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Durable Goods Industries the Problem of Recovery, by Samuel O. Dunn	23
Editorials	25
A Sane View of a Much Ballyhooed Subject	
Hunt Out for Lot Owners!	
Lumber Price Small Factor in Total Cost	
Frontispiece—Science Pioneers New Construction Method	27
Modernism in Wood Construction	28
Glued Arches and Plywood Panel Roof Used Successfully at Madison	
G.-E. Turns to "Right"	30
Four Houses of Conventional Type Put Ahead of Modernistic Prize Winners in Designs Offered Builders for Actual Construction of Demonstration Homes	
Operative Builders Department	31
2,000 Homes for Long Island!	31
American Builder Survey Shows Operative Building Starting Up in Volume	
Selective Selling Starts Cincinnati Home Building	32
Lot Owners Prove Best Prospects for Home Construction	
Plans and Specifications for Kopf & Kopf Built House in Cincinnati	33
Modernization Department	35
New York Builders Biggest Buyers of Foreclosed Properties	35
Modernized Buildings Prove Profitable Investment for Operative Apartment Builders	
Elevators Give Builders New Field	36
How to Add a Passenger Elevator in an Old House	
Big Profits in Brick Veneering	38
Detroit Contractor Develops Low Cost Overcoating Method and High Efficiency Sales Plan	
"It Pays to Advertise," Says Builder Watson	41
Decatur, Ill., Contractor Tells How to Promote Business	
Home Design Section	42
Photograph, Plans and Drawings for Seven Charming Homes	
"—Entirely Different from the Low Cost House of Yesterday"	48
Leland R. Reeder, Kansas City Architect, Describes Small Homes to Fit the Needs of Today	
The House of the Month	50
Working Plans and Photographs for a Livable Early American Home of Medium Size	
Specifications—General Conditions	52
Legal and Agreement Provisions of the Model Open Specifications of the National Plan Service	
Novel Products Displayed	53
New Building of the Metal Building Specialties Company at Harrisburg, Pa., Demonstrates the Lines Offered	
Modern Folks Want Modern Homes	54
V. L. Sherman Continuing His Home Equipment Department Discusses Coal Stokers and Air Conditioning	
Quality of Concrete Improved 248 Per Cent	57
Tests Prove Value of Paper Covering While Curing	
Practical Job Pointers	58
News of the Industry	60
What's New Department	66
Letters from Readers	74
Selected List of Manufacturers' Literature	78
Advertisers' Index	81

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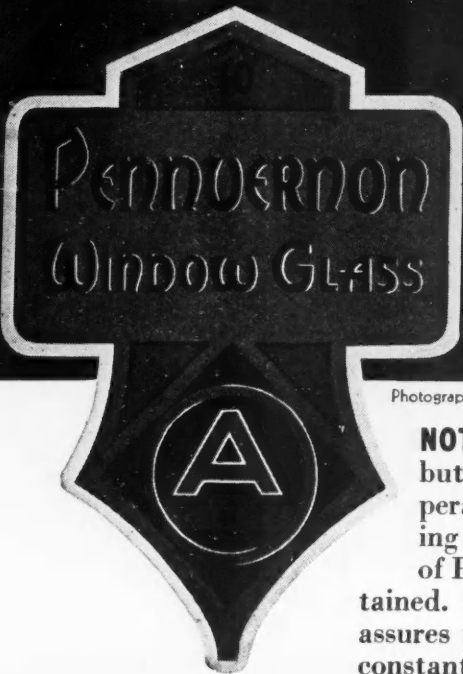
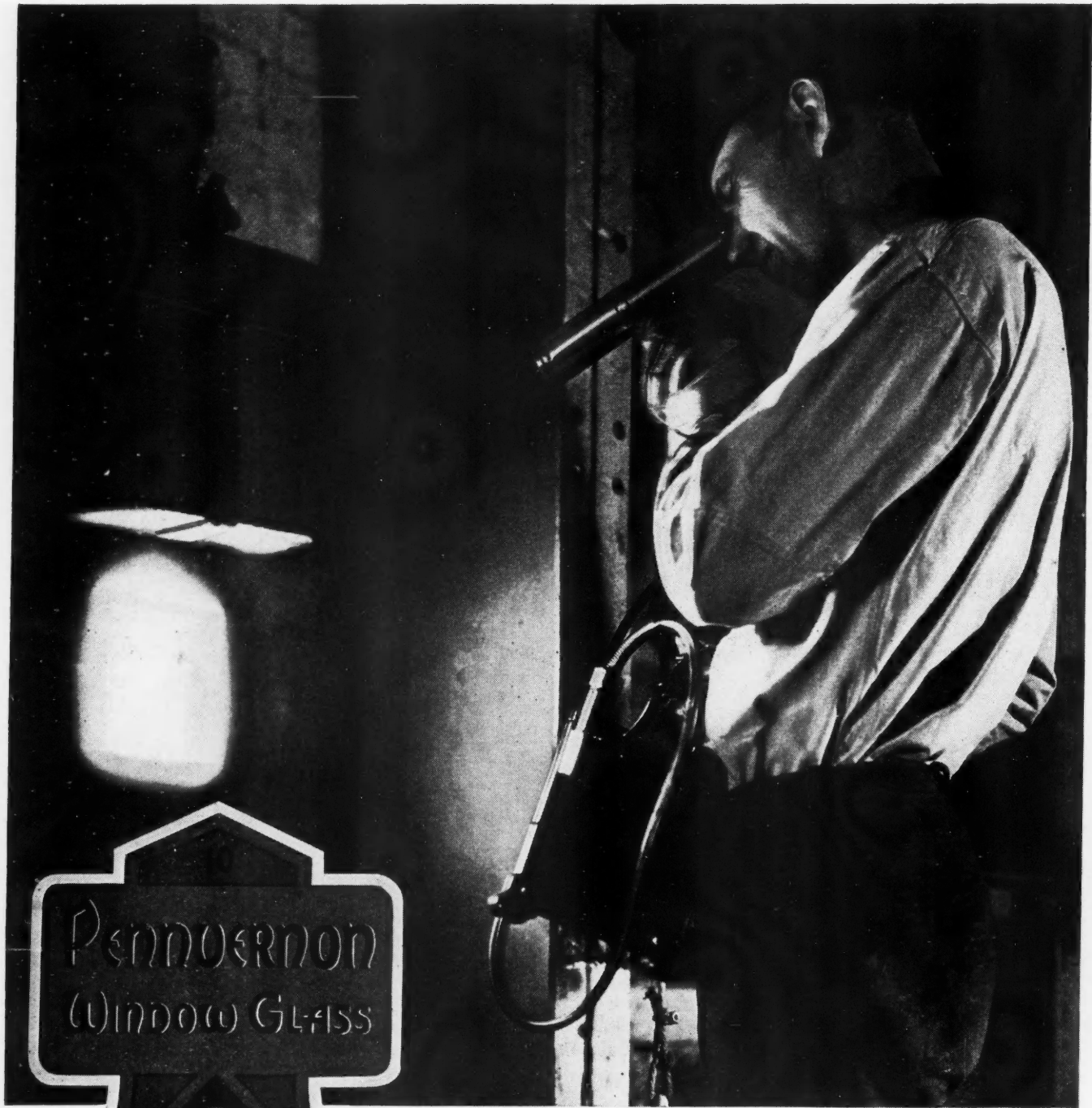
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Durable Goods Industries The Problem of Recovery

FREIGHT car loadings, the best measure of total *physical* production and distribution of all commodities, show that business in the United States is substantially better than at the bottom of the depression in the summer of 1932, and in March, 1933, but that no *general improvement* has occurred within the last year. In 1932 they were 47 per cent smaller than in 1929. In 1933 they were 3 per cent larger than in 1932. In 1934 they were 9 per cent larger than in 1932 and 6½ per cent larger than in 1933. In the twelve months ended on May 1, 1935, they were no larger than in the preceding twelve months. They are still 40 per cent smaller than in 1929.

The general recovery thus far made has been slow and unsatisfactory because we have not effectively attacked the problems presented by the "durable goods" industries.

Congress has passed one measure specifically to revive a durable goods industry—the National Housing Act, which is making it easier to finance modernization, repair and construction of residential buildings. Under the modernization credit plan expenditures of \$400,000,000 have been pledged throughout the country, and actual expenditures have exceeded by several times the amounts borrowed for them. Also, contracts for residential construction increased from about \$89,000,000 in the first four months of 1934 to \$133,000,000 in the first four months in 1935, and from \$25,000,000 to \$50,000,000 in April.

THIS is a real beginning; but it is only a beginning. Most building modernization and construction must be paid for by persons outside the building industry. Therefore, it is essential to full prosperity in the building industry that prosperity be restored in other industries.

Almost one-half of the 11,000,000 unemployed are in the durable goods industries. Almost all the other one-half are in the service industries. Revive the durable goods industries, and you will revive the service industries, whose lack of business is due to stagnation in the durable goods industries. How, then, revive the durable goods industries?

Col. Leonard P. Ayres has demonstrated that, excepting automobiles, *five-sixths* of all durable goods are bought by business itself with its profits, or with capital raised by selling securities to investors who will buy them only if confident of profits.

Business is not buying more durable goods principally because of government policies, actual or proposed, that curtail profits, or prevent confidence that they will be earned.

Labor works for wages. Capital works for profits. There is plenty of both. Business will give them both full employment only when confidence that it can earn enough to pay them both has been fully restored.

Samuel O. Drumm,

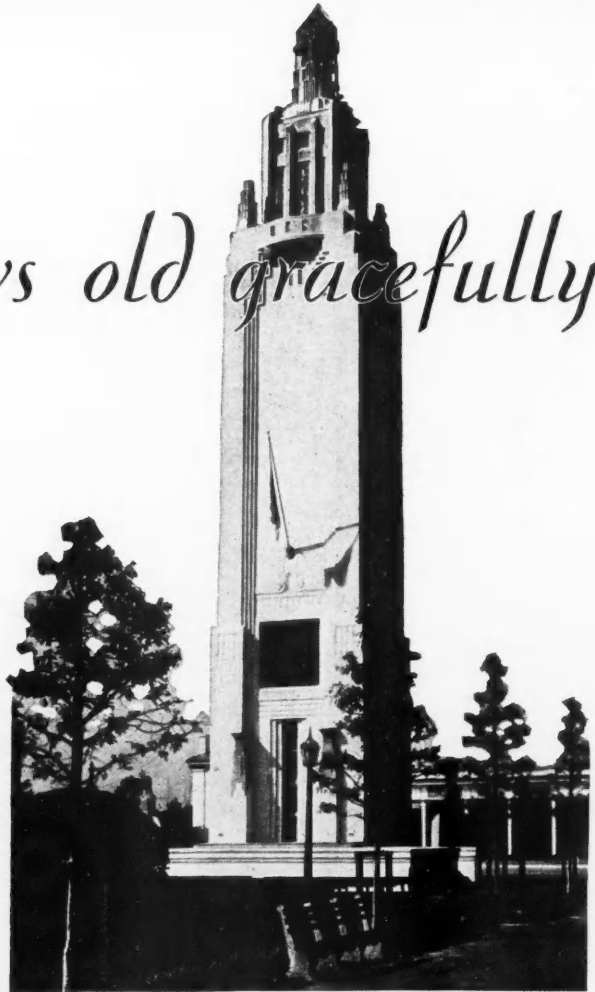
CHAIRMAN,
AMERICAN BUILDER PUBLISHING CORPORATION
SIMMONS-BOARDMAN PUBLISHING CORPORATION

Stucco that grows old gracefully

These two structures, both in Playland Park, Rye Beach, New York, interest the eye as examples of stucco applied in "float finish." The *Artstone* stucco (a prepared stucco) is cream color, made with Atlas White plus pigment. As applied, it gives a monolithic concrete appearance to the exterior, and is, in fact, comparably sturdy and durable and weatherproof.

Not new, these buildings are proving that portland cement stucco, rightly made and applied, grows old gracefully. Weathering adds charm to the pleasant light colors possible with Atlas White. The stucco takes on a warm, weathered tone most pleasing against a background of trees and shrubs and green lawns.

Whatever the texture chosen and in any of the varied colors possible, Atlas White stucco makes an attractive and lasting exterior on almost any type of structure, new or old. You will be interested in the detailed information—write Universal Atlas Cement Co., *Subsidiary of United States Steel Corporation*, 208 South LaSalle Street, Chicago. 181



E. Gisonde, Inc., Mt. Vernon, N. Y., was the stucco contractor. Johnson and Miller, Inc., Yonkers, N. Y., were the general contractors. Walker and Gillette, N. Y. C., were the architects. Artstone Rocor Corp., Brooklyn, furnished the stucco.



ATLAS WHITE PORTLAND CEMENT

AMERICAN BUILDER AND BUILDING AGE

A Sane View of a Much Ballyhooed Subject

"**P**REFABRICATED houses" continue to be much talked and written about. Every convention and conference has its speaker on this subject. Newspapers and magazines are full of it.

The revival of home building activities this spring and the now generally recognized market for large numbers of new dwelling units have given fresh impetus and encouragement to the proposition. Past failures are excused or forgotten; volume demand is in sight ahead. And so, factory-built houses "twice as good for half the price" are being promised the buying public.

The men of the building industry—the carpenters, bricklayers, painters, the contractors, architects, and local retail building supply dealers—will have little to do, we are assured, with the sale, erection or servicing of this new type housing. In fact, much of the argument for prefabricated houses is a direct challenge of the practices and customs of the established building industry. The alleged high cost and inefficiency of its operations have been cited as major reasons for developing a new and different system.

Maintaining an Open Mind

This publication is sympathetic to improvements in the science and art of home building. Its pages have led the field in recording and explaining the new developments of merit as they have occurred. Better home building service for the buying public has been the objective of its editorial policy. In line with this objective it has often been forced to criticize industry practices which seemed destructive or unsound. With such a record, dating back more than half a century, AMERICAN BUILDER should be credited with having an open mind on this prefabricated house question.

It is the judgment of this publication that factory-built houses are not what the home buying public wants and will never become a large factor in American housing. Two obstacles which seem insurmountable stand between the prefabricated home and a big market. One is union labor hostility, backed by today's widely held belief that the way to increase employment and payrolls is to encourage hand labor. The other is the cost and difficulty of distribution—of moving the prefabricated house from the shop production line to the building site.

These two obstacles are curiously related in a way that

seems to close both city and rural markets to the prefabricated house. In the cities, where there would be a concentrated market for fairly easy delivery by motor truck, the union labor influence is strong; and out in the country where neither building codes nor labor rules would interfere the market is so spread out that delivery costs would eat up any possible savings of shop production. So, both markets, city and farm, seem to be "out."

Can Costs Be Cut?

The chief argument for prefabricated houses is cost saving. Yet low costs can only be realized on volume production. Limited and difficult markets make large volume impossible. So the cost advantage goes glimmering.

As a matter of record, each of the sample prefabricated houses put up so far has actually cost several times its nominal price. The attempt to transfer normal field assembly operations to the factory has not succeeded. Costs have increased, with plenty of "grief" thrown in for good measure.

A sane view of prefabrication, it seems to this publication, is one that is cordial but critical. Practical builders cannot afford to be blind to progress, yet their own experience protects them from being gullible. They know that solid facts of construction and of human nature stand back of many home building customs; and they will be slow to take up with any scheme which runs counter to those facts.

In reality, semi-prefabrication has been, for many years, a useful and growing factor in home building. Lumber, surfaced-4-sides and end-squared to exact lengths; sheathing, end-matched; oak flooring, factory stained and waxed ready to use as soon as laid; windows and frames, completely factory fitted; plumbing fixtures, heating plant, and other essential items of home equipment, all factory-built in mass production and turned over to the experienced building assembler in the most efficient size and form for practical use; all of these factors of finished and semi-finished items for builders' use have been utilized more and more.

Doubtless this trend will continue, and we will see local dealers stocking or servicing more and more of these specialties. Such developments should continue within the established building industry, using existing facilities

for manufacture and distribution, and employing experienced local contractor management and skilled local building trades mechanics for the final assembly on the building site.

This is the sane view; and if it should ever happen that outsiders are able to come in with a different system of housing it will be the fault of the building industry itself in failing to operate as reliably and efficiently as it knows how. The local building organization has every advantage in planning and building to suit the needs of the local home seekers. Better selling—better planning—better job performance—these are the three things needed to offset the prefabrication ballyhoo and assist the American public to lasting satisfaction in home ownership.

HUNT OUT THE LOT OWNERS!

MANY of the homes being built this spring are for lot owners who bought five years or more ago and have finally been persuaded that now is the right time to go ahead with construction. These lot owners had already taken the first step toward home ownership and a building contract. It only remained for some alert and sales-minded building industry man to step in with facts regarding today's home building opportunities—and the project gets under way!

Builders who have not yet tried this will be surprised at the number of home site owners who are eager to go ahead. As an example, a contractor-builder operating in the Calumet region southeast of Chicago obtained a list of some 2000 lot owners from the local tax records. He wrote a letter inviting these men to attend a neighborhood meeting where a new idea in home building would be presented. Forty attended the meeting and of these, twenty-three signed cards inviting further conference regarding building contracts. Likewise in some of the Detroit suburbs where high grade subdivisions were laid out and lots sold some years ago a considerable volume of home building is now in progress. These jobs were sold to lot owners by active canvassing of the tax records to find those who still owned the lots and had paid their taxes. These names proved to be gilt edged prospects for home building contracts.

There is a live tip here for building industry men in every community. Hunt out your lot owners and explain that now is the time to build, before costs go up. Ownership of the building site probably is sufficient equity for financing under FHA rules. Consider the present income and the family status of each of these prospects and then help to shape up plans to suit each individual case. Builder, architect and real estate salesman can work together to advantage "in times like these" to turn these lot owners into home builders. Sales-minded building men in every community have this unusual opportunity right now of selling home construction to these logical prospects.

Diagram of Cost percentages in Home Building as prepared by the Southern Pine Association

LUMBER PRICE SMALL FACTOR IN TOTAL COST

THE diagram below prepared by the Southern Pine Association shows the distribution of costs on lumber frame houses as follows: An average of 20 houses built in the Mid-West, 2 in the Far West, 3 in Illinois, 2 in Ohio, and actual bids made by contractors for building 4 houses in the new Southern Pine Plan Book as if these 4 houses were built north of the Ohio River.

The chart may be considered a fair cross-section of percentage costs for points north of the Ohio River, while in the extreme South the percentages will change to some extent because of the lower freight rate on lumber from the producing section and because of the average cost of carpentry labor's being slightly lower.

The values of the houses represented in this diagram varied from \$2,500 to \$20,000—the majority being below \$7,000. They were plastered, painted, equipped with hot-air heating, wired, and most of them have basements.

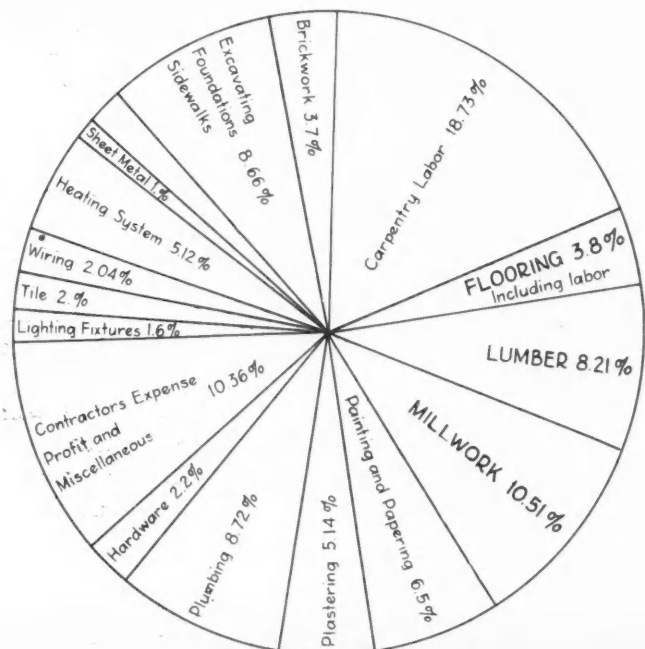
Lumber costs represent 8.21 per cent of the total cost of all these residences, or about 1/12 of the total cost.

The combination of lumber, millwork and flooring, including the labor of manufacturing the millwork and including the cost of labor in laying the floor, represents 22.25 per cent of the total cost of the residences.

It will be noticed that some of the individual items are greater than the cost of lumber entering into residential construction.

If the cost of lumber moves upward or downward by even as much as \$10.00 per thousand feet, the percentage of cost of that lumber is increased or decreased by a very small amount, and will make little change in the percentage table.

In presenting these data the Southern Pine Association points out that there is no foundation for statements that the cost of lumber is the cause for either a decrease or an increase in building, since it represents such a very small percentage of the total cost.

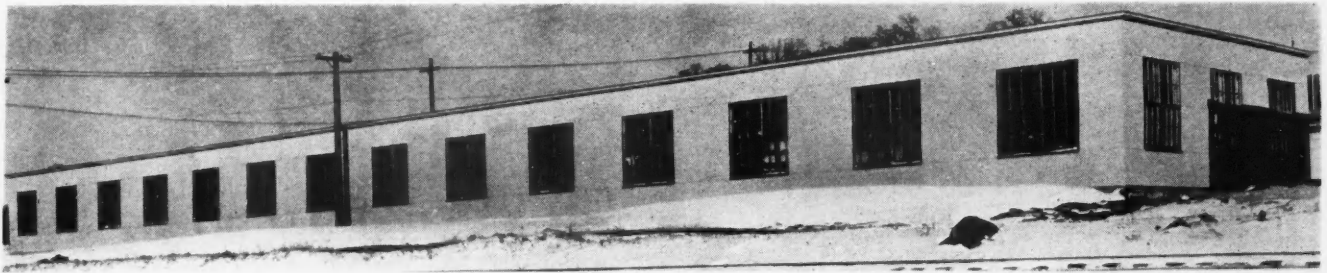




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Science Pioneers New Construction Method

The Forest Products Laboratory engineers tried out some advanced building ideas when they erected the new service building at the Madison (Wis.) headquarters last winter. Roof panels 4 by 16 feet consisting of three 2 by 6 joists, an upper sheet of 5-ply $\frac{5}{8}$ -inch plywood and a lower sheet of 3-ply $\frac{3}{8}$ -inch plywood were constructed in the shop and hoisted into place by motor truck, as illustrated. Each panel carries an insulation blanket inside. Panel ends were nailed to the supporting trusses and the roof finished with an application of asphalt, tar and gravel. More about this interesting demonstration of advanced construction is presented on the next two pages.



Modernism in Wood Construction

Glued Arches and Plywood Panel Roof Used Successfully at Madison

A PLYWOOD building with glued arches, for service purposes and intended also as a demonstration of modernism in wood construction, has been completed on the grounds of the U. S. Forest Products Laboratory, Madison, Wis. It includes a main storage and testing house 160 feet long, 46 feet wide, 12 feet high at the walls and 19 feet high at the center, and a garage section 64 by 24 feet, with a roof height of 12 to 14 feet.

Its construction embodies special features developed or adapted through Laboratory research. Such features, widely discussed in the American wood and building industries of late years but as yet largely unused, are based on the idea of factory-made wood structural units suited to quick and economical erection and at the same time adequate to the requirements of strength, serviceability, and appearance.

In designing the main section a requirement was unobstructed floor space and ample overhead clearance for sawmill and other industrial projects, for which reason arched supports were chosen in preference to column-and-girder or standard truss construction. Here the results of previous studies were useful in the design of three-hinged arches glued and built up from small material to give service equivalent to that of high-quality solid timbers.

Two types of glued arch were provided—one solid and one of double I-beam section. A third type included was a trussed arch held together at the joints with split-ring and hinge-and-plate connectors. Five solid glued arches and two each of the composite types were built and symmetrically disposed in the building, solid arches at the middle bays, double I-beam arches next, and trussed arches at the ends. The halves of each arch were bent at the knee but straight above and below the knee, taking the familiar boomerang shape, and were held together at the apex with bolted plates. Flanged plate bearings were provided at the foundations, which were built to withstand a side thrust of 10,000 pounds at each footing. A maximum roof loading of 45 pounds per square foot was assumed, including dead load, wind, and snow. Live loads were figured as uniformly distributed or acting on half the roof only.

The solid arches were glued up of laminations of 9/16-inch material to a width of 11½ inches and a thickness of 12 inches at the base, 24 inches at the knee, and 8 inches at the apex. Each layer was made of 4 inch and 8 inch pieces, with the edge joints staggered in alternate laminations. The length of individual pieces varied from 6 to 16 feet. To obtain the lengths required, such pieces

were glued endwise in scarf joints having an angle of 1 to 12.

The chords of the double I-beam arch were built up of similar laminations. The bottom and top chords, 6 inches thick and 8 inches wide, were cut lengthwise into three pieces with a band saw, the center section being 3½ inches wide and the two outer sections 2¼ inches wide. The center sections of the two chords were then boxed together by gluing on Douglas fir plywood plates 1 inch thick and of the desired outline, after which the outer chord sections were glued on to form flanges. The completed arch was 21 inches thick at the base, 36 inches at the knee, and 12 inches at the apex. Casein glue was used in the arches described and in other glue work throughout the building, except in the premanufacture of sheet plywood.

The trussed arches were constructed of chord members 6 by 8 inches in section and web members of sizes ranging from 2 by 4 to 4 by 6 inches. Joints at the knee were formed with Siemens hinge-connector assemblies, the well-known device of German origin in which stresses are transmitted from the wood member by inset claw plates to straps or flat plates, which are socketed at the joint proper in a double-ringed, inset and through-bolted "hinge connector." Other joints were made with Teco split-ring connectors, which are recessed in precut grooves on opposing faces of members to be joined, the latter then being drawn together with a bolt. Offsetting the cost of the so-called modern connectors is the fact that, by efficiently distributing stress over a large area of wood, they obviate the oversizing of members merely to provide seating for the large number of bolts that would otherwise be needed to obtain a safe joint.

The roof deck of the main section of the building consists of built-up panels 4 feet wide and 16 feet long. Each unit, forming a large flat box beam with stressed coverings, consists of an upper and lower sheet of Douglas fir plywood 4 feet wide, and 16 feet long, glued to three 2 by 6 inch joists, one at each edge and one in the middle. The upper sheet, 5-ply and 5/8 inch thick, forms the roof sheathing, while the lower sheet, 3-ply and 3/8 inch thick, provides a smooth ceiling. Previous tests had demonstrated that such units, owing to the stress value of the plywood itself, have strength and stiffness equivalent to that of ordinary decking supported by 10-inch joists. These box beams or roof panels were joined together at the edges by splines in the outer joists and were fastened at the ends to the arches by nailing through the lower sheet. To facilitate nailing, the upper sheet was left 6 inches short and the space filled in after erection.



Interior new plywood building of the Laboratory, showing glued arches. Span is 46 feet, walls 12 feet high, ridge 19 feet high. The two trusses in the foreground are built up solid, the third is of double I-beam section and the fourth an ordinary timber truss.

Included in the construction of the panels was an insulating blanket fastened at mid height of the joists. The roof covering is tar and gravel.

Outside walls were framed with 2 by 6 inch studding spaced 24 inches on centers and were covered on the outside with 5-ply $\frac{5}{8}$ -inch yellow poplar plywood glued on the hot press with water-resisting artificial resin glue and installed in sheets 4 feet wide and 4 to 8 feet long. The wall extends upward to form a 2-foot parapet. The studs were cross-braced at each horizontal joint of the plywood, and midway between joints where the height of sheets was 8 feet. Both horizontal and vertical edges of the sheets were bluntly V-jointed and were spread with an elastic composition, shoved into place, and the sheets nailed to the studding. A sheet metal drip was provided at the bottom of the wall. All exterior walls were given two coats of aluminum priming paint and 2 coats of lead-and-oil finishing paint.

Inside walls were of 3-ply $\frac{3}{8}$ -inch Douglas fir plywood. This, as well as the Douglas fir plywood used in the roof panels, was built up with a commercial moisture-resistant glue of specified quality.

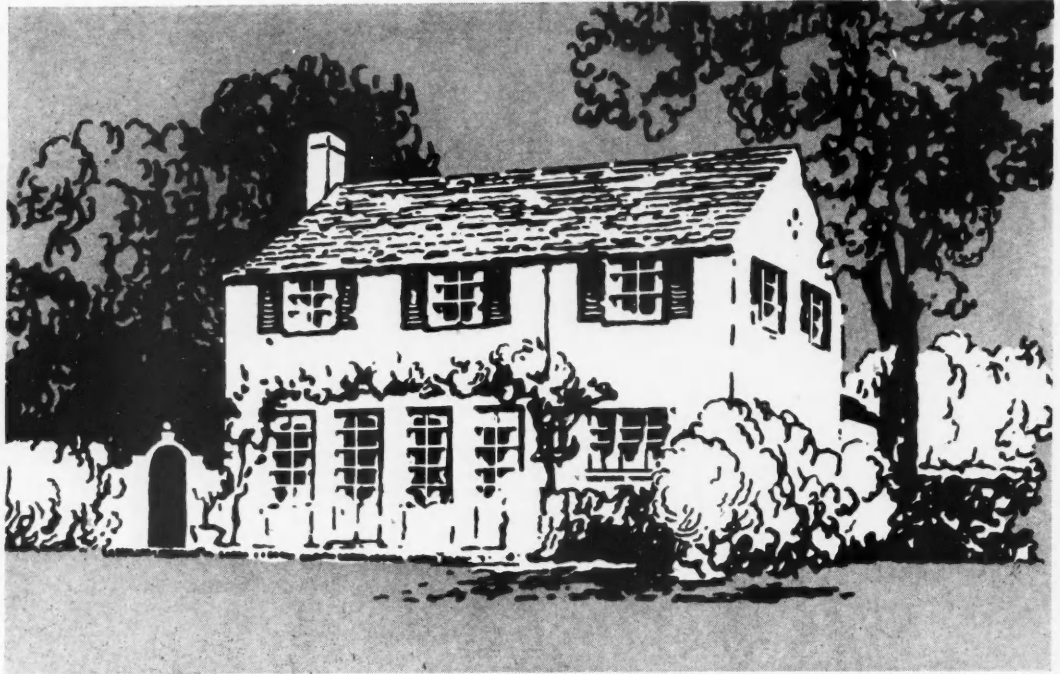
Wall construction in the 64 by 24 foot garage section was similar in all respects to that of the main section. The garage roof, however, having about half the span of the other, is supported on lighter arches of bowstring type. These were built up to a depth of 5 inches with

glued laminations $\frac{9}{16}$ inch thick and $1\frac{1}{2}$ inches wide. They were spaced 30 inches apart. Instead of a tie rod at each arch, "skewbacks" were provided at the wall line to take up the thrust. These were glued up of six 2 by 12 inch planks each. They were recessed slightly to receive the arch ends and tied together by inch rods $8\frac{2}{3}$ feet apart. Roof sheathing over the garage consists of 5-ply $\frac{5}{8}$ -inch Douglas fir plywood in sheets 4 by 10 feet glued and nailed to the arches.

The building as completed stands as a study of the problem of wood construction in its more progressive aspects, though not necessarily as its final solution. Tests on full-scale duplicates of the large arches are in progress, and are giving a quite satisfactory check of design factors. The cost of the building complete, just over \$23,000, or 15½ cents per cubic foot, even though it includes extra "pioneering" expense in arch fabrication, compares favorably with the cost of ordinary construction, and lower costs on similar projects under standard production conditions may naturally be expected. The type of construction made it possible to enclose the building very quickly. The nine large arches were erected by 6 men using a hoist in $1\frac{1}{4}$ days and the roof panels in 2 days, and the outside plywood panels were placed by 4 men in less than 3 days. Contractors for the arches were Unit Structures, Inc. Plywood was supplied by the Has-kelite Mfg. Co., and Harbor Plywood Corp.

DESIGN No. 1 in G-E Portfolio from which builders are asked to make their selection for Demonstration house construction. This design was submitted by Amedeo Tione and Georges Galushes of Detroit. Plans are illustrated below.

Cost Key is 1.626-138-660-30-23-12



G-E Turns to "Right"

Four Houses of Conventional Type Put Ahead of Modernistic Prize Winners in Designs Offered Builders for Actual Construction of Demonstration Homes.

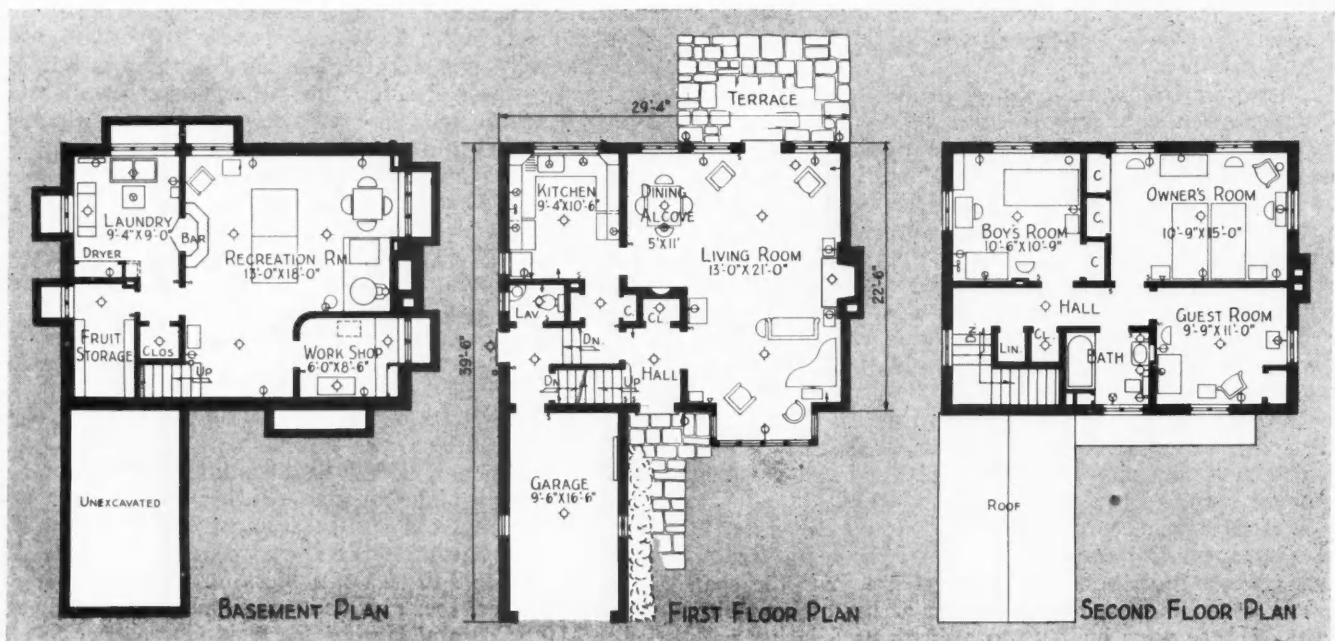
THE General Electric project of interesting local builders in 1,000 communities to put up electrical demonstration homes, as announced in this publication last month, using some of the "New American" designs submitted in the Company's recent \$21,000 prize competition, has expanded until now the building of "from 2,000 to 5,000" such homes is contemplated, according to an announcement by T. K. Quinn, vice president. A large portfolio has been prepared to give interested builders full information regarding this program of demonstration homes construction and promotion. A pocket in the port-

folio contains 18 designs from which each builder can select the house best adapted to the taste and preference of his community.

While the Jury of Awards was evidently mesmerized by modernism to a degree that many of the prize designs are too far to the "left" for general acceptance, a much saner element has evidently influenced the selection of the designs to be used in the actual construction program.

No. 1 Design (illustrated) is a charming Colonial; No. 2 by Royal Barry Wills of Boston is a Cape Cod cottage; No. 3 by Clarence W. Jahn of Milwaukee is a dormered gable design of French feeling; and No. 4 by Ralph W. Higgins of New York City is a Long Island Dutch type with long sloping roof to the rear. The Grand Prize small house of the competition by Hays and Simpson of Cleveland is No. 5 of this portfolio and the other eleven prize winners follow in an entirely revised order.

This is the G-E recommendation for the "New American" Home and it is a collection of designs from which every taste can be served.



OPERATIVE BUILDERS

A monthly department for the men who plan, erect and equip homes for sale



OPERATIVE BUILDERS are hard at work in the New York area supplying the pent-up demand for modest priced homes. Here is a scene at 169th Street and 25th Avenue (Flushing) where Bob Rose Developments, Inc., operative builders, have a large group of homes under construction. More than 250 are planned to be built this year.

2,000 Homes for Long Island!

THERE is a saying to the effect that as Long Island goes, so goes the home building industry. Long Island has one of the most concentrated home building industries in the entire country—in fact home building might be said to be its biggest industry.

It is good news to builders everywhere to learn that the home building industry of Long Island is staging a tremendous comeback this spring. A survey of operative builders in this territory shows that from 1,600 to 2,000 new homes are under construction or are contemplated within the next six months.

For the first time in many years new house building can be seen and the sound of hammers heard in practically every community.

Real estate men report unusual activity by operative builders—who are buying lots and building houses for sale. One of the oldest and best known realtors of Flushing, L.I., Laurence B. Halleran, says that in his thirty years' experience he cannot recall a time when there were more houses under construction at one time.

Twenty-five to thirty percent of the houses under construction have been sold either from the plans or from a model house, he says.

"Builders today take a group of ten houses and rush one house to completion and use it as a model house which is fully furnished," reports Halleran. They then sell from this finished house with the result that the other nine houses started in the group of ten are usually sold before they are rough enclosed.

"Only yesterday," he said, "we sold 450 additional lots to a local builder who intends to start the erection of 200 houses. I believe we are on the edge of the greatest building boom Long Island has ever seen."

A survey by the AMERICAN BUILDER discloses that 95 percent of the houses being built are valued under

(Continued to page 76)

Selective Selling Starts Cincinnati Home Building

Lot Owners Prove Best Prospects for New Home Construction

OPERATIVE home building in this spring of 1935 is being pushed by those salesminded building contractors who are able to find and interest lot owners who bought home building sites back four or five years ago, still have them and still have the income and the family status which calls for home ownership. The lot owner has become the most logical prospect for home selling effort; and sales are being made to these lot owners from architect's plans and sketches and the reputation of the builder's organization.

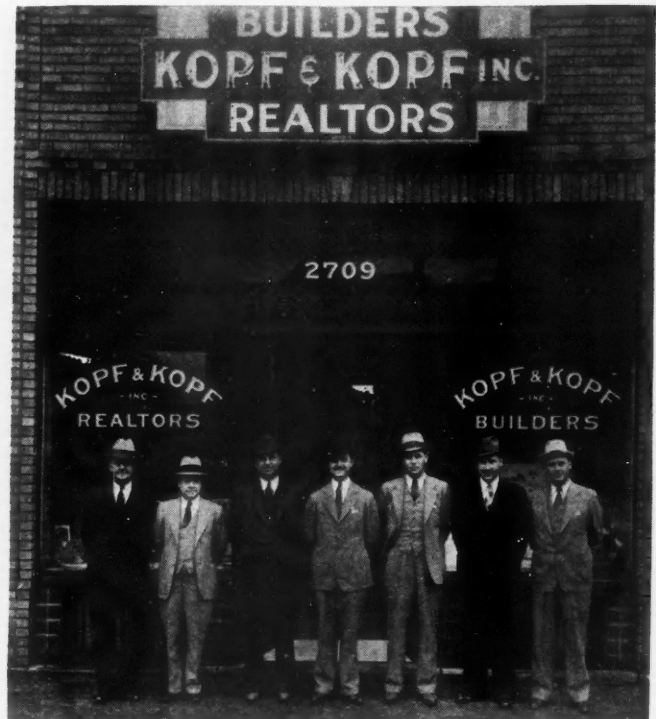
Thus, this year's "speculative building" is home building minus the speculation; since each job is sold *before it is started* and the lot ownership guarantees a sufficient equity for FHA financing.

In a 1400-mile inspection trip by auto early in May, AMERICAN BUILDER investigated the current home building situation in Indianapolis, Cincinnati, Louisville, Ashland (Ky.), Columbus, Detroit and intermediate towns and found this the case almost universally—the building that is starting up in all these places is based on aggressive selling of construction now to lot owners. In carrying out these programs there is a tendency for a builder, an architect and a realtor to associate themselves together to offer a complete service. The real estate men do the selling, locating the prospects from the property tax records, the builder assumes the responsibility for the building project, while the architect does the designing in consultation with owner, builder and salesman.

Cincinnati seemed to be one of the "hot spots" surveyed on this home building circle tour. Among the Cincinnati operative builders found actively carrying



MEN busy on Kopf & Kopf 8-room house detailed on page opposite; contract price, not including lot, \$14,500.



THIS is the gang that is setting the home building and selling pace in Cincinnati. The Kopf Brothers, Willard, Walter and Larry, are the 3rd, 5th and last (left to right); the firm architect, L. J. Marioni, is No. 4; George Clingman, star salesman, is No. 1; Robert Walters, bookkeeper, No. 2, and John Ritterholz, detail man, No. 6.

on at this time were Myers Y. Cooper Co., E. C. Cordes, Geo. Hare & Son, Holscher & Rape, Kopf & Kopf, Inc., Lang Bros., Inc., Loebker Bros., James P. Mulford, Geo. E. Thurner and Robert Wachendorf.

Kopf & Kopf, Inc., builders and realtors, operating in the Hyde Park section of the city and with offices at 2709 Observatory Road, were found to be doing some very interesting home selling and building work. "From baseball to building" might well be the title of the story of the Kopf brothers, their prowess on the major league diamonds being well known to followers of the New York Giants and the Cincinnati Reds of a decade ago. However now these former ball tossers have more than 100 finely built homes to their credit in the Hyde Park neighborhood. Ten jobs were under way on May 1. Closely associated with the Kopf brothers in their selling and building activities is L. J. Marioni, architect.

KOPF & KOPF SPECIFICATIONS FOR 1935 BETTER HOMES

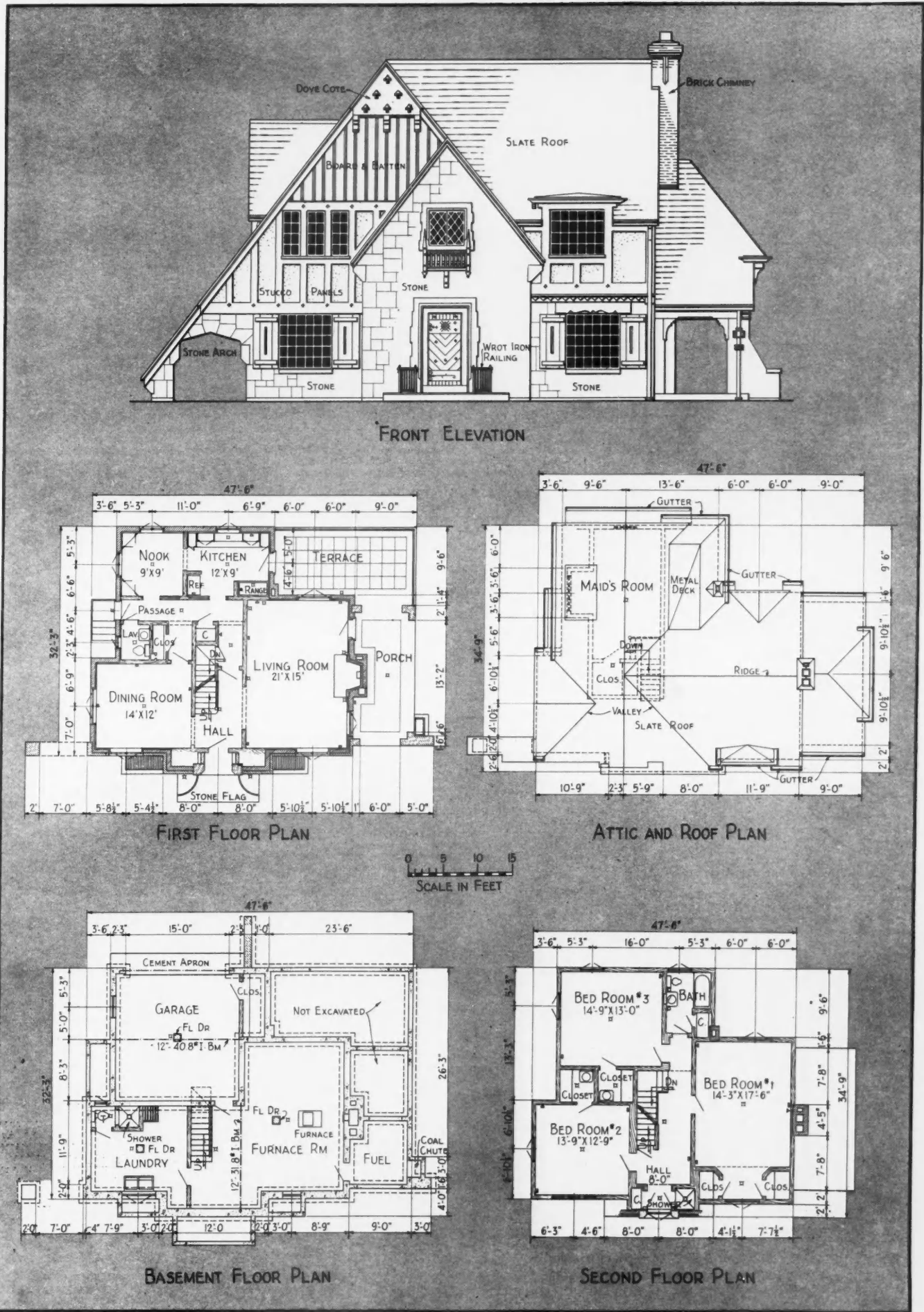
Specifications of labor and materials required in the construction and completion of two and one-half story brick, stone and half timber residence and garage to be built on the East side of Herschel Way, Hyde Park, Cincinnati, Ohio, in accordance with drawings and this specification and under the supervision of L. J. Marioni, Registered Architect, 2709 Observatory Road, Cincinnati, Ohio.

CONCRETE WORK—Set plank curb and lay footings under all concrete walls of the building including interior basement concrete walls, not less than 10" thick, and projecting at least 12" on each side of the walls above; these to be composed of four parts clean gravel, two parts clean sharp sand and one part portland cement, properly mixed, tamped and leveled off. Set all reinforcing steel in footings called for on the plans. Set a 2"x4" sleeper in all footings before pouring and remove same after footing has set to form a key bond with foundation wall.

If ready mixed concrete is used a 2500-lb. mix must be guaranteed. Add 10% of hydrated lime to concrete. All concrete shall be thoroughly stirred, spaded and tamped so that all water pockets and bubbles are removed from the mixture. When one day's work joins that of another the joints shall be thoroughly washed and picked, and grouted with a coating neat cement before beginning new work.

Waterproofing—After exterior basement concrete walls have set, see that they are entirely clean of all foreign matter, and give same a heavy brush coat of Philin Carey Company's (Percoproof) or equal waterproofing.

CEMENT FLOORS—Level off all basement (Continued to page 34)



WORKING PLANS of Kopf & Kopf built house, L. J. Marioni, architect, now being erected on Herschel Way, Hyde Park, Cincinnati. Specifications of this house and photos of entrance shown opposite. Cost Key is 2.580-147-1063-45-32-25 (3rd floor unfinished).

Kopf & Kopf Specifications Continued:

areas and cover with 6" of clean cinders, well tamped, level and pitched to drains. Then put down a concrete floor consisting of full 3" of concrete composed of portland cement one part, sand two parts, and clean coarse gravel four parts. Finish floors of basement and garage with 1" of smooth cement finish and mark off in squares 5'x5'. Pitch to drains where shown on plans.

ORNAMENTAL IRON WORK—Furnish and set wrought iron railings at main entrance, at kitchen entrance and around rear terrace as shown on drawings. These shall be leaded securely into cement work and substantially braced.

Furnish and set a railing called for on plans. All exterior iron work shall have a coat of rust resisting black paint before delivery to job.

BRICK AND STONE WORK—Face brick to be selected by owner, allowance for same to be \$25.00 per M delivered to job, all to be laid in natural cement mortar with each course well flushed throughout and face joints $\frac{5}{8}$ " thick and tooled. All work shall be bonded every fifth course with a rowlock course. Set soldier course with $\frac{1}{2}$ " projection all around top of foundation. Brick sills to have considerable pitch and to be well flushed. Furnish and build in all flues of dimensions shown, carried up separately and all to have terra cotta flue linings their entire height, of sizes called for on the drawings. Finish off tops of chimneys with cement wash as shown and project flue linings.

Cut Stone—Furnish and set all cut stone as shown on drawings, same to be Indiana limestone, shot-sawed as furnished by Hummel Building Company. This to be laid in ashlar pattern with close joints, using cement mortar.

Hill Stone—Build walls at front of stone to height and thickness shown on elevations and plans. Use select field and hill stone and have natural face of stone exposed. Build in "shiners" as directed by the architect.

CARPENTER WORK—First floor joists to be 2x10s. Second floor joists to be 2x10s. Third floor joists to be 2x8s. Third floor ceiling joists to be 2x6s. All roof rafters to be 2x6s. All the above mentioned to be spaced 16" on center. All joists to be well bridged. All inside and outside studding, first and second floors to be 2x4s, all triple corners and double at openings. All studding partitions to be bridged halfway up with 2x4 pieces. Joists to be triple under all partitions and truss joists well under bathrooms as directed. Studding to have top and bottom plates, top plates to be double. All joists must be sized, and placed crowning edge up. All openings over 3'-0" to be well trussed. Cover main and other roofs with good sound boards 1"x4" spaced $1\frac{1}{2}$ " apart and securely nailed to each bearing with 8d nails.

Where called for on the drawings outside of house to be sheathed with No. 2 common yellow pine sheathing, securely nailed to each bearing.

Lay standard yellow pine floor in kitchen. Dress off rough places and protect floor with paper to keep clean until covered with linoleum. Furnish and lay $\frac{7}{8}$ " common yellow pine floor diagonally over entire first and second floors. Joints must be cut on and parallel to joists. When laying sheathing allow for swelling. Each board to have at least 2 8d nails at joint. Floors must be level and prepared for finished floors.

MILLWORK—All outside finish not otherwise specified to be clear sound red cypress, free from shakes and knots and other defects impairing its strength and durability and to be strictly in accordance with the drawings.

Main entrance door shall be $2\frac{1}{4}$ " thick of clear white oak exterior and selected red birch interior, strictly as detailed. All inside doors first and second floor to be eight panel birch doors, $1\frac{3}{4}$ " thick. All basement doors and third floor doors to be two vertical panel fir doors.

All door frames to be plain $1\frac{3}{4}$ " thick with $\frac{1}{2}$ "x $1\frac{3}{4}$ " rebate. Inside door frames must be long enough to meet sub-floor.

All windows to have red gum stools and apron excepting kitchen and bathrooms which shall be tile. All door trim on first floor to be red gum. Baseboards in living room, dining room and main hall shall be selected red gum. Second floor door trim and base to be white pine, kiln dried and hand smoothed. Shoe strips throughout shall be oak and nailed to floor. Furnish breakfast room china cases strictly as detailed, same to be white pine excepting shelves which shall be white oak. Shelves to have moulded front edge.

Furnish shelving for all closets and hickory hanging rods where called for on plans. All exterior millwork to be rough sawed.



HOUSE under construction in Hyde Park section of Cincinnati photographed by American Builder on May 1; Herb Cassinelli, Builder; L. J. Marioni, Architect; Kopf & Kopf, sales agents. Price \$21,000.

STAIRS—Treads shall be $1\frac{1}{8}$ " thick, risers $\frac{7}{8}$ " thick, tongued and grooved together and have wall strings housed over. Treads shall be selected clear white oak, risers shall be selected red birch. The wall strings to be moulded on top edge to correspond to adjoining base. Stairs to be put in before plastering is done and to be well protected with paper and boards laid over treads until finished.

Build mill box stairs to basement with 1" treads and $\frac{7}{8}$ " risers, same to be of dressed yellow pine. Furnish necessary hand rail.

LATHING, PLASTERING & STUCCO—The plastering contractor is to examine all ceilings, partitions and furring and notify carpenter of any that are not set square, plumb or level and see that they are made so before lathing. Lath all partitions, studded walls, ceilings, stair soffits of entire finished first, second and third stories with rock lath, excepting as otherwise specified, well nailed to each bearing. Basement ceiling and stud partitions shall be similarly lathed. Use metal lath on plaster jambs, arches, ceiling coves, inside corners, etc., wherever necessary and put metal corner beads on all exposed angles of this work. All lath to be well nailed to bearings.

Entire basement ceiling to be plastered, also garage ceiling, this to be a cement mortar, the last coat to be floated. All wood partitions in basement to be plastered as shown.

Stucco—Sheathing is to be covered with a good quality of tar paper, joints to be well lapped, over which shall be placed 24" gauge self-furring metal lath, containing 18% copper, well secured to the sheathing with galvanized nails. First or scratch coat shall be composed of portland cement, sand, not to exceed 10% of lime, and sufficient amount of plasterers' hair. This coat shall be well trowelled on and allowed to thoroughly dry out before second coat is applied. This second coat shall be composed of two parts sharp sand and one part portland cement, very little lime being used. After the second coat has been applied, the work must stand until it is thoroughly dried and practically all cracking has occurred. The architect shall select the shade of float coat from sample submitted.

Basement walls above grade line to be stuccoed with cement mortar floated on. This branch of the work to be done by the plastering contractor.

LIVING ROOM FIREPLACE—Furnish and set in living room one complete cast stone English fireplace in strict accordance with the drawing. Build firebrick hearth and back and jambs. Furnish damper, ash dump door, all cement firebrick and other materials required to make a first class job. Set above fireplace in niche one cast stone shelf for electric clock, same to be moulded front and of same stone as fireplace. Fireplace to be log burning and erected so that it will draw properly and prevent smoking.

SHEET METAL WORK—All hanging gutters to be moulded gutters as detailed on plans, same to be supported by heavy strap iron gutter hangers. Joints to be well lapped, riveted and soldered. Downspouts to be of sizes and shape called for on plans with neat curve under planer. All metal for this work shall be No. 26 gauge Armco galvanized iron. All flashing and counter flashing shall be galvanized iron and applied wherever shown on plans or directed. Valleys must be closed and flashings carried under each slate. Form saddle at chimney to drain roof properly.

All flashing shall be painted with red lead before installation.

Provide galvanized iron strainers in all gutter outlets. Flash tops of all windows and frame walls and wherever else directed. Flash tops of all diagonal and horizontal half-timber.

Line clothes chute entire length and inside of doors with 26" gauge galvanized iron. Joints must be well soldered and perfectly smooth inside and leave square openings to receive door frames at first and second floors where shown.

STEEL SASH—Steel casement windows shall be Fenwrought flat screen type with standard bronze plated hardware, including locking handles and roto worm and gear under-screen adjusters. Casements to be furnished in standard shop coat of paint and manufacturer shall include all necessary screws, glazing clips, and installation fittings, also mastic caulking compound.

Screens for casement windows shall be of No. 16 mesh bronze wire cloth with baked enamel reinforced and rewirable steel frames, and shall be so designed that one screen shall cover to adjacent casement swing leaves where ventilating units occur in pairs.

GLAZING—All glass throughout the building to be the best selected double strength "A" glass, same to be Libbey-Owens-Ford (or equal). Glass to be back bedded and puttied in sash with pure linseed oil putty. Remove putty stains from glass after completion of job. Furnish and install Florentine glass in bathroom windows.

PLUMBING AND GAS FITTING—All plumbing shall conform in every particular to the laws and regulations of the Ohio State Code and regulations governing locality in which the building is to stand.

This contractor shall connect to water main in Herschel Way from nearest point of building and run a $\frac{3}{4}$ " copper tubing water service into the building. Keep water service at least 3'-6" below surface of the ground. Install 1" water meter on this line. From meter take off copper tubing to supply hot water heater, kitchen sink, laundry trays, bathtubs, toilets, lavatories, inside and outside hose cocks as shown on plans. From the water heater take off $\frac{3}{4}$ " copper tubing leads to supply laundry trays, kitchen sink, bathtubs and lavatories and shower stalls. All water lines to have necessary stop and waste cocks of best quality. All fixtures shall be properly connected with the sewer, trapped and back vented in accordance with the Cincinnati Plumbing Code. All toilets and leads to fixtures to have stop cocks. All vents to be carried through the roof at a point not exposed to view from the front of the house.

Gas Fitting—Connect to meter and run gas to all rooms where shown on plans. Furnish and put in gas pipe in accordance with the rules of the gas company, keeping system free from traps and low places and decline to meter.

OVERHEAD DOOR—Furnish and install one complete overhead door of size and design shown on elevations, same to be as manufactured by Kinneer Company or equal. Door to have jamb closing action and rubber bottom astragal so as to be absolutely weathertight.

Door to be of four section type and have leaded glass panel where shown on elevations.

HARDWOOD FLOORS—All floors except kitchen, breakfast room and maid's room to be laid with $\frac{3}{4}$ " random width ash plank floors.

Underlay all floors with rosin sized paper. All hardwood to be secret nailed with tongued and grooved joints. Provide adequate number of pegs.

Floors shall be smoothed and all high spots removed, after which same shall be scraped and sanded. Contractor shall then finish hardwood floors complete with one coat of wood filler, darkened to suit owner, followed by two coats of white shellac and one coat of wax.

Kitchen and breakfast room and maid's room to be laid in $2\frac{1}{4}$ " yellow pine strip flooring.

Kitchen and breakfast room floors to be thoroughly sanded for laying of linoleum.

LINOLEUM FLOORS—In kitchen and breakfast room cement down over saturated felt Armstrong's Inlaid Linoleum of a color and pattern to be selected by the owner and as furnished by the F. A. Kamp Flooring Company of Cincinnati, Ohio. This floor to be well rolled and left in perfect condition.

HEATING—The heating shall be accomplished by a Sunbeam Air Conditioning Unit as manufactured by the Fox Furnace Co.

The furnace shall be set on a level foundation located as shown on heating plans, the fan and base to be grouted in place.

Warm air ducts, pipes or fittings shall be insulated. Where insulated warm air ducts or branches pass through walls or partitions the insulation shall be carried through unbroken. Where ducts or branches passing through walls are not insulated, place tight fitting mitred sleeve of galvanized iron.

Filters shall be in place when unit is running.

MODERNIZATION

"which makes buildings of all kinds more cheerful, more livable and more salable"

New York Builders Biggest Buyers of Foreclosed Properties

Modernized buildings prove profitable investment for operative apartment builders

A BUILDING boom of a different kind is taking place in New York City. This is a building boom in the rebuilding and rehabilitation of foreclosed properties.

Operative builders who back in 1929 were putting up apartment buildings are strongly back in the rehabilitation and modernizing field where they are buying up properties and rebuilding them into sound income producing properties.

The *operative apartment builder* is in a strong position in this field, for he knows apartment construction very well and has had considerable experience in financial and promotional work. The common practice today is for the contractor to purchase the property subject to improvements he will make. Because of his expert knowledge he is able to make the improvements at a low cost, and by keeping the cost down the new earning power given the structure by the modernizing makes it a high class investment proposition.

A typical example of rehabilitation work is that being arranged by the Emigrant Industrial Savings Bank, one of the largest and strongest savings banks in New York, which holds extensive foreclosed properties.

The bank, according to Lloyd A. Smith, real estate manager directly in charge of rebuilding and modernizing operations, does no rebuilding itself but lets all of its work out under competitive bidding to contractors.

In the past two years, according to Mr. Smith, a large number of foreclosed properties held by the bank have been improved and sold. And it is of great significance to the building industry that *contractors were the largest class of buyers*. According to Mr. Smith more than half of the properties moved have been sold to contractors and builders who took title outright or were financially interested in a corporation which took over the property.

Emigrant Industrial Savings Bank has become one of the biggest customers of the building industry and has made hundreds of jobs for New York contractors. The work is handled in the customary fashion with the contractor buying materials and responsible for the building operations.

Does building modernization pay?—is a question often

asked. It most certainly does, according to Mr. Smith who ought to know, for his firm has improved some 900 properties in the past two years with building work involved running into the millions.

"In every case where rebuilding has been done, the property has been put on a profitable basis, and in most cases sold in a short time, enabling the bank to get its investment back," said Mr. Smith. "We are very well satisfied with the results of our modernizing work. A building is only good as long as it pays a profitable return. You must either tear it down or alter it into a modern income producing property."

Emigrant Industrial Savings Bank retains the architectural firm of Voorhees, Gmelin & Walker as advisers and consultants. Before a property is rehabilitated a thorough study of its potential income producing capacity is made. The bank's architects frequently draw suggested modernizing plans for a property before a prospective buyer has been found. When cost studies and estimated earnings have been carefully worked out the project is turned over to a real estate broker who locates a buyer. In a large proportion of the cases the buyers are operative apartment builders who put in substantial cash and form a corporation to take over and operate the structure. It is a splendid testimonial to Mr. Smith and to the architects of the bank that in so many cases the rehabilitation of the properties has turned out so successfully, and they have been soundly reestablished as profitable income producing properties.

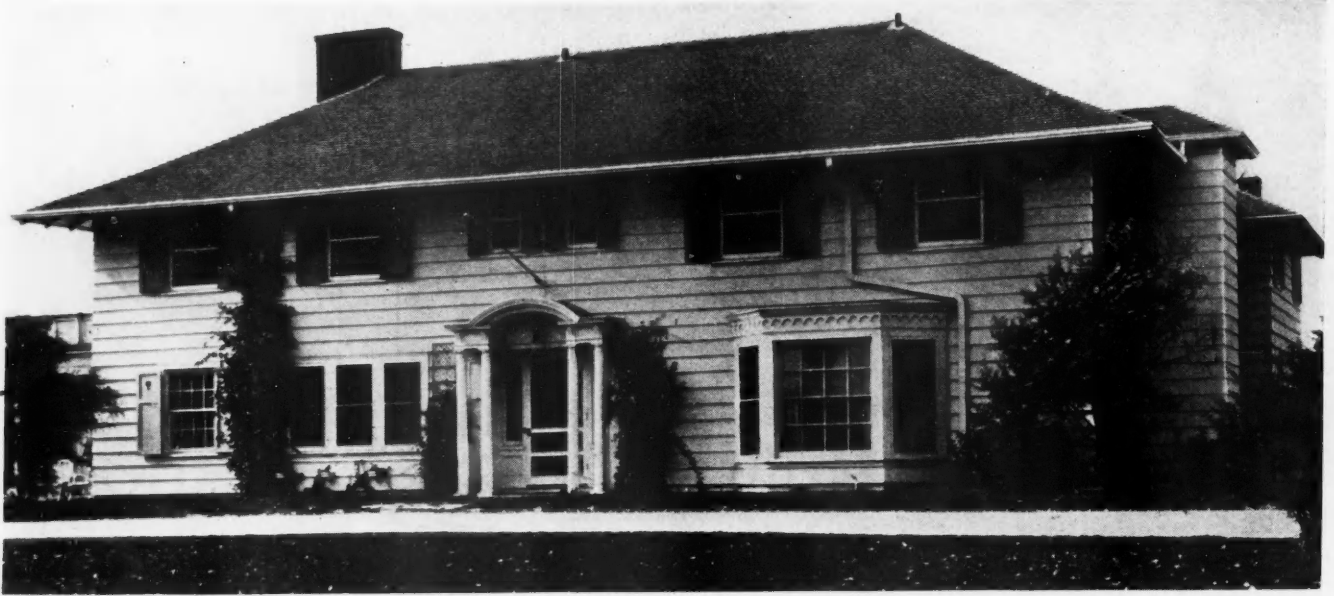
A few typical examples reported by Emigrant Industrial Bank in which a builder bought and successfully restored foreclosed properties are as follows:

Apartment building at 485 Central Park West, modernized by Samuel Derfner, Bronx builder. I. L. Crausman, architect. Old seven and nine room suites were replaced by 67 modern two and a half, three and a half and four and a half room apartments, with new bathrooms, kitchens, elevators, brass plumbing and heating throughout. Building was only ten percent rented before; now is more than 90 percent rented.

Apartment at 244 Madison Street on lower East Side. Thirty modern apartments installed by new builder owner, the Hare Company. O. J. Getty, architect.

Bronx tenement-type structure at 849 Beck Street restored by Krumholz Brothers, builders.

Group of nine old buildings at 315-321 West 57th Street, to be restored and rebuilt into garden apartments by Blitman and Chutick Bros., builders who will own and operate the new project.



Elevators Give Builders New Field

A PROFITABLE new field has been opened to builders with the announcement by an elevator manufacturer of a line of relatively inexpensive elevators for use in private homes. Residence elevators, heretofore restricted to the very wealthy, are now available to a vast new market.

The expense, comparable to the cost of a good automobile, will be considered anything but unreasonable by thousands of home owners, especially in cases where

there are aged people, cripples or invalids in the family. Residence elevators also simplify household tasks by permitting the easy moving of furniture, equipment and meals. There is an excellent possibility of financing the greater part of such an installation under the National Housing Act.

Careful planning will be necessary in almost every case to determine the proper place to install the elevator where it will be most convenient and useful, and so that its installation will not materially alter the interior of the house or cause it to be an eyesore.

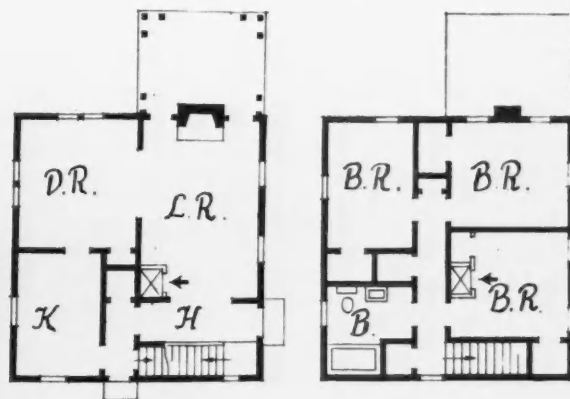
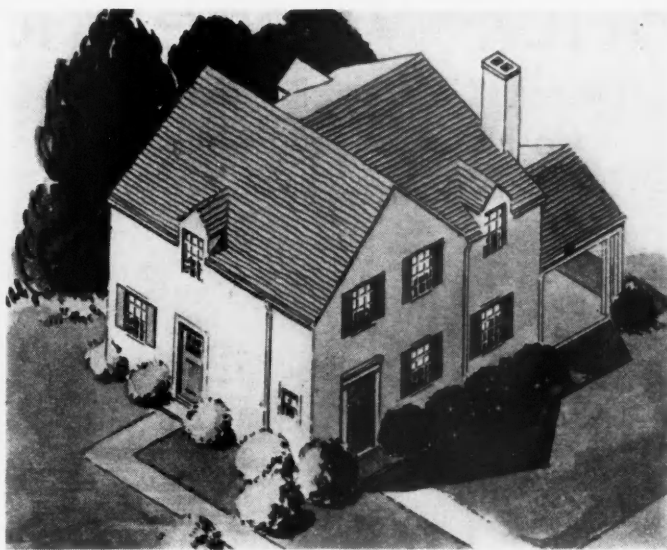
An elevator can be installed in such a way as to require a minimum of space and can be decorated to harmonize with any scheme of interior decoration. In regard to this latter point, it is believed that the most popular car will be one of unfinished spruce, which may be decorated with paint, lacquer, wallpaper, wall fabrics, etc., making possible the personal note in private elevators.

There are four places where a residence elevator may be most happily installed. First, if the hallway has an "open" stair well in which the stair turns around a clear opening extending at least through the first and second floors, the very newest high quality unit can be fitted in with a minimum of expense if the open well is 3 ft. 5 in. wide or more. Some of the older and smaller units require a little less space; perhaps a yard of clear space for a cab carrying one person.

The second location to look for is a coat closet, vestibule or other seldom used extra space leading from the first floor hall, that lies directly beneath a bedroom closet or similar space on the ground floor that can be sacrificed without any serious twinges. Any tier of closets extending from floor to floor has excellent possibilities; but of course if they are not adjacent to a hall or passageway, the convenience of the elevator to all the family is somewhat less.



ILLUSTRATED ABOVE: Home of Ludington Patton, River Hills, Wis.; elevator shaft addition can be seen at the right end of house. At left: Interior view of the above home showing elevator car and door arrangement.



Arrangement with Elevator Installed inside Old Plan.

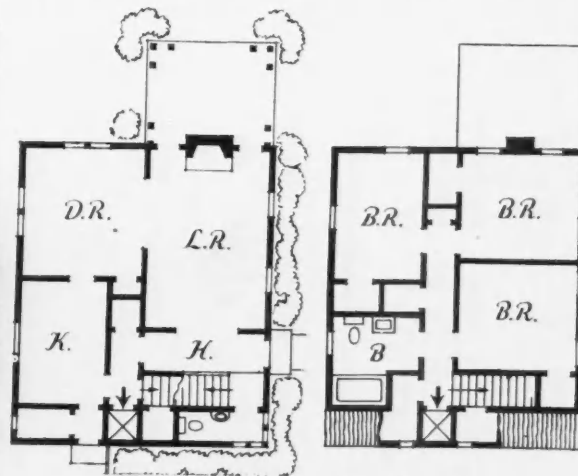
The minimum space required under this and the remaining two plans is approximately 3 ft. 5 in. by 3 ft. 9 in. plus the thickness of any new walls that will have to be built to complete the enclosure of the shaft. This is large enough for a car carrying two people comfortably. A larger car for four people or a wheelchair and attendant requires a shaftway about one foot greater in each direction. Since most building codes will permit a residence elevator to be installed in a non-fireproof house with enclosing walls of plaster on metal lath, it is seldom necessary to allow over five inches for the thickness of new walls and sometimes they may be kept to two inches. Where existing walls can be used for one or more sides of the new shaft, they can readily be made fireproof without structural changes.

The third location to look for if the first two fail to fit the situation is along one wall of the main stair hall or service hall. If the hall is large, the entire enclosure may project into the present hall space at some convenient corner. Or part of the hall space may be used and the rest taken out of a corner of the dining room, library, kitchen or other adjacent area. Upstairs it may be nec-

essary to cut into a room, for often second floor hallways are less commodious than those on the ground floor.

The fourth alternative that brings every house within the range of practical possibilities is an exterior shaft built after the manner of the stair towers of Norman and early Elizabethan manor houses, and the still older feudal castles. The architectural possibilities of such an addition are endless. It may be placed on the front of the house beside the entrance, to which it will add a measure of dignity and importance that is often lacking. If the house has the familiar corner hallway, the tower may be added at the same end of the house. If the hall is of the center type, extending through to a garden entrance at the rear, the elevator may extend out onto the rear terrace.

Or the shaft need not be a tower at all, if the style of the house is Georgian or Colonial. It may be part of an ell or wing which may also include a porch or study or a series of extra toilets or baths. Suffice to say, any house may be equipped with vertical transportation of the most modern sort. Only a little ingenuity is required, and ingenuity is a builder's stock-in-trade.



Arrangement with Elevator in New Addition to Old Plan.

TOP OF PAGE: Typical small house of corner hallway type with small arrows showing possible elevator location.
 BOTTOM OF PAGE: Same house with exterior addition to allow for elevator space, extra closets and lavatory.

Big Profits in Brick Veneering

"CARPENTERS and builders, instead of sitting at home starving, might just as well be out making good money brick veneering old houses," declared H. G. Heydorn of the Campbell Construction Co., Detroit, in a recent conference with American Builder. "We have had five years experience in this work here in Detroit and we have found that house improvements can be sold like washing machines. We go after the business from door to door with specialty salesmen on straight commission and some of them are making as high as \$10,000 per year."

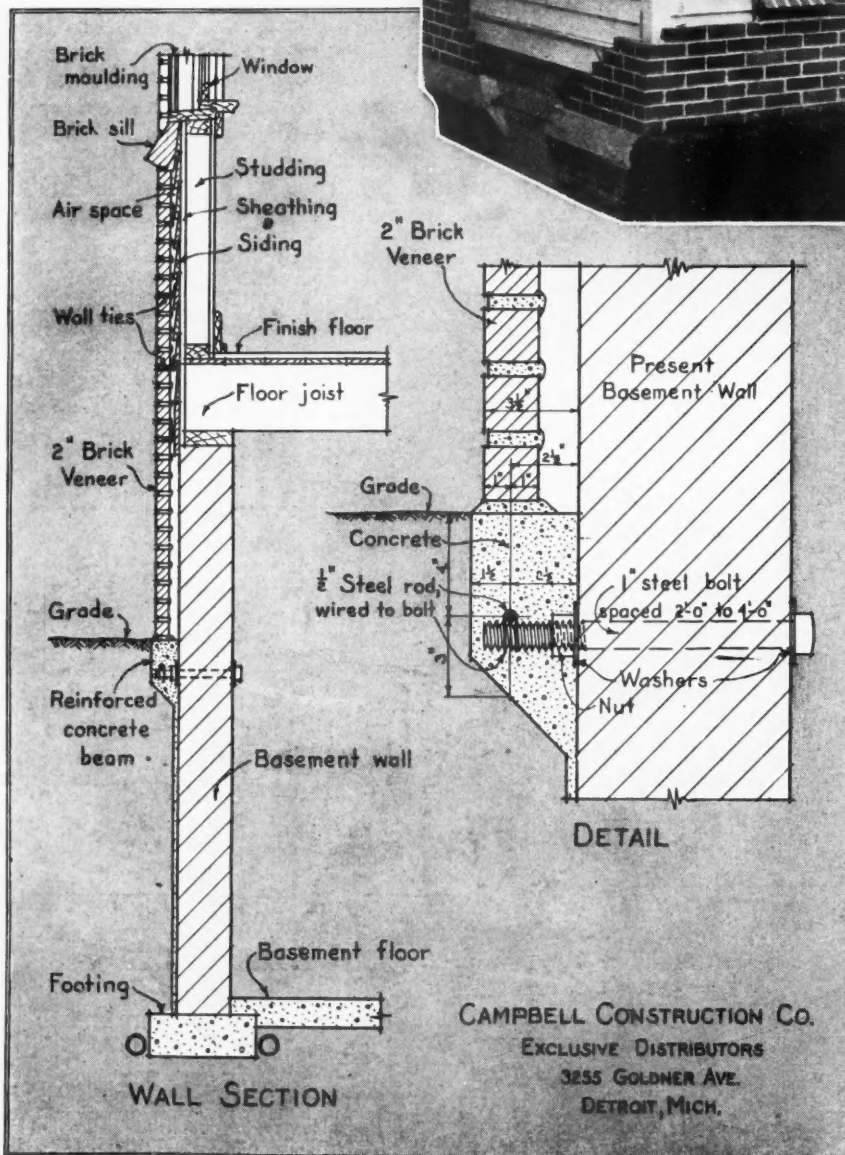
The special type of house improvement which Mr. Heydorn's firm pushes is overcoating old frame and stucco buildings with 2-inch brick veneer. Every town has plenty of prospects for such work when the

Detroit Contractor Develops Low-Cost Overcoating Method and High-Efficiency Sales Plan



ABOVE: Miniature house (about 7 by 14 feet) exhibited at Fairs and Shows to interest property owners in 2-inch brick veneering.

TO LEFT: Details of patented beam foundation.



property owners realize how simple and easy it is to transform their old buildings with this modern 2-inch veneer of genuine brick masonry. Some communities have yielded as many as four brick overcoating jobs in a single block, the records show, with jobs averaging \$1100 each.

The accompanying details show the special patented concrete beam method of foundation construction for the 2-inch brick veneer which is one of the big advantages of this system. Instead of excavating and putting in new footings and foundation as required for a 4-inch brick wall, this lighter 2-inch veneer is safely based on a 3-inch reinforced concrete beam which, at grade, is tied to the old foundation wall by 1-inch bolts spaced every two to four feet. Two men, one with an electric drill and the other to lay out the work and place the forms, put in an average foundation in one day, Mr. Heydorn

(Continued to page 40)

CAMPBELL CONSTRUCTION CO.
EXCLUSIVE DISTRIBUTORS
3255 GOLDNER AVE.
DETROIT, MICH.

OWNER		ESTIMATOR		DATE		TOTAL	
ADDRESS		SOURCE		EXTENSION		TOTAL	
JOB AT	ITEM	CHECKER	LIST	EXTENSION	DATE	TOTAL	
QUANTITY	Permit	JOB	L. FT.				
	Beam Foundation	EA.	L. FT.				
	Pier Foundation	L. FT.	L. FT.				
	Angle Iron	L. FT.	L. FT.				
	Foundation Pored to Grade	SQ. FT.	L. FT.				
	Foundation Wall	JOB	SQ. FT.				
	Two-inch Brick Veneer—Shade	EA.	JOB				
	Mortar—Color	EA.	EA.				
	Wing Wall	L. FT.	L. FT.				
	Chimney Retopping	EA.	EA.				
	Window Moved in Basement	PER OP.	EA.				
	Stone Trim	EA.	L. FT.				
	Stone Sills	L. FT.	SQ. FT.				
	Sidewalk Patching	SQ. FT.	SQ. FT.				
	4-inch Sidewalks and Drives	L. FT.	L. FT.				
	Remove Present Cement Wk.	L. FT.	L. FT.				
	Porch Cutting	L. FT.	L. FT.				
	Cornice Cutting	L. FT.	L. FT.				
	Cornice Detail	SQ. FT.	SQ. FT.				
	Cornice Ordinary	EA.	EA.				
	Shingling Sidewalls						
	Steps Remodeled						
	Extra						
	Remove Present Porch	EA.	L. FT.				
	Basement Wall, Brick	L. FT.	L. FT.				
	Basement Wall, Block and Brick	EA.	EA.				
	Door Cut In	EA.	EA.				
	Coal Chute	L. FT.	L. FT.				
	Window for Basement	L. FT.	L. FT.				
	Lead Wall	L. FT.	L. FT.				
	Lead Coping	L. FT.	L. FT.				
	Pier 16-in x 16-in	L. FT.	L. FT.				
	Foundation Wall	L. FT.	L. FT.				
	Curtain Wall	L. FT.	L. FT.				
	Brick Porch Rail and Stone Coping	EA.	EA.				
	Iron Rail	EA.	EA.				
	Iron Corner Posts	SQ. FT.	SQ. FT.				
	Stone Door Sill	SQ. FT.	SQ. FT.				
	Stone Steps	SQ. FT.	SQ. FT.				
	Dirt Hauling	SO. FT.	SO. FT.				
	Excavating and Cement Floor	JOB	JOB				
	Reinforced Cement Slab						
	Moving Gas Service						
	Extra						

SALESMEN working on commission use this itemized estimate and proposal sheet on every job figured. A duplicate is turned into the office so that the manager can O.K. and base his contract on the figures, if sold. BELOW: Photo of typical job in process of overcoating.



EASY
TERMS

NO
DOWN
PAYMENT

**WHY PAINT?
VENEER
WITH
2-INCH BRICK**

PERMANENT
ADDS BEAUTY
SAVES PAINT
BETTER RE-SALE

INEXPENSIVE
ADDS INSULATION
SAVES FUEL
BETTER RENTAL



BEFORE



AFTER

SEE HOMES BEING VENEERED
NOW IN YOUR NEIGHBORHOOD
THEN ACT!

DETACH AND MAIL WITHOUT OBLIGATION

(Phone LAfayette 2710 today or mail this card)

2-INCH BRICK VENEERING OUR SPECIAL

Improved Method of Brick Veneering — Cost Cut
Convenient Terms

Dear Sirs: Please have your representative call and
estimate in regard to

2-inch Brick
Veneering.

Basements

Complete Building Service

Name _____

Appointment _____

Address _____

Phone _____

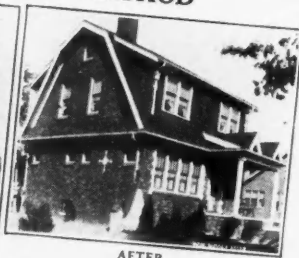
SAVES
FUEL

SAVES
PAINT

ADDS BEAUTY
IMPROVE YOUR HOME
WITH
2-INCH BRICK VENEER
THE LOW COST METHOD



BEFORE



AFTER

SEE

**Jobs Near Your Home
Under Construction at
14311 TERRY**

EASY TERMS

NO DOWN PAYMENT

Send Card Below for Details

FIRST CLASS
PERMIT No. 520
(Sec. 510 PL&R)
DETROIT, MICH.

BUSINESS REPLY CARD

NO POSTAGE STAMP NECESSARY IF MAILED IN UNITED STATES

2c POSTAGE WILL BE PAID BY—

CAMPBELL CONSTRUCTION CO.

3255 Goldner Avenue

DETROIT, MICH.

As each new job is started these door knob hangers have the address printed on them and are distributed in the neighborhood, inviting the home owners to drop around and examine the work. A salesman on the job picks up many new prospects this way.

stated. Then, allowing one day for the concrete to set, the brick laying goes forward the third day. The half thickness face brick save one-third the cost of regular brick and the mortar is cut down one-half.

Some of the advantages of this beam foundation at grade are: Only necessary to excavate 6 inches out from the wall and approximately 12 inches deep. Saves the cost of excavation and dirt hauling. Does not ruin lawns or shrubbery on account of the limited excavation necessary. Saves the cost of new footing. Saves the cost of moving drain tile. Saves the cost of bringing the wall up from below frost line to grade, or approximately 400

square feet of masonry per job. Saves the cost of waterproofing wall to grade. Eliminates replacement of present concrete walks and driveways. Makes less mess around premises during construction.

The 2-inch brick veneer method of overcoating was invented by a practical builder and a brick manufacturer, Edward J. and Henry W. Mason of Detroit, with patent granted May 10, 1932. The right to use this system is granted on an exclusive basis to one contractor or builder in each county or group of counties. The Campbell Construction Co. has Wayne County (Detroit). A royalty of \$10.00 per job is charged.

"It Pays to Advertise" —Says Builder Watson

HARRY H. WATSON, general contractor of Decatur, Ill., takes his selling job seriously, just as he does the building of a new house or repairing an old one. His promotion methods include various recognized ways of making profitable contacts.

Watson is a firm believer in newspaper advertising, and consequently keeps his name before the people of Decatur and vicinity in a consistent campaign. At present, he is stressing remodeling jobs and modernization in his display advertisements and is driving home the thought that the work may be financed through banks or other lending agencies. Four of these small single column ads are illustrated on this page.

When asked to furnish estimates free on any work, as advertised, Watson tells prospective customers what should be done, by indicating what can be done to make the home more attractive, more comfortable; in short, modern. Thus, he turns the Better Housing Movement into profitable business.

About another phase of sales promotion, he says, "I have great respect for the powers of direct mail and can trace considerable business to this form of advertising. In my business, I use considerable paint,

for instance. I reason that if manufacturers of paint can afford to carry large display advertisements in trade magazines to the effect that they will supply fellows like me with post cards, blotters and other literature telling the sales story, and with my name and address attractively printed thereon, I certainly can afford to mail them out, or see that they get distribution in some way or other.

"Consequently, I go in for this form of advertising very strongly, and I am glad to do it, for the very good reason that I have found it pays."

Personal letters and mailing pieces (a typed letter and an attractively printed broadside are shown below) offering timely suggestions round out his campaign.

Mr. Watson takes the greatest of care when making up prospect lists. He knows that profitable sales depend upon having the right names and correct addresses for use in connection with direct mail activities, personal solicitation or other means of approach. He has found it a good idea constantly to cultivate his list of satisfied customers for in this way many leads have popped up that resulted in more business. Classified advertising in telephone directories and like publications has also helped.

"This is about all I have to say on the subject of how I get business," went on the genial contractor. "But I don't want to break off without saying a word about the benefits I derive from my reading of the AMERICAN BUILDER—a publication that I have been reading with increasing interest over a long period of years.

"Its fine editorials and up-to-the-minute news, practical articles, home designs and numerous other instructive and educational features, have helped me immensely in my business. And I have profited, too, through making it a rule to read the advertisements."

HARRY H. WATSON GENERAL CONTRACTOR
WE BUILD NEW HOUSES AND REPAIR OLD ONE

777 WEST CUSHING ST. DECATUR, ILLINOIS

Dear Property Owner:

Where's the fire?

Do you, too, get a feeling that it may be your home every time you hear the fire trucks?

The Grace Methodist Church fire originated from a defective flue. More than 25% of all fires are directly traceable to this same cause. A large number of them occur during the night while you and your family are asleep.

Are you positive that your chimney and flue are in good shape? Do you know, when you retire each evening, that a piece of loose mortar will not let sparks through your chimney so that the fire department will make a run to your house before morning?

It will cost you nothing to find out if your family is safe. For a limited time we are offering FREE CHIMNEY INSPECTION SERVICE.

Stop worrying! Call 2-3623 or fill out the enclosed card and mail it today. Our inspector will call and thoroughly check over your chimney and flues. If they are safe, he will tell you; if not, he will indicate what repairs are needed.

This is an easy way for you to satisfy yourself that you and your family are safe. No postage stamp is required on the card, and of course there is no obligation.

Yours very truly,
Harry H. Watson

ESTIMATES CHEERFULLY FURNISHED

HARRY H. WATSON
General Contractor and Builder
777 WEST CUSHING AVENUE
DECATUR, ILLINOIS

Mr. Richard Roe
Decatur, Illinois

Dear Sir:

Is it going to be necessary for you to put in a city walk or a drive approach to your property? Or have you already had this work done, as required by city ordinance?

If not, it will be to your advantage to have it done now, while prices on all materials are low, and many good workmen need the work which they would be willing to do for a very reasonable wage. I personally know a number of such men who are skilled in this work, and I would be willing to make a very low contract price on your job to obtain employment for them.

It would mean a big saving to you to have this work done for yourself in this manner, rather than to wait for the city to do it with the additional expense necessary to that way of handling it.

I would like very much to hear from you at once, if you have any of this work which should be done, as I believe I can show you that it will be of benefit to you to do it now. Just phone me at 2-3623, and I will come to see you.

Yours very truly,
Harry H. Watson

**IT'S TIME NOW—
LET'S GET TO-
GETHER ON That
Remodeling Job!**

We have said it so many times—think of the many, many things you can do in your home to make it more attractive and livable. Inside and out hundreds of these suggest that you make the change of that adjustment for comfort, quiet and appearance.

The time is here—prices are low—men are waiting to work. If we assist you, with our phone, give you a free estimate of the cost, and if desired, provide a time-payment plan for you.

Harry H. Watson
GENERAL CONTRACTOR
777 West Cushing Phone 2-3623

**BUILD
REPAIR
REMODEL**

On Easy Monthly Payments.

Modernize
—Bathroom
—Kitchen
—Laundry
—Attic
—Basement
—Fireplace
—Refrigerator
—Hot Water
—Electricity

ESTIMATES furnished FREE on any work—large or small.

Harry H. Watson
GENERAL CONTRACTOR
Building, Remodeling, Remodeling
777 West Cushing Phone 2-3623

REMODEL
For Greater Living Comfort!

It Costs Less Now!

Transform your home into a modern, more livable place. "All the safety, charm and comfort scientific construction can provide, at extremely low cost. In doing so, you increase livability, resale and personal value, permanence, safety and health.

Utilize the attic—reduce heat loss—keep out cold—keep out heat.

HARRY H. WATSON
GENERAL CONTRACTOR
Building, Remodeling, Remodeling
777 West Cushing Phone 2-3623

Modernize Your Home Now!
—Before It's Too Late

HOME—repairs, alterations, improvements may be financed NOW through local financial institutions. Don't put off these plans to remodel your home any longer. Especially when you can have your home transformed into a comfortable, up-to-date home—at our present day low prices.

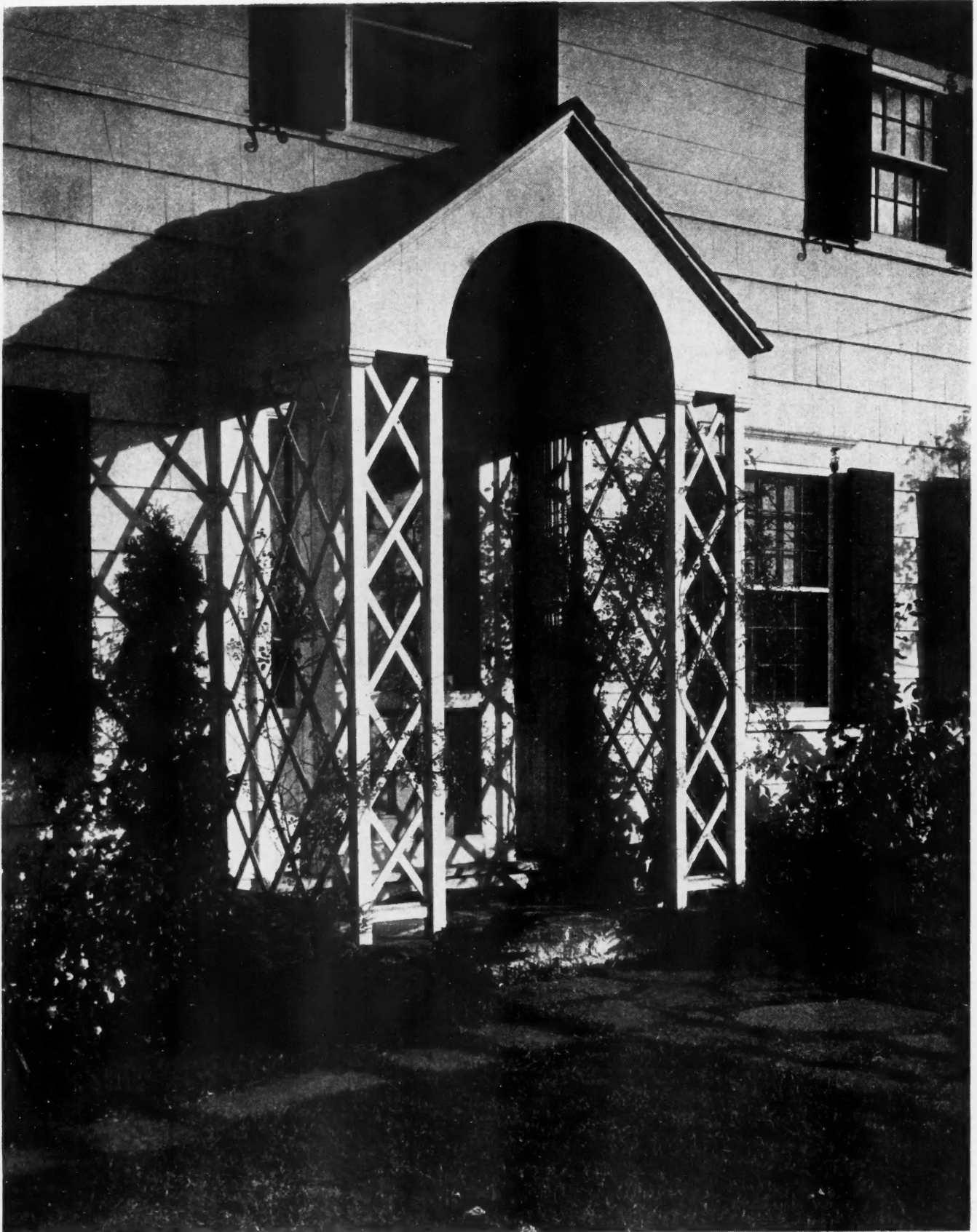
Build, repair or modernize now. It will be a long time before you will have such an opportunity again.

ESTIMATES furnished FREE on any work—large or small.

Harry H. Watson
777 West Cushing Phone 2-3623

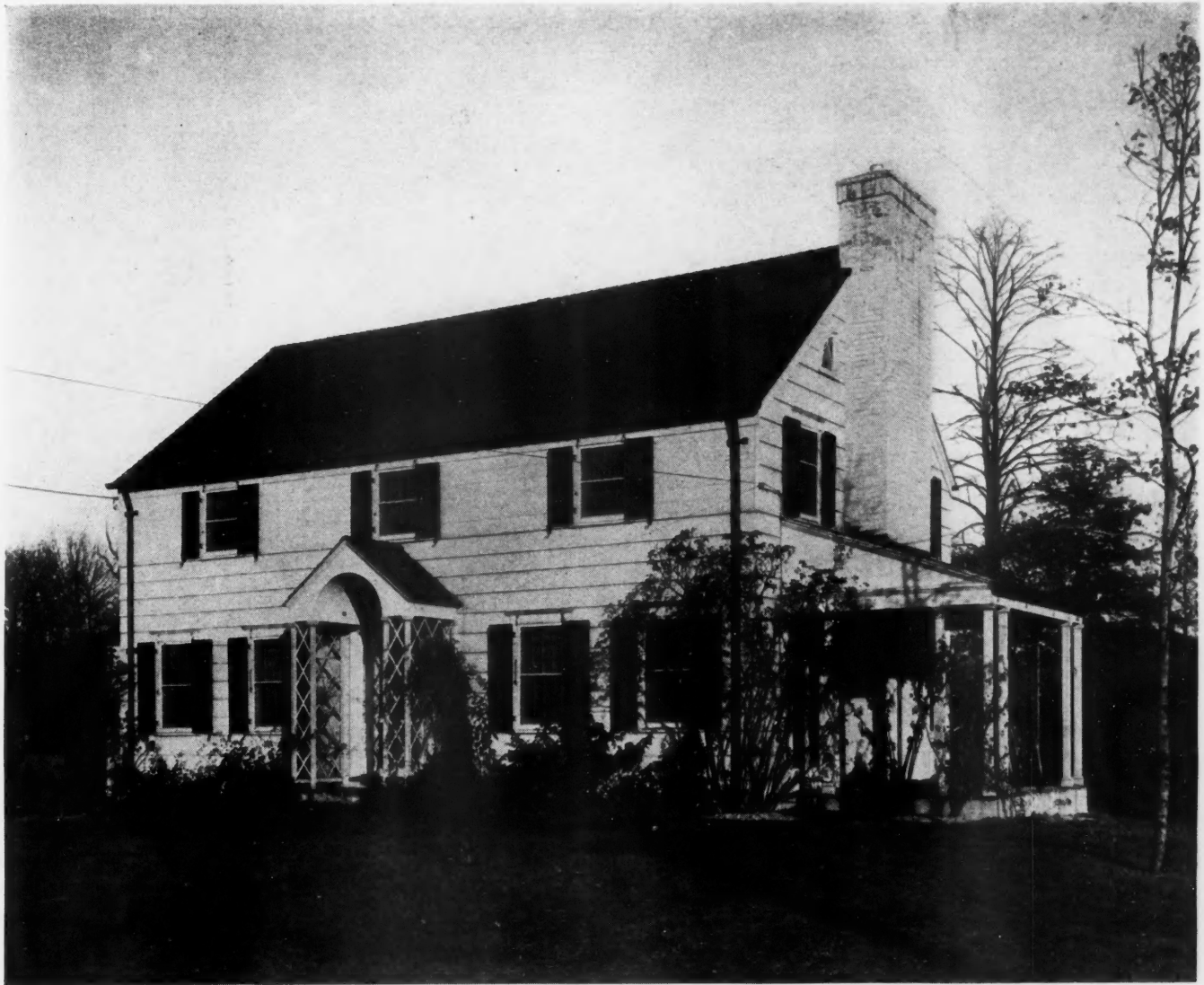
ABOVE: A timely direct mail piece printed on green paper and a letter calling attention to a city ordinance.

LEFT: Four small newspaper ads.



A Latticed Entrance

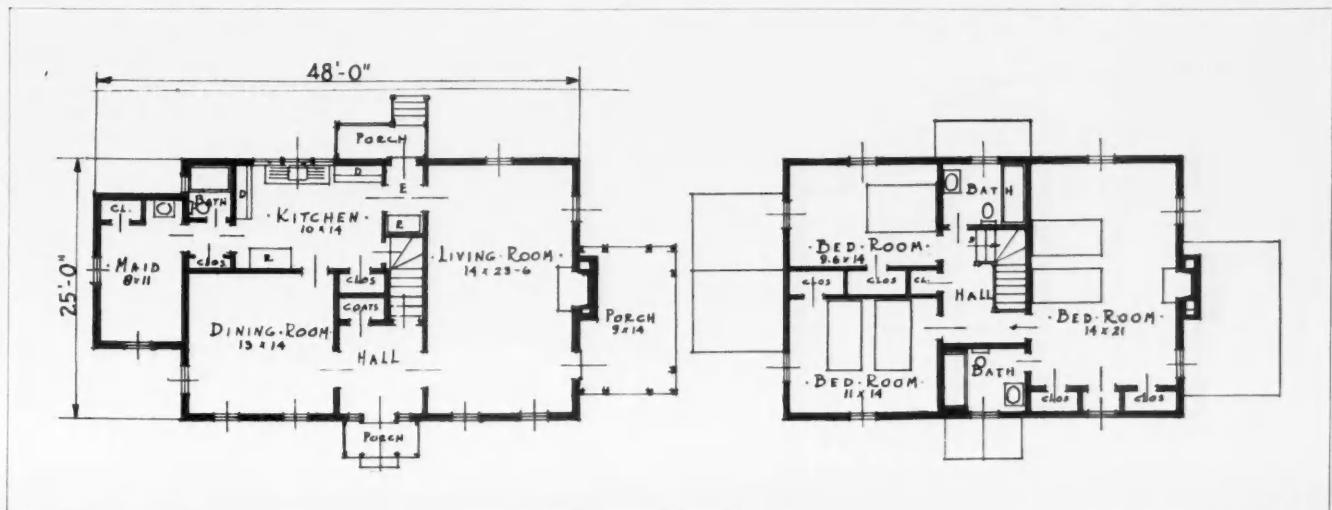
SIMPLE DESIGN and fine craftsmanship make this entrance detail especially charming. It was designed by James J. Bevan, Tuckahoe, N.Y. architect. The informal stone step combines with the latticed construction and well proportioned gable to give an unusually pleasant entrance to the house.

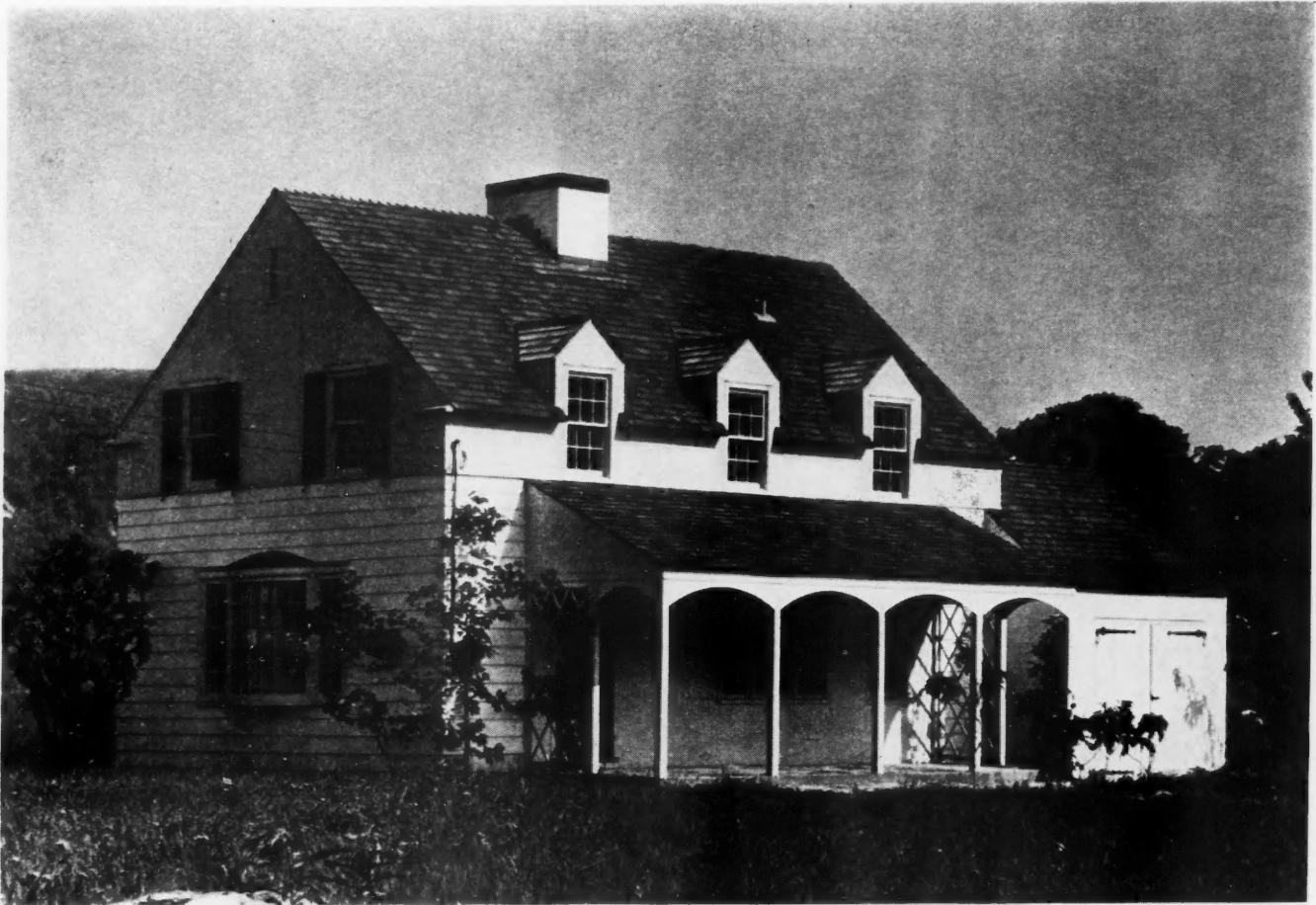


Center Hall Colonial

THIS HOUSE in Tuckahoe, N.Y., built by John L. Bull uses a practical form of the Center Hall Colonial plan. Rooms are spacious, well lighted, well arranged. House is frame construction, dark stained shingle roof, shingled walls painted white, whitewashed brick chimney. James J. Bevan, architect.

Cost Key: 2.177—146—1096—46—29—18

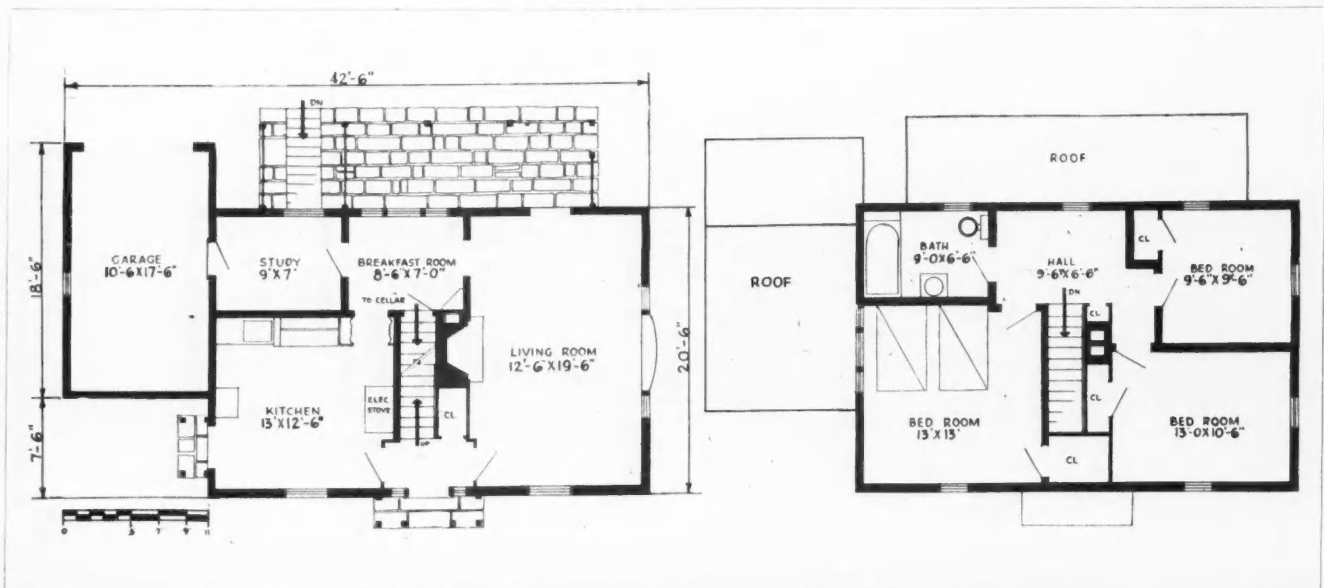




A Connecticut House for Country Living

Cost Key: 1.610—137—646—29—21—16

LOCATED in Kent, Conn., this charming house designed by architect Allan McDowell and built by Peter Gawel, is planned for country living. Hardware, hinges and fixtures are hand wrought by the village blacksmith. Exterior shingles are stained white, laid $8\frac{1}{2}$ inches to weather. Gable ends are of wide redwood laid vertically. The house was unusually inexpensive to build. This house was designed and built for Mr. C. K. Mosher.

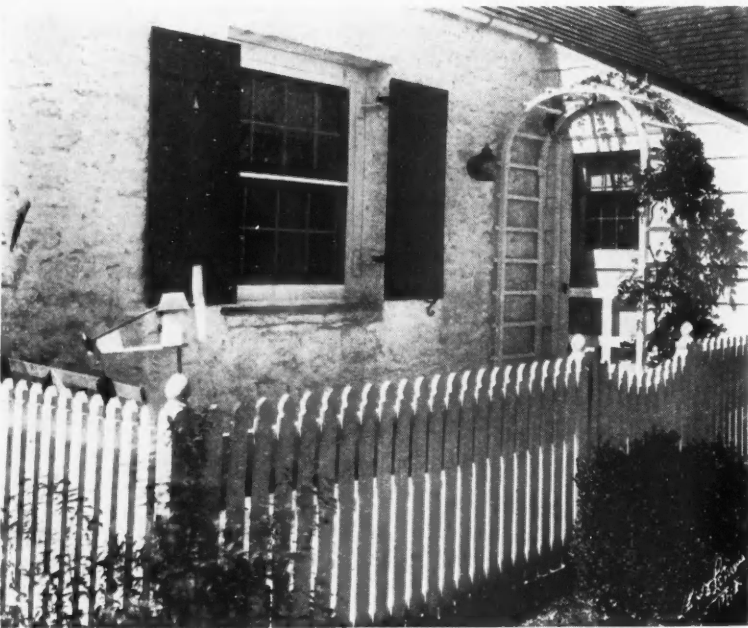




DINING ROOM of R. G. Stillman House, also at Kent, Conn., and designed by Architect McDowell, is attractively paneled. All interior trim is bone white.



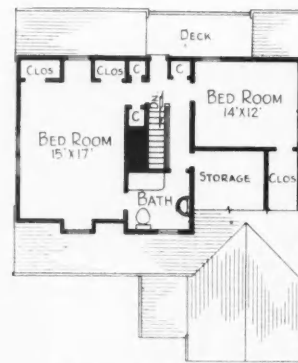
FRONT VIEW of the C. K. Mosher house at Kent, Conn., designed by Allan McDowell and built by Peter Gawel. Proportions, details and windows are handled with skill.



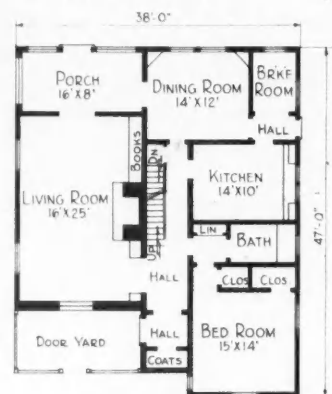
Colonial On a High Plot

Cost Key: 2.129—170—1434—59—25—23

ARCHITECT NAT O. MATSON designed this charming little home for a high plot in White Plains, N.Y. Exterior is of stone and shingles, painted white. The wood shingle roof is stained rust red, and the blinds are rust red. Pine boarding and exposed ceiling beams are used in hall entranceway, and hardware throughout is of Cape Cod style. The front entrance with its picket gate is an unusually attractive feature.



SECOND FLOOR PLAN



FIRST FLOOR PLAN



Latest On Long Island

Cost Key: 1.474—160—952—41—21—21

THIS IS ONE OF THE MOST currently popular types of architecture being featured by the Harmon National Real Estate Corp. in its houses built for sale on Long Island. It is located at Harbor Green and was designed by Architect Randolph Evans. It has a charm and architectural appeal that sets a new high point for low-cost homes.

FLOOR PLAN IS UNUSUAL but planned for modern living. Garage is made a part of the house and the open porch at rear is very attractive. The house is steam-heated, has oak floors, pine trim. There is space on the second floor for 2 bedrooms and bath.



"—entirely different from the low-cost house of yesterday"

LELAND R. REEDER, Kansas City Architect, describes small homes to fit the needs of today.

IF PRESENT indications are to be regarded, the long awaited resumption in building activities will occur in the field of the small house. However, the house that will meet this need is entirely different from the low cost house of yesterday, and the architect who enters this field will be confronted with problems which he has not encountered before. In fact, they have not existed before and by no means the least of these will be the problem of adapting plans and designs to the needs of clients who are attempting to maintain their accustomed standards of living on reduced salaries.

Most of these clients will be young married couples whose former homes and environments have taught them to expect certain comforts and conveniences in a home. Certain features that once were considered luxuries are now accepted as necessities. In so far as is possible these features must be included in the small house of today, but the cost must be kept within the reach of persons living on modest salaries.

And then there will be, too, an increasing demand for small houses by elderly persons, whose families have been raised and have married and established homes of their own. These persons realize that they have no further need for large homes, but they are unable to accustom themselves to life in apartments. The answer, of course, is the small house.

But here, again, the need is for a small place in which they may enjoy the freedom and comforts of a larger house and at the same time be able to reduce the expense and responsibility of keeping such a house.

It may, at first glance, seem impossible to design a house to cost from \$3,500 to \$5,000 which will include such features as air conditioning, modern electrical equipment, soundproof construction, and pleasing design; but it can be done.

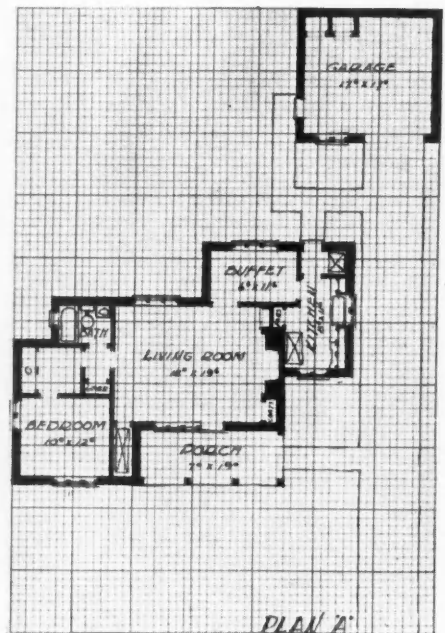
Obviously the old type of flimsy construction and the mill town type of construction are not acceptable. However, by making efficient use of floor space, by the use of modern materials, and by the use of advanced and efficient building methods substantial savings can be effected.

Since the bulk of the market will be made up of people who are not financially able to experiment, and who are by nature inclined to be suspicious of radical changes, extreme modern designs will not be acceptable. For the most part modifications of accepted types will be generally favored. It will be necessary to plan certain rooms to serve a two-fold purpose and other rooms must be eliminated entirely. In the accompanying sets of plans an effort has been made to adjust the use of space to the requirements outlined here.

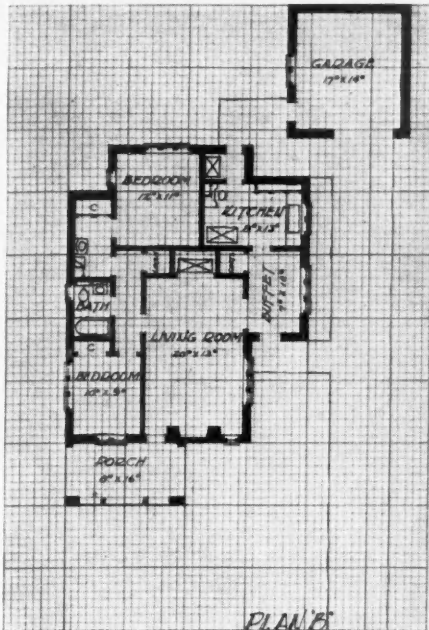
The general design of the exterior is French Provincial modified to fit in appropriately with the average middle class neighborhood. At the same time, though, these houses would be appropriate for a small suburban site.

All needless ornamentation is eliminated and the attractiveness is dependent upon the interesting roof line and the chimney arrangement. The exterior can very easily be of any type material depending upon the amount to be spent.

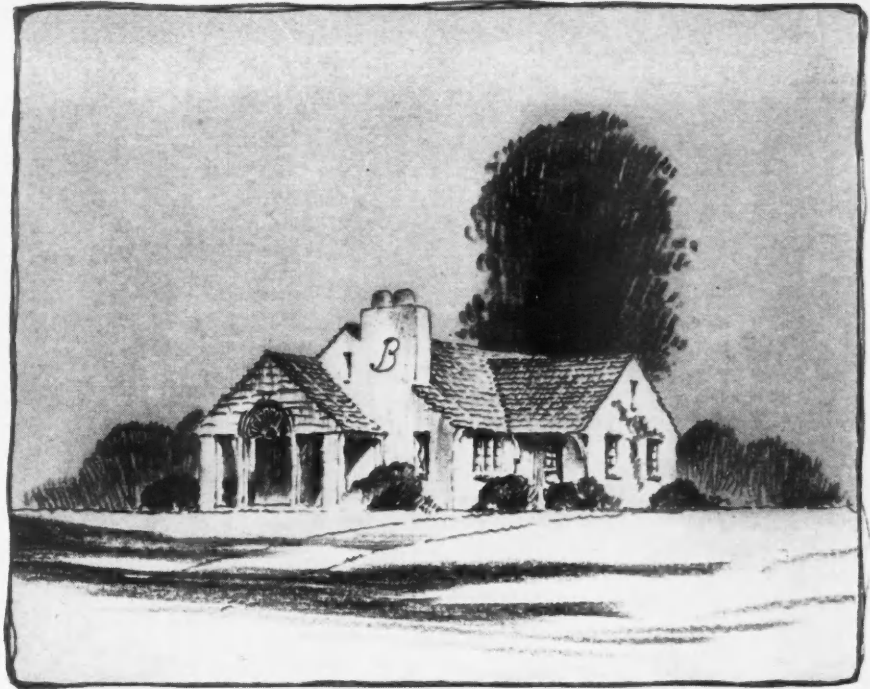
Basements have been eliminated and a gas fueled, positive air circulating heating and air conditioning system is installed in the attic. Where gas rates prohibit its use as a fuel, the heating plant must be provided for on the first floor level. In this case, the garage would be at-



PLAN "A": Cost Key is 1.176-152-937-40-18-15



PLAN "B": Cost Key is 1.321-140-1036-44-17-17



tached to the house and the heating plant and laundry would be placed there.

In Plan "A" the main entrance is through a porch which may be enclosed and used as a sun room or recreation room. For greater privacy a porch might be added in the angle formed by the living room and buffet. This would mean that a door must be cut leading into the buffet or French doors must replace the living room windows at this point. This space is also ideally suited for a flag stoned and canopied terrace.

The closet in the living room balances book shelves on the opposite side of the woodburning fireplace, and conveniently located with reference to the front door so that it can serve as a coat closet.

A large wardrobe is provided in the dressing room and a linen closet in the adjacent hall, thus making them accessible to the bedroom and to the living room as well. This is necessary since the living room with its roll-out bed must serve as guest room.

The bath room, also, is convenient to both bed room and living room, and the dressing room serves the purpose of a powder puff room.

While a house of this type may be looked upon by most persons as a more or less temporary home, it must at the same time be designed to suit certain changing requirements. In the case of young couples it is necessary that there be space enough to provide for one or two small children. This is possible with the roll-out bed in the living room and there is space enough in the bed room for a crib.

In this case the crib may also be placed in the dressing room where it has sufficient ventilation from the windows in the bath and bed room, but at the same time is protected from direct air currents.

The buffet is substituted for a full sized dining room to reduce building costs and because the dining room is used less than any other room in the house. This buffet is adequate for the average small family and when guests are entertained it is possible to serve meals in the living room. At such times the buffet would be used as a butler's pantry.

The kitchen is designed so that there is ample room for two persons to work without being crowded, and at the same time is arranged so that all working points are

convenient for a single person. There is a planning desk at one end of the drain board and natural light from a window over the sink. There is a closet for mops, brooms, and pans, and the service entry is so arranged that deliveries may be made and groceries placed in the refrigerator without entering the kitchen. This makes it possible to leave this entry open while the woman of the house is away. This is also the logical place for service meters. Above and below the drain board there is ample cupboard space and the necessary drawers for kitchen implements.

Throughout the house wood casement windows are used, these may be double glazed later if desired. The walls are all of wood finish except in the bath room where the walls and floor are of linoleum.

The living room and buffet walls are knotty pine, finished and stained. The bed room and kitchen walls are clear white pine, tinted and decorated. The ceilings throughout are of insulation board of a color and texture to harmonize with the walls.

The attic which is unfinished, except for a small floored section, can be reached by means of a disappearing ship's ladder in the dressing room ceiling.

Plan "B" is for a large family and has two bed rooms and a stationary type disappearing bed in the living room. The main entrance is through the buffet, thus eliminating the necessity of entering directly into the living room. This buffet has all the possibilities of the other plan and in addition, with the closet and when a folding pulman table is used makes a regular entry hall.

To be accessible to both bed rooms and to the living room, the bath is placed off a small hall. Here, also, is a linen closet and a dressing room. For greater washing facilities, a lavatory may be placed in this dressing room.

The kitchen in this house has the detached service entry and also the planning desk and cabinets which the modern woman requires. And as in Plan "A," if gas fuel is not practical the garage may be moved up and joined to the house.

Ample cross ventilation and sufficient natural light are supplied in both of these plans. Closets have been made large enough and located in such a way that they are convenient for overnight guests using the living room.

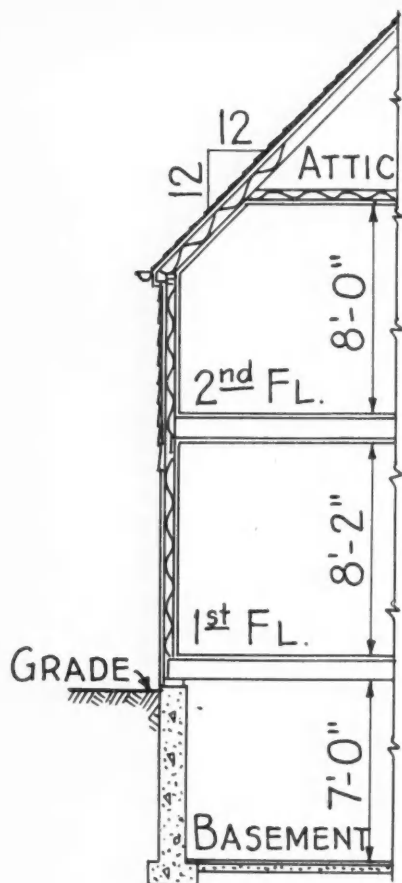


Livable Early American

A Home of Medium Size with Facilities and Conveniences Allowing for Family Comfort

BUILT OF STONE AND STUCCO on the first floor and shingles above, this attractive home reflects the traditions of the ever popular Early American style. The low sloping roof is broken interestingly by well-spaced dormers. With 8 rooms, 2 baths and attached double garage, plenty of living space is allowed for the family's needs. Features include built-in breakfast nook, sun room, and plenty of storage space. Adequate windows give good light and ventilation. The design is No. 755-B of National Plan Service, Inc. General specifications appear on the second page following.

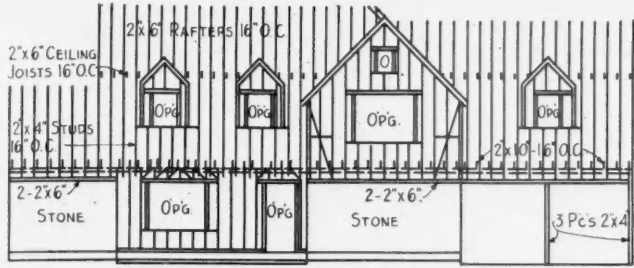
Cost Key 2.566-207-1025-41-32-26



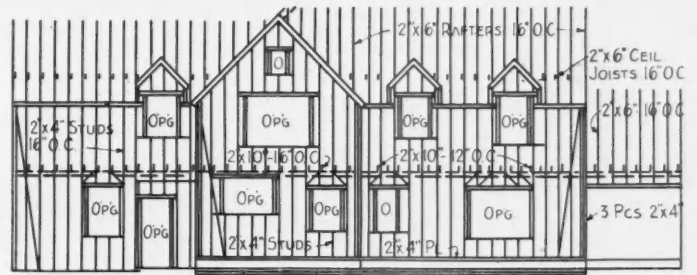
WALL SECTION



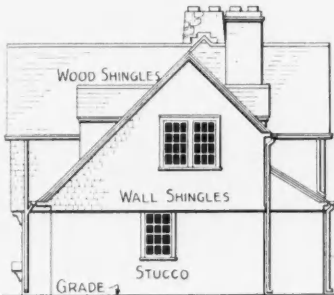
FRONT ELEVATION



FRONT FRAMING



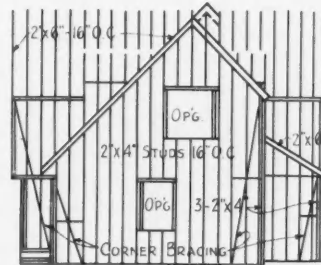
REAR FRAMING



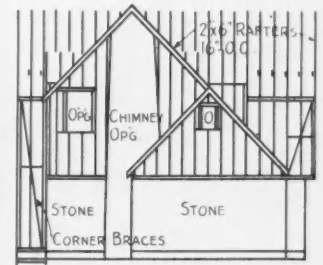
RIGHT ELEVATION



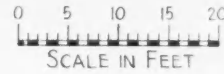
LEFT ELEVATION



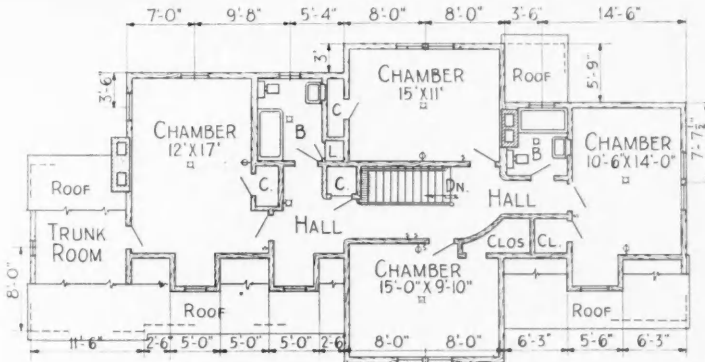
RIGHT SIDE FRAMING



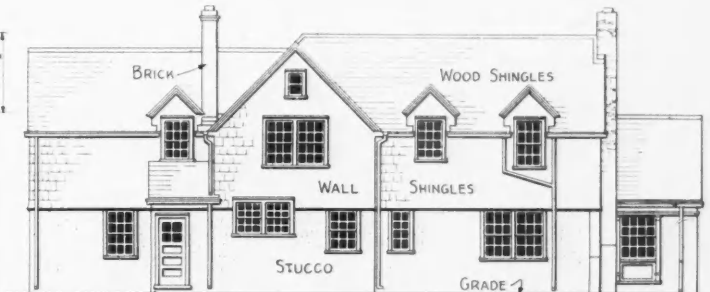
LEFT SIDE FRAMING



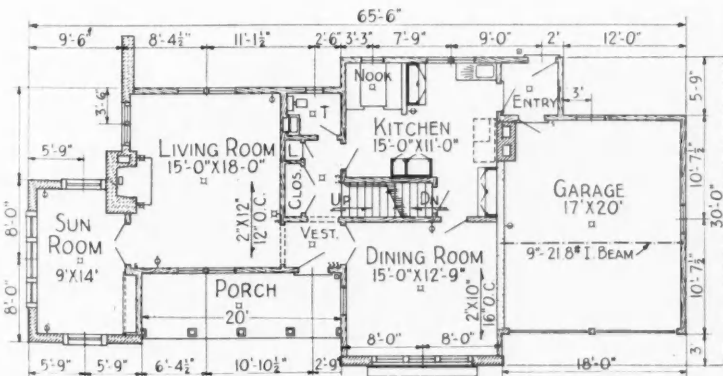
SCALE IN FEET



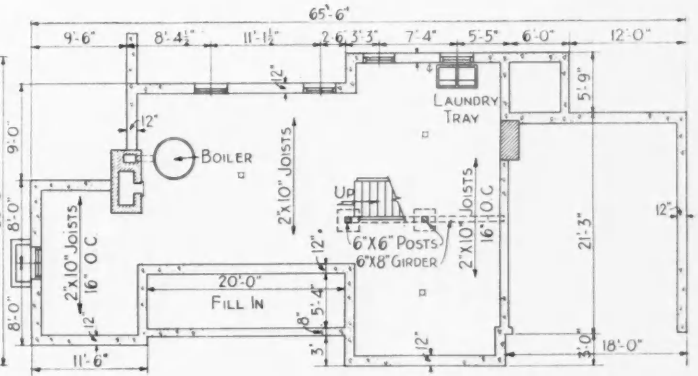
SECOND FLOOR PLAN



REAR ELEVATION



FIRST FLOOR PLAN



BASEMENT PLAN

Specifications—General Conditions

Legal and Agreement Provisions of the Model Open Specifications of the National Plan Service

In the April issue, pages 75 and 76, *American Builder* presented the materials and construction practice sections of the National Plan Service Open Specifications. Following are the General Contract provisions of this document:

1. **DEFINITIONS:** The word "Owner," as used in these specifications, refers to the party for whom the building is to be constructed, his authorized Agent, Architect or Supervisor. The word "Contractor" refers to the party or parties with whom the Owner may contract for the whole or any part of the work included in these specifications. The word "Specifications" is intended to refer to the general conditions as well as all labor and materials.
2. **METHODS OF CONSTRUCTION AND SELECTION OF MATERIALS:** After reading the specifications, the Owner shall thoroughly inform himself regarding the prevailing building methods and the materials used in his locality. He then shall fill out the specification forms in writing, designating the construction, materials, and finish, before submitting the plans and specifications to the bidding contractors. The Owner and successful Contractor shall check each and every item selected by the Owner, before signing the building contract, and each of them shall sign the Specifications before signing the building contract. Omission of certain fixtures or equipment, if the Owner desires, shall be so indicated under the proper headings. The use of old material or materials on hand, if desired by the Owner, shall be mentioned stating kind and quantities. These materials shall be inspected by the Contractor before submitting his bid.
3. **BUILDING CONTRACT DOCUMENTS:** The building contract is based upon the General Conditions, the Specification of the work, the Working Drawings and the Building Contract Agreement. It shall be the duty of the Owner and the Contractor to inform themselves as to the requirements of said documents before signing the Agreement. Changes in work or material from that specified, shall be stipulated in writing and attached to and made a part of the Contract.
4. **OMISSIONS:** The drawings and Specifications are intended to co-operate. Anything shown on the drawings but not mentioned in the Specifications or vice versa or anything not expressly set forth in either but which is reasonably implied shall be furnished as though specifically shown and mentioned in both without any extra charge. Should anything be omitted from the drawings necessary to the proper construction of the work herein described it shall be the duty of the Contractor to so notify the Owner in writing before signing the contract and in the event of the Contractor failing to give such notice he shall make good any damage or defect in his work caused thereby without extra charge.
5. **RIGHT TO REJECT BIDS:** The Owner reserves the right to reject any and all bids.
6. **SURVEYS, PLOTS, ETC.:** The Owner shall have the building site surveyed and shall determine and stake out the location of the building thereon, together with the final grades. He shall also furnish all plot plans when required.
7. **BUILDING PERMITS:** The Contractor shall give requisite notice to the proper authorities relative to the work in his charge, and shall obtain at his own expense all necessary building permits as may be required by Laws and Ordinances. If the plans and Specifications do not conform to the local building requirements, the Contractor shall notify the Owner in writing before the work is performed and the value of any changes shall be adjusted.
8. **RESPONSIBILITY:** The Contractor must bear all loss or damage from accidents which may occur to any person or persons during the progress of the work until possession is taken by the Owner. The Contractor must provide all legal and necessary guards, railings, lights, warning signs, etc., during the progress of the work. The Contractor shall lay out the work from the drawings to the approval of the Owner and shall be responsible for any damage that may be sustained by the Owner, adjacent property owners or others from incorrect location of the building. All materials in construction shall conform to the requirements of all building and sanitary laws in force in the locality in which the building is to be erected. The Contractor shall be responsible for any violation of the same and shall make all work acceptable to the building department without extra charge to the Owner.
9. **EXAMINATION OF PREMISES:** Before submitting his bid the Contractor shall examine the building site. No allowance will be made him for lack of full knowledge of all conditions except such underground conditions as are indeterminate before the beginning of work.
10. **SUPERVISION:** All materials and workmanship shall be under the supervision of the Owner or his authorized Agent, Architect, or Supervisor, who shall have the right to reject work and materials not in accordance with the true intent and meaning of the drawings and Specifications.
11. **FOREMAN:** The Contractor must have at the building from start to finish a responsible foreman. In addition the Contractor must give the work his personal supervision. The foreman must be on duty during all working hours and any instructions or notices given to him shall have the same force as if given to the Contractor in person.
12. **MATERIALS AND WORKMANSHIP:** Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, light, power, tools, equipment, scaffolding, transportation, and all other facilities necessary to the execution and completion of the work. Unless otherwise specified, all materials shall be new and both materials and workmanship shall be of good quality. If required, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials. The Contractor shall not employ any unfit person on the premises, nor any one not skilled in the work assigned to him.
13. **CHANGING AND SPECIAL WORK:** It is understood that the Owner shall have the right during the progress of construction to make any alterations, additions or omissions. The Owner reserves the right to have special work not included in the contract done during the course of the work herein included. The same shall be carried into effect by the Contractor without violating or vitiating the contract, but if special changes are made the value of same must be agreed upon in writing by the Owner and Contractor. No omissions will be allowed or extra work paid for unless ordered in writing by the Owner.
14. **MISCELLANEOUS WORK:** Any work or materials not acceptable to the Owner must be removed by the Contractor and replaced by approved materials or work without extra compensation. All condemned materials must be removed from the premises immediately. The Contractor shall afford the Owner every facility for inspecting the work and materials. Any piping, wiring, ducts, etc., shall not be covered up until properly inspected and approved and until certificates, as required, shall have been issued for the same. All cutting and repairing of the work shall be done without extra charge by the contractor or subcontractor whose work it is to cut. All materials designed for the work shall at all times be suitably covered; particular care being taken of all finished parts. The contractor shall provide a temporary privy with enclosure. This shall be removed upon completion of the work and the premises be left in perfect condition. The general Contractor shall furnish all usual heating apparatus and fuel or other appliance to protect the work from frost and dampness. No interior finish will be permitted in the building until the Owner is satisfied that the rooms are sufficiently dry. All water required for building operations will be supplied at site by a plumbing contractor but connections, hose, etc., as may be necessary shall be supplied by the general Contractor. The building must be kept free from all superfluous material, dirt and rubbish at all times. At completion of the work all paint spots must be removed from floors, walls and windows and doors refitted where required. Windows must be cleaned and such minor repairs and alterations as may be necessary to make the building ready for occupancy.
15. **DELAYS AND EXTENSION OF TIME:** If the progress of the work is delayed by an act or by neglect of the Owner or his Employee, or by any other contractor employed by the Owner, or by changes ordered in the work, or by strikes, lockout, fire, unusual delay in transportation, unavoidable casualties, or any causes beyond the Contractor's control, or by delay authorized by the Owner, then the time of completion shall be reasonably extended as may be agreed upon by the Owner and Contractor.
16. **OWNER'S RIGHT TO DO WORK:** Should the Contractor neglect to properly prosecute the work, or fail to perform any provision of these Specifications, the Owner, after giving written notice to the Contractor, may, without prejudice to any other provisions he may have, remedy such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.
17. **OWNER'S RIGHT TO TERMINATE CONTRACT:** Should the Contractor be adjudged a bankrupt, or should he make a general assignment for the benefit of his creditors, or should a receiver be appointed, on account of his insolvency, or should he refuse or fail, except

when provision is made for extension of time, or should the Contractor fail to supply enough skilled workmen or proper materials, or should he fail to make prompt payment to sub-contractors or pay for material or labor, or persistently disregard laws, ordinances or the intent of the drawings, or otherwise be guilty of a substantial violation of any provision of the Contract; then the Owner may, without prejudice to any other right or provision and after giving the Contractor seven day's written notice, terminate the employment of the Contractor and take possession of the premises, all materials, tools, and appliances thereon, and finish the work by whatever method he may deem necessary. The Contractor in such case shall not be entitled to receive any further payment until the work is finished. Should the unpaid balance of the contract price exceed the expense of finishing the work including compensation for additional administrative services, such excess shall be paid to the Contractor. Should such expense exceed the unpaid balance, the Contractor shall pay the difference to the Owner.

18. **CONTRACTOR'S RIGHT TO TERMINATE CONTRACT:** If the Court or any other public authority, should stop the work for a period of two months, through no act or fault of the Contractor, or of any one employed by him, or should the Owner fail to make any payment within seven days after it is due, then the Contractor may, upon seven days' written notice to the Owner, stop work or terminate this Contract and recover from the Owner payment for all work executed and any loss sustained, besides a reasonable profit and damages.

19. **SUB-CONTRACTORS:** All sub-contractors must be approved by the Owner before the Contract is signed. The Contractor shall be as fully responsible to the Owner for the acts and omissions of his sub-contractors and of persons either directly or indirectly employed by them as he is for the acts and omissions of persons directly employed by him. Nothing contained in the Specifications shall constitute any contractual relations between any sub-contractor and the Owner.

20. **SEPARATE CONTRACTS:** The Owner reserves the right to make other contracts in connection with this work. The general Contractor shall properly connect and co-ordinate his work with the other Contractors, affording them reasonable opportunity for the introduction and storage of their materials and the execution of their work. The General Contractor shall inspect and report to the Owner any defects in other Contractor's work. His failure to so inspect and report shall constitute an acceptance insofar as relates to his own work, except such defects which may have developed in the other Contractor's work after the General Contractor's work is completed. The General Contractor shall report to the Owner defective work and any discrepancy between the work executed by the other Contractor and the drawings.

21. **RELEASE OF LIENS:** The Lien Laws of the State shall govern all work and materials. The Contractor shall furnish the Owner, before final payment is made, a full release of liens signed by all subcontractors and material men associated in any way with the work. If any subcontractors refuse to furnish a release or receipt in full, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against any lien. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all the moneys that the latter may have been compelled to pay in discharging such a lien including all costs and a reasonable attorney's fee.

22. **PATENTS-FEES:** The Contractor shall pay all fees for royalties and shall save the Owner harmless from loss on account of suits, or claims of any kind for infringement of patents in connection with his work, in force at the time of signing this contract.

23. **PAYMENTS:** The payments to be made under this contract, and the manner of making same, shall be as stipulated in the Building Contract Agreement. The Contractor shall submit to the Owner an application for each payment and, if required, receipts or other vouchers showing his payments for materials and labor, including payments to sub-contractors. The Contractor shall, before the first application for payment, submit to the Owner a sworn schedule of values of the various parts of the work. This statement shall give the names of all parties having contracts or sub-contracts for specific portions of the work or for materials entering into the construction thereof and the amount due or to become due each, and that the items mentioned include all labor and materials required to complete the building according to plans and specifications; that there are no other contracts outstanding, and that there is nothing due or to become due to any person for material, labor, or other work of any kind done or to be done upon the building other than stated. No payment made to the Contractor, nor partial or entire use or occupancy of the work by the Owner, shall be an acceptance of any work or materials not in accordance with this contract. The making and acceptance of the final payment shall constitute a waiver of all claims by the Owner, otherwise than under requirement of the specifications, and of all claims by the Contractor, except those previously made in writing and still unsettled.

(Continued on page 76)

Novel Products Display

THE METAL BUILDING PRODUCTS Company, manufacturers' representatives in Harrisburg, Pa., realized that it was impossible to have a complete line of samples to show contractors, architects and engineers unless an extremely large display room were used. O. L. Preble, Jr., of this firm writes that the problem was solved by putting up a small office and display building in which many of their products were used. Those not incorporated in the construction are effectively arranged inside for demonstration purposes.

A front view of the attractive, modern structure and the plan with details are shown in the illustrations. The general contractor was a local firm, Ritter Bros.

Inside, the front space is divided with office equipment on the right and displays opposite. Closets, washroom and basement stairway are in the rear; the back part is garage and storage.

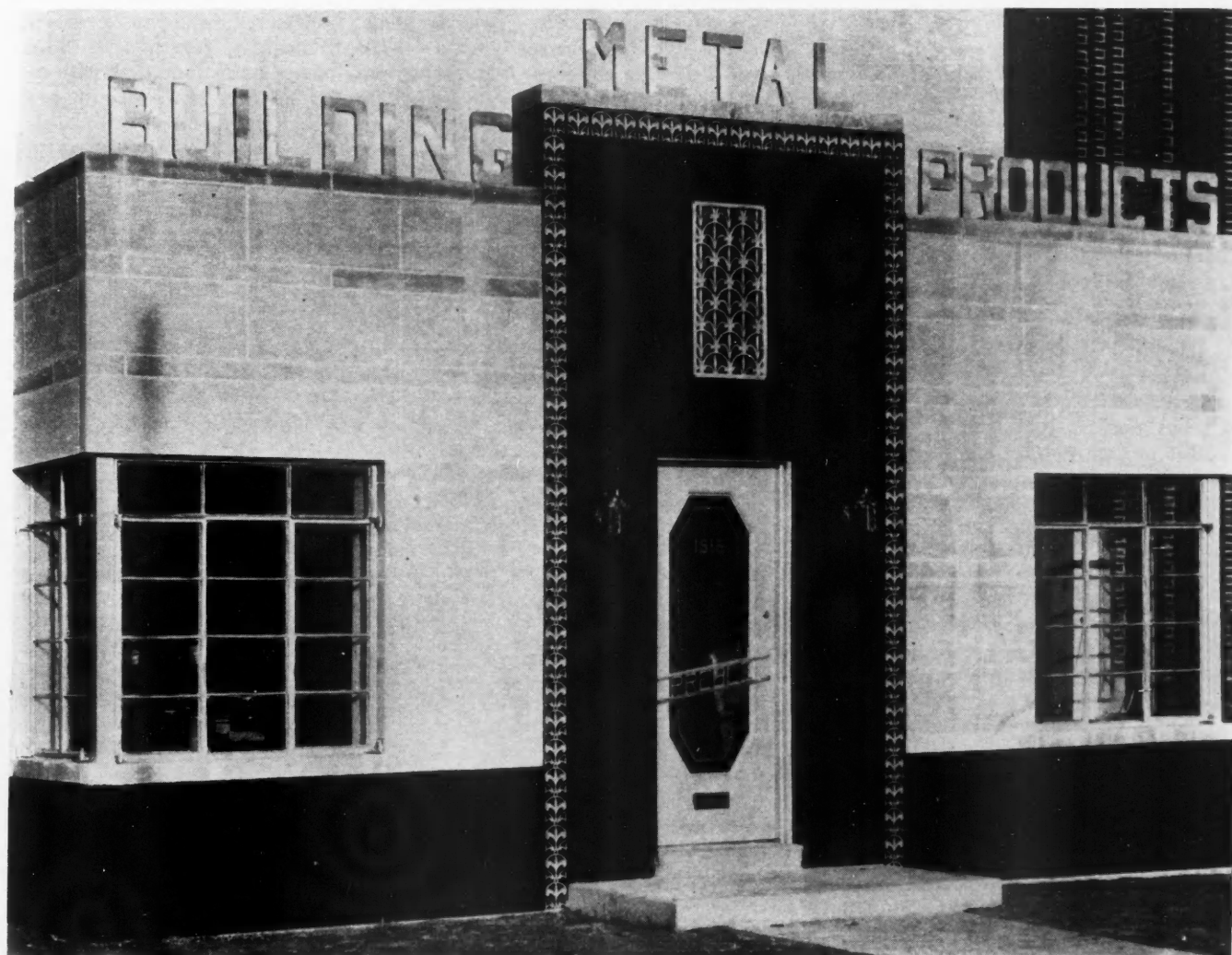
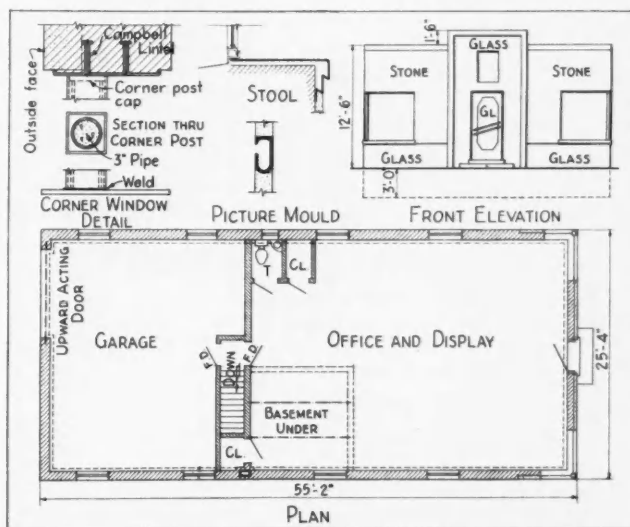
The products which are built into the structure serving as permanent displays include the new type Campbell Metal Window casements with spring extension hinges controlled by a chain release. The corner window lintels, furnished by the same company, rest on a 4 x 4 inch steel tube containing a 3-inch pipe column, concrete filled.

The black Carrara and window glass are Pittsburgh Plate Glass products; joists, Kalman; steel deck from R. C. Mahon Co. The truss loop floor and ceiling lath were furnished by the Bostwick Steel Lath Co.; the

aluminum work was from Ellison Bronze Co.

Electric wyr-way, base, window sills, heavy duty picture moulding, access door and door frames came from Knapp Brothers Mfg. Co.; the concealed copper radiation and grilles, from Tuttle & Bailey.

The J. G. Wilson Co. folding garage door makes a good product demonstration, as do the kalamein doors from E. H. Frederick. Thus, practically the whole building, both inside and out, becomes a selling unit—compact, attractive and efficient.



Modern Folks Want Modern Homes

Complete Home Equipment now included under
FHA Mortgages at 5% and 20 years to pay—
Coal Stokers Surveyed

By V. L. SHERMAN

Department of Mechanical Engineering,
Lewis Institute of Technology, Chicago

WITH the increase in the number of building permits this spring there seems to me to be a noticeable increase in the number of better homes, and especially is this true with those homes which are financed under the provisions of the Federal Housing Administration. It must be obvious to those shrewd enough to build now, under the FHA provisions, that a completely equipped home which may be financed under a long term mortgage, including all of the features which make for comfortable completeness, is far ahead of the terms offered by mortgagors in years past. These prospective owners also recognize the chief element of safety in the provisions for complete plans and specifications, an endorsement of the loan by those competent to judge in such matters, and an accepted responsibility by the contractor. He knows, too, that the whole matter has become a community affair.

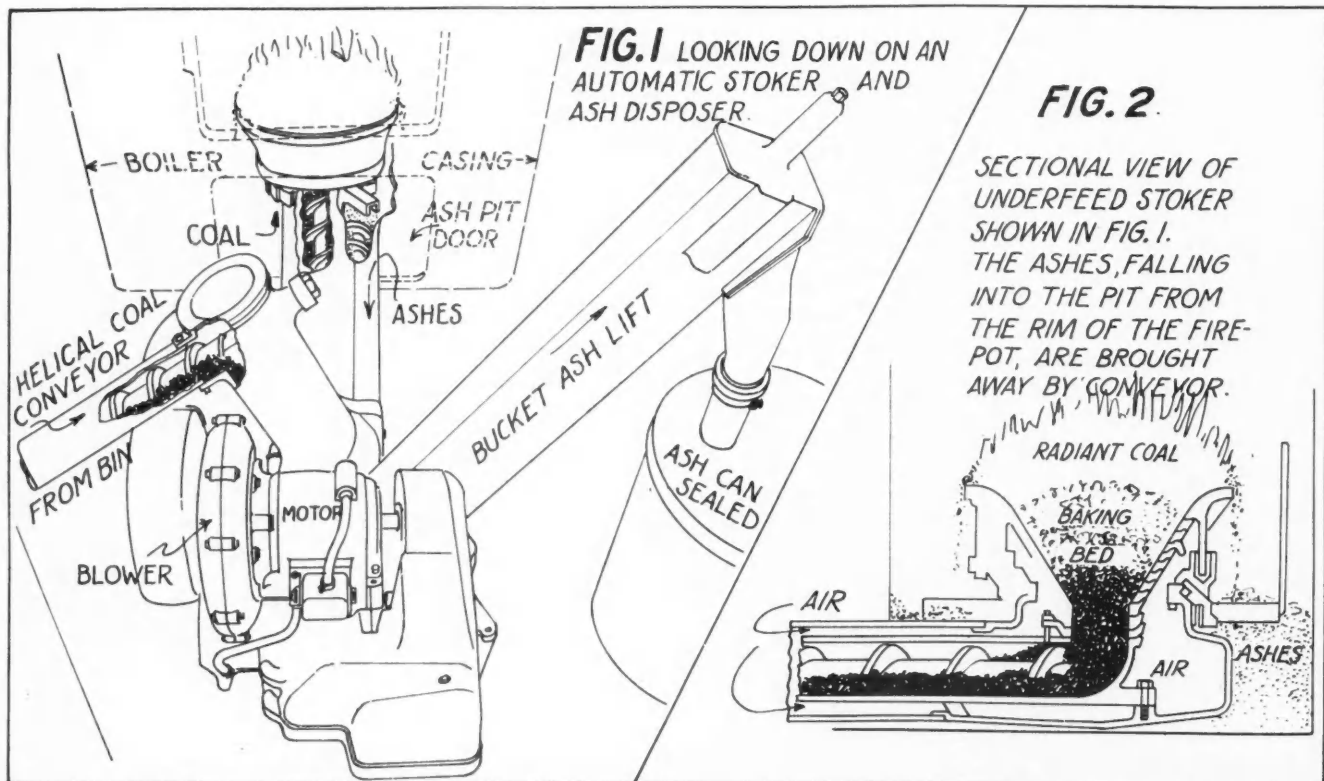
Under these circumstances it is hardly strange to see the type of home building under the FHA as a much better type than what we used to think of as average. It appears to me to be very much better.

To be a little more definite about what I have in mind when speaking of a better type of home I will tell of a case in point. Five years ago a young engineer married. Through ability and training he had found himself well occupied as to time, but being previously entirely free, found with a shock that managing a house and a house-

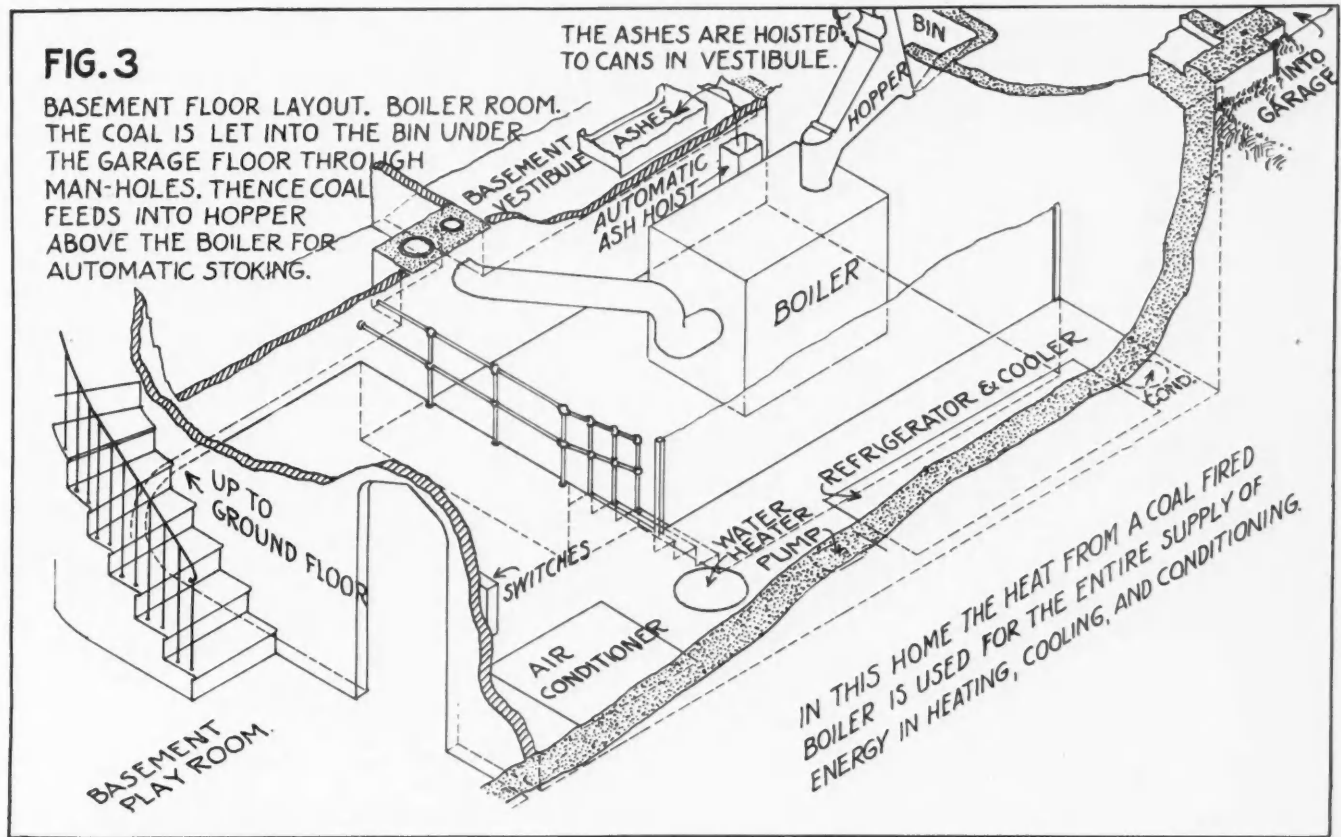
hold took up a great deal more of his time than he had anticipated. He did not want to let up in his work, nor could he afford to. (There are probably many thousands like him throughout the country, young fellows with ability and ambition who are going ahead even in these days of slack times.)

Well, three years ago he built a home which now shelters the young couple and the two children. A few weeks ago I paid them a visit, and he took me over the premises. If there is anything lacking in substantial equipment, accommodation, means to comfort, I certainly did not see what it could be. They have what I could exactly call a completely equipped home. While it is not large in size it is attractive and convenient. They use electricity for cooking, burn coke in a warm-air furnace which is ready for an additional air-conditioning unit, their refrigeration system is more than ample, their house circuits provide a real profusion of outlets with the circuits so arranged that the loads are always taken care of. For convenience they have circuit-breakers back of the main fuses. With this careful forethought in his building of the home this young man finds that with all his long hours he has been able to turn in his coupe and buy a sedan.

It really is not hard to conceive of the increase within the last few years of the number of young men and young women who are coming along to the time when



HEATING—AIR CONDITIONING—PLUMBING AND WIRING



they must have homes. Nor is it hard to believe that these same young people will want this complete type of home, which for them is not a dream but a necessity. Coupling this fact with the opportunities offered under the FHA what could be expected but the raising of standards all along the line?

In domestic life in this country there has always been the time element. In the old country the low wages of the help was clearly responsible for the slowness in using central heating plants. A fireplace in every room meant little to them. But the standards here call for more comfort and less help. It is so largely a question of time that certain expenses are much more than compensated for by reliable equipment.

There are some newspaper writers who delight in pointing out their views that the more equipment one has in a home the more fussing there is for the householder. I am mentioning this because we sometimes hear newspapers quoted on the subject. But the truth is merely this. To a newspaper man when things go wrong it is news. But when things go right it isn't news. Add to this the fact that there is always poor equipment to be had and the gullibility of certain professions, and the outcome seems natural.

One of the greatest advances in home equipment within recent years has been the adoption of stokers to coal-fired furnaces and boilers. This is no new thing in the industrial field, and stokers have proved themselves a distinct economy. Besides the cost account there is another factor which is about as important to industry and of much greater importance in the home. That is cleanliness.

Numbering the advantages so far as industry is concerned we can say that good stokers reduce the amount of labor required. How important this is to the home

owners!—that stokers permit the burning of poorer grades of fuel—to the home owner this means that he can burn far less expensive grades of coal than an ordinary grate would burn; that the stoker feeds fuel at a uniform rate, maintaining better furnace conditions—uniform firing with a hand-fired domestic boiler or furnace requires the time of an expert; that a stoker avoids excessive admission of air to the fire—for a domestic heater a good stoker will not only furnish the right amount of air for even firing, but it will supply the air required for best combustion; that the stoker saves the labor of handling the ashes. What more could a home owner ask for?

In Figures 1 and 2 are shown a type of stoker which will carry the coal to the fire, see that it is properly fed into the fire, allow enough baking to ensure the combustion of the gases, remove the ashes and deliver them to sealed cans. There is not the least of a fairy tale about this. It may be more clearly seen in Figure 2 that the drive of the coal from below and the form of the grate make for an even and completely burning fuel bed. If any doubts remain as to the complete success of the stoker, visit some plant where fuel costs and labor costs are a matter of every day record. See what the manager of such a plant has to say about stokers.

In Figure 3 is a sort of basement layout of a home where the entire plant was well planned. The fuel is coal, but the coal and the resulting ashes really are never in the house. To the extreme right is the garage door. In the floor of the garage are two manholes through which the coal is dropped into a concrete bin. This bin is in the form of an inverted square prism and leads to a hopper door at its bottom. This door is in the foundation wall over the boiler level. The coal, then, can at any time be shunted down into the hopper from which

MECHANICAL EQUIPMENT FOR 20-YEAR FINANCED HOUSES

it feeds to the boiler stoker. The ashes are delivered by means of an automatic ash hoist to sealed cans in the vestibule of the basement.

There is then no coal, coal dust, or ashes to contend with in this basement. Such a plant can operate on what an ordinary mortal would consider a vile grade of fuel, if he had to fire an ordinary grate with it.

But with the increased efficiency in the handling of fuel and the economy there are other possibilities offered. In refrigeration and in air conditioning the amount of energy required is sometimes surprising to a stranger. The operating costs and the efficiency of these two factors depend on the costs of the energy. The energy is, of course, heat, and the costs are fuel costs.

When such a plant as the one shown in Figure 3 can be operated at such low costs and with so much convenience there is no surprise to note that the original layout of the plant called for heating, cooling, (air conditioning), and a good sized extra refrigerating load. When such a plan is thoroughly worked out beforehand, and advantages are taken of all the recent improvements in heating and refrigeration, the first costs and the operating costs together compare more than favorably with the first costs and the running costs of a much cheaper system.

It has been repeatedly pointed out that only with well built houses can we efficiently operate air conditioning equipment. But it is equally true that a well built house is not of necessity an elaborate house or a large house. A well built house is one which is designed and built by those who know what to provide for in the original planning and who will accept the responsibility of seeing that the plans are altogether followed. Under the Federal Housing Administration provisions it should almost be impossible to build any other sort.

"Air conditioners" for individual rooms have been on the market for a considerable time. The benefits offered by their makers cover a wide range. The range of condi-

tions covered by these little conditioners on occasion matches their portability claims. But I am glad to realize that some of the original makers of these room air conditioning units are not only still manufacturing them but improving them beyond measure. From these manufacturers I am sure I never heard a claim made that could not be proven, albeit they made no such claims as did some others.

It must be remembered that a conditioner of air must filter the air and provide motion enough to distribute the air properly, and that it must heat and humidify the air in the winter and cool and dehumidify it during the summer. The air conditioner must be able to handle its peak loads and all intermediate loads with efficiency.

In the summer these loads, through the necessity of dehumidifying the air, are likely to be much heavier than the winter loads over periods of time. Unless the apparatus is capable of handling the summer load one might as well open the windows wide and not depend on the air conditioner at all. But several of the original builders and a few since have produced very efficient small units. The unit shown in Figure 4 is the conditioner shown from the rear with the outer case removed. The air enters from below and passes through the fans and into the chamber above the tilted eliminator plates. These plates direct the air stream and prevent water from possibly dropping back into the fans and motor. The water, of course, is from the humidifying jets from the nozzles just above the plates.

There are cooling coils, fin tubes, in two racks above these nozzles, and there are heating coils in fin tubes on one rack, just above. The filters are shown in loose position. These filter pads lie just below the grille in the case, when that covers the conditioner. The whole apparatus stands desk high, and is operated in heating and cooling, humidifying and draining, through very small pipes connecting with the main heating and refrigerating plants in the basement. They will do the work required of them and do it well.

Touching on the subject of reliability in manufacture, one of the best features to be found in this trend toward the cooling of air and of air conditioning is the manufacturer's openhandedness with information concerning his own equipment and information concerning the science. Whenever a manufacturer is to be found, and they are not so hard to find, who is generous with information concerning his own products and their scope, and who is generous with data, so far accepted as correct, in the ways of calculating loads of heating and cooling, there need be no hesitancy in dealing with him.

These manufacturers have spent both time and money and shown the greatest spirit of co-operation in providing those interested with valuable data. Their methods in attacking problems are sometimes widely different but of nearly equal effectiveness.

Some are, perhaps, to be called more conservative, dealing with a more exacting type of business. Others, no less sincere, are more liberal in their allowances, aiming for a less restricting market. Neither of them has anything to hide.

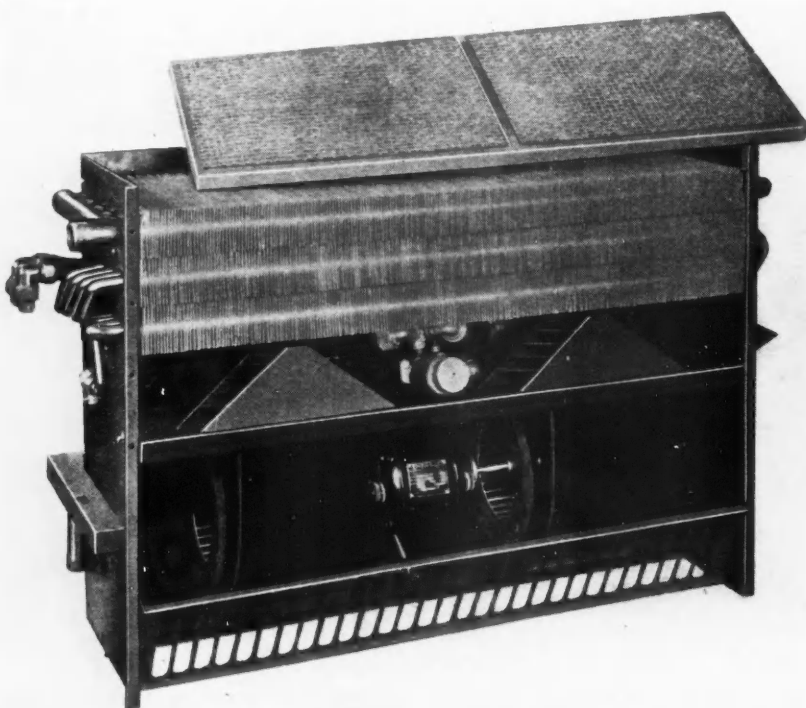


FIG. 4. A Room Conditioner, standing desk high when its neat cover is in place.

Quality of Concrete Improved 248 per cent

Tests Prove Value of Paper Covering While Curing

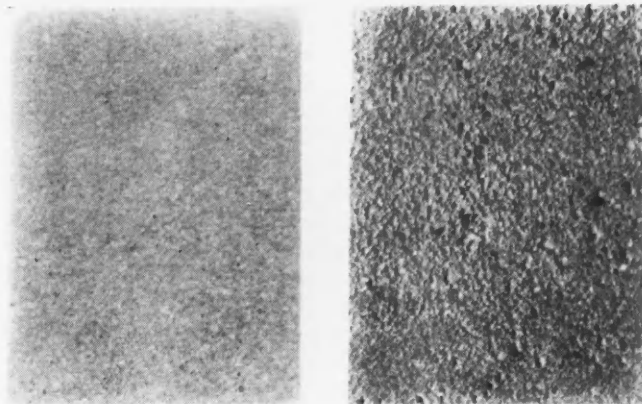
EVERYBODY knows that all too often concrete is soft, dusty, or full of fine cracks and that it "goes to pieces" in a discouragingly short time. But it is not so commonly known how important a factor "curing" is in correcting such trouble nor how practicable it has become to "cure" every little sidewalk and driveway job.

Repeated comparisons by well known testing engineers show that without changing any other factor in concrete, the addition of a simple "paper cure" increases the strength 248 percent—or from 1400 lb. per sq. in. to 4880 lb. Another way of checking the same thing is to sandblast two samples, identical except as to curing. The accompanying illustrations show the result—the cured surface smooth and hard, while the uncured one is rough and coarse.

"Curing," as a practical step in laying concrete, has meant little or nothing to the average contractor. If he knew anything about it he has thought of an elaborate and expensive process required only on concrete floors in big skyscrapers or on concrete pavements. But it's time to get a new idea on this subject.

To get it clearly, we must first ask ourselves "how does concrete harden?" Not by quick drying out, as is commonly thought. It is a gradual chemical action requiring water to combine with the cement particles. Tests prove that concrete continues to gain hardness and strength for months—often for years—if moisture is present. This gradual hardening is called "curing." The value of concrete in walks, drives, floors or any flat slab is largely dependent on its hardness. If it is hard and dense, it has strength to resist surface wear and crushing; it is much less likely to crack, dust, check or spall. The problem in getting hard, dense, long-lived concrete, then, is to keep the slab damp.

Every cement contractor knows how quickly a concrete slab can dry out on the surface—particularly un-



UNRETOUCHED photographs of two concrete slabs after severe sandblasting. The concrete in both was identical in every way except that the one at the right was allowed to dry without any protection and the one at the left was "cured" under Sisalkraft.

der a hot sun and wind. That's why he repeatedly wets it down for a day or two or tries to cover it up with something. There is plenty of water in the concrete at the time it is poured to provide the maximum ultimate strength if it can be kept in the concrete long enough. That is the thought back of the simple idea of laying an airproof sheet of paper over the concrete as soon as it has taken its initial set, and of leaving it there for ten days or longer. Since no air can reach the damp concrete, the moisture vapor is not carried away and evaporation is greatly retarded.

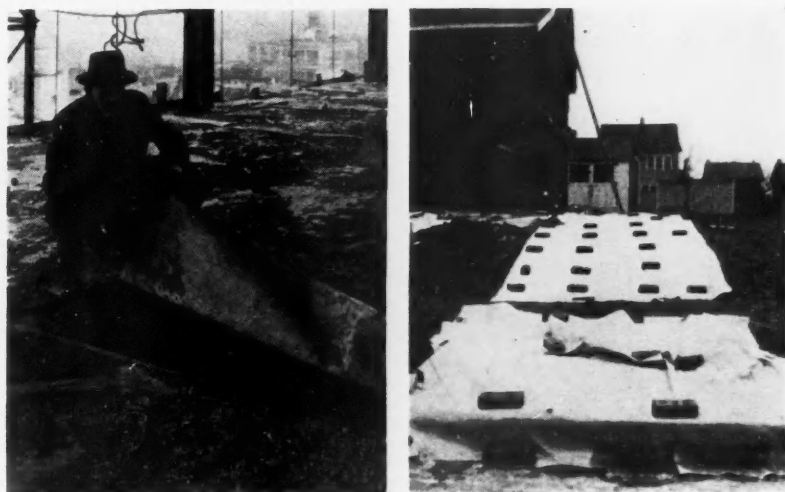
In theory that's very simple. In actual practice it is equally simple if two problems are solved; (1) maintaining the air-tightness of the paper under job conditions and, (2) keeping the paper in place for the required time.

Engineers and general contractors on big building and highway projects have proved that a very tough reinforced paper is essential. Obviously, it must have positive, air-proof qualities, but that is not enough unless the reinforcing gives it sufficient strength to retain these qualities during application and during the entire curing period. A sisal-reinforced paper has demonstrated its suitability for this class of service and is widely used throughout the country.

While conditions may not be as severe on small jobs as on some large ones, a weak sheet of paper is of little use in a wind or after being dragged over rough ground, form lumber, etc. The surest way to solve the problem on small work, as on big, is to use the tough, reinforced paper that has stood the test.

Methods of keeping paper in place vary somewhat with conditions. On big jobs the strips of paper (from 3 to 7 ft. wide) are glued together with a special glue furnished by the manufacturer and the edges are weighted down with boards, dirt or most anything handy. On small jobs gluing is not ordinarily needed, although as shown in one of the accompanying views, it may be used on sidewalks to assure a quality job with a minimum interference to traffic.

An incidental advantage of this curing method is that rain, dirt and stains of all kinds are kept off the newly laid concrete by the same sheet that keeps the moisture in. And this sheet can be used over and over. It may protect a mixer or a pile of cement when not in place for curing. Even on severe uses like highways this paper is often re-used as many as 8 or 10 times. The cost of curing small jobs is trifling.



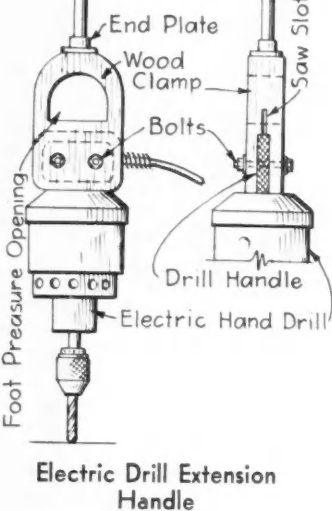
CONCRETE curing is a severe test for paper under conditions like these. The damp concrete surface under the paper is clearly shown when the paper is lifted. To Right: Skyscraper curing used for this driveway. This paper has been used a number of times already and is still good for many re-uses.

PRACTICAL JOB POINTERS

A READERS' EXCHANGE of tested ideas and methods, taken from their own building experience. Two dollars or a year's subscription to American Builder is paid for each item published. State business connection or trade.

Electric Drill Extension Handle

WHEN LAYING a large hardwood floor, one man was kept busy drilling holes with an electric hand drill to facilitate driving the nails and to avoid any possibility of splitting the wood. This was an awkward job because he had to bend down all the time or kneel on the floor, neither being a comfortable position. To ease his back and make the job more continuous, an extension handle was made out of a piece of wood and iron pipe fittings.



The wood was made in the form of a clamp, cut out to fit over the drill handle, with a saw cut in the end of the slot to give spring to it when two bolts were tightened through the finger hole in the drill handle. Higher up, an opening was cut in the wood so that the operator's foot could be inserted and pressure applied this way for a change when his arms became tired. The actual handle is made up of half-inch pipe and fittings, secured to the wood clamp by an end plate, the whole thing being long enough to enable the man to stand up to the job.—H. MOORE, Hamilton, Ont., Can.

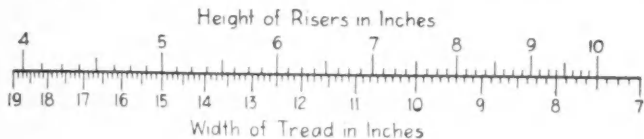
Proportioning Risers and Treads

ARCHITECTS and builders generally design risers and treads in accordance with one of the following well known rules-of-thumb:

R plus T equals $17\frac{1}{2}$ " or 2 times R plus T equals 25 where R equals height of riser and T equals width of tread.

Experience has shown, however, that an easier angle of climb will result if risers and treads are proportioned so that R times T equal 75.

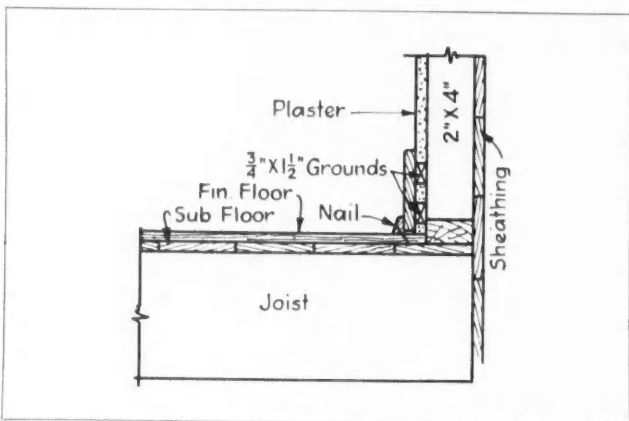
The scale shown, based on this old rule, has been prepared by the writer to show at a glance the proportionate dimensions of risers and treads for correct stair design. For example, if you want a $7\frac{1}{2}$ " riser (top scale), the lower scale shows a 10" tread.



Values on this scale are shown to eighths of an inch. Risers between $6\frac{1}{2}$ " and $7\frac{1}{4}$ " are most commonly used.—J. D. LEVIN, Engineer, Independence, Iowa.

Better Nailing Base

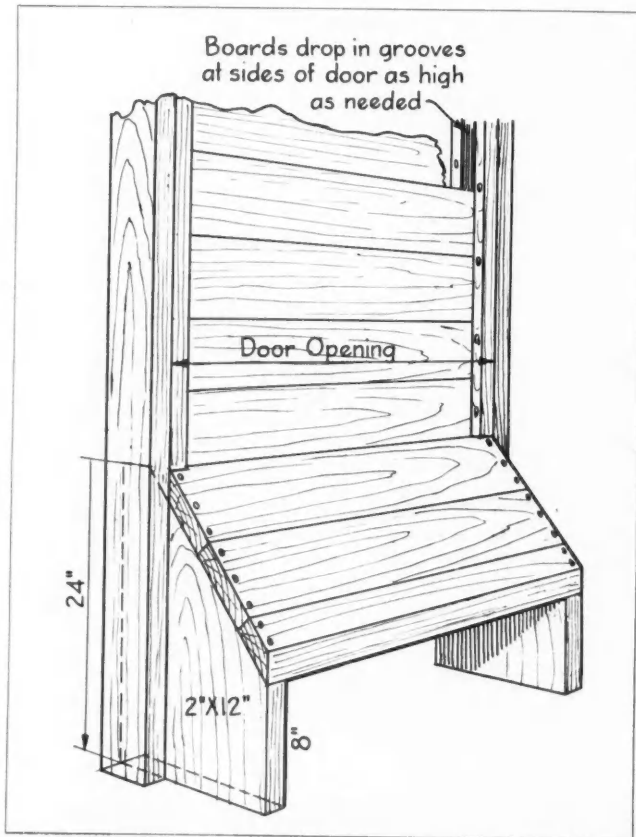
IN your February issue Mr. H. H. Siegele gave a "practical" base and baseshoe job, as he called it, which I don't think is practical at all. I am enclosing a sketch of a method that is good. A good builder will not plaster any house without one or two grounds behind his base. It is best to have two grounds as shown, using a plain shoe mold. Be sure to nail it to the floor and not to the base. It is not practical to nail in a groove or put the base in a groove as he has shown.—J. L. SALLY, Contractor and Builder, Durham, N.C.



Nail shoe mold to floor

Coal Door Chute

ATTACHED you will find a sketch of a coal door chute which I have found very convenient for a coal bin in a limited space. Anyone trying to shovel coal off the top of the pile can save himself much time and temper by this simple device installed on the door to the bin. Renew my subscription to your worthy pages for a year if this is acceptable.—L. E. McINTYRE, Contractor and Builder, Emlenton, Pa.



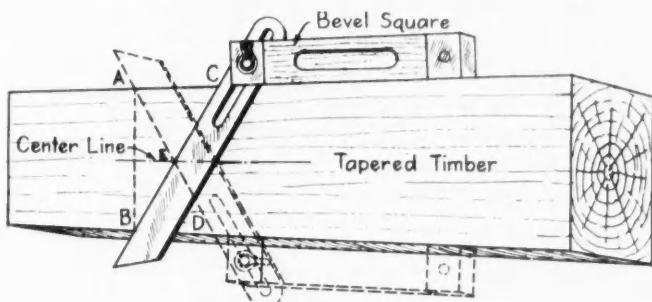
Coal door chute opening

Squaring a Tapered Timber

I AM enclosing my idea of how to square a tapered board or timber with the common T bevel.

Set the bevel so that the blade will reach diagonally across face and mark along the edge of the blade (CB). Then mark the center (E) of this line as in the illustration. Turn the bevel over and place it against the opposite face of timber so that the edge crosses the center line and line BC at E, and draw line AD. Then draw a line across the board (at AB) where blade meets the edges of the board or timber, and it will be squared.

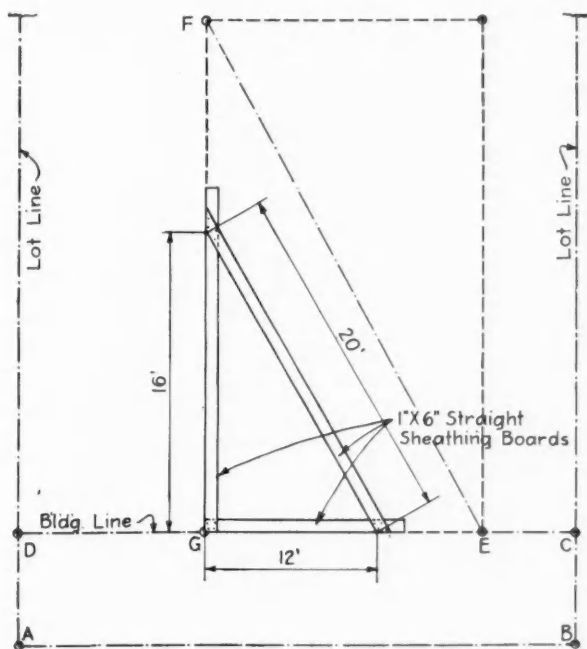
With this method a tapered timber or porch column may be squared on all four sides as easily as if it were a square timber.—C. H. DRAWE, Carpenter, La Grange, Mo.



Staking Out a House

SOMETIMES smile at some of the Practical Job Pointers in the AMERICAN BUILDER, some of which I have used for 15 or 20 years. I also profit greatly by some others. I will send you one for other contractors to smile at.

In the February number Edward F. Treadwell gave us a two-man plan for staking out a house. It is O.K. too. Here is a one-man method.



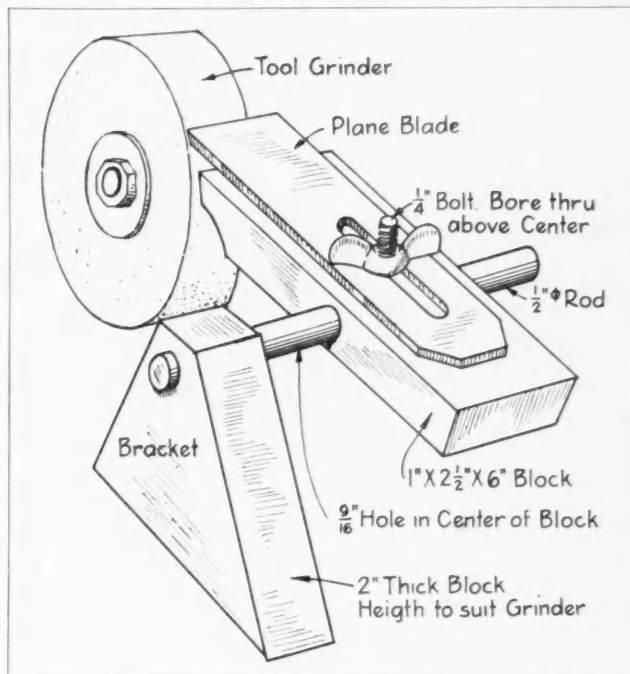
Take three 1x6 straight sheathing boards 16' to 20' long and make a big triangular square or template with sides of 12 x 18 x 20 proportions, as shown in illustration.

Now stretch a line CD, at line of foundation parallel with front lot line, AB, lay one blade of big square directly under line, stretch another line (GF) exactly over the edge of other blade. The rest of it is done by measuring desired distance from these two lines, then check diagonal measurements at EF with steel tape to verify accuracy.—ED GILBERT, Contractor, Winfield, Kans.

For Grinding Plane Blades

I AM enclosing a sketch of an easily made slide rest for grinding plane irons using a hand grinder or grind stone. Material required: 1 piece of round iron $\frac{1}{2}$ "x6"; 1 piece of wood, 1 "x $2\frac{1}{2}$ "x6"; 1 piece of wood, 2 "x6"x6" bracket; 1 bolt $\frac{1}{4}$ "x $1\frac{1}{2}$ " with wing nut.

I find this rest does a fine job. By sliding it from one side to the other, the grinding wheel does not have to be as wide as the plane iron. Care should be taken so as not to burn the plane iron. Nail or screw the bracket to bench in front of grinder. Then set plane iron to suit bevel on stone. This bevel can be made more or less to suit by raising or lowering on the wheel.—H. B. MASON, Duncan Falls, O.



Device used to grind plane blades

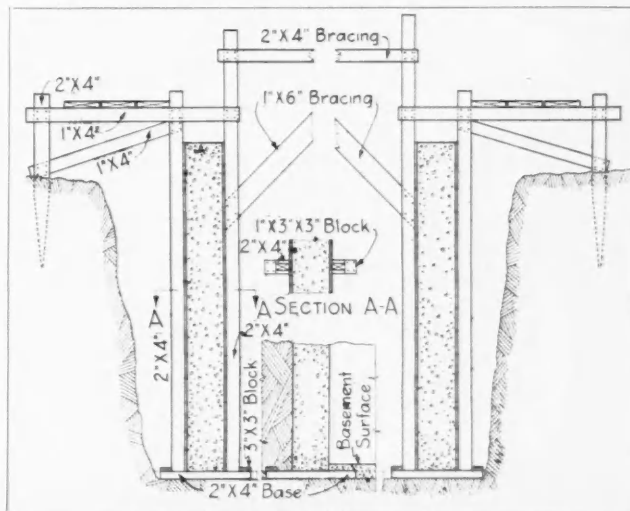
Economical Forms

WHERE soil conditions permit omission of footings for small house foundations, I find the method of form building shown in my sketch economical.

After the base 2x4 is leveled and aligned, dirt should be filled around, and flush with top surface, after which a thorough wetting with tamping will keep them secure while nailing forms and placing first concrete.

The base 2x4 is left as shown in finished wall, basement finish covering it completely.

The upright 2x4 is not nailed to base, which permits easy removal.—JOHN J. COONEY, Mansfield, Mass.



Forms built to save cost



"The Home of Tomorrow" built by the Yonkers Housing Committee under the auspices of the Chamber of Commerce. Concrete masonry walls, portland cement stucco exterior, and concrete-joint first floor with joists exposed to give beam ceiling to basement play room.

STILL MORE EVIDENCE OF THE APPEAL OF CONCRETE

THE Yonkers "Home of Tomorrow," advertised as a "concrete house" drew 5,000 visitors on the first day of exhibition—in the rain! 20,000 visitors in the first two weeks.

There's nothing magical about this public interest in Concrete. It's simply a question of value.

People appreciate the smartness and appealing beauty of Concrete. They know that it is strong and enduring—decay-proof, vermin-proof, fireproof and storm-proof—that it banishes the fear of heavy upkeep charges. And one look at the price tag tells them that it is low in first cost as well.

Talk Concrete to your prospects. Build with Concrete for quicker sale, better rentability.

PORTLAND CEMENT ASSOCIATION Room 156, 33 W. Grand Ave., Chicago, Ill.

Please send literature on the subjects checked.

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| <input type="checkbox"/> Fireproof house design. | <input type="checkbox"/> Concrete residence floors. |
| <input type="checkbox"/> Portland cement stucco. | <input type="checkbox"/> Concrete ashlar masonry. |
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NEWS OF THE MONTH

Building Activities

\$249,860,000 Work Relief Fund Allotted for Housing

ALLOTMENTS AMOUNTING to \$249,860,000 to the Public Works Administration, Housing Division, for the development of 67 slum-clearance and low-rent housing projects was made on May 16 by the Advisory Committee on Allotments which has been created as part of the machinery for administering the President's \$4,000,000,000 work-relief program. The recommendations have been approved by the President. This is the first step toward authorization of the housing part of the work-relief program, under the law that roughly allocated a total of \$450,000,000 for "housing." Most of the detailed policies to govern the expenditure are yet to be decided upon.

Thirty-six of the projects were among those affected by the impoundment of \$110,000,000 of PWA Housing Division funds, and the action of the committee reinstated their original allotments. Thirty-one of the projects were new applications which had been examined by the Housing Division and placed on file.

All allotments to these projects are tentative, the ultimate development of each depending upon the ability of the Housing Division of PWA to assemble sites at a price which will permit the construction of true low-rent housing. In accordance with established policy, announcement of each specific project will be made when sufficient land has been assembled to permit definite action being taken.

Included among the slum-clearance and low-rent housing projects reinstated by this action are those in Cleveland, Ohio; New York City; Chicago; Milwaukee; Cincinnati, Ohio; Nashville, Tenn.; Boston, and Louisville, Ky. These projects previously had been announced and were being developed, but were included in the group affected by the impoundment of the Housing Division funds.

Help State Work-Relief Program

At the same time the committee recommended that the federal government participate to the extent of \$100,000,000 in a work-relief program proposed by the state of Wisconsin, which includes an item of \$40,000,000 for urban low-cost housing and another \$10,035,445 for rural housing.

According to the general policy the rates of pay were to be fixed by the President and the general objective had been stated as contemplating payments averaging a little over \$50 a month. However, an executive order fixing the rates of pay on a monthly basis was issued on May 21 but it included an exception as to projects under the supervision of the Public Works Administration, which has charge of housing activities, for which wage rates, subject to the approval of the state directors of the PWA, are to be determined in accordance with local conditions by the authority to which the loan, grant, or allotment is made except as otherwise required by law. An exception is also made as to permanent building for the use of the federal government or the District of Columbia.

For projects under the supervision of the PWA the maximum hours of work for manual labor are to be eight hours a day and even 130 hours a month. Preference in the employment of workers is to be given to persons from the public relief rolls, and except with the specific authorization of the Works Progress Administration, at least 90 per cent of all persons working on a project shall have been taken from such rolls.

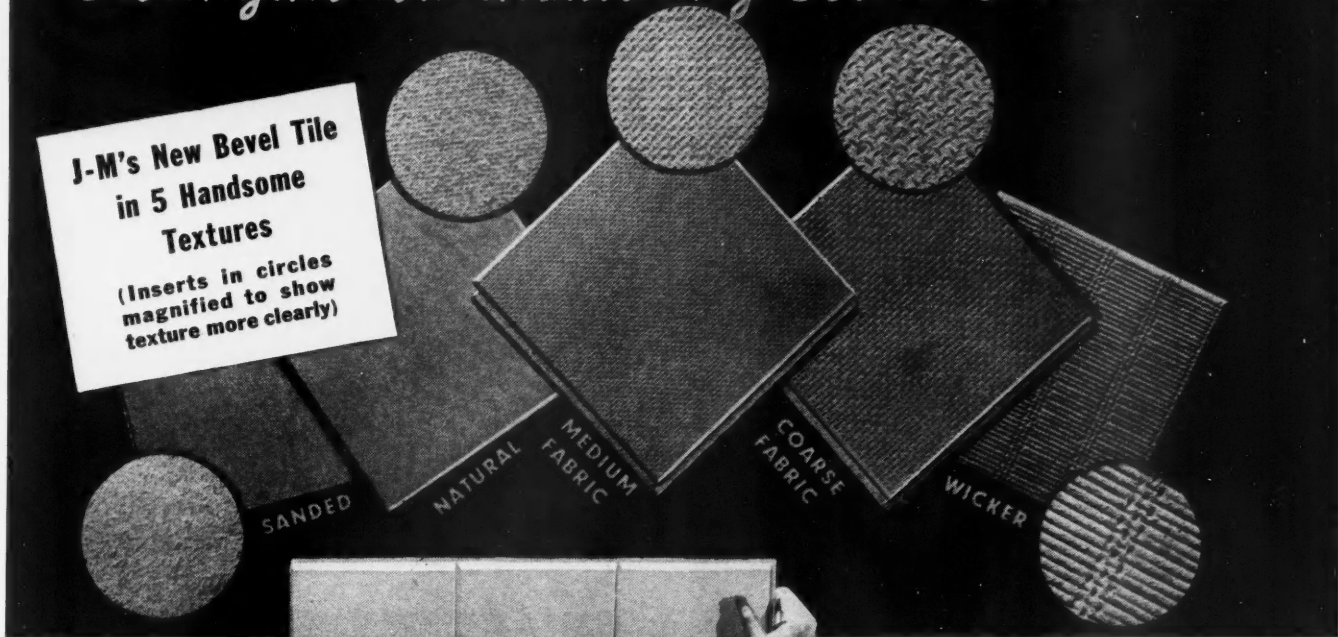
Government officials in charge of the program have emphasized that it is not their desire to compete with private enterprise but this is on the theory that private enterprise is not especially interested in building homes for those without credit to purchase homes of their own, and it is proposed to offer the low-cost homes to be constructed under the government's program on especially liberal credit terms.

Johns-Manville Announces—

Two Notable Additions to the Market's most Distinguished insulating Board Line...

J-M's New Bevel Tile in 5 Handsome Textures

(Inserts in circles magnified to show texture more clearly)



J-M's New Multiple Tile

in Large Sanded Finish Units for Economical Application.

NEGLECTED during the depression years, ceilings and walls in the average home or store are cracked, unsightly.



Business, and plenty of it, for dealer, contractor and carpenter.

But, to land it, you've got to recognize the trend in interior surfacings. Home owners haven't been buying, but they've been reading, thinking and planning.

They want the smart, new, modern effects...they want economy of installa-

tion...and, above all, economy of upkeep.

Johns-Manville meets the demand with the most distinguished line of decorative insulating boards on the market.

Two notable additions are featured above... J-M Bevel Tile in five handsome textures that achieve the decora-

tive effect of color with unpainted insulating board... J-M Multiple Bevel Tile, unusually pleasing patterns in large units for economical application.

The coupon brings complete details on the complete line of J-M Decorative Insulating Boards...and, if you wish, the FREE book which describes J-M's "Before and After" Sales Plan...a plan which enables any dealer, any contractor to land home-improvement business quickly, easily, and in real volume. Fill in and mail the coupon today.

New Ceilings for old!

With the new J-M Decorative Ceiling Tile, any unsightly ceiling can be made permanently attractive. The tiles are applied right over the old cracked plaster. The job shown was done in one day. Cost, one-half that of replastering.



Johns-Manville materials for MODERN INTERIORS



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Send me full information on

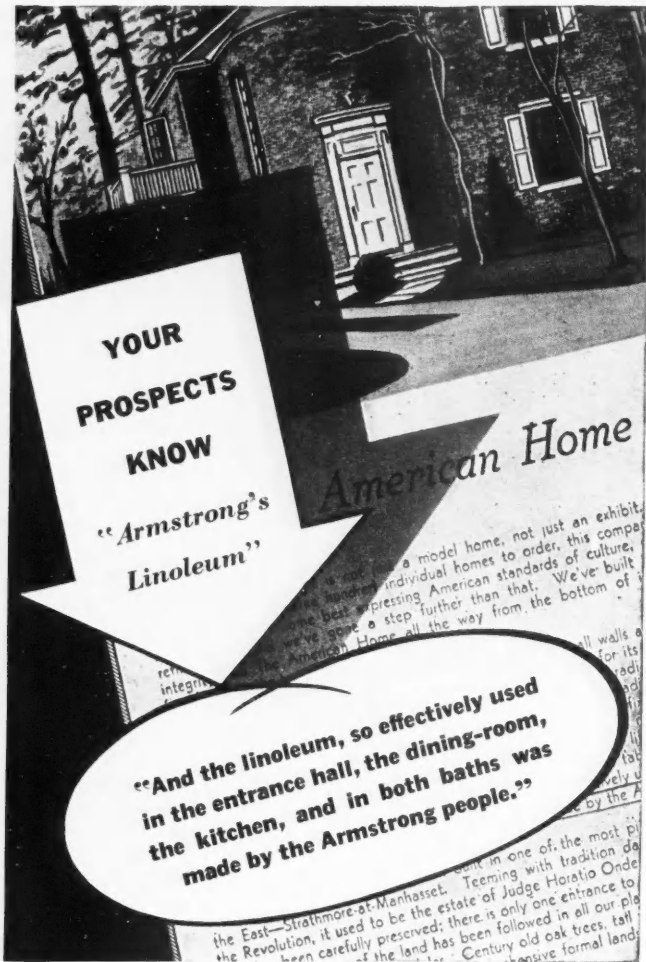
- J-M Insulating Boards
- J-M "Before and After" Sales Plan

Name _____ Title _____

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Street _____

City _____ State _____



MANY agents and builders besides Levitt and Sons (whose advertisement in the N. Y. Times is here reproduced) know that Armstrong has built up a well-recognized reputation for quality. "It's Armstrong's" means a floor of beauty, a floor that will be easy to keep clean, a floor that will stand up for years and years of hard service. The use of such a floor also indicates to the customer that the builder probably uses other quality materials.

In your hard-to-rent and hard-to-sell places, an Armstrong's Linoleum Floor may be that one single "touch" that so often makes all the difference between a sale and no sale. Armstrong's Linoleum Floors have helped take many a house and apartment off the "white elephant" list. Write for full information. Armstrong Cork Products Co., Floor Division, 1218 State St., Lancaster, Pennsylvania.



Armstrong's
LINOLEUM FLOORS

April Building Shows Gains

THE increase in building activity shown by the reports for the first three months of 1935 continued into April, according to the Bureau of Labor Statistics. Compared with April a year ago, the value of buildings for which permits were issued showed a gain of over 65 per cent. The value of residential buildings was more than 120 per cent greater than during April 1934. All nine geographic divisions showed increases in both the number and value of building operations. Six of the nine geographic divisions had gains of over 100 per cent in the value of residential buildings, comparing April 1935 with the corresponding month of the preceding year.

The per cent of change from April 1934 to April 1935 is shown in the following table:

Type of building	% increase in no. of permits	% increase in estimated cost
New residential	108.8	122.7
New nonresidential	22.5	44.8
Additions, alterations, repairs	28.7	47.3
Total construction	32.4	65.2

The gains, comparing April with March 1935, while smaller than the increase over the year period, were greater than the normal seasonal increases. These comparisons were based on reports received by the Bureau of Labor Statistics of the United States Department of Labor from 792 identical cities.

The change from March to April 1935 is shown below:

Type of building	% increase in no. of permits	% increase in estimated cost
New residential	18.6	14.0
New nonresidential	33.5	14.2
Additions, alterations, repairs	22.1	9.4
Total construction	23.6	12.7

Announce Lumber Sales Convention

THE annual convention of the National Association of Commission Lumber Salesmen is to be held in Detroit, Mich., June 27, 28 and 29. The Statler Hotel will be headquarters.

Loans Get Bank Examiners' O.K.

ALL financial institutions of the United States have been notified by the Federal Housing Administration of the ruling of J. F. T. O'Connor, Comptroller of the Treasury, that national bank examiners will be instructed not to classify home mortgage loans insured by the Federal Housing Administration as "slow, doubtful or loss."

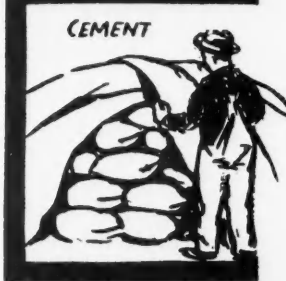
Under this decision, Acting Administrator Stewart McDonald explained, national banks approved as mortgagees by the Federal Housing Administration may now make or acquire long-term mortgages insured under the provisions of Title II of the National Housing Act, in perfect confidence that the loans will not be classified unfavorably by national bank examiners. It is hoped that other examining agencies, including State Banking Departments, will issue the necessary instructions to their examiners to adopt a like attitude toward insured mortgages held by institutions under their supervision.

Detroit's PWA Housing Project

SIGNING of a contract with 15 Detroit architects to prepare plans for the \$6,000,000 Public Works Administration slum-clearance and low-rent housing project in that city has been announced.

The architectural group will be known as the Eastfield Associates. George D. Mason will act as chairman. Other members of the group include C. Howard Crane, Clair W. Ditchy, G. Frank Corder, W. B. Stratton, Clarence E. Day, Harry G. Muehlman, Marcus R. Burrows, Arthur H. Hyde, C. William Palmer, Henry F. Stanton, Edward A. Schilling, Alonzo Frank Herman, George Wagschall and Clarence W. Hubbell.

Landscape architects for the project will be Raymond Wilcox and Edward A. Eichstaedt, Administrator Ickes announced. Mr. Gagschall and Mr. Hubbell will serve as mechanical and structural engineers. They will be aided by Lynn Trout as consulting structural engineer.



From
a
Sidewalk
to a
Complete
House

You can get
either temporary
or lasting protection
by

"WRAPPING
IT UP IN

SISALKRAFT

REG. U. S. PAT. OFFICE

Tough Strong Air Tight
Waterproof Ask your dealer

THE SISALKRAFT CO.

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WHITE *that gives this*
INDIVIDUALITY and CHARM

- The stucco used in this beautiful stucco home was made with Medusa White Portland Cement. Whether plain or waterproofed, white or lightly tinted or richly colored, this white cement lends itself to original and distinctive treatments that make for individuality and charm.
- Medusa White Portland Cements (plain or waterproofed) have been successful for twenty-five years. Whether used in stucco, cast-stone, or mortar, these cements give a lasting beauty, a high resistance to moisture, and unusual non-staining qualities.
- Complete specifications and details on the various uses of Medusa White Portland Cement (plain and waterproofed) will be sent to anyone who fills out and returns the coupon below.

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Gentlemen:
Without obligation please send me your booklet entitled "Medusa White Portland Cement Stucco."

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an easy
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HOMES*

... AND A
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**MAKE THE BASEMENT
YOUR SALES CLINCHER**

● Progressive builders who are cashing in on the present building activity, know the value of featuring modern home equipment. They know, too, from experience, that the basement ... the extra room ... is today's sales clincher.

The Gar Wood Tempered Aire Automatic Oil Heating and Air Conditioning System, designed specially for homes, offers builders an added advantage. The installation of this important equipment makes any house a better home and, consequently, makes it easier to sell. Insist on Gar Wood Systems which are nationally known for their dependability and economy of operation.

Write us now for free "Home Heating Data". Find out for yourself how the Gar Wood System helps you sell the homes you build.

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OIL HEAT COSTS LESS THAN COAL

WE ARE COOPERATING WITH THE FEDERAL HOUSING PROGRAM

Building League Announces Meeting

THE forty-third annual convention of the United States Building and Loan League will be held in Cincinnati, Ohio, Nov. 6-8. Officials of the twelve Federal Home Loan Banks will join with the executives of building and loan associations, savings and loan associations, co-operative banks, and homestead associations, by which various names these thrift and home financing institutions are known in the several states. The first national gathering of the newly organized Society of Residential Appraisers will be held in conjunction with the League meeting, bringing many professional appraisers as well as home financing executives into the group.

New Upson Sales Supervisor

THE Upson Company recently announced the appointment of R. George Morgan as supervisor of sales. He has been associated with The Upson Company for the past fifteen years, having been through the Sales and Advertising Departments, and later in the field as sales supervisor.

Insure Over \$100,000,000

THE Federal Housing Administration announced on May 11 that modernization credits, home mortgages and low cost housing projects insured or committed under provisions of the National Housing Act amount to date to \$101,540,571.

All of this money is private capital advanced by financial institutions under the modernization credit plan and the mutual mortgage insurance plan of the Administration.

Modernization credits alone account for \$66,222,065 of the total. These are extended to finance additions, alterations, repairs and permanent installation of necessary equipment to all types of real property. For every insured dollar of credit obtained in this manner, several dollars in cash has been spent by property owners. The total of modernization work done with cash and insured credit since the program was launched last August is estimated at more than \$400,000,000.

The Administration has received applications for more than \$241,000,000 worth of insured mortgages on low cost housing projects and on mortgages for one-to-four-family dwellings. Of this amount \$200,000,000 is for low cost housing projects, all new construction, of which there have been commitments on projects totaling more than \$11,700,000. There have been mortgage insurance applications for more than \$41,000,000 on the one-to-four-family projects, of which one-third is for new home construction with commitments totaling \$18,800,000.

Hackett Named Ickes' Assistant

HORATIO B. HACKETT has been appointed assistant administrator of PWA.

He moved into this post from his former office as director of the Housing Division of the Public Works Administration where he had served for the past sixteen months. Angelo Clas, assistant director of the Housing Division of PWA, is now director of that division.

Approved as Mortgagee

THE State Employees' Retirement System of Pennsylvania has been approved as a mortgagee under Title II of the National Housing Act.

This Pennsylvania State body is now authorized under this approval to invest its funds in residential mortgages insured by the Federal Housing Administration either by direct loans to home owners or by purchase of insured mortgages from financial institutions. On May 31, 1934, its financial statement showed total assets of \$20,838,319.07. David L. Lawrence is chairman of the State Employees' Retirement Board, which administers this fund, and Silas K. Ginsburg is secretary.

First Half of May Construction

The F. W. Dodge Corporation report on residential construction for the first half of May amounting to \$22,072,500 indicates a volume almost double that of the same period last year.

Celotex

*Helps Contractors
Get New Business*

*It Builds, Insulates, Decorates and Subdues
Noise in old and new buildings*

Celotex Insulating Cane Board is an invaluable aid to contractors and builders. There is a demand for this useful, dependable, versatile building material. Remodeling is the order of the day. New homes are no longer considered modern without insulation.

Celotex meets present needs

Dealers find Celotex is a business getter because it is a proven four-in-one building material. It builds, insulates, decorates, subdues noise—all at one low cost.

On the market twelve years, extensively and successfully advertised, its value and effectiveness already demonstrated in more than 400,000 homes, Celotex has public acceptance in every community.

Celotex does the job—as sheathing—as a plaster base—as interior finish. Wherever and however used it insulates buildings of all types.

That is why contractors depend upon it—why dealers recommend it—why Celotex is a leader wherever building is active.

A Major Selling Advantage—All Celotex Cane Fibre Products are manufactured under the Ferox Process (patented) and therefore effectively resist damage by Fungus Growth, Dry-Rot and Termites (White Ants).

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919 No. Michigan Ave. Chicago, Ill.

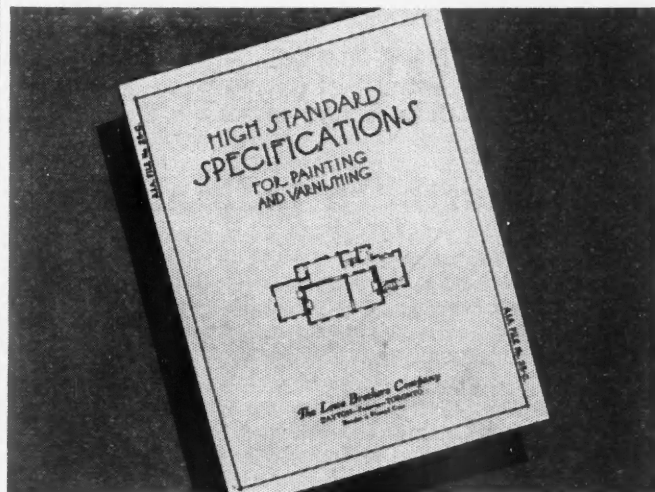
CELOTEX
BRAND
INSULATING CANE BOARD
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**BUILDS • INSULATES • DECORATES
SUBDUES NOISE**



*Let this
free book help you
prepare your bids*



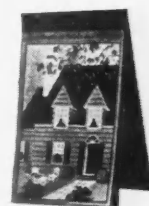
32 pages of specifications covering interior and exterior painting. Saves time and trouble. Prevents misunderstandings. Given free by Lowe Brothers dealers.

This is one of the most practical books of its kind ever published. It is filled from cover to cover with clear, concise specifications that can be applied to any job of painting on which you wish to bid.

These specifications have been carefully prepared. They can be used word for word just as they appear in the book. Get your copy today from the dealer who handles Lowe Brothers products in your locality.

And while you are in his store be sure to ask him about the Lowe Brothers Pictorial Color Chart. This chart shows full color illustrations of various types of houses and every kind of room—all painted with actual paint. The Lowe Brothers dealer will be glad to lend you one of these charts to show to your clients. It will help you get more jobs. And its use puts you under no obligation.

When competing with contractors who specify "cheap" paint, remember this. Analysis shows that so-called "cheap" paints contain as much as 63% water and other evaporating liquids. In contrast, Lowe Brothers High Standard Paint contains 90% film-forming solids that remain on the surface and protect property. Thus it covers more surface, lasts longer, costs much less in the end. The Lowe Brothers Co., Dayton, Ohio.



● This Pictorial Color Chart shows full color illustrations of many types of houses and every kind of room.

Lowe Brothers

PAINTS • VARNISHES

QUALITY UNSURPASSED SINCE 1869

ONLY ONE PAINT GAVE GOOD SERVICE

in this northern Indiana town



Mail coupon for complete picture story of sensational paint test made here

- No contractor can risk being careless over the paints he specifies. Too many people judge the houses you build only by *the way they look*.

A sensational paint test made by the real estate management of a community in northern Indiana is of vital interest to you. It determined, once and for all, what paint is most durable, most economical.

The 100 houses in the town were divided into 3 sections. Three different kinds of paint were used under identical conditions. Two of the paints cracked and peeled within two years. Only the third paint gave good service. Houses painted with it did not need repainting until five years later. This third paint — the only one that gave real, lasting protection — was Eagle Pure White Lead.

Mail the coupon below for the complete story of this sensational test. Then you'll understand why Eagle Pure White Lead is a safe specification for all your exterior painting jobs.

EAGLE *pure* WHITE LEAD



Boost the Better Housing Program in your community

The Eagle-Picher Lead Company, Dept. AB6, Cincinnati, Ohio.

Please send me a copy of the picture-folder that tells the complete story of the Indiana Community Paint Test.

Name _____

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NEW PRODUCTS

FOR FURTHER INFORMATION about any new product write the American Builder Information Exchange, 105 West Adams Street, Chicago, Ill.

New Gypsum Plank

A **NATIONALLY** known manufacturer is now marketing a factory made gypsum slab for floor and roof construction, embodying several unusual features that remove the limitations to wide-spread use formerly encountered in prefabricated building units.

This "plank," as it is termed by the manufacturer, is simply a solid slab of extra dense gypsum, 2 inches thick by 15 inches wide, bound on the edges with galvanized steel, tongued and grooved like ordinary lumber. It is laid over the customary supports, to which it is secured by clips like wood planking. An important characteristic is that the end joints are laid random, without regard to location of supports, therefore permitting the use of standard length units with a minimum of cutting and waste.

Joists or beams may be spaced up to seven feet apart. This "plank" may be readily nailed, sawed, cut or bored with carpenter's tools, thus retaining the simplicity of ordinary con-



Laying structural gypsum plank

struction. Yet it offers the advantages of incombustibility, durability, attractive appearance, low maintenance cost, and uniformity. It is manufactured by the Structural Gypsum Division of the American Cyanamid & Chemical Corp., New York City.

New Waterproofing Compound

THE PROTEXALL CO., 430 Race Street, Philadelphia, has announced a new colorless transparent liquid waterproofing that can be used on most surfaces either inside or outside buildings—one that is acid resistant and can be sprayed on or brushed.

The compound is composed of preoxidized oils and waterproofing material reduced to a thin liquid state. It will not weather or crumble, cannot become brittle and will not crack.

The makers claim that Protexall No. 5 will prevent efflorescence in brick, prevent uneven stains on stone, disintegration of stucco, and concrete. It will prevent paint from "flaking" off damp walls; it can be used as a sealer for plaster walls, a dampproofing for exterior walls, a dampproofing for basement walls, a sealing primer for painted wood and a finish to preserve the natural appearance of wood.

JUST A MINUTE TO DO THIS

MADE IN ANY SIZE FOR ANY OPENING FROM A HANGAR TO A PRIVATE GARAGE

Please send me literature and full information regarding your product. I am interested in doors for the particular purpose as checked.

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

Mail to: **OVERHEAD DOOR CORPORATION, Hartford City, Indiana, U. S. A.**

- PRIVATE GARAGE
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- WAREHOUSE
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AB 6-35

THE "OVERHEAD DOOR"

is Satisfactory and Lasting because OF ITS FIVE DISTINCTIVE FEATURES

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THE "OVERHEAD DOOR" is perfectly tight, top, bottom and sides, when closed, occupies no valuable space when open; any or all sections may be arranged for glass. An **ELECTRIC CONTROL** gives complete door operation from any location.

"As Vital as Your Heart"

1. INCLINED ROLLED STEEL TRACKS
2. HINGES OF GRADUATED HEIGHTS
3. FLOATING BALL BEARING ROLLERS
4. INDEPENDENT EXTENSION SPRINGS
5. HINGE - ROLLER - TRACK COMBINATION

A National Service Organization assumes the responsibility of all erection and service. **For Old or New Buildings Opening Preparation** The usual door jamb and casing construction, with normal headroom is all that is required.

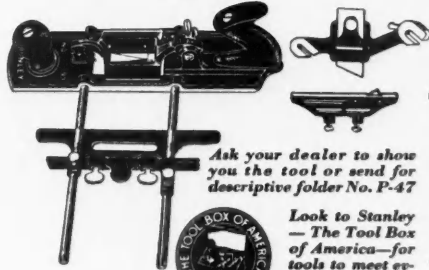
OVERHEAD DOOR CORPORATION • HARTFORD CITY, INDIANA U.S.A.



MODERNIZING - BEAUTIFYING

Modernizing and remodeling usually calls for the use of fibre board. The problem of cutting and decorating fibre board to produce attractive effects is now solved with the new

STANLEY FIBREBOARD CUTTER No. 193A

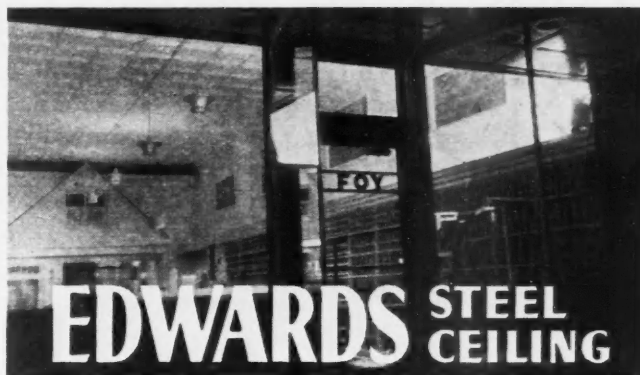
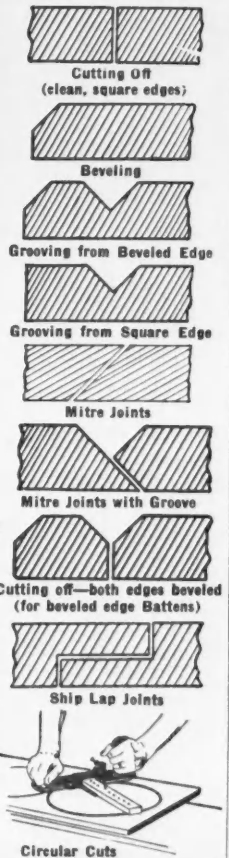


Ask your dealer to show you the tool or send for descriptive folder No. P-47

Look to Stanley - The Tool Box of America - for tools to meet every requirement

STANLEY TOOLS
New Britain, Conn.

One Tool for all these operations on Fibre Board



EDWARDS STEEL CEILING

Modernize for Modern Eyes and Pocket the Profit

The Government's campaign for "modernizing Main Street" has opened up big profit opportunities for contractors with Edwards Steel Ceiling. Merchants are quick to appreciate its beauty and cleanliness and the way it reflects light onto every counter, shelf and display rack. It can't crack, peel or crumble, costs nothing for repairs and reduces fire hazard.

Die-cut nail holes enable you to install it rapidly, right over old plaster, without interfering with business or disturbing clerks and customers. Send ceiling measurements for estimate.

Write for Ceiling Catalog No. 179

THE EDWARDS MANUFACTURING CO.
542-562 Eggleston Ave. Cincinnati, Ohio

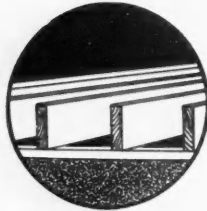
Metal Ceilings, Siding, Roofing,
Spanish Tile and Shingles

Where Can You Get Facts on Termites?

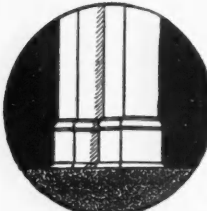
Vulnerable points for Termite damage



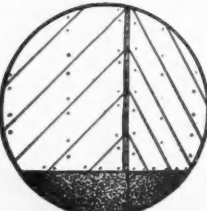
1. Plates and corner posts.



2. Sills.



3. Porch columns.



4. Sheathing.

FACTS pertaining to termite protection are difficult to obtain. They must come from reliable sources if they are to be helpful. Government bureaus and technical associations have made comprehensive reports of research on termite control. These reports are available to those interested.

Authorities unanimously agree on the effectiveness of two preservatives, creosote and zinc chloride. These have been used for a sufficient period of time to have long passed the experimental stage. Their approval rests on the only sound basis—many years of service in termite-infested regions with highly satisfactory results.

In view of the facts mentioned above, and the results of years of experience, The American Creosoting Company uses only these two proven preservatives in Am-CreCo pressure treated timber. We will send you the facts on request.



AMERICAN CREOSOTING COMPANY

COLONIAL
CREOSOTING
COMPANY
INCORPORATED



GEORGIA
CREOSOTING
COMPANY
INCORPORATED

LOUISVILLE — KENTUCKY

Fine Marble Effects

IT is now possible to secure perfect reproduction of the finest of imported marbles at a fraction of the cost of the original marble. By a new process the marble effect is exactly reproduced, both in design and colors, on sheets which install easily over old or new walls, using ordinary woodworking tools. The sheet sizes are 4x4, 4x5, 4x6, 4x7, and 4x8, and are made by the Marsh Wall Tile Co. of Dover, Ohio.

Many installations have already been made in bars, theatre lobbies, restaurants and bathrooms. An installation of Marsh-marble is shown in the accompanying photograph. The new product, "Marshmarble," is made by the makers of "Marshtile" and "Marlite."



New marble like product has low cost

Concrete Barrow

A CONTRACTORS' WHEELBARROW with a tray capacity of 5 cubic feet, handling 4 cubic feet of sloppy concrete without spilling, and equipped with a 16x4-inch pneumatic rubber tire, is called the F-25 barrow, one of the F-type lines of the Lansing Co., Lansing, Mich. It is equipped with a pressed steel dump guard at the forward end, has a never-slip axle screwed into the wheel bearings and a steel bushing on each wheel hub. There are heavy channel iron shoes clamped around the legs; between the tray and the dash braces is a heavy reinforcing steel plate. The barrow has a curved dash brace of channel iron and a steel rod is rolled into the top of the tray.

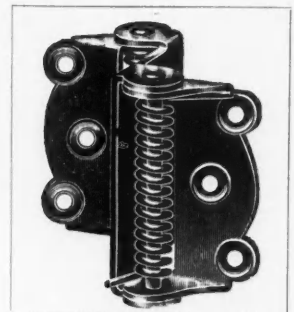


Lansing pneumatic tired wheelbarrow

Double Acting Door Hinges

TWO DOUBLE ACTING screen door hinges for screen doors and partition gates have been placed on the market by The Shelby Spring Hinge Company, Shelby, Ohio.

Made of wrought steel, they have heavy spring rods and a one-piece center flange. One of these hinges is adjustable with the spring covered; the other (illustrated) is non-adjustable with uncovered spring.





8 MACHINES IN ONE
 EACH INDEPENDENTLY OPERATED
NEW MODEL "A"
PLANING MILL SPECIAL
 ALL BALL BEARING

\$685 without motor

Here is the machine you've really been waiting for—with largest working surface of any combination machine available. All bearings high-grade ball bearings.

Includes cast-iron double table rip and cross-cut saw, 22" band saw, swing cut-off saw, 12" jointer, tenoner, upright hollow chisel mortiser and borer, reversible spindle shaper, and 18" standing disc.

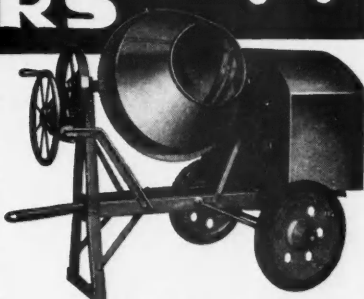
Send for descriptive circular

THE PARKS WOODWORKING MACHINE CO.
 Dept. BL-6, 1524 Knowlton St., Cincinnati, O.

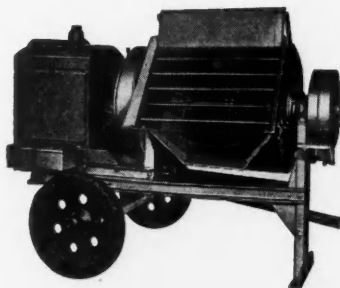


KWIK-MIX MIXERS

Full anti-friction bearing. Light weight. Skip shaker. Automatic water tank. Spring mounting. Sizes: 3½-S, 5-S, 7-S, 10-S.



3½-S Trailer — Roller Bearing — Spring Mounting.



Plaster and Mortar Mixers Trailer and 4 Wheel Type.

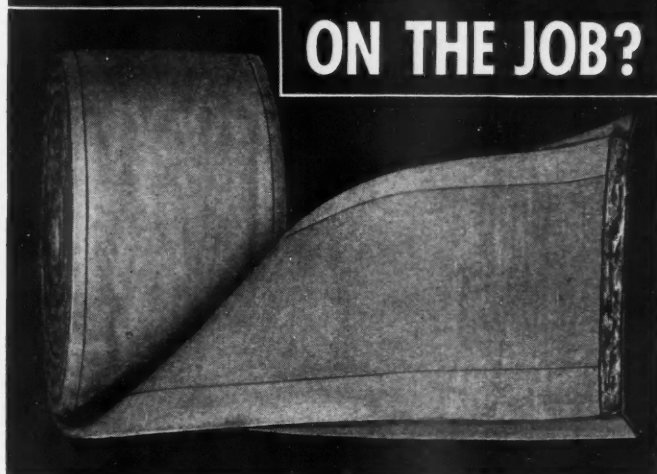
NEW LOW PRICE
 Write for information and new low prices on Kwik-Mix Trailer Mixers



Write for Catalog AB

KWIK-MIX CONCRETE MIXER CO.
 PORT WASHINGTON WISCONSIN

WHAT WILL IT DO ON THE JOB?



A FEW UNVARNISHED FACTS ABOUT INSULATION

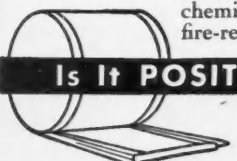
We have plenty of laboratory figures to show why BALSAM-WOOL is better insulation. But your customers don't want laboratory figures. They want insulation efficiency—on the job. Here are a few questions every contractor should ask . . . if he is interested in giving his customers more insulation value per dollar:



Is It Moisture-PROOF?

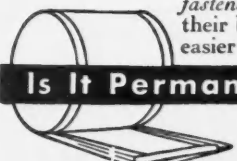
We know—and you know—that moisture destroys the effectiveness of insulation.

We know—and you know—that moisture gets into any insulation which is not adequately protected as a whole. BALSAM-WOOL is completely and permanently protected from moisture . . . sealed in a waterproof covering. In addition, it is chemically treated to make it verminproof and fire-resistant.



Is It POSITIVE in Application?

To be effective, insulation must have no weak spots—leave no loophole for wind, heat or cold to get through. But you cannot be sure of continuous insulation with materials that are merely poured or dumped in by common labor. BALSAM-WOOL is positive in application—fastened in place by qualified carpenters who know their business. Flanged edges now make it even easier to apply than ever before.



Is It Permanent in EFFECTIVENESS?

Materials that settle or that change their form, cannot be permanently effective. BALSAM-WOOL lasts as long as the building in which it is applied—stays where it is put and does not change its form.

Does It Offer the RIGHT Thickness for the Job?

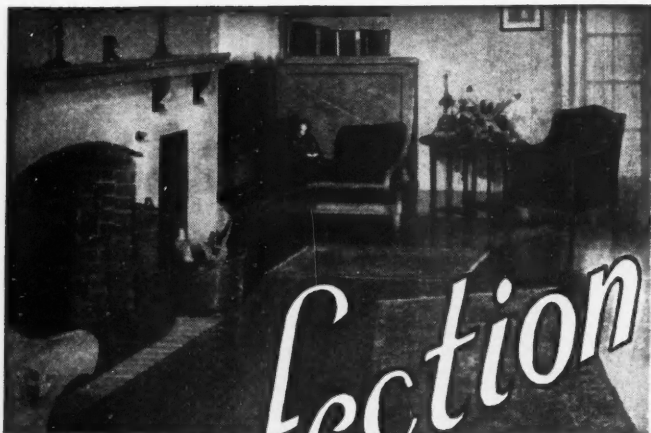
For every home and every climate there is a right thickness of insulation beyond which it does not pay to go. BALSAM-WOOL comes in thicknesses to fit every insulation need, everywhere.

Let us tell you all of the facts about BALSAM-WOOL. We believe you will find them worth knowing!

BALSAM-WOOL
 WOOD CONVERSION COMPANY
 ST. PAUL MINNESOTA



Made by the Makers of
NU-WOOD



Perfection BRAND OAK FLOORS

In old homes or new, whether for renting or selling, "PERFECTION" BRAND Oak Floors give service and satisfaction. The greatest value for the money.

Take advantage of the new Housing Administration Act and sell good Oak Floors on your modernizing jobs.

"PERFECTION" BRAND Oak Flooring as furnished by your local dealer is carefully manufactured from selected timber, scientifically seasoned and kiln dried, easily finished. Ask your dealer today to show you the "PERFECTION" BRAND.

Complete information is yours for the asking. Write us today. Sold only through retail lumber dealers.



ARKANSAS OAK FLOORING CO.
PINE BLUFF ARKANSAS

Increased Capacity Saws

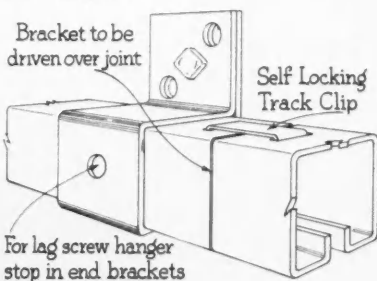
BUILT-IN EXTENSION tables, which are machined and accurately fitted to saw tables to increase the capacity of the No. 8 saw to 24 inch ripping and 18 inch cut-off, are being made by J. D. Wallace & Co., Chicago. The capacity of the No. 20 Universal saw is likewise increased to 24 inch ripping and 14 inch cut-off. A more powerful Universal type, motor delivering up to 1½ H.P. on intermittent work, is now used on the No. 20 model; the No. 8 machine has a 2 H.P. three phase motor with gear drive.



Self-Locking Track Clip

THE WAGNER MANUFACTURING COMPANY, Cedar Falls, Ia., are featuring their self-locking track clip as standard equipment with their garage and barn door track.

This is a device for holding the ends of lengths of track together so that the door hanger runs smoothly over the joints. The ends of the track units are punched to take the locking clip which is held in place by the attaching bracket being driven over the joint.



Other holes are provided in the end of the track, the end caps and bracket to take a nail or lag screw which acts as a hanger stop. The brackets are identical and may be used at either end, center, or over joints.

Combination Resilient Flooring

A PRODUCT KNOWN as Homasote "Restful" Flooring is being marketed by the Agasote Millboard Co., Trenton, N.J. This new item is made of a linoleum or rubber top-covering combined with a chemically-treated, sound- and cold-insulating base (see below).

The large sheets range in size from 1x8 feet to 3x14 feet; borders, in sizes 17 inches wide by 8 to 14 feet long. Two thicknesses are supplied, ½ inch for remodeling and 13/16 inch for new work, and can be laid over old walls and floors or applied directly over rough flooring in new jobs. The surface is finished in a variety of colors and patterns.



MarshTile MEANS
 MORE JOBS FOR YOU




THE lustrous beauty of tiled walls at a fraction of the cost for material and installation... that's sales-making **MARSH TILE**, the sanitary, long-lived, easily-cleaned wall-finish in large-sized, burnished sheets. **MARSH TILE** can be speedily installed over old walls, using ordinary wood-working tools. Send for descriptive folder with full details. Write to the exclusive manufacturers of **MARSH TILE**, **MARSH WALL TILE COMPANY**, Dover, Ohio.

MARSH TILE

AMERICAN STEEL SHEETS

FOR ALL KNOWN USES



KEYSTONE Copper Steel Sheets
Excel in the Building Field

Use sheets of recognized reputation and value. For roofing, siding, gutters, spouting, air conditioning systems, and general sheet metal work—Keystone Copper Steel gives maximum rust resistance.

Insist upon AMERICAN Black Sheets, Keystone Rust Resisting Copper Steel Sheets, Apollo Best Bloom Galvanized Sheets, Galvanized Sheets, Heavy-Coated Galvanized Sheets, Formed Roofing and Siding Products, Terne Plates, etc. Write for information.

This Company also manufactures U S S STAINLESS and Heat Resisting Steel Sheets and Light Plates for all uses to which these products are adapted.

AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh, Pa.

SUBSIDIARY of UNITED STATES STEEL CORPORATION

LUMBER YARDS
BUILDERS
DEVELOPERS



Plan Books

of Eastern Design

BUNGALOWS
BOOK D. 35¢

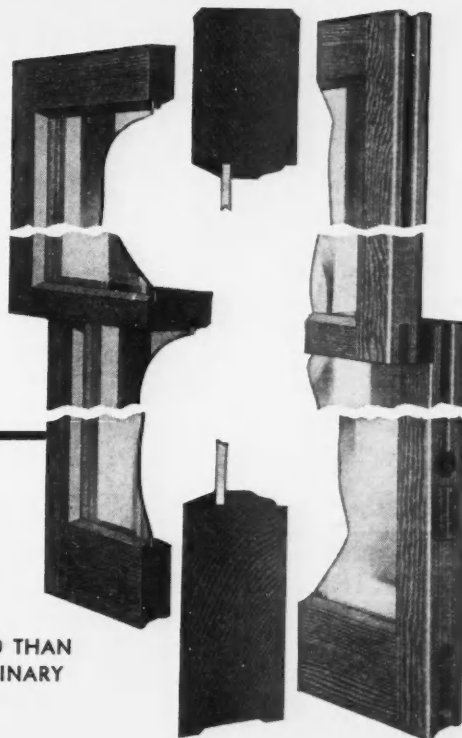
20 Pages of small homes

"THE HOUSE TO LIVE IN"
A BOOK OF 54 SMALL HOMES
\$1 dollar a copy Limited Edition

SIMMONS - BOARDMAN PUBLISHING CO.
30 CHURCH STREET NEW YORK, N.Y.

Avoid ROT and DECAY

USE THE HUTTIG RED-E-FIT • ROT-PROOF CHEMICALLY TREATED IMPROVED WOOD WINDOW



**COSTS
LESS
INSTALLED THAN
ANY ORDINARY
WINDOW**

GUARANTEED FOR 25 YEARS

- **RED-E-FIT**
comes all ready sized—No dressing, reworking or fitting required on the job
- **ROT-PROOFED**
chemically treated eliminates moisture absorption at the joints—PREVENTS ROT AND DECAY
- **BOTTOM RAIL BEVELED**
already shaped for pitch of sill.
- **RABBETED CHECK RAILS**
cut out for parting stop—can be used with any other top or bottom sash.
- **PLOUGHED AND BORED**
ready for cord and weights
- **DOVE-TAILED PUTTY LOCK**
an exclusive Huttig development locks the putty into the wood
- **EVERY WINDOW BRANDED**
 with our trade mark and guaranteed for 25 years against rot and decay.
- **YOU CAN SAVE 25 TO 50 CENTS**
per window on installation costs by ordering this window.

SEE IT AT YOUR DEALERS
who can obtain it thru their jobber

HUTTIG MFG. COMPANY
MUSCATINE, IOWA

CAN BE USED IN ANY STANDARD FRAME

SKILSAW

- Powerful, Efficient, and Dependable!
- Thousands Now in Use !!

SKILSAW is, by far, the leading portable electric hand saw in reliability and performance and in the number of satisfied users everywhere. Has more power—size for size, more refinements in construction and design, more applications in sawing work of every kind. Cuts wood, metal, stone and compositions.

6 Powerful Sizes

See your dealer or write for our new complete catalog.

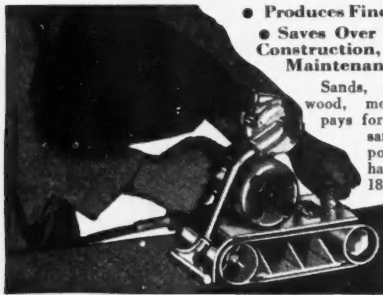


SKILSAW SANDER

- Produces Finer Finishes Faster!
- Saves Over Hand Sanding in Construction, Modernizing and Maintenance Work!

Sands, grinds and finishes wood, metal, stone,—quickly pays for itself. Full 32 sq. in. sanding area. Extra powerful motor. Easy handling,—weighs only 18 lbs.

Model "B" (illustrated) has a Vacuum Dust Collector to improve utility and make belts last longer.



SKILSAW, INC. — 3314 Elston Ave. — CHICAGO

It's a JAEGER



Recognized biggest value.

Fast 3 1/2 S Trailers. Power Load Tilters 3 1/2, 7, 10S. Non-Tilts 7S to 56S sizes.



GET OUR LOW PRICES

THE JAEGER MACHINE COMPANY

521 Dublin Avenue, Columbus, Ohio

STARLINE INC.

HARVARD, ILL. ALBANY, N. Y.

BARN EQUIPMENT

For Any Type Farm Building



We supply everything to equip any type barn—Door Hangers—Hay Carriers—Stalls—Stanchions—Pens—Water Bowls—Litter Carriers—Ventilators and Ventilating Systems—Poultry Equipment—also complete hardware for Garage Doors.

Before you remodel or build any farm building, ask our Architectural Department for free plans.

Write Department AB6

50 YEARS SERVING BARN BUILDERS

New Extra Strength Glass

THE LIBBEY-OWENS-FORD Glass Company of Toledo is one of two companies with U. S. license to make glass that will bend like a sheet of steel. This type, described as the world's hardest glass, is heat treated in a new electric furnace designed especially for the strengthening process. The Toledo concern is installing two of the English furnaces in its plant at Ottawa, Ill.

The treatment consists of placing a sheet of ordinary plate glass in the furnace and heating it until it is plastic. Then a blast of cold air is suddenly directed against the glass, creating high strain, as the glass men say.

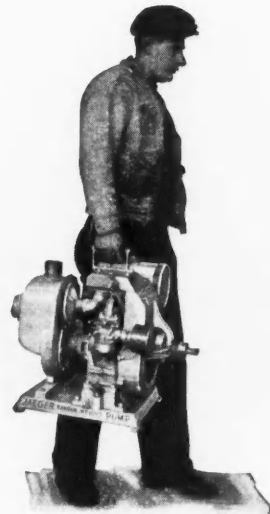
This process develops high compression on the outer wall of the glass, while the interior is under tension or a pressure in the opposite direction. This action gives the glass a strength from four to six times that of ordinary glass.

When extraordinary force is brought to bear, the glass crumbles into small fragments like rock candy. And the pieces do not cut or scratch like ordinary slivers of glass. Research engineers, to demonstrate some of its qualities, place a sheet of the treated glass on a cake of ice and then pour hot lead on the glass surface. Despite this extreme test, the glass does not crack.

Portable Utility Pump

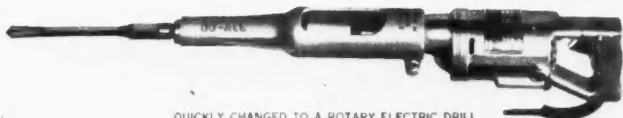
A "BANTAM WEIGHT" pump of recent development is now being supplied by the Jaeger Machine Co., Columbus, Ohio. It is powered with 2 1/2 horsepower engine and rated at 8500 gallons per hour capacity.

Aluminum and alloy steel construction and compact design are said to make this outfit portable. Priming action is automatic, without hand levers or adjustments. Repriming is also automatic. Patented self-cleaning shell design, open type impeller mounted direct on engine shaft and Lubri-Seal are other features.

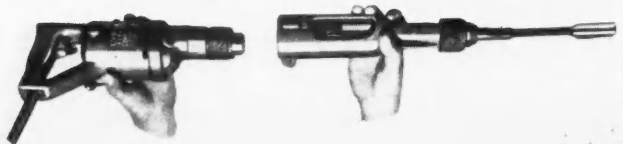


Combination Hammer and Drill

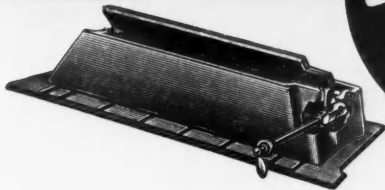
THE WODACK ELECTRIC Tool Corp., Chicago, announces the new Wodack "Do-All" combination electric hammer and drill. The hammer mechanism is so constructed that there are two working parts, both of which are made of specially treated steels to give long life. The motor is of the universal type with forced draft ventilation, and the tool may be operated from any light socket. By opening the chuck and loosening a cap screw, the hammer member may be removed and the tool used as an electric drill, with a capacity of 3/8 inch in metal. It may also be used as a portable grinder and buffer. When used as a hammer with star drills the tool drills holes in concrete and masonry up to 1 3/4-inch diameter, and by using special tools it does chipping, chiseling, cutting and vibrating.



QUICKLY CHANGED TO A ROTARY ELECTRIC DRILL



P E E R L E S S



*dome
damper*

**OTHER
PEERLESS
PRODUCTS**
Fireplace Fixtures—
Ash Dumps—Coal
Windows—Ash Pit
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ceivers and Hearth
Fire Gas Heaters

Guarantee perfect operation of the fireplace. Install Peerless Dampers. They eliminate heat loss and unhealthful drafts when the fireplace is not in use. Peerless dampers will wear a lifetime. Their small cost is repaid hundreds of times by properly burning fireplaces. Made in all standard sizes—three models to choose from—Rotary Control—Poker Control—Chain Control.

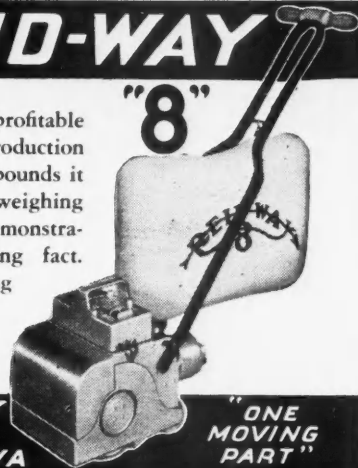
Write for details and prices

PEERLESS MANUFACTURING CORP.
1400 W. Ormsby Ave. Louisville, Ky.

ADDS CHARM AND COMFORT

THE REID-WAY

Every contractor can make profitable use of this Reid-Way high production machine. Weighing only 75 pounds it will out-perform machines weighing three times as much. A demonstration will prove this amazing fact. Write for circulars describing the Reid-Way line of "One moving part" sanders.



THE REID-WAY
2961 FIRST AVE., E.
CEDAR RAPIDS, IOWA

**"ONE
MOVING
PART"**

**STUCCO
SPRAYING
MACHINE**

This marvelous machine completely solves the problem for renovating masonry buildings, walls, etc. It fuses a plastic mixture to any masonry surface. This plastic waterproof material fills all cracks and checks. It can be applied in varying thicknesses desired and in 30 colors and shades. Process proven by over six years of actual use under all conditions and in practically every climate.

OFFERS BIG EARNINGS

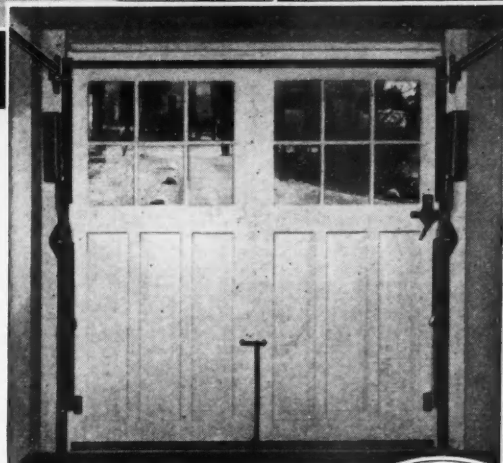
Many operators report costs of only 8c to 10c with sales at 20c to 35c per sq. yd. The profit on one order often pays for machine. Now the big government renovating campaign and the increasing demand for color offers large profits in your territory. Machine furnished on free trial and easy payments. Territory protected. Learn about this wonderful machine and what it has accomplished for others. Send for complete data. Write today.

COLORCRETE INDUSTRIES, INC.
505 Ottawa Ave., Holland, Mich.



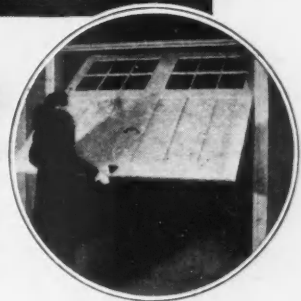
Never Before

Could doors
be modernized
so *Easily*
--*Economically*



**TIP-TOP
DOOR HARDWARE**

The simplest set ever devised
—no springs—no complicated
mechanism . . . nothing to
wear or to require after-in-
stallation adjustments.



Just what you've wanted. A set that gives the old style garage door convenient upward action . . . and one that's TRULY EASY TO INSTALL. So radically new in principle and so perfect in operation . . . built by Engineers who have been counterbalancing doors for 40 years. Complete for most any style door TIP-TOP is ideal for replacements . . . and a real time-saver for you. Its steel weatherstrips . . . Its special arrangement for raising over snow and ice . . . And its sturdy lock will delight the owner. Don't fail to investigate TIP-TOP right away.



Balanced Perfectly
. . . . Like A Scale

An unique "Balance-Lever" does the trick. Neat, interchangeable weights accurately balance the particular door . . . just like a balance scale. Few moving parts ruggedly built. Nothing to wear or get out of fix. That's TIP-TOP.

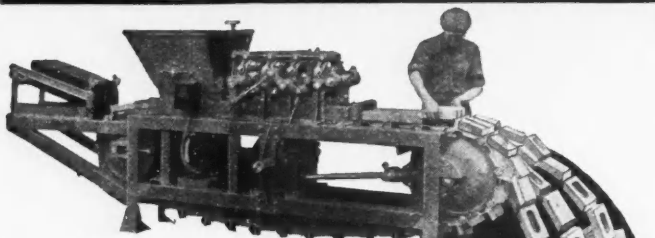
See It At Your Dealer's

The **KINNEAR MFG. CO.**
1660-80 Fields Ave. Columbus, Ohio



BIG PROFITS

FROM LINE
PRODUCTION



Manufacturing Independence for You

This marvelous DUNBRIK machine revolutionizes brick making. Previous machines or methods must give way to this super process. Think of producing superior brick—The most stable unit—At the rate of 24,000 per day—At an amazingly low cost—And you will realize what an outstanding opportunity is offered for your locality.

Dominate Triple Brick Market

You can control a triple market in your territory—COMMON, TINTED AND FACE BRICK—and your business, investment and future growth are safeguarded by an EXCLUSIVE FRANCHISE granted you without cost.

Others Point the Way

Let us show you how automatic line production and this better, lower cost brick has smashed building costs—How DUNBRIK manufacturers are getting from 60 to 80% of the available business in their territories. Study their unusual progress and let them be your guide to manufacturing independence. Send for the complete story as told in "4 Keys to Success." Write today. No obligation.

W. E. DUNN MFG. CO.

450 W. 24th St.

Holland, Mich.

WANTED!

CARPENTER CONTRACTORS •

To whom we can refer inquiries received from advertising. To men able to estimate costs and equipped to install weatherstrips, a splendid money-making opportunity is offered. This nationally known firm has set all standards of quality for 30 years. Now introducing a new selling plan for an improved, lower cost line having an established high factor of efficiency. Two member adjustable strip easy to apply—entirely different. Every selling aid furnished. No investment required. Write today for complete details. Address: Alfred M. Lane, President, Monarch Metal Weatherstrip Co., 6335 Etzel Ave., St. Louis, Missouri.



SpeedWay

Standardize on
SpeedWay Air-Cooled—
STEEL BODIES

Lighter, handier, stronger. Stand up under all manner of abuse. Try to stall a Speedway, you'll find over-capacity—extra power to handle emergencies. 12 superior design and construction features—the last word in drills. Far ahead of all others, still cost much less, type for type.

SpeedWay Mfg. Co.
1823 So. 52nd Ave., Cicero, Ill.



Write
for Catalog

More Drill
for the Money

LETTERS from readers

on all subjects

Facts, opinions and advice welcomed here

Contractor's Bogie

San Jose, Calif.

To the Editor:

In a recent issue of your valued magazine, I read an article dealing with the cost of estimating which the contractors were forced to bear in bidding on a job.

We have solved this in a very radical way, but it suits us and our estimating department is self supporting.

First: Before bidding on a job one must understand it is a matter of selling one's services. Are your services worth anything. We take it you have rendered or expect to render an experienced service to your clients. Ask your prospective customer before bidding on a job if he buys his auto, his clothes, his stove, his piano or other articles of home furnishing, at the lowest possible price. I think he does not. Not even his food. Then why his major investment, which his home represents, on this lowest plane price. The very lowest price will probably be by one who may not be as experienced or reliable as he might be. We suggest this and tell our customer we will prepare a very careful estimate for him. We make a very small preliminary charge for this, from \$10. to \$25. for homes or modernization jobs of from \$1000 to \$5000, slightly more in proportion. Our idea is not so much to get paid what it costs to do this work, but we have learned that when the customer will pay in cash only the trifling sum of \$10. our chance of getting the job is about 10 to 1. In fact we get most of the jobs we figure. Of course we cannot get this idea over to all home owners, but our percentage is great enough that we have adopted this as a permanent policy. This work is done in conjunction with licensed contractors. We work with only one contractor on each job.

If each material estimator and contractor should make this his rule, the owner would not have from 5 to 10 contractors and materialmen figure his work, but he would pick out the builder he wanted to do the work and place it in his hands. The jobs could be done for less money too as the overhead would be considerable less.

Just consider this: A short time ago, I estimated a millwork job for another mill. They paid me \$100 for this list and estimate. I understand there were 17 bidders on this job. This represents \$1700 of cost for figuring millwork only. Multiply this by the other crafts and see how it probably cost \$5000 to figure this job. The owner has to pay this in the final analysis.

If the work were equally divided and each contractor received one job each year, each job would have to bear \$5000 of overhead in place of from \$250 to \$500 under our plan.

If each bidder ask a fee such as an architect, doctor or attorney would expect, would the owner ask all these to figure? I think not. We are entitled to this fee. Lets band together and quit working for nothing. Our plan saves the owner money too.

ROY V. ISH,
Superintendent Construction,
Draftsman and Estimator.

Cause and Effect

Rochester, N.Y.

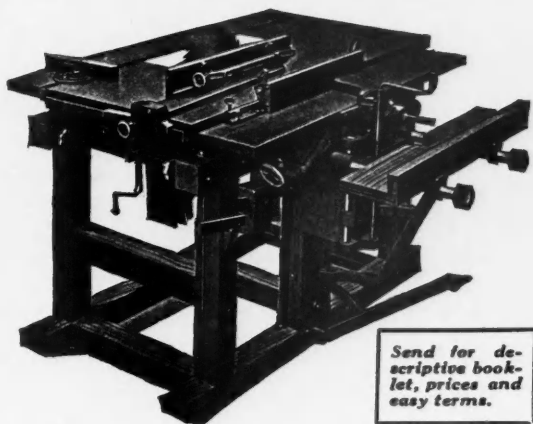
To the Editor:

Just a few lines to let you know how much I look forward to each issue of the AMERICAN BUILDER. Each issue is like a month's schooling. Keep up the good work.

Enclosed is a list of catalogs I could use, and a snapshot of a five-room bungalow costing \$7800 with lot, log fireplace, hot water heat and walls and ceilings insulated, which I just finished.

JOHN F. FIEN,
Carpenter Builder.

There's No Economy in Worn-Out—Out of Date Machinery



Send for descriptive booklet, prices and easy terms.

Modernize your equipment with Monarch machines on our present low price, easy term plan, an opportunity that may never come again.

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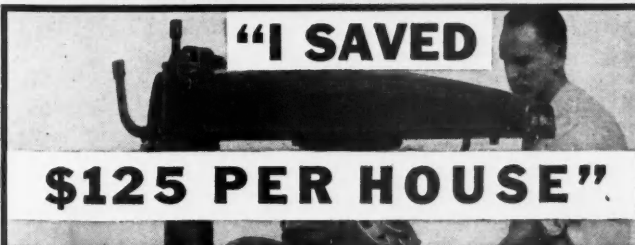
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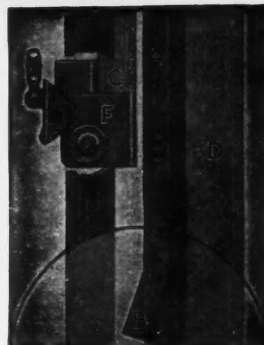


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with headroom requirements of 8 1/2 to 21 inches. All standard sizes, as well as special sizes and heavy duty doors with special heavy tracking are available. Ask especially about the Ro-Way low priced doors for residence garages and the Ro-Way specially designed torsion spring high lift doors for use in public service stations.

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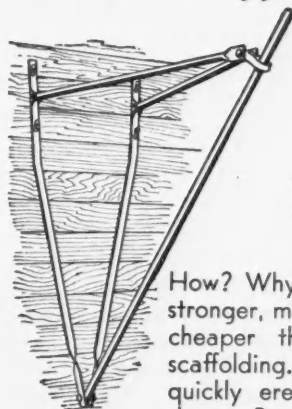
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How? Why? Because they are stronger, more dependable and cheaper than costly wooden scaffolding. Because they are quickly erected, quickly taken down. Because you can use them on wood or stucco. No wonder they soon pay for themselves. Thousands of builders have used them for years.

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SCAFFOLDING BRACKETS



ACCURATE METAL WEATHER STRIP


You start at the top of the ladder when you handle the ACCURATE line. Make money with a money maker. First in reliability—precision—service cooperation AND priced RIGHT.

[[Send for details regarding jobber set-up. Valuable territory now open to right men. Unlimited opportunity.]]

Write today

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10-S

LANSLING COMPANY
LANSLING, MICHIGAN
BRANCHES IN PRINCIPAL CITIES

Specifications—General Conditions

(Continued from page 52)

24. **WORKMAN'S COMPENSATION LAWS:** The Contractor must assume all risks and bear all losses occasioned by neglect or accidents during the progress of the work until the same shall be completed and accepted by the Owner. The Contractor shall obtain and pay for liability insurance covering the entire work in accordance with any Workman's Compensation Law which may be in operation now or put in effect before the completion of this contract.

25. **INSURANCE:** The Owner shall effect fire, lightning and tornado insurance from time to time equaling the amount of the payments made on account of the contract and made payable to the Contractor or Owner as their interests may appear.

26. **GUARANTY BONDS:** If requested by the Owner, prior to the signing of the contract, the Contractor shall furnish bond covering the faithful performance of the work herein specified and the payments of all obligations in such form and with such sureties as the Owner may approve. If such bond is required previous to the submission of bids, the premium shall be paid by the Contractor; if subsequent thereto, it shall be paid by the Owner.

27. **DAMAGES:** If either party to this Contract should suffer damage in any manner because of any wrongful act or neglect of the other party or of anyone employed by him, then he shall be reimbursed by the other party for such damage.

Claims under this clause shall be made in writing to the party liable within a reasonable time of the first observance of such damage and not later than the time of final payment, except as expressly stipulated otherwise in the case of faulty work or materials, and shall be adjusted by agreement or arbitration.

28. **ARBITRATION:** At the choice of either the Contractor or Owner, all questions in dispute shall be submitted to arbitration. One arbitrator may be agreed upon, otherwise three shall be selected; one to be named in writing by each party, and the third to be chosen by the two selected arbitrators. The arbitrators shall act with promptness, the decision of any two of them shall be binding on both parties hereto. The decision of the arbitrators upon any question subject to arbitration shall be a condition precedent to right of legal action by either the Owner or the Contractor. The arbitrators are authorized to award the party whose contention is sustained, such sums as they shall deem proper for the time, expense, and trouble incident to the appeal and, if the appeal was taken without just cause, damages for delay. Unless otherwise provided by agreement, the cost and charges of arbitration shall be fixed by the arbitrators upon either or both parties. The procedure shall conform to the Laws of the State in which the work lies, and wherever permitted by Law, the decision of the arbitrators may be filed in Court to carry it into effect.

29. **GUARANTEE:** The Contractor shall be responsible for and shall make good any defect due to flaws in labor and material which may appear or be discovered within one year after the completion of the work and its acceptance by the Owner.

30. **RETURNING DRAWINGS AND SPECIFICATIONS:** All drawings and specifications must be returned to the Owner before the final certificate will be issued by him to the Contractor.

31. **ADDITIONAL CONDITIONS:**.....

2000 Homes for Long Island

(Continued from page 31)

\$10,000. Materials and equipment are almost 100 per cent purchased locally.

Operative builders and residential contractors are also very active in other metropolitan New York areas such as Westchester County and the various sections of New Jersey. Residential construction in these areas is running from 100 to 500 percent greater than last year.

One of the most encouraging signs to students of the residential building industry is the increased volume of lot sales to the independent small builders throughout the area. As one well known realtor told the AMERICAN BUILDER, "when we have contractors coming in and buying lots again, we know the building business is on the upgrade, for they don't buy lots these days unless they expect to put houses on them very soon."

There are literally thousands of the smaller contractors, many of them new young builders of high caliber, building or planning to build one, two or three houses for sale. The total volume of work of this type mounts to extremely important totals and equals in importance the volume being done by the large operative builders who are putting up ten or a dozen houses at a time, and whose volume will run to several hundred houses in a year.

Houses now under construction in the metropolitan New York area give unusually high values for the money. They are well planned and equipped with the latest plumbing, heating and lighting equipment. Use-recreation rooms are widely featured and English and colonial designs predominate. Most houses are well insulated, well constructed.

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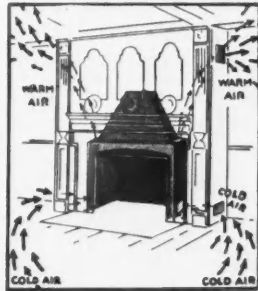
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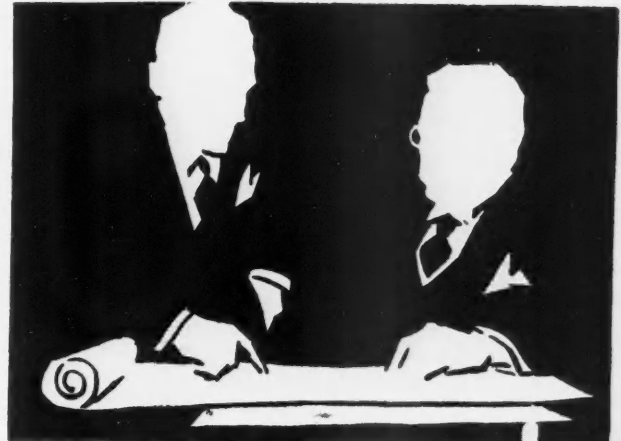
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NOT NAILED ON, but laid individually in mortar, utilizing the new MASON PATENTED BEAM FOUNDATION. Unlimited field; tremendous possibilities. No costly excavation and back-fill. Surprisingly low cost.

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Selected List of Manufacturers' Literature

For the Service of Builders, Contractors, Architects and Dealers

THE publications listed on these pages may be obtained without charge either by using the coupon, listing the numbers of the catalogs desired and mailing to AMERICAN BUILDER, 105 West Adams Street, Chicago, or by applying on your business stationery to the manufacturers direct, in which case kindly mention this publication. Either the titles or the numbers may be used in ordering. This list is an editorial feature for convenience of our readers.

OF TIMELY INTEREST

PORTLAND CEMENT ASSN., 33 W. Grand Ave., Chicago, Ill.

384—Home Designs—"Low-Cost Fireproof Concrete Homes"; 24 pages, illustrated, showing designs intended to suggest what can be accomplished with concrete as a principal construction material for the modern, low-cost, fireproof home.

385—Non-Burning Houses—"Our New Home Is Fireproof"; 12-page illustrated folder describes modern fireproof concrete home in the \$5,000 to \$7,000 class built in Des Moines, Ia.

THE INSULITE CO., Minneapolis, Minn.

386—Playhouse Plans—"How to Build a Playhouse for the Kiddies," a big blueprint sheet giving working drawings to a large scale of a 5 x 7 foot insulation board playhouse. Itemized bill of material included.

THE AGASOTE MILLBOARD CO., Trenton, N.J.

387—New, Restful Flooring—"A Complete Homasote Floor" is a color folder describing the triple combination floor consisting of a wearing surface of linoleum or rubber mounted on an insulation and sound absorption board.

THE MASONITE CORP., Chicago, Ill.

388—Modern Interiors—Masonite's contribution to the Better Housing Program is a 24-page brochure in color illustrating how to remodel and redecorate and restyle homes, offices and retail shops.

WASHINGTON MANUFACTURING CO., Tacoma, Wash.

389—Porch Columns—An 8-page folder illustrating the Samson columns and porch work sold through millwork jobbers.

NATIONAL LUMBER MANUFACTURERS ASSN., 1337 Connecticut Ave., Washington, D.C.

390—House Plans—"Interesting Small Homes," a 24-page collection of small home designs, the perspectives attractively rendered in pen and ink and the floor plans clearly drawn and dimensioned.

AMERICAN RADIATOR CO., New York City.

391—Better Heating—"The Home Modernization Budget Book," a 32-page handbook devoted to the modernization of homes in general and their heating systems in particular. Handy tables are provided for tabulating estimated costs.

PAINTS AND WATERPROOFING

ALUMINUM COMPANY OF AMERICA, Pittsburgh, Pa.

392—Aluminum Paint—"Specifications for Aluminum Paint Made with Alcoa Albron Powder or Paste"; complete information for architects, contractors and property owners relative to aluminum for painting.

THE SHERWIN-WILLIAMS CO., Cleveland, Ohio.

393—Industrial Painting—"Plant Conditioning; Profit Through Paint," an elaborate brochure for contractors and plant superintendents specifying proper paint treatments for every kind of industrial use. A spiral bound book illustrated in the modern manner.

E. I. DU PONT DE NEMOURS & CO., Inc., Wilmington, Del.

394—Painting and Decorating—"New Color Harmony for Your Home," a beautifully illustrated handbook of 44 pages showing examples of different color schemes and treatments for exterior home painting and interior decoration.

THE NEW JERSEY ZINC CO., 160 Front St., New York City.

395—Zinc Dust Paint—"Metallic Zinc Powder in Industrial Paint," a 16-page handbook giving the results of scientific tests of Zinc Dust-Zinc Oxide paint for iron and steel.

THE PROTExALL CO., 430 Race St., Philadelphia, Pa.

396—Waterproofing—"Protexall No. 5" is a folder describing a colorless liquid waterproofing which waterproofs by penetration and by forming a protective coating for use on brick walls, stucco, stone, cement, wood, wallboard, etc.

AIR CONDITIONING—HEATING

CARRIER PRODUCTS CORP., Newark, N.J.

397—Ideal Weather—"Carrier Home Weathermaker," a bulletin for architects and contractors describing the new Carrier Weathermaker which operates from automatic steam boiler. Part of the very extensive Carrier line of air conditioning equipment for all types of buildings.

THE TRANE CO., La Crosse, Wis.

398—Ventilating Fans—"Trane Fans for Heating, Ventilating, Drying and Air Conditioning," a 24-page technical bulletin illustrating the Trane line of multiblade fans with tables of dimensions and capacities.

KING VENTILATING CO., Owatonna, Minn.

399—Warm Air Humidifier—"King Humidifier and Fuel Saver," an illustrated folder presenting this simple and practical piece of home equipment.

NATIONAL RADIATOR CORP., Johnstown, Pa.

400—Heating Facts—"Facts You Should Know About Heating," a new 32-page book of informative material about heating, what the various systems are and do, what makes good installations good, how to select good equipment, and how to benefit from all the opportunities offered by modern heating. A beautiful book with large illustrations in two colors. It is believed that this book will be of real help to contractors, builders, architects and heating contractors in their discussion of heating with the consumers.

GENERAL REFRIGERATION SALES CO., Beloit, Wis.

401—Air Conditioning for Residences—A technical folder giving information regarding modern Lipman comfort cooling equipment for summer air conditioning, and of Lipman winter air conditioning for residences.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Minneapolis, Minn.

402—Automatic Controls—"This Thing Called Air Conditioning," a 32-page booklet giving a complete discussion of automatic controls and air conditioning for buildings, based on the latest information from all sources.

DELCO APPLIANCE CORP., Rochester, N.Y.

403—Oil Burning Heater—"The New Way to Better Home Heat," an attractive illustrated broadside showing how the Delco Heat boiler fits into the decorative and efficiency scheme of the modern home basement.

FAIRBANKS, MORSE & CO., Chicago, Ill.

404—Air Conditioning Equipment—"Ortho-Clime (Corrected Climated) Air Conditioners," a 6-page folder presenting the Fairbanks, Morse line of air conditioners for summer cooling of homes, offices and business buildings.

BUILDING SPECIALTIES

STRAN-STEEL CORP., 6100 McGraw Ave., Detroit, Mich.

405—Steel House Framing—"Steel Is Sweeping the Country," an illustrated broadside showing recent houses of Stran-Steel construction in Detroit, Pittsburgh, Cincinnati, San Francisco, Springfield, and Washington.

METAL LATH MANUFACTURERS ASSN., 208 S. La Salle St., Chicago, Ill.

406—Metal Lath Specifications—New standard specifications prepared by the Metal Lath Manufacturers Assn. are presented in a 24-page illustrated booklet with details of recommended practice. A valuable appendix covers the miscellaneous specifications for bucks, electrical outlets, plastering, concrete stucco, etc., to all of which the metal lath specifications themselves are closely related.

KAWNEER Co., Niles, Mich.

407—Modern Store Fronts—"Store Fronts in the Modern Manner by Zouri," a 24-page illustrated handbook presenting designs and details of construction for present day shop windows, doors, display cases, etc.

VENTO STEEL SASH Co., Muskegon, Mich.

408—Coal Chutes—"Vento Coal Chutes," are presented in a new folder giving details, sizes, etc.

THE DENISTON Co., 4856 South Western Ave., Chicago, Ill.

409—Lead Seal Nails—The Deniston roofing nail with the lead seal under the head is featured in a new illustrated circular. A new model in this line is the Deniston Drive Screw Lead Seal nail. A special circular describes this.

THE BUILDERS IRON Co., Inc., New Haven, Conn.

410—Sidewalk Doors—Information regarding "Bilco" patent sidewalk doors and hatchways is offered in a new illustrated circular.

WOOSTER PRODUCTS INC., Wooster, Ohio.

411—Wooster Treads—A series of detail plates in a portfolio present full information regarding stair construction and the use of Wooster safety treads, nosings, edgings, thresholds, etc.

KING VENTILATING Co., Owatonna, Minn.

412—Barn Ventilators—"The New Line King Aerators and Ventilators" is a 4-page illustrated circular giving dimensions, prices and condensed specifications of this old established line.

THE FORMICA INSULATION Co., Cincinnati, Ohio.

413—Modern Doors—"Formica Doors, Permanently Finished, Handsome, Lasting," an illustrated folder with details and photographs showing new thought in door design and construction.

UNITED STATES GYPSUM Co., Chicago, Ill.

414—Insulating Rock Lath—New circular describing this fireproof plaster base which insulates by reflection.

EQUIPMENT FOR BUILDINGS

FAIRBANKS, MORSE & Co., Chicago, Ill.

415—Water Systems—"Fairbanks-Morse Home Water Service," a 32-page handbook illustrating the Fairbanks-Morse line and showing independent

water systems for suburban and farm homes should be installed for present day efficiency and comfort.

WESTCO PUMP CORP., Davenport, Ia.

416—Electric Pumps—"Westco Turbine-Type Water Systems," an 8-page catalog featuring "The World's Simplest Electric Pump; No Belts, No Gears, No Rods, No Pistons, No Leathers, No Valves, No Springs." Specifications and capacities are given.

THE F. E. MYERS & BRO. Co., Ashland, Ohio.

417—Pumps, Hay Tools, Door Hangers—"Myers Complete Catalog No. 67," a monumental book of 344 pages, 1935 edition, presenting the extensive Myers line of hand and power pumps, water systems, spray rigs, hay track and carriers, barn and garage door hangers, etc. A standard reference library on these subjects.

BRIDGEPORT BRASS Co., Bridgeport, Conn.

418—Copper Pipe—"Bridgeport Copper Water Tube," a 20-page handbook on copper pipe and fittings for modern water supply of permanent satisfaction.

SCHOELKOPF MANUFACTURING Co., Madison, Wis.

419—Garage Door Openers—"Air-Lec Opens and Closes the Largest Doors," a 4-page folder presenting this successful compressed air line garage door operator.

THE KINNEAR MFG. Co., Columbus, Ohio.

420—Upward-Acting Door Hardware—"Recapture Lost Profits," a broadside featuring the new Kinnear Tip-Top door hardware of interest to lumber and hardware dealers and building contractors.

ALLITH-PROUTY MFG. Co., Danville, Ill.

421—Builders Hardware—"Allith-Prouty Catalog No. 100-R," a book of 144 pages revised to cover the 1935 line of door hangers and tracks for garages, airports, fire doors, overhead carriers,

etc. A most complete presentation of this line of equipment.

VICTOR ELECTRIC PRODUCTS, Inc., 712 Reading Rd., Cincinnati, Ohio.

422—Kitchen Ventilator—"The New Victor In-Bilt Ventilator," a 4-page circular showing details of installation in the wall with outside louvres. Specifications and sizes fully explained.

SEDGWICK MACHINE WORKS, 150 W. 15th St., New York City.

423—New Type Dumb Waiter—"The New Sedgwick Electric Roto-Waiter" is presented in a new folder under this title, showing sizes and installation details.

NATIONAL ELECTRIC PRODUCTS CORP., Pittsburgh, Pa.

424—Wiring Data—"Handbook for the Man on the Job"; 90 pages of practical information on surface and extension wiring with the use of metal mouldings, metal extension duct, floor duct and oval duct. It is written for the man on the job in a concise and helpful manner.

A. J. LINDEMANN & HOVERSON Co., Milwaukee, Wis.

425—Electric Ranges—"Ranges, Water Heaters, Air Heaters, Appliances" comprising the extensive L & H line are presented in an illustrated portfolio with complete specifications.

ILG ELECTRIC VENTILATING Co., 2850 N. Crawford Ave., Chicago, Ill.

426—Home Cooling—"Cool Your Whole House with the Ilgattic System," a selling and installing handbook of exceptional interest making clear the Ilg system of ventilation and air conditioning which "makes every bedroom a sleeping porch."

CONTRACTORS' EQUIPMENT

LANSING Co., Lansing, Mich.

427—Wheelbarrows and Trucks—"General Catalog No. 12," a handbook of 164 pages on the complete Lansing line.

American Builder,
105 W. Adams St.,
Chicago, Ill.

(June, 1935).

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Types of Houses

A Century of Progress Homes and Furnishings

Edited by Dorothy Raley

Outside and inside views with descriptions of modern homes in the housing exhibit at the Century of Progress Exposition. Shows the Armco-Ferro-Mayflower House and Guest House; the Brick House; Crystal House; Cyprus Log Cabin; Florida Tropical House; General Houses' Steel House; "The House of Tomorrow"; Lumber House; Masonite House; Stran Steel-Irwin Town House and Garden Home; Universal House's Country Home; Weiboldt-Rostone House.

1934. 127 pages, illus., 8 x 11 inches, bound in permatex, \$2.50.

The Colonial and Federal House

By Rexford Newcomb

The Dean of the College of Fine and Applied Arts of the University of Illinois describes America's most important architectural type of house. Features of good Colonial homes are described and detailed plans of 100 antique and modern houses are shown. The author tells how to build an authentic Colonial house.

1933. 174 pages, 100 illus., 7 x 9 1/2 inches, cloth, \$3.50.

Houses of Stone

By Frasier Forman Peters

The author is a practical builder and in this book he describes with pictures some of the 100 stone and concrete houses which he built in Oak Hill Village, Newton Center, Massachusetts. Following a discussion of the stone masonry house the author explains their planning and gives "Technical Details of Flagg Masonry Construction."

1933. 163 pages, 43 illus., 8 x 11 inches, paper, \$2.50; cloth, \$3.50.

Plan Books

The House to Live In

Views of 40 houses with floor plans and brief descriptions of each. Includes wood, stucco and brick veneer in English and Colonial design. Each house has been designed for a particular need or climate by an experienced architect. Plans are available at small extra cost.

1932. 22 pages, illus., 8 1/2 x 11 inches, paper, \$1.00.

The House for Modern Living

Contains 107 small house designs, including 54 prize winners in the General Electric Architectural Competition; with 48 selected entries and 7 prize houses from the 1935 Better Homes in America Competition. These are modernistic in design with flat sun deck roofs, and leisure giving equipment.

1935. 140 pages, illustrated with drawings and diagrams, 9 1/2 x 12 inches, paper, \$1.50.

Face Brick Homes

Sketches of small houses with floor plans and brief descriptions of the building, construction details and lot size. Plans are available.

1931. 32 pages, illus., 8 1/2 x 11 inches, paper, \$.65.

The Home Moderne, Vol. 1.

By Duncan Hunter

Plates showing homes of various sizes and types designed in modern style and giving wide variety in treatment of details and materials. The plan layouts are suited to conditions of modern living. Complete working drawings for any of these buildings can be supplied.

1930. 25 plates, 6 3/4 x 8 3/4, paper folder, \$.60.

Bungalows

By Harry Marchak

Sketches, floor plans and brief descriptions of 16 bungalows of modern style and of Eastern design. These houses are practical and can be built at low cost. Plans and specifications are available.

1932. 20 pages, illus., 9 x 7 inches, paper, \$.35.

Camps in the Woods

By Augustus D. Shephard

Photographs, sketches and floor plans explaining the designing of camps which serve as summer homes. These are in the higher cost class, built for permanent occupancy and provided with every modern convenience.

1931. 104 pages, illus., 9 1/2 x 12 1/2 inches, cloth, \$6.00.

Summer Cottages, Log Cabins and Garages

By J. W. Lindstrom

Plans and photographs of exteriors, including 10 in color. This is a good selection of Minnesota types. Blueprints are available.

1931. 64 pages, illus., 7 1/2 x 11 1/2 inches, paper, \$1.00.

FREE-Book Guide

A copy of the "Building Age Book Guide," brought up-to-date with a mimeographed supplement, is free upon request. All of the books described, including those listed on this page, are sold on a "money back if not satisfied" guarantee.

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