from interested persons.

For descriptions, measurements and ratings, see Catalog 67.

Irvington, New York
Representatives in all principal cities of the United States and Canada

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE
Wodack Saws "Do the Work"

Model "B" for Bevel Cuts
Wodack Electric Hand Saw comes in 3 models. Model "B" has a tilting base for bevel cuts to 60°. The 11" diameter blade cuts 4½ inches; therefore has the capacity for bevel cuts on large lumber. Also has rip and depth gauges, ¾ h. p. G. E. universal motor for both A. C. and D. C. 60 cycles or less. Perfect Safety Guard. Operates from neighbor's light socket.

Write today for name of nearest demonstrator

F. L. ROGERS & CO.
23 S. Jefferson Street
CHICAGO, ILL.

FROM PITTSBURGH
"... The saw is O. K. and earned its cost on one job."
R. H. Uhlinger, Builder.

FROM NEW YORK
"... proven all that you claimed for it, and we have made a considerable saving in the cost of our jobs."
McKeown Bros. Co., Inc.

FROM WISCONSIN
"... have wished many times that the hours I spent sawing by hand could have been done with your power saw. I use it for everything—to make work easier."
Otto F. Rupnow, Wauwatosa.

FROM MICHIGAN
"... we cut rafters eighteen at a time, each operation requiring about two minutes."
C. J. Samuelson & Son,
Traverse City.

2 Tools in 1
Combination Lock Mortiser and Router
Cuts out both faceplate and barrel of a door lock in one operation without stopping. Will cut 60 doors an hour. If desired, Router sold separately. ¾ h. p. G. E. universal motor.

Accept No Substitute

Sterling

"V-formed" front braces give greatest strength and rigidity to both tray and frame.

Properly balanced barrows carry the load over the wheel. Therefore the greatest stress and weaving is at the front. Ordinary braces of flat stock or even angle iron were found not strong enough to meet Sterling requirements. Sterling designed, scientifically, a special "V-formed" front brace. It gives to Sterling barrows a strength and rigidity not found in any other barrow. They can't wobble. This is another reason why they cost less per job to use. Buy them for your next job.

Leading Hardware and Equipment dealers have them—or they can get them quickly from our complete stock warehouses at Chicago, New York, Philadelphia, Pittsburgh, Cleveland, Detroit, St. Louis.

STERLING WHEELBARROW COMPANY
Milwaukee Wisconsin

When writing advertisers please mention The American Builder
**OAK FLOORS enhance their value**

Houses laid with "Perfection" Brand Oak Flooring command a better price on the open market.

You can depend upon "Perfection." In two modern plants operated by skilled lumbermen, only the finest oak is selected. After proper seasoning and kiln-drying, it is perfectly milled and matched so that it lays smooth and stays smooth. It is graded and handled so carefully that upon arrival anywhere, it is always in perfect condition. Leading lumber dealers gladly feature this nationally advertised brand.

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**Win-Dor CASEMENT HARDWARE**

The Casement Hardware Co.
402-A North Wood Street, Chicago

**CASEMENT HARDWARE HEADQUARTERS**

221,000 families will read this ad this month

Above is shown one of a series of attractive advertisements which are appearing in House and Garden, and House Beautiful every month. Your prospects and customers know and appreciate Win-Dor Casement Hardware already—now they'll know it even better. Are you using it? Send for catalog.
Its Name is Foremost!
Its Value is Foremost!

"Herringbone"
The Best Base
For a Good Plaster Job

The reason lies in the design. Rigid reinforcing ribs spaced one inch apart lie at an angle to the plane of the sheet and act as shelves upon which the plaster rests while setting. The mesh is small—eight to the square inch—and formed to guide thin leaves of plaster through to embed all the metal. And the lath is easy to erect, being smooth, with square ends and interlocking edges, and easily handled by one man.

Genfire also manufactures various other types of metal lath, Steel Casement and Basement Windows, T-Bar and Plate Girder Joists, Duplex Steel Bridging, Steel Lintels, and other firesafe building products.

GENFIRE STEEL COMPANY
YOUNGSTOWN, OHIO
Branches in All Principal Cities. Dealers Everywhere. Member of the National Council for Better Plastering.

Consider these
Concealed Bed
facts

-and Holmes Concealed Beds Will be Your Choice!

1. Holmes Beds add extra room efficiency that appeals to women. They make renting easier and lower building costs.
2. The beauty of Holmes Beds wins the most discriminating. Cane and wood period designs in head and foot ends harmonize with finest interior decorations.
3. Holmes Beds occupy a minimum of space—only 30" required for full size. All Holmes beds operate through standard door frames.
4. All sizes—single, twin, three quarter and full width. Comfortable full coil springs.
5. Ball bearing action. Automatic safety lock and balancer. Holmes Concealed beds cannot jackknife. They are known everywhere as the easiest to operate.

Our engineering department will gladly assist you in suggesting plans adaptable to your building requirements. Write for book "BEHIND THE DOORS" showing details and newest development in the efficient use of concealed beds.

Concealed Bed Corporation
Distributors for Holmes and Marshall & Stearns Co.
58 E. Washington Street
CHICAGO

Write to-day for FREE BOOK

CONCEALED BED CORPORATION,
58 E. Washington St., Chicago, Ill.
Gentlemen—Please send a copy of the Catalog on Holmes Concealed Beds and how they solve the Extra Room problem.

Name __________________________
Address _________________________
City ____________________________
State __________________________
Name of your Architect or Contractor __________________________
Home Owner [ ] Home Builder [ ] Architect [ ] Contractor [ ]

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
The Sharpening Stone that Completes Your Kit!

THOUSANDS of carpenters and craftsmen have learned the advantages of using the Carborundum Combination Stone.

You also need a Carborundum "Combina-tion" Stone to keep your edge tools right—one side coarse grit to start the edge and a fine grit side for finishing the edge—and it's a stone that keeps sharp—always cuts free and clean. Made in seven sizes.

Carried by Hardware Dealers Everywhere
Send for our Catalog C-2

THE CARBORUNDUM COMPANY, NIAGARA FALLS, N. Y.
CANADIAN CARBORUNDUM CO., LTD., NIAGARA FALLS, ONT.

SOFt cut nails have an unhappy way of slipping off knots and, in bending, pry up the flooring or damage it to such an extent that it must be sawed out. Reading Hard Cut Floor Nails, on the other hand, because of their strength and rectangular shape, drive through knots and all, grip tight all along the line and help to turn out satisfactory jobs.

No matter how hard you drive them their heads stay on and sink firmly into the wood. You will scarcely find a warped or squeaky floor where Reading Cut Nails have been used. Contractors who watch such things closely find that they are cutting labor costs and building good-will since using Reading Cut Nails.

READING IRON COMPANY
READING, PA.

RICO HARD FLOOR NAILS

FOR ADVERTISERS’ INDEX SEE NEXT TO LAST PAGE
Avoid costly delays in handling water

WHENEVER your construction work calls for the handling of water, start the job with a dependable R electric pump. It will see you through on time. For here's a pump built heavier, stronger, and of better materials. It stands up under hard usage. It has patented features found in no other pump. These account for its durability and long life. Its operating cost is unusually low .... its upkeep cost is trivial.

Learn all the R pump features. Get the low prices and General Motors terms. Mail the coupon today.

DELCO-LIGHT COMPANY
Subsidiary of General Motors Corporation
Dept. Z-603 Dayton, Ohio

Also Manufacturers of DELCO-LIGHT Electric Plants

ROLSCREENS are as different from the window screens of yesterday as are your convenient homes of today...

ROLSCREENS have attained a beauty and convenience never before thought of in connection with window screens.

Rolscreens are scarcely visible. There are no unsightly frames to mar the beauty of the windows. They are all metal construction and are built in with the windows. Rolscreens roll up and down—up, they are completely hidden and a touch lowers them, automatically locking firmly into place on the inside.

Of course, Rolscreens save the labor and expense of taking down and rehanging each season but home owners have discovered many new conveniences in having Rolscreens always ready for service the entire year.

Architects and builders everywhere are specifying the genuine Rolscreen (Trademark shown above). If you wish more detailed information we will send you an illustrated booklet which shows also some of the hundreds of homes, apartments, hotels and hospitals that are Rolscreened.

ROLSCREEN COMPANY
52 Main Street, Pella, Iowa

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
Wall-Tex
boasts amazing strength
as well as beauty

Wall-Tex fabric wall-covering combines utility and decoration. A prominent interior decorator selected Wall-Tex No. 3860 for the living-room illustrated above. Unsightly cracks can never mar the beauty of its walls, because Wall-Tex is wear-and-tear-resisting. It hides cracks in old plaster, and helps keep new plaster from cracking. For old walls and ceilings, no other wall-covering gives equal satisfaction. For 1928, Wall-Tex is being produced in a wider variety of designs and colors. There are designs suitable for every room. Plain patterns for painting, stenciling, Tiffany finishes or rough-cast plastering. All Wall-Tex is hung just like wall-paper. It can be wiped clean with a damp cloth.

Architects, builders, decorators should write for full information on their particular requirements. The Columbus-Union Oilcloth Company, Columbus, Ohio.

Fireplaces
Can Be Unusual and Efficient!

Because a home owner wants his fireplace unusual or unique is no reason why a builder cannot make it practical and efficient. Appearance and utility have little or no relationship.

The efficiency of a fireplace depends entirely upon internal construction and equipment used. No matter how odd the external design, if you build the fireplace according to Donley Construction Plans, using a Donley Damper and other Donley Equipment, it will be practical.

And if you seek unusual and beautiful designs to show customers, you can get them, together with complete construction plans, in the Donley Book of Successful Fireplaces by sending 25c in stamps or coins to cover mailing costs.

The Donley Brothers Co.
13910 Miles Avenue, Cleveland, Ohio

For Advertisers' Index see next to last page
Make Ornamental Concrete Products

The market for concrete lawn, garden and porch furniture is constantly increasing. No other manufacturer offers such a wide range of molds for making vases, urns, flower boxes, lawn seats, sun-dial pedestals, balusters, and porch columns. Ask for our illustrated Ornamental Mold Catalog and learn how easily these fast-selling products are made.

Build with Concrete Tile

Concrete building tile are economical. Light in weight, they have plenty of strength. Ideal as a stucco surface, they are also widely used as a low-cost back-up for brick.

In rural communities they are used for all types of construction. On farms the High-test type, laid on edge, make excellent corn cribs. In cities architects are specifying these tile for the largest buildings.

If good concrete tile are not available in your community, start a plant. Write us and learn about our big line of tile machines—all from a hand operated unit to a big power machine making four tile at a time.

The cabinets builders have been waiting for!

NEW MIAMI CABINETS

OUTSTANDING in design, attractiveness and construction. Ultra modern fixtures that mark the conveniently built home, apartment or hotel. Easily installed... and the prices are reasonable. Five designs to show. Illustrated is

“The Renaissance”

So cleverly arranged that when the cabinet is closed it gives the appearance of a mirror set flush with the wall. The door front is black and gold marble finished steel. The 1928 Venetian Mirror is artistically etched in silver and gold.

Breakage, heretofore a “bugbear” in shipping and installation, is held to a minimum with three carefully tested Miami features:

1. Mirror is held by ornamental clips... no holes to lessen strength of glass.
3. Full length piano hinge.

MIAMI LAUNDRY QUEEN
IRONING BOARD CABINET

Everything neat... everything compact. Saves space and adds to kitchen convenience.

THE MIAMI CABINET CO., Middletown, Ohio.
Please send me full particulars about MIAMI CABINETS.
Name:
Address:
City.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER
You can't escape the fact that non-returnable cement bags waste your money. Cloth Sacks are exchangeable... for actual cash!

TEXTILE BAG
MANUFACTURERS ASSOCIATION
7310 WOODWARD AVE., DETROIT, MICH.

First choice for sewers because it lasts—vitrified clay pipe

CLAY PRODUCTS ASSOCIATION
CONWAY BUILDING
Chicago

Vitrified Clay
Sanitary Sewer Pipe
The Little Tank
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you get all three in Leach Tilting Mixers. Besides they absolutely last longer.

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THE PARISIAN

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can stand on it—
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No holes to plug after they are removed.

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On Pages 121, 122, 123 and 124

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Sands, Refinishes, Waxes, Polishes, Scrubs
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See Pages 121 to 124
This Issue
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Adds the touch of Refinement. Beauty that increases renting and selling values.

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Bookcase Colonnades—Sidewalls, Medicine Cabinets, etc., are of Distinctive Design and give living comfort to any home.

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ELECTRIC CO. ST., PHILA., PA.

FAIRBANKS-MORSE HOME WATER SYSTEMS

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is not an ordinary mail box. Its design breathes the spirit of Old England and it is hand made by skilled metal craftsmen. Only the finest materials are used—wrought iron, wrought brass, etc.

Yet the retail price is only $8.00

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The best hardware dealer in your city sells "PEARL"

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The CHAMPION MORTISER

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We use over 50 designs.

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Why Builders Demand this New Time-Saving Trim

IN any building operation today, "an hour saved is a dollar earned." When time comes to install the trim, the builder needs a good job quickly performed, and that is why TrimPak has become so popular among thousands of builders in the three years it has been available to them.

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Please send complete information on TrimPak.

Name:

Address:

Please check the square that identifies you, so we may reply most intelligently:

☐ Architect  ☐ Builder  ☐ Contractor  ☐ Retail Lumber Dealer  ☐ Home Builder

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says Mr. Thomas.

Mr. Thomas is one of the foremost floor finishers of the South, and, as he says in his letter, he has used eight different brands and kinds of paper, but none ever gave him the satisfaction that Speed-grits DURUNDUM does. Every floor finisher in the country can improve his work as Mr. Thomas has.

Get acquainted with Speed-grits DURUNDUM PAPER. Let us tell you more about it.

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Metal Lath "Proves" Itself
In Time of Stress

—In the Tokyo and California earthquakes, when buildings everywhere collapsed like veritable houses of cards, structures reinforced with Metal Lath showed but a few, easily repaired cracks.

—Again, when the mad fury of a West Indian hurricane brought death and millions of dollars' damage to Southern Florida, Metal Lath reinforced buildings established another "honor" record.

—Moreover, Metal Lath is also daily—almost hourly—practically proving its worth as a fire retardent.

* * *

A plastering base which yields so great a measure of protection in times of extraordinary stress is, of course, also insurance against everyday emergencies—a preventive of the causes which result in streaked, cracked or falling plastering.

And by using the 1/8 inch flat rib North Western PLASTA-SAVER Metal Lath, you have the added satisfaction of knowing that you have supplied this much desired protection at the lowest possible cost to your customer.

NORTH WESTERN EXPANDED METAL CO.
1203 Old Colony Building
CHICAGO

Plasta-Saver
1/8" FLAT RIB METAL LATH
## ADVERTISERS' INDEX, JUNE, 1928—(Continued)

### NOTICE TO ADVERTISERS

Forms for the July number of the American Builder will close promptly on June 10. New Copy, changes and orders for omissions of advertisements must reach our business office, 1827 Prairie Ave., Chicago, not later than the above date. If new copy is not received by the 10th of the month preceding date of publication the publishers reserve the right to repeat last advertisement on all unexpired contracts.

### AMERICAN BUILDER.
When your plans call for plaster reveal in window openings—remember that Milcor Expansion Metal Casing, because of its expanded metal wing, provides a means for a close, permanent bond at the junction of the plaster and casing...this positively prevents cleavage cracks and is a patented exclusive Milcor feature.
No Door is too Big
nor too Heavy for
"GLIDE"
Hangers and Track

The world famous "Glide" is the original covered hanger and track. The track combines a wheel tread and a water shed cover in one piece. The runway for the hanger is wide and the shape of its tread minimizes friction. Heavy gauge, open hearth steel accounts for the tremendous strength and weather-resisting properties of this track. Patented, telescoping joints eliminate the necessity of joint brackets—yet make the track weatherproof.

The "Glide" Hanger is so constructed that the drop strap to which the door is bolted is nearest the building. Blocking is unnecessary and the door is always held the same distance from the building regardless of the door's thickness. The weight of the door is carried directly below a point where the track is fastened to the building, which accounts for the tremendous strength of this hanger and the ease with which it rolls. Being hinged, the drop strap permits the door to be swung out at bottom if ever necessary.

Get acquainted today with "Glide" and the other Frantz Hangers and Tracks at your dealer's. See for yourself how well made they are and how easily they can be installed.

Write for the FREE Chart "How to Select the Correct Hanger and Track for any Type of Door." This chart will save time and money for you and help you solve your door hanging problems.

FRANTZ MANUFACTURING CO.
Dept. A-7
STERLING, ILL., U. S. A.

"No Hardware is Genuine FRANTZ QUALITY Without the Red Label"