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# AMERICAN BUILDER

and Building Age

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# NIPPY NIGHTS

USE 'INCOR' . . . AVOID

## FROST RISK . . . SAVE MONEY, TOO

**F**ALL is the time to be on your guard against frost damage. When weather gets really cold, you're ready for it. But sunny Fall days fool you; nights turn cold suddenly—unless you're prepared, frost may nip the concrete.

Be on the safe side. Heat mixing water; use 'Incor' 24-Hour Cement; protect the placed concrete promptly to avoid heat loss. For overnight service

*strength, simply maintain curing temperatures at about 70°.*

'Incor', a more thoroughly processed Portland cement, gains strength faster, is safe from freezing days sooner; that saves heating expense, cuts costs all along the line. Dependable high early strength, and strong, durable concrete, too—*proved by 'Incor's 11-year service record.*

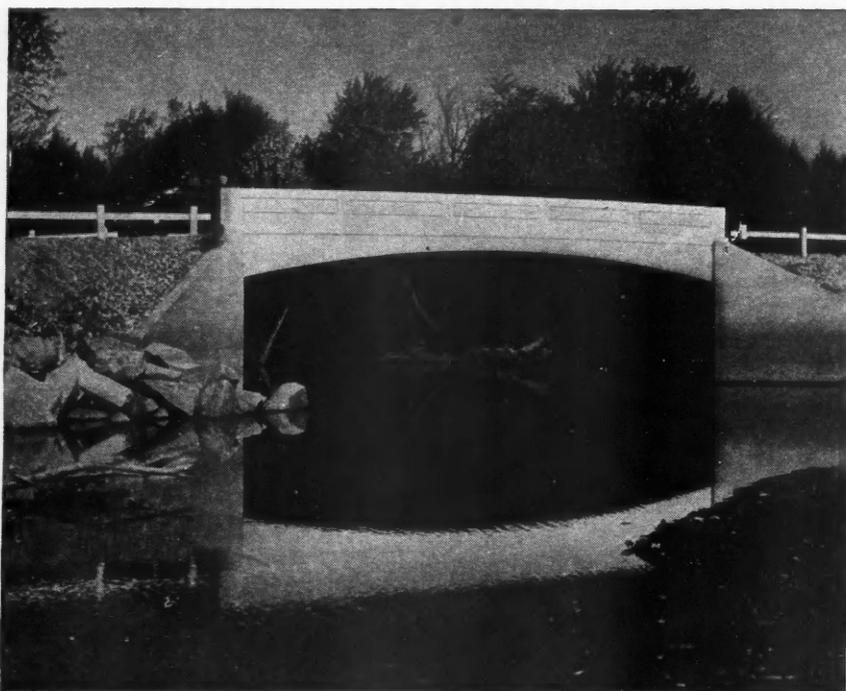


Figure 'Incor's\* cold-weather advantages on work now under way. Write for copy of "Cold-Weather Concreting." Lone Star Cement Corporation, Room 2226, 342 Madison Avenue, New York.

\*Reg. U. S. Pat. Off.

*'INCOR' SAVED 12 DAYS, \$300, when used for footings, abutments and arch of Fowler River Bridge, Bristol, N.H. Placed over 8 years ago, in cool Fall weather. Today, all concrete in excellent condition.*

*Typical of 'Incor's 11-year record . . . under hard service and difficult exposure conditions.*

# LONE STAR CEMENT CORPORATION

MAKERS OF LONE STAR CEMENT . . . 'INCOR' 24-HOUR CEMENT

# AMERICAN BUILDER

## AND BUILDING AGE

### "7 Keys to More Home for the Money"

SINCE July of last year this publication has been devoting all its efforts to the reawakening of home building activity by emphasizing the big value and reasonable costs of the present day product of the home building industry.

It has clearly demonstrated by numerous actual examples, as well as by extensive market studies, that now is the time to build and that it is intelligent to take advantage now of modern advances in styling and construction efficiency and of present low financing costs, before the expected and certain boom in home building upsets current conditions which are so favorable to low cost, high grade home building.

Last October *American Builder* presented an issue which discussed "The Truth About Home Building Costs" and proved that professional builders today are delivering "More House for the Money Than in 1929." That publication was widely circulated and was quoted in many newspapers of large circulation, so that the facts presented became influential with the general public as well as in professional builder and dealer circles.

During the year there has been much discussion of home building costs and of the ability of local building industry groups to perform satisfactorily to produce homes which the family of average income is willing to buy and is able to pay for.

"More Home for the Money" became a popular program subject for retail dealer and other building industry conventions. Prominent manufacturers took up the theme and have enlisted their production and dealer organizations in the cause of low costs and better values.

#### How to Plan and Build "Big-Value" Homes

This present issue of *American Builder* is arranged in a somewhat unusual way—with the idea of making its entire contents most helpful to its building industry readers and, in their hands, to their clients and prospective customers.

The magazine is divided into seven "Keys" or chapters, each one devoted to an important phase of home planning, home building and home ownership. Careful study of these seven chapters makes each a useful "key" for achieving better homes at lower cost and for selling them to the general public. In each chapter are presented both the material which the editors have to offer and also the announcements and information from the manufacturers on their materials and services in line with that particular chapter or "Key."

This entire publication is then a working handbook for the business men of the building industry, to help them analyze and solve current home building problems, to organize an efficient local home building service in every community and to win the confidence and approval of the general public in the new home and remodeling values of today.

#### Arranged in Seven Chapters

"Key 1" naturally pertains to home design, and ten well selected examples or case studies are presented to illustrate good current designs in several styles and prices. These homes illustrate "plus-value" designing. An analysis of them will show how they deliver "More Home for the Money."

"Key 2" has to do with financing. The savings today in the cost of home financing should be brought constantly to the attention of prospective buyers and home owners. Under present FHA and building and loan association rules, buyers can acquire a home at reasonable rates, paying for it "like rent" over a long-term period. In contrasting the present low interest rates, John H. Fahey, chairman of the Federal Home Loan Bank Board, recently said, "Over-lending, stimulated by excessive appraisals, and the existence of the inflated second mortgage, were the chief defects the Home Owners' Loan Corporation encountered in undertaking to re-finance home mortgages. Most of the second mortgages involved bonuses of 25 per cent or more and few of them carried interest rates of less than 9 per cent. Some were as high as 16 per cent and 18 per cent." The substantial advantage in building now from the point of view of low financing costs is developed in "Key 2."

The third chapter, "Key 3," is devoted to better materials and their installation and use on the job, to guarantee lasting approval and satisfaction. Structural materials, finishing materials, progressive pretabrication are some of the subjects dealt with in this "Key" which can be of real assistance to builders and dealers in their work with the home seeking public.

"Key 4" covers that very important and popular subject, *all-year comfort*, including heating, ventilating and air conditioning equipment, automatic controls and insulation. The material in this chapter makes a strong argument from the angle of health and comfort for investing in the modern all-year comfort home.

Convenience equipment is covered in "Key 5" and here we find interesting facts regarding specialties and equip-



"OF greatest value to its industry" was the judgment of the Jury of Award in giving First Place to this publication for its campaign against false price-thinking in home building and its promotion during the past year of the "More Home for the Money" idea. The beautifully engraved copper plaque mounted on mahogany, as illustrated above, was awarded "American Builder" on Sept. 21 at the Cleveland convention of the National Industrial Advertisers Association.

ment for various parts of the house, emphasizing their sales appeal, especially when it is remembered that these items can be so easily acquired when built in and paid for under the general mortgage with 20 to 25 years to pay.

Efficiency tools and equipment are considered in "Key 6." In an era of high labor costs, it becomes increasingly important to utilize all advances in power equipment and special tools to increase the quality of work done and to shorten the time. A current survey of tools and equipment in use by *American Builder* readers reveals an impressive variety and amount of such helps currently in use.

"Key 7" has to do with local industry service or the organization of the builders, dealers, financing interests, etc., in each community for the benefit of the home building public.

The present spectacular upturn in home building activity confirms a number of the statements which this publication has been making about building values and building costs. From a low point in January of a little over \$35,000,000 for the 37 eastern states, residential contracts as reported by F. W. Dodge have increased so far this year almost 300 per cent, up to \$99,732,000 for the month of August. This is a recovery following an abrupt decline during the last half of 1937, a decline which was due to general lack of confidence and the impression widely held, though erroneous, that "prices were too high." During the past year there has been a drop of 7 per cent in the average of building material prices, with labor costs practically stabilized. At the same time rental rates on the average have continued to advance, now standing at about 112, taking 1935 as 100.

What this upturn in home building means to the general business of the nation and especially in the line of re-employment is revealed by a statement from the National Industrial Conference Board that the building industry was the largest contributor to increased employment from June to July when it added 144,000 workers to its payroll.

Surveys indicate that the greatest home building activity is in the smaller, less expensive homes, which indicates that to plan, build and finance homes of this type is no problem to the building industry of today. We have heard a good deal about mass housing and slum clearance, but the demonstrated ability of builders to provide attractive and comfortable small homes at a satisfactory price out in the suburbs and in the smaller cities goes to prove that America is still a nation of individual home owners and that the future of the building industry lies now in the wide open spaces and not in the congested areas.

In placing this October issue, "7 Keys to More Home for the Money," in the hands of its readers, *American Builder* urges each to give these seven Keys to Business his thoughtful study and then to make it his personal concern to carry at least some of these ideas over to the general public who should know more about the big values and reasonable costs now available. Put the book to use and it will work for you and all the building industry.

## 4 STEPS IN USE OF "7 KEYS" TO MORE BUSINESS



Reception



Action



Demonstration



Result



## PLUS-VALUE DESIGNING

Use this key to create interest and to sell both new-home and remodeling jobs

### Case Studies of Ten Most Successful Low-Cost Homes

THE American home building industry of today is turning out an exceptional product which richly merits the enthusiastic approval of the buying and building public.

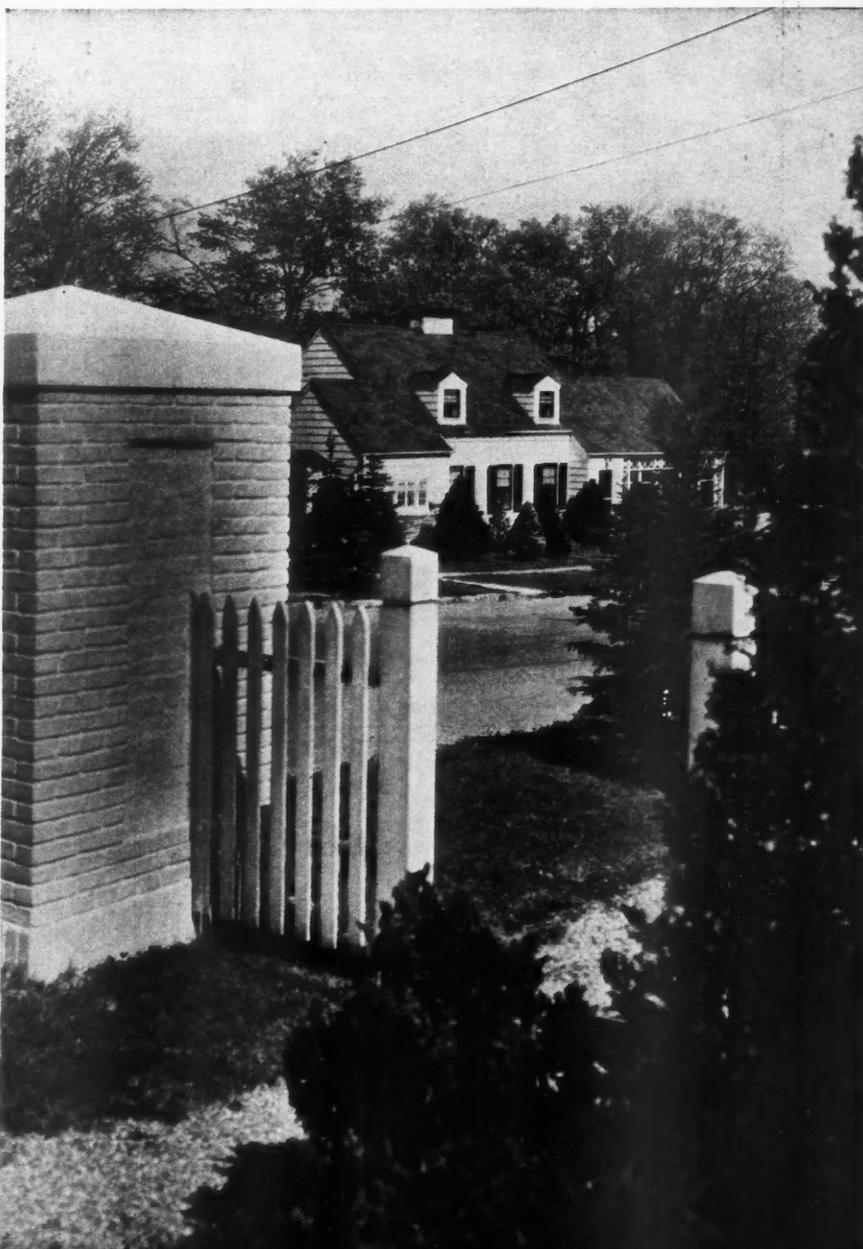
Not what theorists say about present home costs and values, but what the building industry is actually producing and the home seeking public buying and using with satisfaction is what counts.

Competent, plus-value designing is being used on the great majority of today's output of homes; which means that buyers are getting the benefit not only of good appearance but also of those economies in construction and in use that come from careful advance planning.

As quite typical of present-day work, *American Builder* in this department presents ten selected designs—widely distributed geographically and showing a choice of style and price. "TruCost" estimating figures on each are given in the table on page 56 so that builders and dealers who have their local cost figures organized in the "TruCost" manner can very quickly and easily quote an accurate price on any of these homes. Detailed specifications for some are included. Construction photos and drawings make clear important parts of these projects.

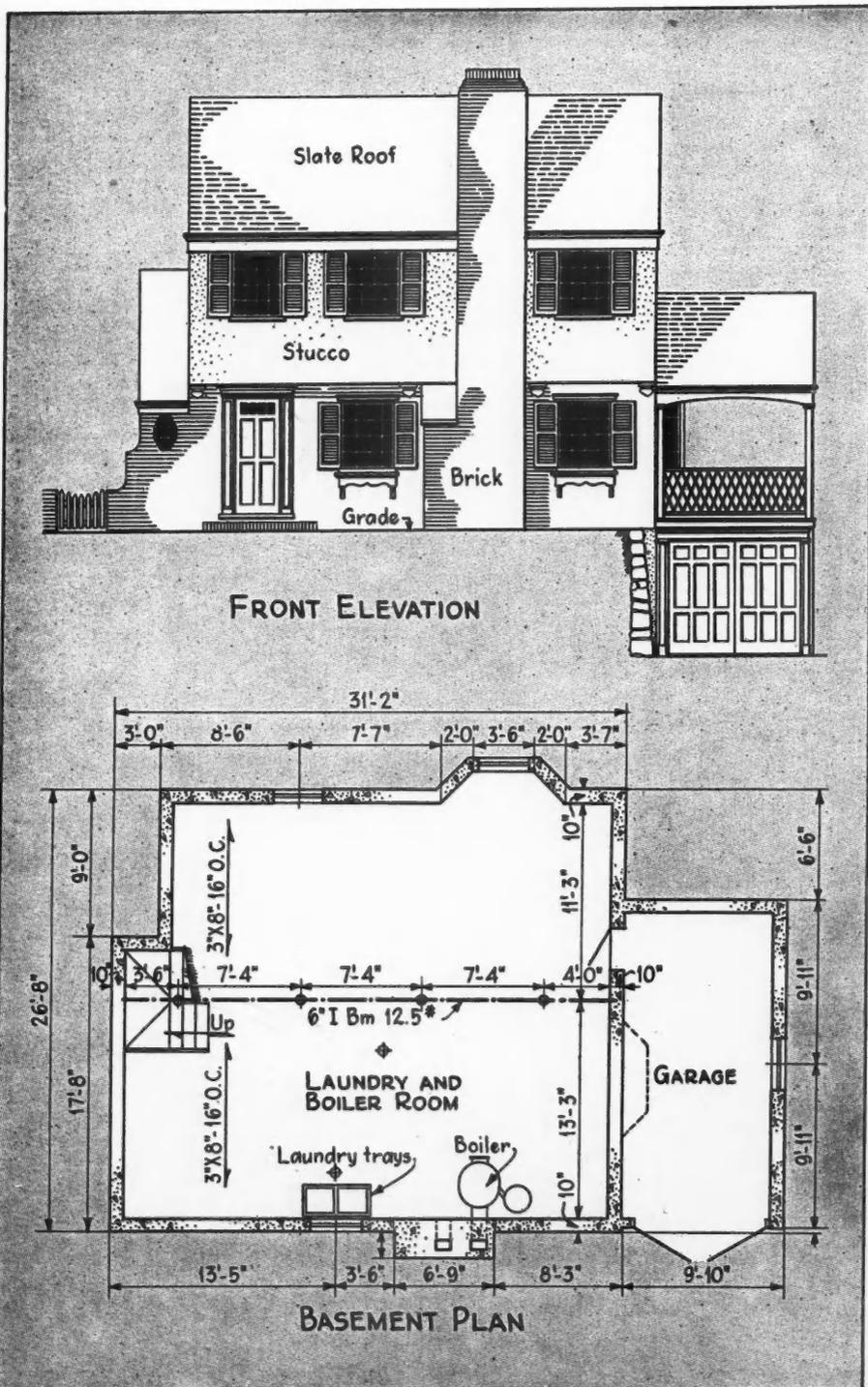
In the interest of increased home building activity the construction fraternity in every community should be arranging for model and demonstration homes to visualize to the public the big values now possible through plus-value designing.

GLIMPSE of Wilmot Woods near Scarsdale, N.Y., where 1938 homes, according to the builder, "represent a startling increase in value as compared to 1929." They are priced at \$9,990 (which figures \$75 per month) up to \$23,500.



# Our Front Cover (7 Keys) Home...

Built by Levitt & Sons, Famous New York Firm—This House Illustrates How Better Materials, Modern Equipment, Efficient Construction Practice Permit Builder of Today to Give More House for the Money. Levitt advertises, "Lowest Price in 17 Years."



THE ACCOMPANYING HOME as well as hundreds of others built in several Levitt developments in suburban New York areas dramatically meets all of the "7 Key" requirements as outlined in this issue.

They have plus-value design by Alfred Levitt, low-cost financing, sound structural materials, superb interior styling and finishing. All-year comfort is provided by automatic air conditioning. Houses are fully equipped including range, refrigerator and Venetian blinds and are built efficiently and well. The Levitt prices are low.

In a series of advertisements recently the statement was made that the Levitt houses were on sale at the "lowest price in 17 years," and were the best value in the history of the firm.



OUR FRONT COVER HOME designed and built by Levitt & Sons.

LEVITT'S QUALITY SPECIFICATIONS GIVE BUYER HIGH VALUE HOME AT LOW COST

**AIR CONDITIONING**—General Electric gas-fired, winter air conditioner with automatic humidifier, filters and controls.

**INSULATION**—Johns-Manville Rockwool insulation.

**WINDOWS**—Fenestra steel windows with bronze screens. Pittsburgh plate glass. National Acme warp-proof Venetian blinds (Blinds included in purchase price of all Levitt houses).

**AUTOMATIC HOT WATER**—Gas-fired automatic hot water heater with Monel Metal tank.

**PIPING AND PLUMBING**—Anaconda red-brass pipe throughout. Kohler of Kohler plumbing fixtures.

**LIFETIME ROOF**—Bangor slate roof laid with copper nails over extra heavy asphalt-saturated Carey Felt.

**SUPER KITCHEN**—Extensive mill-built kitchen cabinets with Duco finish, flush doors. Ample work-counter space. Magic Chef insulated gas range with Lorain

oven control. Built-in upholstered leather seats in breakfast alcove (color optional).

**LAUNDRY EQUIPMENT**—Porcelain laundry tubs, built-in ironing board, revolving laundry dryer.

**LUMBER**—No. 1 quality throughout.

**LOW-COST FINANCING**—The Levitt homes make home buying easy. A \$9,000 house may be purchased with a down payment of \$1,200 and complete monthly carrying charges of \$78 per month, which includes taxes, water, fire insurance, interest and repayment of principal in 20 years.

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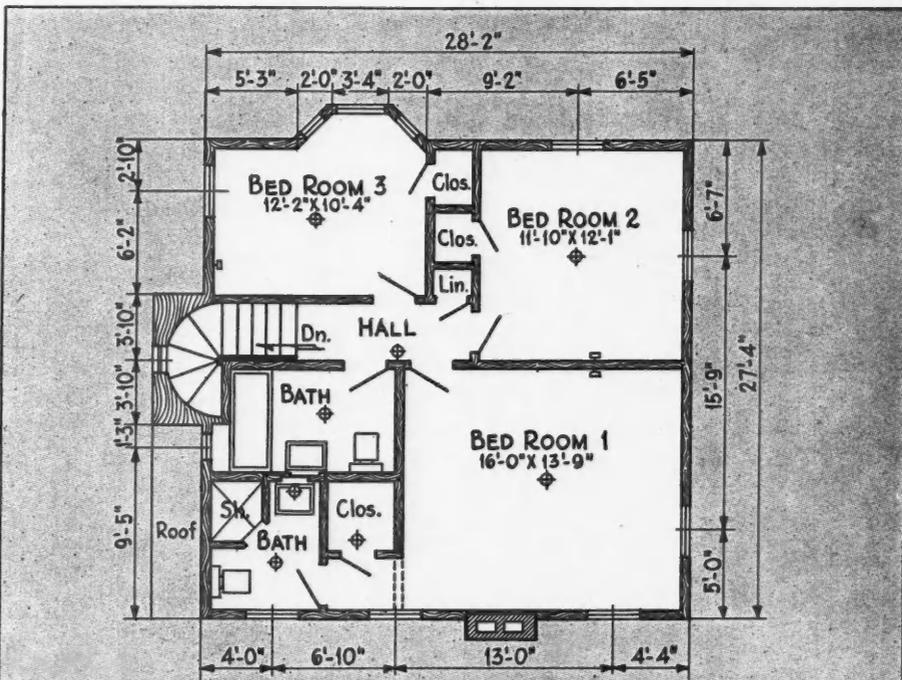
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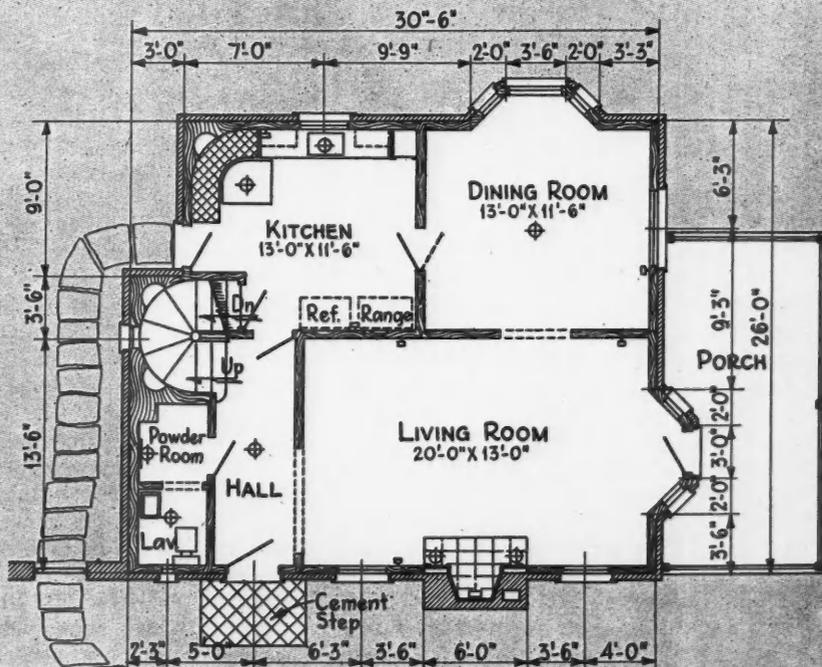
**PRACTICAL PLANNING**

—Although main outside basement dimensions are only 31' 2" x 26' 8", this compact plan provides ample sized living room, dining room and kitchen, 3 bedrooms, 2 baths and a downstairs lavatory.

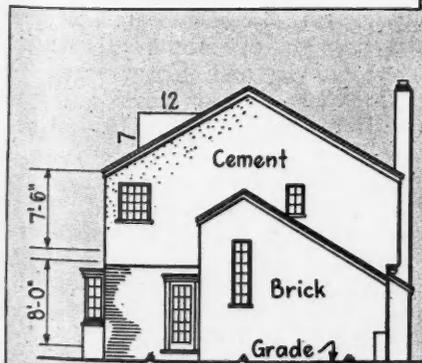
"Powder room" with circular mirror is conveniently located at left of entrance and is a very pleasing feature of plan. Living room is spacious and well lighted. Kitchen has ceiling furred down to cabinets and features built-in circular leather seat in corner. Architect states that fire-place should normally be at end of house but in this case was placed in front at request of owner.



SECOND FLOOR PLAN



FIRST FLOOR PLAN

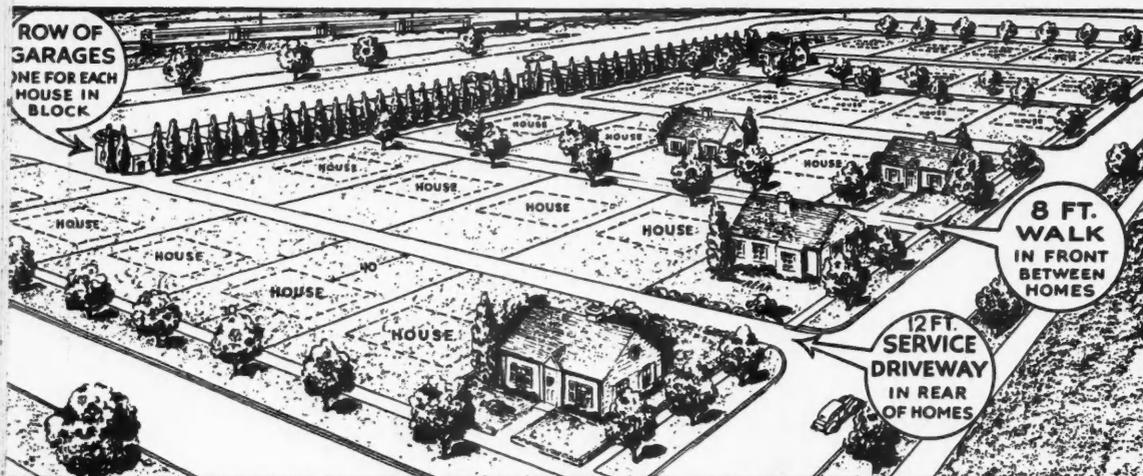


SIDE ELEVATION

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cont.



LEFT: View of Mills and Sons "Low Cost-High Value" home project in their Ivanhoe development near Chicago; the corner house, shown close-up with plan on opposite page, is typical of the group.



AMERICAN BUILDER  
*The Case* FIGURES  
FOR THESE HOUSES  
ON PAGE

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THE unique method of redividing a block to give better lot sizes with economy, reduce traffic hazards and allow more open spacing is indicated in drawing at the left.

## "We Are Able to Build 15% More Value into Today's Houses" —Say Mills and Sons, Chicago, in Comparing Them with the Houses of a Decade Ago. They Feature Novel Subdividing, Thorough Planning, Sound Building, Comfort Equipment

**W**HEN the National Housing Act was amended last spring, to allow 90 per cent FHA financing on low-cost homes, Mills & Sons, nationally known Chicago builders, decided to capitalize on the market which was thus opened up, and offer a type of home that would represent top value in spite of local high-cost conditions. Careful consideration was given to each detail and much thought was devoted to the individual units as well as the project as a whole.

As a starting point, a block of their Ivanhoe Parkways development having 40 lots, 30 by 125 feet each, was resubdivided according to a very novel plan. From this, 31 sites approximately 47 feet front by 100 feet deep were secured by an arrangement as shown in the sketch above. This unique block plan affords larger lots with sufficient space between the houses for adequate light, air and view, eliminates much of the neighborhood traffic hazards, and allows more of a park-like landscaping. It will be noticed that the garages are arranged in a row at the far end of the service drives. The houses inside the block face each other across 8-foot walks, with building lines approximately 70 feet apart.

The houses themselves are of attractive colonial design, and although most of them are a four-room and dinette arrangement on one floor, the exterior details

offer sufficient variation so that no two look alike. The space economy, as seen in the plan with exterior view shown at the top of the page, has not reduced the livability of these compact houses. From the front entry there is access either to the dinette and kitchen, or directly into the living room. A small rear hall connects bedrooms, bath, living room, kitchen and stairs to the unfinished second floor; circulation to the front of the house is very well worked out. A grade entrance opens onto a platform with stairs to the kitchen and basement, the latter housing the fuel room, furnace, laundry and storage space. On the second floor of the house there is unfinished space which can later be used for one or two additional bedrooms.

In selling these houses, Mills & Sons capitalized upon the FHA financing available, and point out that through it "home buying has now been made easier than ever before in history, making possible payments including taxes less than actual rental values and ownership assured at the end of a 25-year period." They further pointed out to *American Builder* that as well as the monthly payments being very reasonable, the values built into these houses would represent about 15 per cent more home value in livability than could be delivered for the same money ten years ago.

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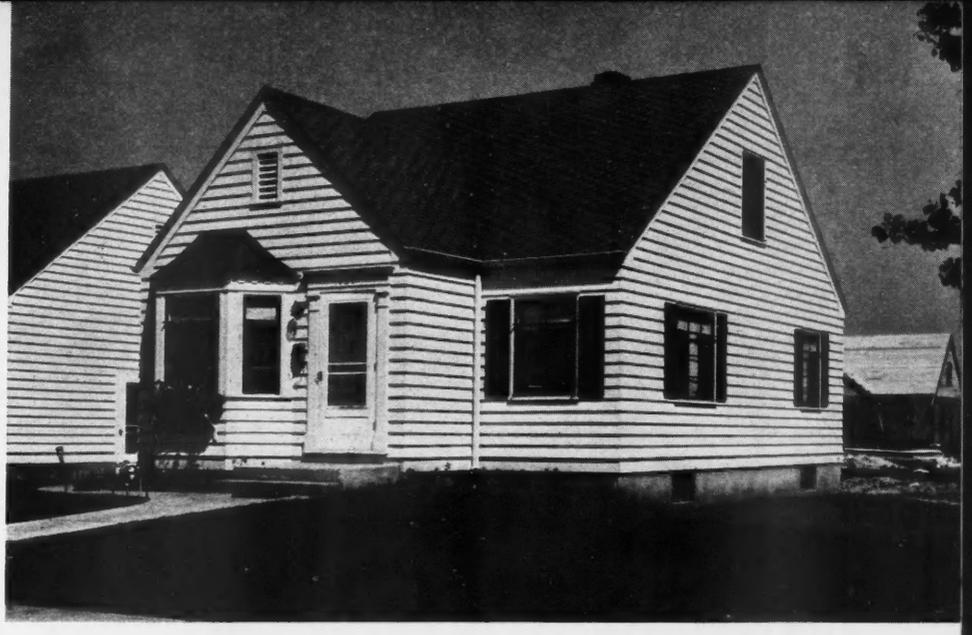
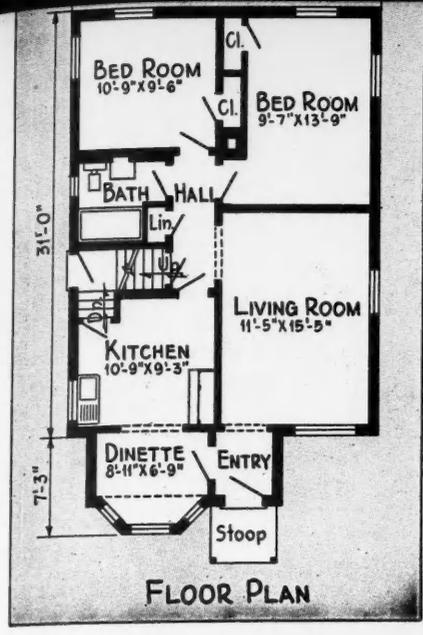
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ABOVE: Practical layout of four rooms and dinette within small outside dimensions retains convenience, livability and good exterior styling.



CONSTRUCTION view at right shows excavating and grading machinery ready to work on crosswalks and service drives. Note framing corner bracing and trussing over windows in the illustration below.

A high point in these Mills houses is their quality construction and materials. Framing of specified moisture content kiln-dried lumber, properly sized and braced, excellent finishing materials such as bonderized Fenestra casements and a well chosen group of equipment items, including kitchen cases, electric door chimes, Square D circuit breaker, etc., are a few of the many features included in them; the partial specifications which follow list other construction details and materials.

**MILLS "HIGH QUALITY SPECS"**

**EXCAVATING:** All excavations for footings and piers shall be to the neat size as far as possible, and all should be level to the line at the bottom and ready to receive footings. This contractor, if he inadvertently excavates in any part or place below the depth shown on drawings, shall fill such extra depth with concrete of the strength and mixture specified herein for concrete walls and footings *at his expense*. When basement walls, etc., are in place, this contractor shall back fill around the walls, etc., to a grade as indicated on the drawings. After back filling, the black dirt taken from the excavation shall be spread as far as possible over the roughly graded sub-soil.

**CEMENT AND CONCRETE:** All cement used shall be fresh portland cement unless otherwise directed in writing by owner.  
(Continued to page 70)





This 6-room California home has many features which combine to make it extremely livable yet it was built at reasonable cost following the plan below.

AMERICAN BUILDER  
*The Cost* FIGURES  
 FOR THIS HOUSE  
 ON PAGE

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## Large House Livability for Small Budget

Through Plan Economy California Builder Offers Spaciousness at Reasonable Cost

**T**YPICAL of the unique livability of Southern California homes, this home was developed to offer the advantages of a large house within the budget of the average small home owner. While effecting a feeling of spaciousness and room seclusion, the design is also of a compactness for that section which permits minimum construction costs and placement on the average city lot. With the frontage of 44 feet and a depth of 57 feet this house is situated on a level lot, 55 feet by 128 feet, in the Janss Investment Corporation's Westwood Hills development of Los Angeles.

C. B. Foltz of Westwood Hills, the builder, has evolved in the design the straight-forward, attractive simplicity of California architecture with the most comfortable of living arrangements. A T-shaped hall occupying the center of the 1,740 square feet of house carries all through traffic and leaves each room free for its own purpose. The large bath, while connected with the master bedroom by a dressing room with built-in wardrobe and dressing table, also is reached through the hall and is within easy access of the den should that room be used as another bedroom.

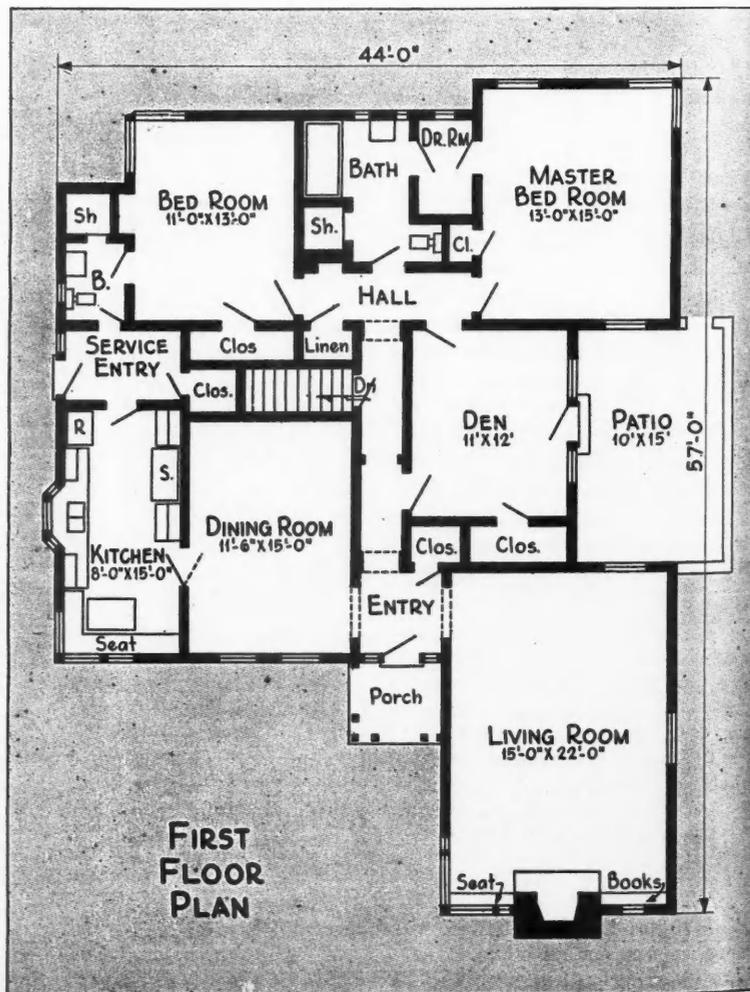
With the sleeping quarters isolated at the rear of the house, a separate bath is provided for the second bedroom along with unusually commodious closet space, not only here but throughout the house.

The living room has exposure on three sides including a large corner window, with built-in seat that not only adds to the interior appearance, but also completes the arrangement of the fireplace, the mantle of which continues on over the built-in bookcases on the other side. A walled-in patio off the den and living room offers a delightful invitation for sun baths or informal entertaining, both of which form an important part of Southern California life.

The house is of frame construction with exterior of stucco on metal lath with the exception of the patio and the front horizontal window panel, which are done in painted redwood siding and a shutter detail at the dining room windows. Interior walls are finished

in a semi-grain white plaster with the exception of the bedrooms, which are papered. The master bath is tiled in blue and cream and the second bath in maroon and cream. The den is of redwood. The large kitchen features tiled-top cupboards flanking the stove space, bay window over the sink, and a breakfast nook at the corner windows.

Unit heat from a basement pipe furnace is another feature in this attractive California home.



# "The Right Road to Independence"



Wm. C. Jahnig, Builder

**W.** C. JAHNIG is a practical speculative builder of Butler, Pa., who is yet in a sense an idealist. He is an enthusiast for his business and is constantly striving to build a better home for less money. Since 1922 he has built 115 houses.

"I don't think any person will make a mistake buying a home now," he told *American Builder*. "I know I am giving more house for the money today than at any time since I started in the building field in 1921. My houses today are much better for less money than in 1926 or '29, have better design, are air conditioned, insulated, have more modern kitchens and many other things."

For more than 15 years a subscriber to *American Builder*, Mr. Jahnig is at present erecting five houses, of which two are constructed from plans published in *American Builder*.

"I am sold on this business from the top of my head to the soles of my feet," he declares. "Home owning is the right road to independence. It is an investment that truly defies changing conditions. Prices may fluctuate from time to time but the intrinsic basic value of a home is always the same, for a home is a man's castle and estate. A home owner is his own 'board of directors' and he declares his own dividends."

In his 15 years' experience Builder Jahnig has had 24 open houses or model homes, the most recent having been visited by over 5,000 persons. "When I sell a party a home that makes them my friends," he says. "There is no hard, cold business but a warm friendship. The street of homes I have built is a street of my

A revealing statement on home ownership by a builder who has sold 115 houses since 1922 and says, "I am giving more house for the money today than at any time since I started building."

friends. Maybe it is because I own a nice home myself and live right among them.

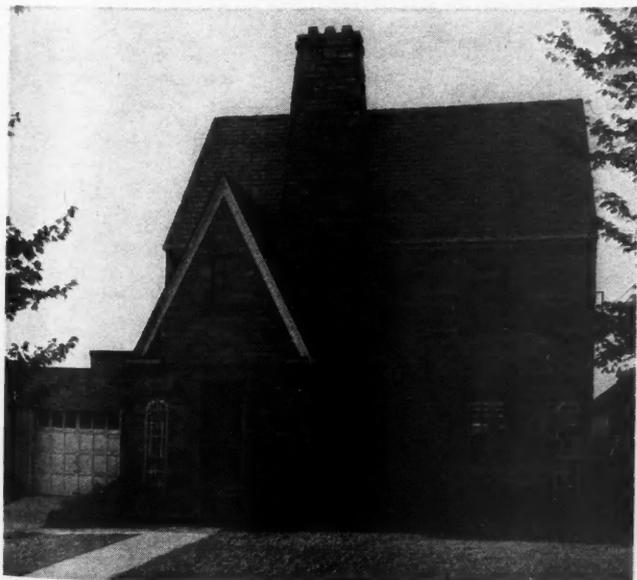
"I am as anxious to see people buy a home for themselves and see them plant and fix it up to their own tastes as I am to actually sell a house. I believe the American home is a civic asset. As a famous writer put it: 'Home, the spot of earth supremely blessed, a dearer sweeter spot than all the rest.'

"As a progressive builder I try very hard to keep up to the latest, and I thank the *American Builder* for it has helped me so much. I have been a subscriber ever since I began building and will be as long as I build houses, and probably longer."

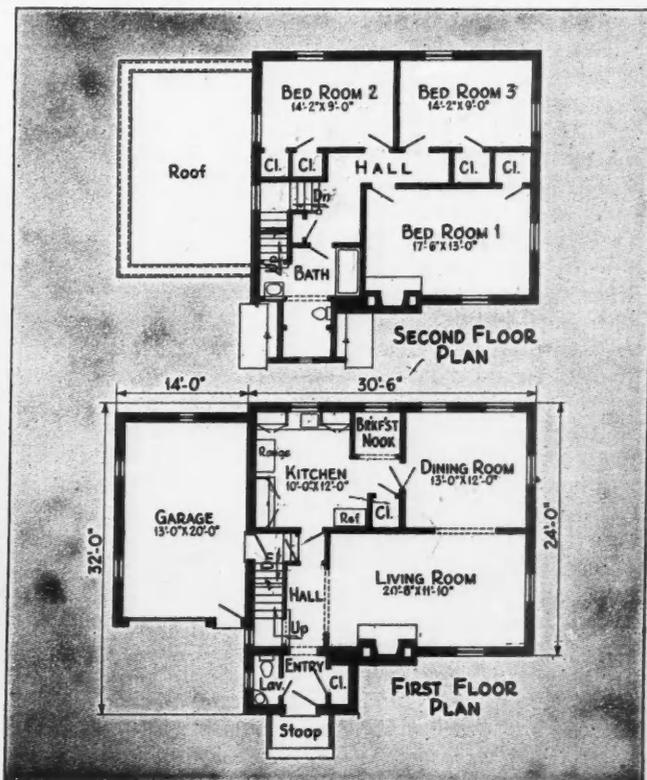
The Jahnig homes are substantially built, using Briar Hill stone, No. 1 Bangor slate roof, Fenestra steel sash, marble sills, copper plumbing, Lennox gas-fired Aire-Flo winter air conditioning unit, and Johns-Manville Rockwool. He also features a cabinet kitchen sink and plumbing fixtures by Standard Sanitary, tile bathrooms with arched ceilings, Overhead garage doors, 8 ft. solid concrete driveway, finished attic and basement with toilet, lavatory on first floor, hardwood floors throughout. He also uses a complete Red Seal wiring job, Plate glass windows, the doors and trim of birch finished as walnut.

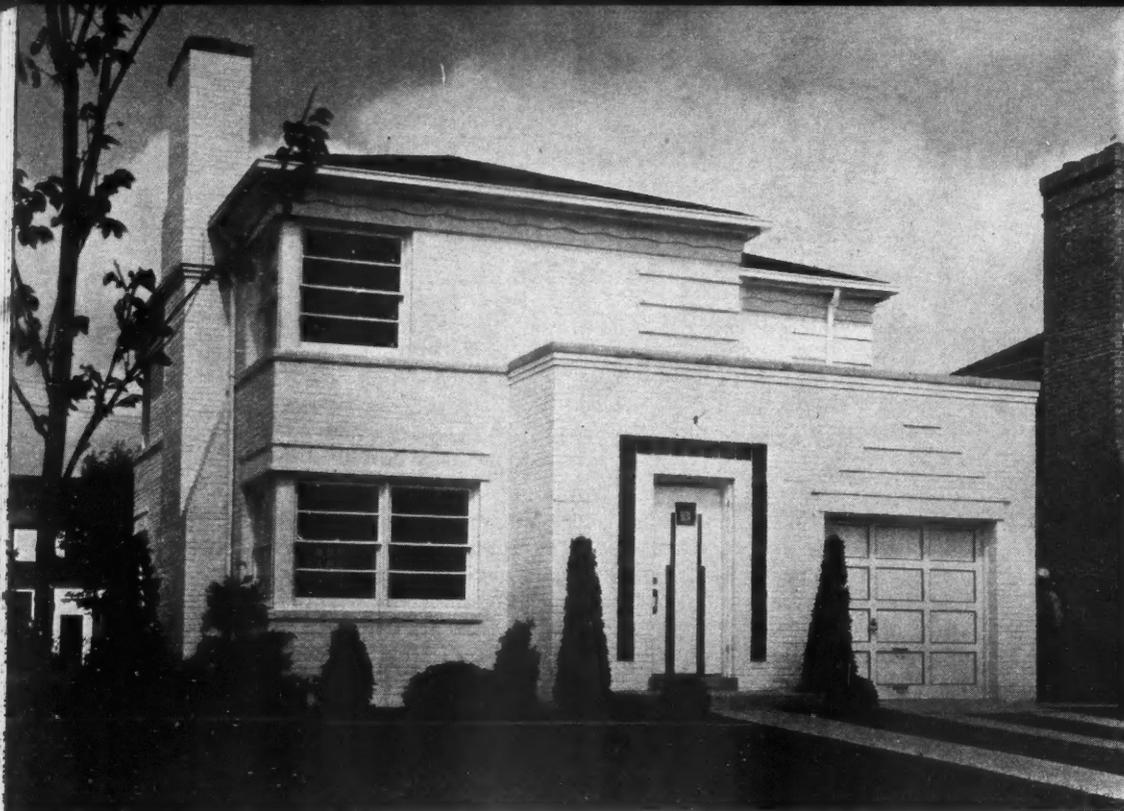
AMERICAN BUILDER  
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ON PAGE

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ONE OF THE SUBSTANTIALLY-BUILT stone and tile Jahnig homes at Butler, Pa. The housewife said, "You have just thought of everything to make our house convenient and easy to work and live in."





THIS W. C. Tackett home in Scarsdale, near Chicago, combines the types of modern styling and detail that have proven salability in today's market. Glass block used around entrance to light vestibule, corner windows with horizontal muntins, clean cut trim as seen in the exterior at the left and plan features as shown below and on page opposite all meet buyers' demands for more home value.

AMERICAN BUILDER  
*True Cost* FIGURES  
FOR THIS HOUSE  
ON PAGE

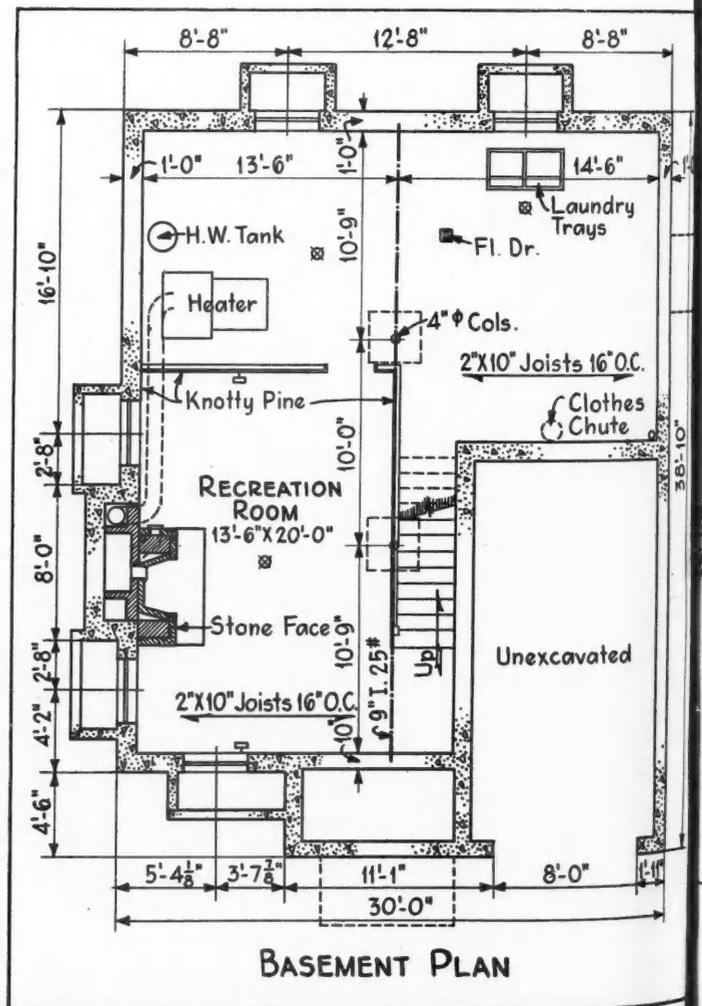
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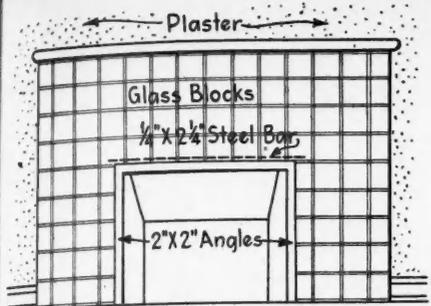
## Tackett Meets Home Buyers' Demands for Modern Features

AS ONE of the outstanding builders of speculative homes in the medium size and price range in the Chicago area, W. C. Tackett, Inc., has been unusually successful in adding the extra value features to his homes which mean increased salability. This is particularly true in the field of modern design of the type shown above. Not being of extreme styling, it is more acceptable to the buying public than much of the radical modernism. Tackett is constantly testing public reaction to various new features as they are introduced, including equipment items, methods of room arrangement and exterior design. The architectural department of this firm is constantly making changes in the previous year's designs to offer more home for the money.

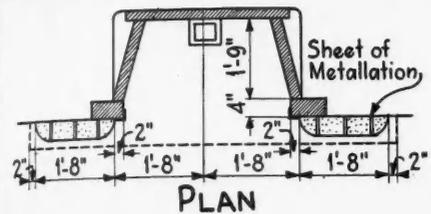
An outline of material and equipment features of Tackett-built houses are as follows:

Dry basements guaranteed by waterproofing and drain tile; recreation rooms paneled in knotty pine, with wood-burning fireplace; No. 1 kiln-dried lumber used throughout; Celotex Vaporseal and rock wool insulation; thick butt asphalt shingles laid over 15 lb. felt, or Edham wood shingles; heated attached garages with McKee overhead doors; finest quality woodwork featuring  $1\frac{3}{4}$ " thick windows and doors; metal weatherstripping with bronze interlocking thresholds; metal lath ceilings and corners, U.S.G. cement plaster; tile floors and walls, built-in electric heaters and porcelain accessories in baths; reversible type electric ventilating fans in kitchens; all wiring in rigid conduits; Standard Sanitary and Kohler plumbing fixtures; automatic hot water heaters; Sunbeam winter air conditioning systems; Corbin solid brass hardware; Rittenhouse chimes; G-E electric clocks; bronze screens and Armstrong linoleum; all painting 3-coat work, using high quality workmanship and materials.

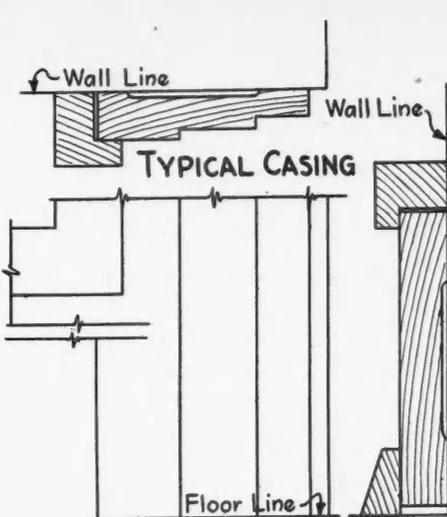




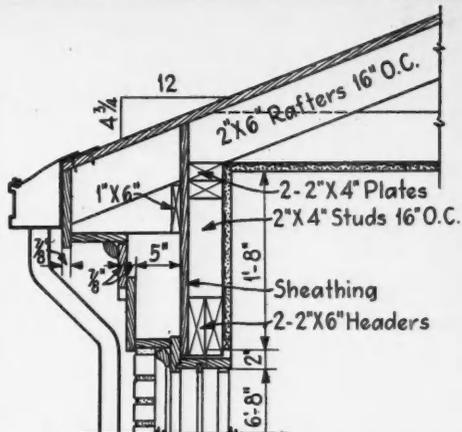
ELEVATION OF LIVING RM. MANTEL



PLAN



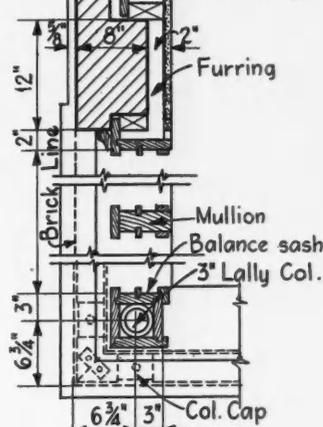
ELEVATION OF CASING AND BASE



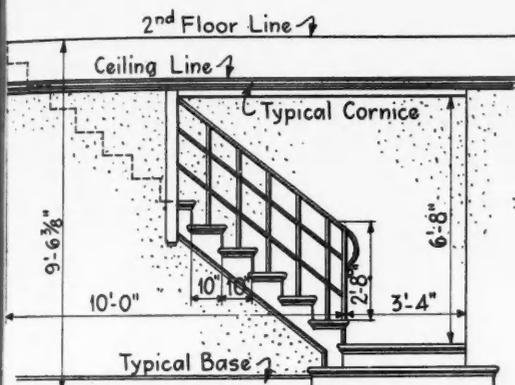
TYPICAL CORNICE SECTION



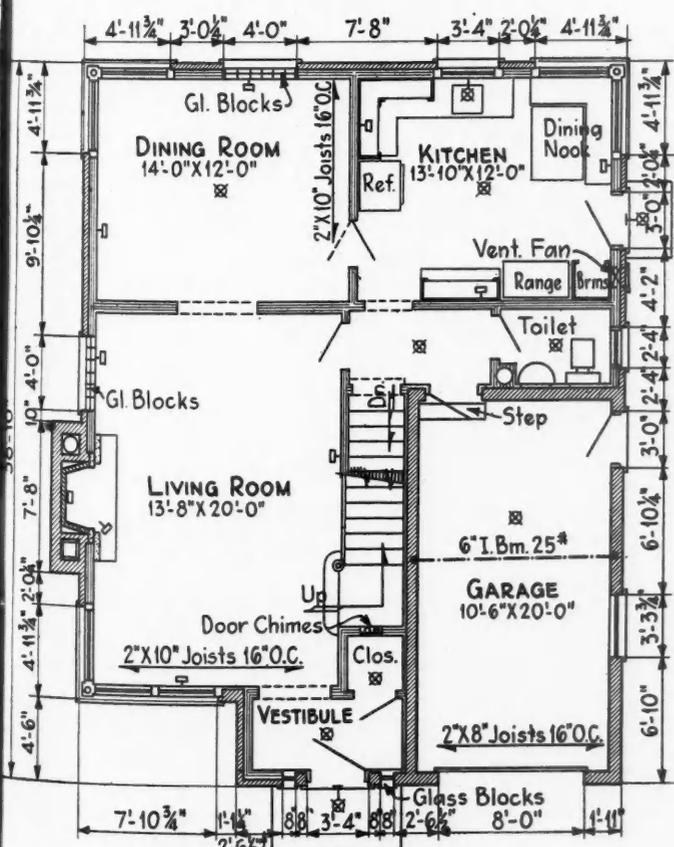
DETAIL OF CORNICE IN LIVING RM. AND DINING RM.



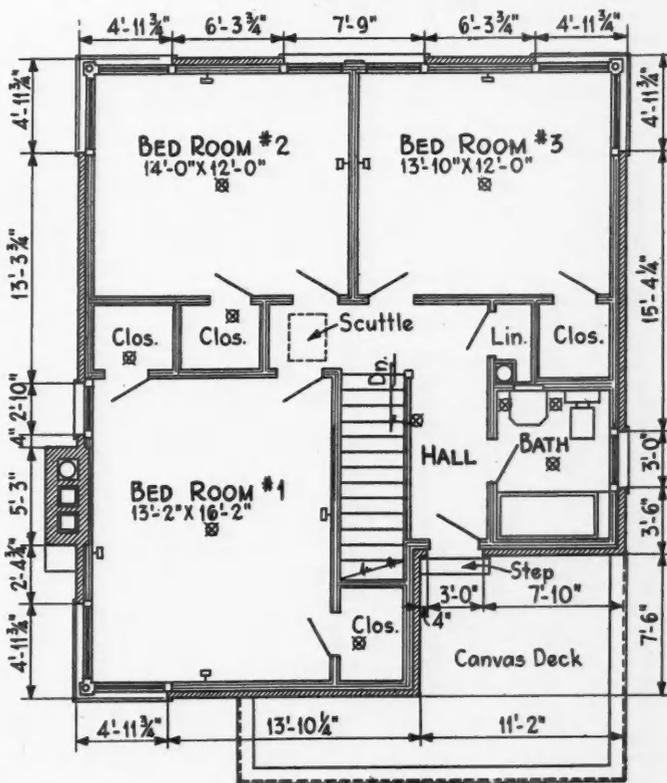
PLAN OF CORNER MULLION (1ST FLOOR)



ELEVATION OF LIVING ROOM STAIR



FIRST FLOOR PLAN



SECOND FLOOR PLAN



# How Fonde Uses New Methods to Produce Better Value Homes in Knoxville, Tenn.

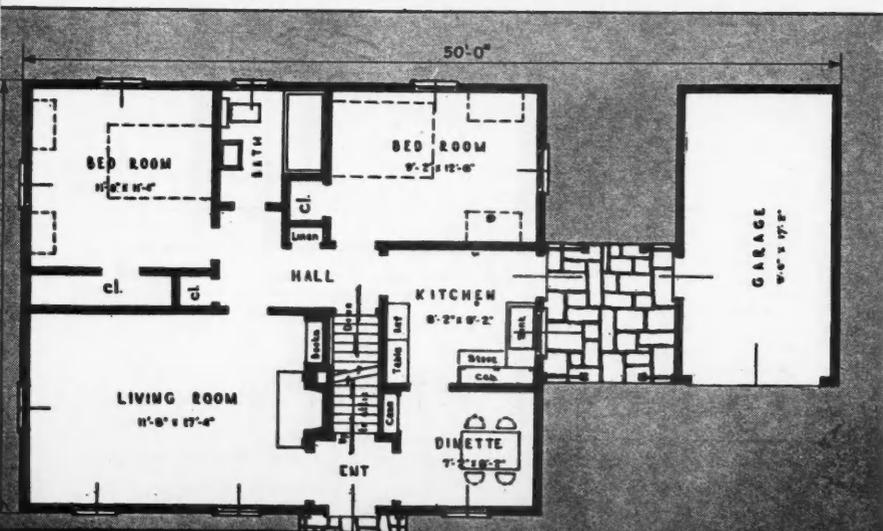
**D**URING the past year a most unusual and successful development in home building to deliver high values at low cost has taken place at Forest Court, near Knoxville, Tenn. Here in the South Central section of the country, the firm of H. C. Fonde & Son, builders, and an affiliate, the Builders Supply Company, are delivering "more house for the money" by a system of industry integration which brings together the efficiency methods covered in "the 7 Keys" of this issue.

A brief history will show the background upon which the present Fonde operations are based. Back in 1927 H. C. Fonde, a contractor, and Stuart Fonde, an engineer, entered into a partnership which even through the lean years of the depression was able to keep a crew of workmen employed at maintenance and remodeling when new construction was at a low ebb. When the small house field finally picked up about three years ago, Stuart Fonde found that they could not compete with the then prevailing low quality standards and still retain the better type of construction that they had been producing. So from this point he set about to figure a means of producing a custom-built low cost home which offered good design, quality and workmanship not before available to the man of modest income.

In the meantime the FHA adopted a specification of minimum requirements for house construction which in a few months did more to correct the evils of small house construction than years of educational work by better builders could possibly have done. As a result of this specification by FHA, Mr. Fonde felt encouraged in his small home efforts. Details for a project were finally worked out and early in 1938 a four-acre plot was selected. First it was decided that no house should exceed \$3500, lot included. It was apparent that since there was a decided drop in home building about that time, an exceptionally good job would have to be done if the houses were to sell.

Meanwhile, C. A. Riley, a practical man with a number of years' experience in designing small homes and selling building materials, took charge of Fonde's separate business, the Builders Supply Company. His knowledge of design and materials, combined with the construction facilities of H. C. Fonde & Son, made possible a very efficient

TOP of page: Construction view of H. C. Fonde's Forest Court project showing workmen applying asbestos siding; note safe yet minimum scaffolding. Left: Largest of the Fonde carefully planned high value homes has fireplace, basement, attic and connected garage. Opposite page, right: Even the smallest units are well planned and attractively designed.



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**RIGHT:** This Fonde house has a utility room instead of basement. All houses have entrance hall or porch and are very compact, yet extremely livable.

organization for small home construction.

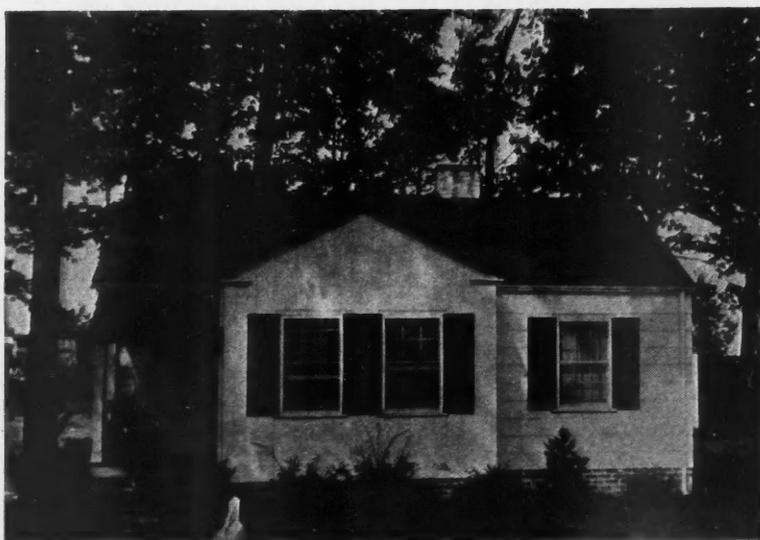
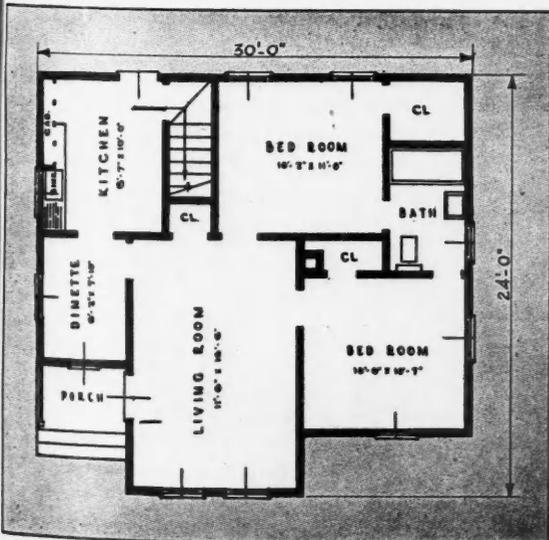
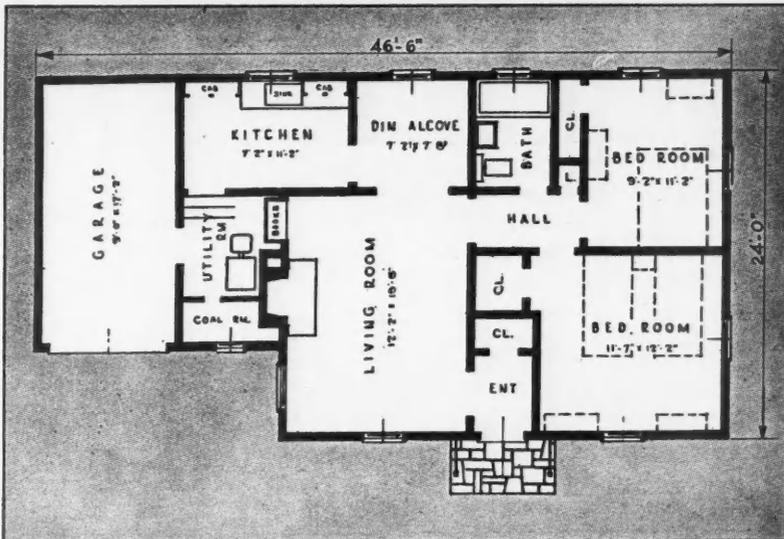
Plans were drawn to develop the very best house possible to build and yet leave a satisfactory profit at the prices set, after careful research had shown that the best sellers were of five room size. To conserve time and expense, dry construction was decided upon, using the taped joint gypsum board for interior walls. Every material that went into the houses and the methods of using it were studied for efficiency.

Six homes were started and crews were dispatched to do certain jobs on each house; one superintendent handled the entire project. All framing was cut from templates with power machinery. Window assemblies were made complete at the shop so that it takes only 3 to 5 minutes setting time on the job. Other time and labor saving methods were adopted including power mortising of locks and power sanding of trim and doors in the shop. A special stud cutting frame was set up on the building site so that members of the same length could be quickly turned out with an electric hand saw. A combination saw and jointer was placed in each house when finishing started, and many operations were done on it; this method gave better fits in less time. Mr. Fonde states that "power tools will cut costs far below anything that can be done by hand, and are as essential to successful building as the materials that go into the job. We have estimated that a power hand saw will pay for itself on one \$16,000 residential job."

All hardwood floors were laid before the interior wallboards were put up so that the workmen would not damage the walls or be hampered by finishing out close to a wall. Metal corners on the weather boarding provide a better corner at no extra cost over that of mitering the board. Windows are equipped with N.S.W. weather-stripping and sash balances. In all ceilings 2 inches of rock wool were used. Other features are listed in the following outline:

Concrete footings, brick foundations, termite insula-

tion strip, standard frame construction, Insulite sheathing, National Gypsum wallboard, oak floors throughout, butted wall paper, 210 lb. asphalt roof, building felt between floors and subfloor and back of weather boarding and under roof, 26-gauge galvanized iron sheet metal, ample cabinet and closet space, Masonite wainscot in bathrooms, gypsum tile wainscot in kitchens, moulded casings, Kohler plumbing fixtures, streamlined copper pipes, hot air or hot water heat, upward-acting garage doors, chromium bathroom accessories, Venetian mirror medicine cabinets, cedarized paper in closets, six-panel Colonial doors, solid brass locks, concrete floors in basements or utility rooms. (Continued to page 140)



## Florida's Largest Low Cost Home Development Meets with Immediate Success

**Miami Builder's Sales Boom with Project Announcement Before Construction Starts. Mass Methods Assure Buyer's Extra Value**

**T**HE Lester F. Preu Organization of Miami Beach, Fla., is at present in the midst of one of the most interesting low-cost home developments to be found in the country. The project is the result of a consultation with the local FHA office late this spring when it was pointed out that the area was badly in need of homes in the minimum price bracket. The enterprising Preu firm which has built over 500 structures in the past 4½ years, including homes ranging in price from \$4,000 to \$75,000, apartment buildings and stores, immediately prepared to enter this new field on a mass production basis. The Biscayne Improvement Corporation, a holding company, was formed by Lester F. Preu and W. G. Welbon, with the Lester F. Preu Organization acting as the builder.

Suitable plans and specifications for a house which could be bought for \$16.80 a month including interest, amortization of loan, taxes and insurance over a loan period of 24 years were turned out in record time and approved by the local FHA. A subdivision in a very good location on the edge of the city, consisting of 300 full sized lots 50 x 106 feet, had meanwhile been acquired.

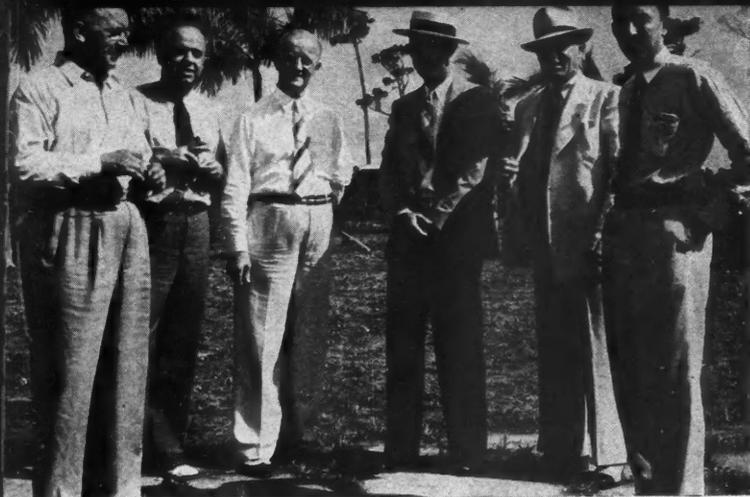
The project was now ready for public announcement, which was made in the Sunday newspaper of July 10. Immediately the rush to buy these houses was on—*25 of them were sold that same day, with the first day of work at the site not scheduled until the following Monday.* The first house was completed in 19 days and at that time 24 houses were under construction and approximately 45 had been sold. About two weeks later, production had been set for the completion of two houses a day; approximately 200 men were employed to turn them out.

"The whirlwind sales and rapid progress on the construction of these homes are due to the wonderful coordination of the project."  
(Continued to page 64)

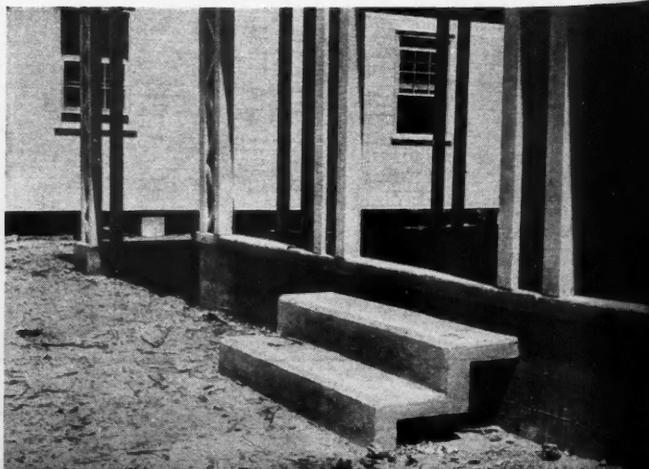
AMERICAN BUILDER  
**The Cost FIGURES**  
FOR THIS HOUSE  
ON PAGE

56

LEFT: Views of the Biscayne Improvement Corporation's 300 low-cost homes project showing mass production methods including the use of precast steps as seen below.



ABOVE, left to right: H. B. Schoolfield, V.P., Biscayne Improvement Corp.; E. J. Robbins, FHA; W. G. Welbon, Pres.; F. C. Hilson, FHA; H. D. Steward, FHA; Lester F. Preu, Secy., and builder.



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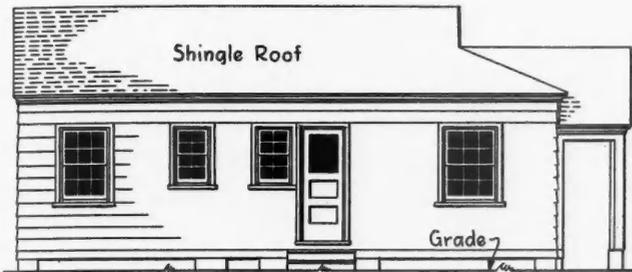
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FRONT ELEVATION



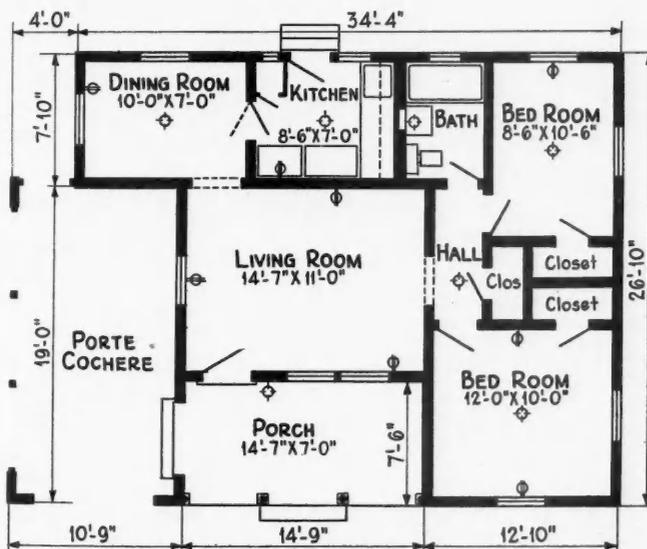
LEFT SIDE ELEVATION



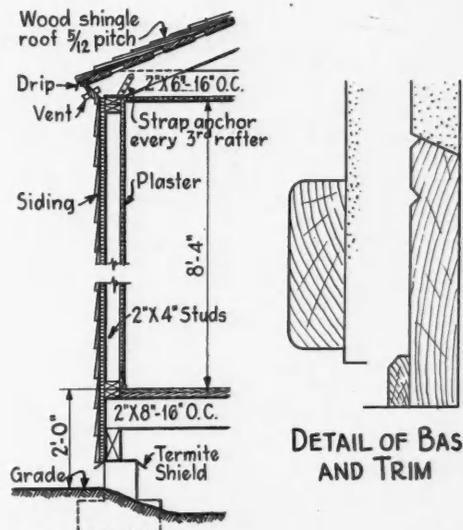
REAR ELEVATION



RIGHT SIDE ELEVATION

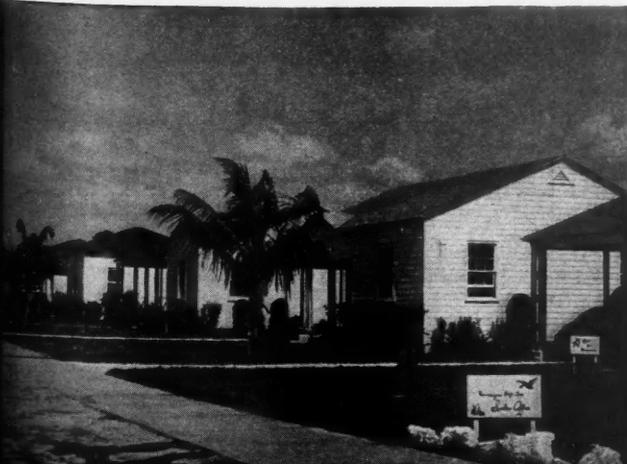


FLOOR PLAN



TYPICAL WALL SECTION

ABOVE: Elevations, standard floor plan and details of a typical house in the Biscayne Improvement Corporation's project in Miami, Florida. Room arrangement is very compact and efficient; closet and cabinet space is generous for this type of house. Below: Variations in color and detail give an attractive appearance to a street of these homes which are built to the above plan; close-up of one is seen at right.



# WEYERHAEUSER

## FOREST PRODUCTS



and Modern Selling Plans

### KEY NO. 1 PLUS-VALUE DESIGNING

When you combine good materials with good design and good workmanship, you put *real value* into your buildings, whether they are new homes, farm structures, or modernization jobs. Clients and prospects today realize the importance and value of good design more than ever before.

Weyerhaeuser's Modern Selling Plans include a Demonstration Home service that can help you deliver More Home for the Money. This service shows how to combine good plans with good materials, so that you produce better buildings for less money; buildings that you and owners are proud of; the kind that bring in additional business.

Ask the 4-SQUARE Lumber Dealer in your town to show you the "Demonstration Home" and "Farm Building Service" portfolios. You will see immediately how these services combined with Weyerhaeuser 4-SQUARE precision lumber can help you increase your building volume.

### DEMONSTRATION HOMES



Architects of nationwide prominence have cooperated in the development of this series of 4-SQUARE Demonstration Homes. These houses are excellent examples of the economies possible where expert planning, improved materials and sound construction are employed. Ask your 4-SQUARE Dealer.

### FARM BUILDING SERVICE



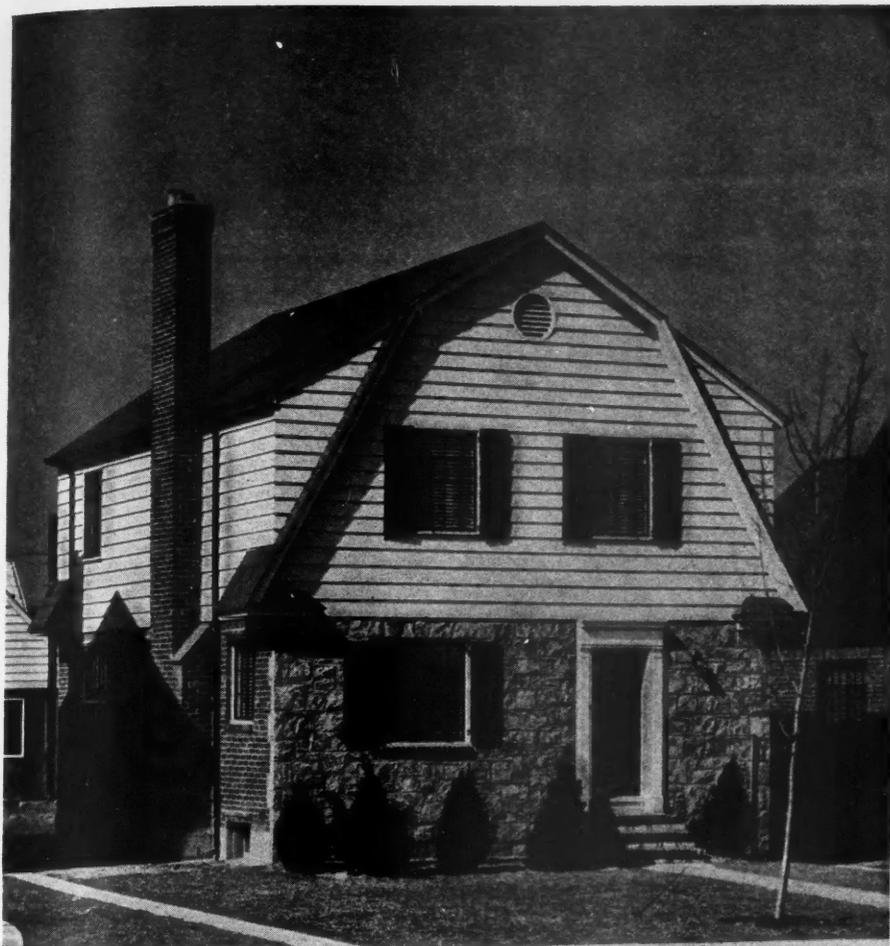
"The New Way to Build on the Farm" is a practical guide for selling sound, economical farm buildings. This portfolio includes 122 farm building plans developed by the engineering departments of fifteen agricultural colleges. Complete plans and specifications available through 4-SQUARE Dealers.

**WEYERHAEUSER**  
**4-SQUARE**  
LUMBER

# WEYERHAEUSER SALES COMPANY

FIRST NAT'L BANK BLDG., SAINT PAUL, MINN.

For other Weyerhaeuser Keys to More Home for the Money see pages 30, 34, 47, 75 and 82.

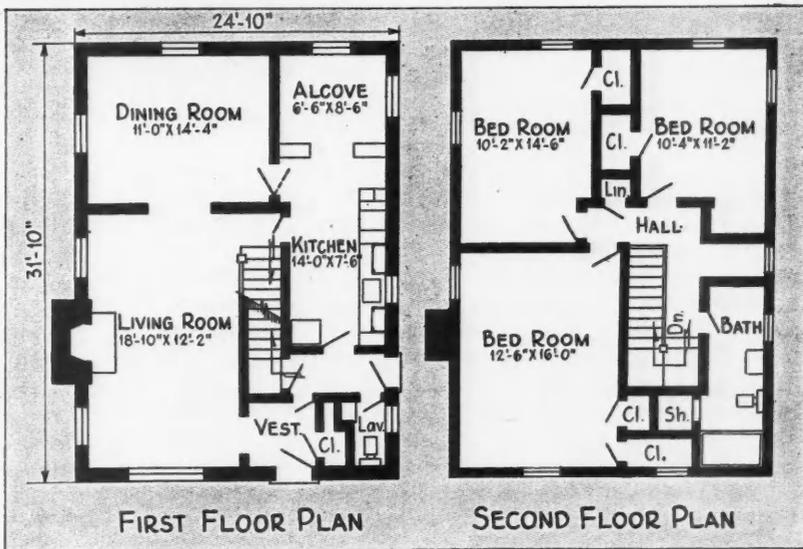


## Worth \$1,000 More Because of Good Plan

Architect for Biggest U. S. Builder Tells How Plus Value Design Gives Today's Buyers More for Their Money



ARCHITECT ARTHUR E. ALLEN, who has designed more than 15,000 dwellings, principally for Long Island builders. At right is "streamlined" floor plan he perfected for the Gross-Morton Company.



AN important reason why the builder of today is able to give a more efficient and valuable dwelling at a lower cost is *better design*.

A practical illustration is given in the accompanying house located in the Jamaica Estates development of the Gross-Morton Company on Long Island, designed by Architect Arthur E. Allen.

Because he has designed probably more homes than any other single individual in the country, Allen is in

a position to speak with authority. "Floor plans no longer are accidents," he declares. Room layouts have been "streamlined" and are planned with as much science and art as is given to a modern motor car.

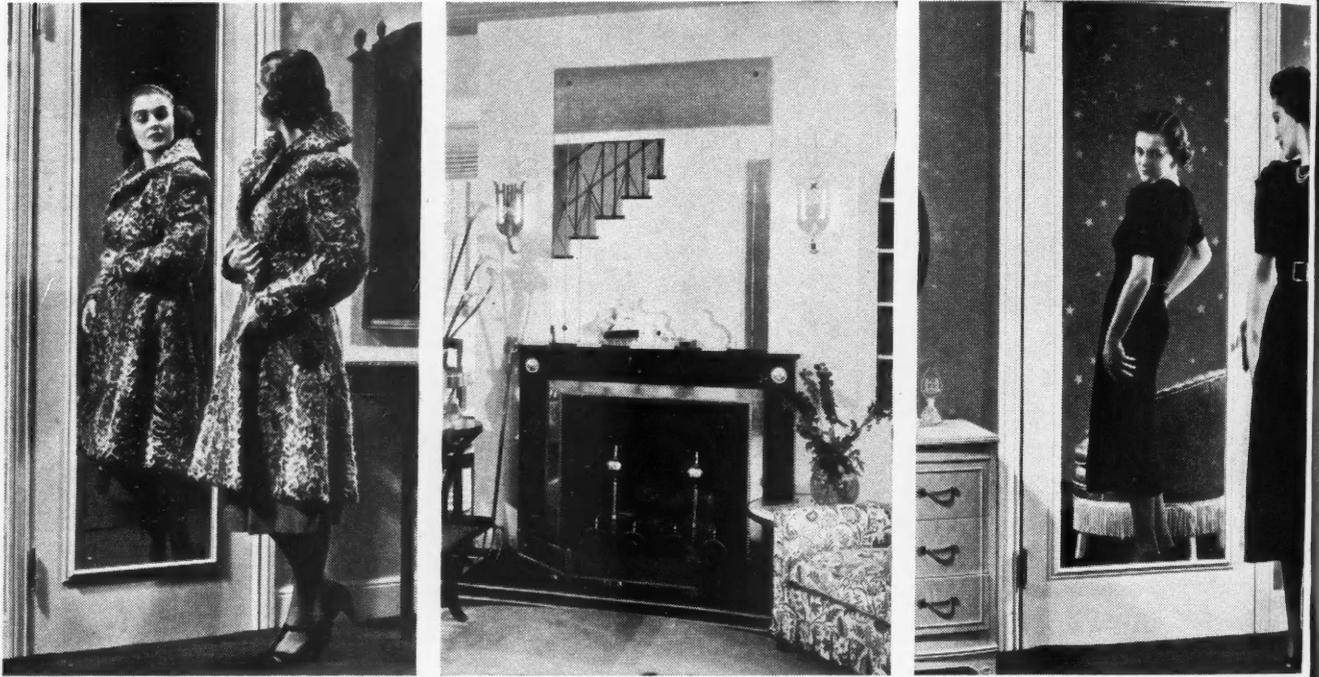
"The results in a finished home can be itemized definitely in savings on construction costs and increases in usable space, comfort and convenience. Proper planning alone can save from 5 to 10 percent in the initial cost of a house."

To illustrate his point, Mr. Allen has analyzed the accompanying plan which is a popular Gross-Morton design:

(Continued to page 38)

# BUILT-IN *Mirrors*

## ARE + VALUES OF INTERIOR DESIGN



● More and more, built-in mirrors are becoming a prominent, pleasing and practical feature of interior design in the modern house. . . Nothing that adds so little to cost adds so much to value. Built-in mirrors of distinctive decorative charm add an appearance of greater spaciousness to rooms—bring light to distant corners and reflect appealing colors. . . In bedrooms, door mirrors make dressing more convenient and pleasant. In bathrooms, door mirrors create an atmosphere of brightness and sparkling cleanliness. In the entrance hall, full-length door mirrors add a bright note of welcome to guests and afford a last minute check up on appearance before going out.

Built-in mirrors are plus values that stand out in the vacant house open for inspection—that impress prospects with the convenience and attractive decorative arrangements that can be reflected in the future.

To bring added appeal to every house you build—to make it easier to sell—use built-in mirrors plentifully throughout. And, because to be entirely satisfactory, mirrors must be made of the highest quality glass it is to your best interest to specify L.O.F. Quality Glass—noted for its remarkable brilliance and exceptional quality.

Libbey·Owens·Ford Glass Company, Toledo, Ohio.



# LIBBEY · OWENS · FORD

## *QUALITY GLASS*

## Built-in Mirrors Build Up Profits For Builders

**B**ECAUSE the public appreciates that mirrors, both for decorative and utilitarian purposes, can do so much to lift a dwelling above the average and make it an attractive, inspiring place in which to live and entertain one's friends, builders have an unusually good opportunity to increase the salability of new residences by incorporating built-in mirrors in a variety of ways.

An essentially new type of home has come into existence, one that features more and larger windows, but the increased use of glass by no means is stopping there.

The widespread vogue for mirror-topped tables and incidental mirrors on the wall have aroused new appreciation of mirrors, so that the home with built-in mirrors as standard features are compelling magnets for the house-shopping family.

Everywhere, glass is receiving recognition to which its beauty and practical utility entitle it, not alone as a building material but as a decorative medium ideally suited to express the moods and phases of a new era in gracious living—especially in dwellings costing \$6,000 or more.

It is interesting, therefore, to take a hypothetical blueprint trip through a proposed dwelling to see what can be accomplished with built-in mirrors designed more quickly to arrest the eye of the prospect and convince him or her that here indeed is a home that reflects all the things they have previously sought.

Let's start in the living room, where, for instance, contact between the family and the outside world is a major consideration.

Windows . . . Picture Windows, those generously proportioned expanses of polished plate glass that frame one's favorite view and make it seem a marching mural on the wall; corner windows, brilliantly glazed surfaces meeting at right angles, that brighten interior corners where shadows used to hover . . . such identify today's modern home.

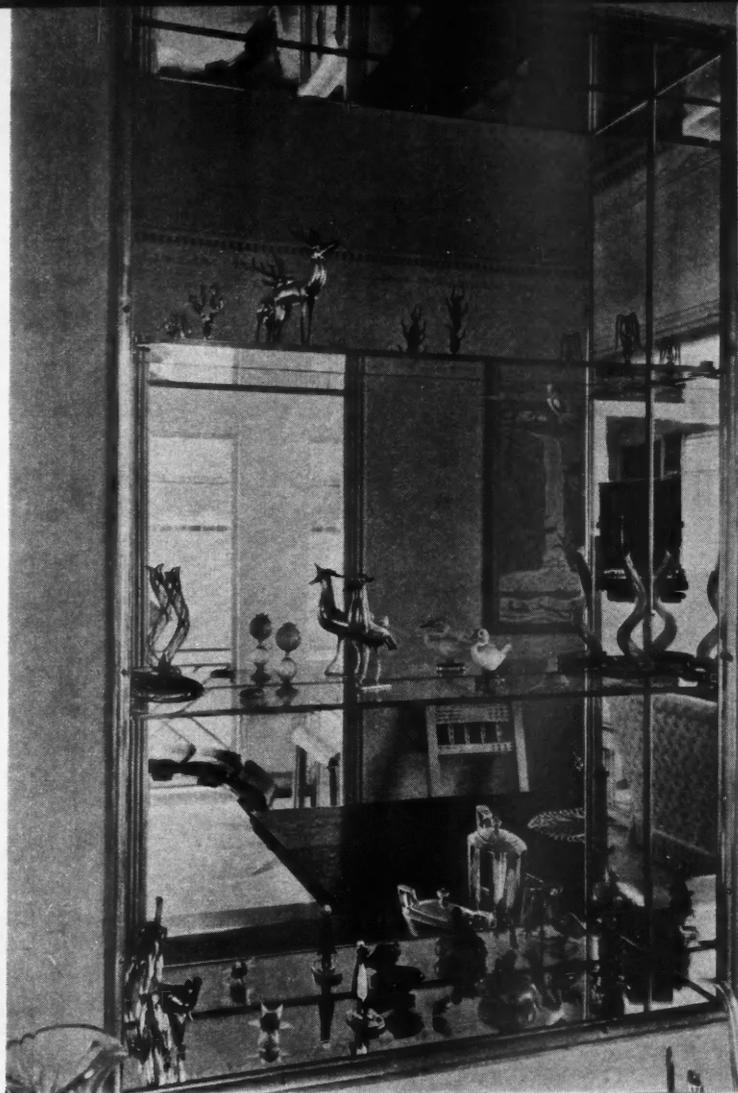
In that setting, cleverly conceived built-in mirrors may readily become the central decorative motif of the living room. A large plate-glass mirror, circular or square, plain or colored, installed over the mantel not only adds cheer and spaciousness, but can reflect an inviting outdoor vista, add light and create a picture pattern for the wall.

A woman, entering the bare room of a new house, is immediately stimulated by such a focal point and her imagination instantly conceives what can be accomplished with rugs and furnishings in place and their arrangements influenced by the over-mantel mirror . . . from a sales standpoint, it is important to realize that such a built-in feature tends to make her think in terms of that particular house.

### Other Uses That Appeal to Women

A full-length plate-glass mirror built into the entry door can do much as a decorative and practical feature. Every woman yearns for such a mirror for she wants to be correctly attired, whether leaving the house or to welcome friends . . . and a full-length mirror gives her a quick, final opportunity to scan herself before opening the door . . . to check the angle of her hat, the set of her gown or to see if hosiery seams are straight.

In the dining room, a built-in niche, with glass shelving and the back and sides mirrored, can do much for the room. The lure of china and crystal, placed on glass shelving, is doubled when guests see them once in their places and again reflected in their brilliant background.



MIRROR lined alcove with glass shelves, a strong decorative note.

Other niches, whether small or large, but lined with mirrors of clear polished plate glass, will set off prized possessions of the occupants to their best advantage, whether it be the dining room, den or recreation room.

A full-length plate-glass mirror in the master bedroom door can hardly be matched for practical usage, or built-in full-length mirrors for doors leading into a clothes or linen closet or for doors to a built-in bed compartment.

It goes without saying that a full-length mirror in the bathroom door is one of the most popular features of today's really modern homes, and often one of these may well be just the touch that decides a sale.

Some builders report unusual success with the practice of incorporating a built-in mirror around three sides of a recessed bath-tub. In such an installation, it is well to consider the possibility of using peach or blue plate-glass mirrors.

All in all, the virtues of built-in mirrors for cheer, decoration and utility and their possibilities to increase "sales appeal" are so many that to overlook their value is to neglect the most effective media available today.

Consider, for instance, mirrors that completely frame a fireplace to lift a living room to distinctive individuality; and such small but highly practical applications as mirror panels for wall light switches—sparkling little spots of brilliance as well as an effective means of eliminating finger smudges from the wall; mirror panels between two windows to create an arresting illusion of one double glazed surface. And don't overlook the effectiveness of a mirrored push plate on the door to the kitchen.

The old bromide used in referring to a magician and his tricks—"He does it with mirrors," can have a most significant meaning for the alert builder.

# WEYERHAEUSER

## FOREST PRODUCTS



The financing of your work for your customers on convenient monthly payment terms has been greatly simplified for you. You prepare only one preliminary application form. Through the local customers of Weyerhaeuser Sales Company or Wood Conversion Company you are relieved of burdensome details. This saves your time and makes installment selling highly desirable business. It will pay you to get full details on this attractive service.

and Modern Selling Plans

### KEY NO. 2

## LOW-COST FINANCING

is helping builders to secure business that otherwise could not be obtained. The ABC Monthly Payment Plan is a service that builders like because it simplifies financing and is easy to use.

Here is an example of how it works. An owner wanted to sell his house. It needed repairs to make it salable. On a lump-sum basis the owner could afford only an \$89.00 roof—but the builder, offering the ABC Monthly Payment Plan available through his dealer, built the job up to over \$600.00. The owner sold the house with a good profit immediately—the builder and dealer both got their money at completion—and the owner pays in convenient monthly installments.

Use of the ABC Monthly Payment Plan is spreading rapidly. Available through the customers of the Wood Conversion Company and the Weyerhaeuser Sales Company, it places builders in position to sell complete jobs, attractively financed.

For full details—how it can help you develop more profitable jobs, write for the names of dealers in your community who have this service.

# ALLIED BUILDING CREDITS, INC.

FIRST NATIONAL BANK BLDG., ST. PAUL, MINN.

For other Weyerhaeuser Keys to More Home for the Money see pages 26, 34, 47, 75 and 82.



# LOW-COST FINANCING

Use this Key to secure quick action:  
Tell prospects to "build while interest rates are still low"

## Build or Buy Now: Pay Like Rent

**B**UILDING industry men have mighty cheerful money news these days to pass along to prospective home buyers and home building clients and to property owners interested in modernizing and repairs. This news is that money for building is plentiful; interest rates are low; and most of the fees formerly associated with home financing have been greatly reduced or entirely wiped out.

Under both Federal Housing Administration rules for government insured home mortgages and building and loan association procedure, the single, long-term first mortgage, paid off monthly like rent, has become standard. This takes the place of the former system of first, second, and third, short-term mortgages, each carrying increasingly heavy interest rates and bonus discounts, and each having to be paid off or renewed—with added expense—every few years.

This new home financing set-up makes a definite and substantial contribution to the cause of lower costs. Thrift-minded buyers will take advantage of these current low interest rates by acting now; for it is certain that increasing building volume and more active general business will tend to put money costs higher for those who delay.

For the convenience of building industry men and of their clients and customers we present on the next two pages in tabular form analyses of FHA financing as compiled by the Mortgage Department of the Wisconsin Retail Lumbermen Association. Just what to do and how to do it to qualify a project for an FHA loan are briefly stated in these tables and in the following "step-by-step" summaries.

### TITLE I, CLASS I—MODERNIZING ONLY

#### Step-by-Step Procedure

1. Financial Statement of Customer (Form No. FHE-CS).
2. Remit \$1.50 with application for Credit Report from Credit Reporting Agency.
3. Approval or disapproval by Mortgage Department.
4. When approved, Note signed by husband and wife and job proceeds.
5. Note and Completion Certificate submitted to Mortgage Department.

### FIGURES

Address: 3507 East Haskell Place

Price \$ 4,750.00  
Loan 4,200.00  
Cash 550.00

#### Monthly Payments:

Principal and Interest . . . . .	\$ 24.57
Mortgage Insurance Premium . . . . .	84
1/12 Ad Valorem Taxes (approx.) . . . . .	5.50
1/12 Fire, Tornado, Explosion Insur. . . . .	1.96
<b>Total Monthly . . . . .</b>	<b>\$ 32.87</b>

#### Advances Required by F. H. A.:

14 Months Mortgage Insurance Prem. \$ . . . . .	11.76
13 Months Fire, Tornado, Expl. Ins. . . . .	25.48
Ad Valorem Taxes . . . . .	33.00
<b>\$ . . . . .</b>	<b>70.24</b>

#### Loan Expense:

Initial Service Charge . . . . .	\$ 63.00
Abstracting and Recording (approx.) . . . . .	12.00
Title Examination	}
Title Insurance	
Survey on Lot	
Credit Report	
Photographs	\$ 35.00
<b>\$ . . . . .</b>	<b>110.00</b>

#### SUMMARY

Cash . . . . .	\$ 550.00
Advance Items . . . . .	70.24
Loan Expense Items . . . . .	110.00
<b>Total Cash Required \$ . . . . .</b>	<b>730.24</b>
<b>Total amount required per month . . . . .</b>	<b>\$ 32.87</b>
<b>Conservative rental income value . . . . .</b>	<b>\$ 55.00</b>

TYPICAL financing set-up for "Buying like Rent" a \$4,750 Home on a long-term F.H.A. mortgage. This property was offered by the Southwest Homes Corporation, Tulsa, Okla., and required a down payment of about 12%, or just a little over the minimum under F.H.A. rules, which is 10% for homes under \$6,000.

6. Check sent to Dealer by Mortgage Department.
7. Payment Record Forms sent to Customer by Mortgage Department.
8. Monthly payments by signer of note, made to Mortgage Department.  
(Send for Title I Regulations issued by FHA, revised March 28, 1938, and Discount Table)—Note: On amounts over \$2,500.00 prior approval of loan by FHA, Washington, D.C., is mandatory before any work can be started.

**TITLE I — CITY AND COUNTRY**

Title I Notes Are Endorsed by Dealer Without Recourse

	CLASS 1	CLASS 2	CLASS 3
<b>PROPERTIES ELIGIBLE</b>	Complete existing structure Residential or Business Property, in City or Country.	New construction not to be used in any way as a home, in City or Country.	Summer cottages or any new construction used wholly or in part for a home, in City or Country.
<b>RESTRICTIONS</b>	Repairs, alterations or improvements. Amounts over \$2500 require prior approval by FHA, Washington, D. C.	New construction only. No part of loan to be used for purchase of land.	New construction only. No part of loan to be used for purchase of land. Building must meet required regulations. Prior approval of location by State FHA office, mandatory.
<b>WHO IS ELIGIBLE?</b>	Owner of property or renter having lease extending 6 months beyond maturity of note.	Owner of land	Owner of land
<b>WHO LOANS MONEY?</b>	Responsible persons with steady income and good Credit rating.		
<b>MAXIMUM AMOUNT OF LOAN</b>	Banks, Loan Companies, Insurance Companies, Mortgage Associations, Home Loan Banks		
<b>MATURITY MAXIMUM</b>	\$10,000.00	\$2500.00	\$2500.00
<b>RATE</b>	5 years	5 years	7 years
<b>PAYMENTS</b>	\$3.50 Discount per \$100.00 per annum		
<b>COLLATERAL SECURITY</b>	Optional with lending institution		Loans for new homes must be secured by first mortgage

**TITLE II, CITY MORTGAGE INSURANCE**

NEW CONSTRUCTION OR RE-FINANCING

	90% LOANS	90% AND 80% LOANS	80% LOANS
	Single Family	Single Family	Up to Four Family
<b>PROPERTIES ELIGIBLE</b>	Real Estate held in fee simple, or 99-year renewable lease or lease with not less than 50 years to run, from the date mortgage is executed. Construction after February 3, 1938, approved prior to construction, and construction begun after January 1, 1937 and before February 3, 1938 if neither lived in nor sold is eligible for 90% loan.		
<b>RESTRICTIONS</b>	At the time a mortgage is insured there must be located on the mortgaged property a dwelling unit designed primarily for residential use but for not more than four families and complying with property standards.		
<b>WHO IS ELIGIBLE?</b>	Owner occupant	Owner Occupant	Owner
<b>WHO LOANS MONEY?</b>	Responsible person with steady income and good credit record.		
<b>WHERE?</b>	Banks, Loan Companies, Insurance Companies, Mortgage Associations, Home Loan Banks.		
<b>MAXIMUM AMOUNT OF MORTGAGE</b>	\$5400.00	\$5400.00	\$16,000.00
<b>DOWN PAYMENT or EQUITY</b>	10%	10% 20%	20%
<b>MATURITY</b>	Prior to July 1, 1939, not less than 4 nor more than 25 years.	Not less than 4 nor more than 20 years.	Not less than 4 nor more than 20 years.
<b>RATE, ON DIMINISHING MONTHLY BALANCE</b>	5%	5%	5%
<b>FHA MORTGAGE INSURANCE PREMIUM</b>	1/4 of 1%	1/2 of 1%	1/2 of 1%
<b>INITIAL COST</b>	\$3.00 per thousand FHA Appraisal, \$10.00 minimum, (returned if no appraisal made). On re-financing a service fee not to exceed 1% or \$20.00, whichever is greater, may be made. Where disbursement is made during construction, service fee of 2 1/2% or \$50.00, whichever is greater, may be made.		
<b>PAYMENTS</b>	Monthly	Monthly	Monthly
<b>SECURITY</b>	Including principal, premium, interest, taxes, insurance. First Mortgage on property clear of all other liens.		

**TITLE I, CLASS 2—NEW CONSTRUCTION OTHER THAN HOMES**

Step-by-Step Procedure

1. Financial Statement of Customer (Form No. FHE-CS).
2. Remit \$1.50 with Financial Statement to cover Credit Report from Credit Reporting Agency.
3. Approval or disapproval by Mortgage Department.
4. When approved, note and collateral (if any) signed by husband and wife.
5. Note and Completion Certificate submitted to Mortgage Department and collateral (if any).
6. Collateral (if any) recorded by Mortgage Department.
7. Check sent to Dealer by Mortgage Department.
8. Payment Record Forms sent to Customer by Mortgage Department.

9. Monthly payments by signer of note, made to Mortgage Department.

Note: No part of loan can be used for purchase of land.

**TITLE I, CLASS 3—NEW RESIDENTIAL CONSTRUCTION ONLY**

Step-by-Step Procedure

1. Financial Statement of Customer, (Form No. FHE-NDCS).
2. Certificate of Conformance, form FHE4 in duplicate.
3. Remit \$1.50 with Financial Statement to cover Credit Report from Credit Reporting Agency.
4. Approval or disapproval by Mortgage Department. Mortgage Department must get prior approval on location from State FHA office.
5. When approved, Mortgage Note signed by husband and wife and returned to Mortgage Department with recorded

TITLE I—CITY AND COUNTRY

TITLE II, CITY MORTGAGE INSURANCE

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TITLE I—CITY AND COUNTRY

TITLE I, CITY MORTGAGE INSURANCE

- Certificate and Check for Hazard and Title Insurance on property.
- 6. Dealer then proceeds with construction.
- 7. Completion Certificate forwarded to Mortgage Department.
- 8. Check sent to Dealer by Mortgage Department.
- 9. Payment Record Forms sent to Customer by Mortgage Department.
- 10. Monthly payments by signer of note, made to Mortgage Department.
- 11. A statement signed by Mortgagor that he will pay all taxes when due and will deposit tax receipts with Mortgage Department. On payment in full of the mortgage all papers will be returned to Mortgagor.
- 12. Front, rear and side view photographs of the building, after completion.

Note: No part of loan to be used for purchase of land. Construction must meet regulation requirements. Prior approval of location by the State FHA office is definitely necessary before construction starts.

**TITLE II, CITY MORTGAGE**  
Step-by-Step Procedure

1. Forward to Mortgage Department:
  - a) Application in triplicate, signed by Mortgagor, FHA Form 2004, Revised February 15, 1938.
  - b) 3 photos of location, about 3"x5", dated.
  - c) 2 sets of Plans and Specifications in detail.
  - d) Plot plan, in duplicate.
  - e) 1 copy of Contractor's signed Bid.
  - f) \$3.00 per \$1,000 of face amount of mortgage. Minimum \$10.00.
  - g) Abstract of Title or Title Guaranty Insurance.
2. Above material submitted by Mortgage Department to State FHA Office for approval.
3. Processed by FHA:
  - a) Preliminary Examiner (If rejected, everything returned.)
  - b) Architect checks plans, specifications and costs.
  - c) Valuator makes physical examination of lot.
  - d) Mortgage risk examiner determines credit rating of applicant.
  - e) "b," "c" and "d" make separate reports to "f."
  - f) Chief Underwriter co-ordinates "b," "c" and "d" reports

- and issues "Commitment" or rejects application and Mortgage Department notified accordingly.
  - g) If "Commitment" is issued, Mortgage Department notifies Dealer and until then no labor or materials must be furnished.
  - h) "Construction Loan" and signing of note and mortgage. Note and mortgage supplied by Mortgage Department; sent to Dealer for Customer's signature. These documents to be returned immediately to Mortgage Department for inspection and recording.
  - i) Three inspections by FHA:
    - (a) When footings are poured.
    - (b) When house roughed in.
    - (c) When house completed and ready for occupancy.
  - j) Mortgage Department receives Final Inspection Report from FHA.
  - k) Closing Charges and Initial Service Charge, Taxes, Insurance, etc., paid by mortgagor to Mortgage Department.
  - l) Note and Mortgage submitted to FHA for insuring and "Construction Loan" terminated.
  - m) Mortgagor makes first monthly payment on 1st day of month following the insuring of note and mortgage. (Send for "Illustrative Case" FHA Form No. 2042)
4. When Construction Loans are made by Mortgage Department @ 6% interest per annum, Dealer will be re-imbursed as building progresses immediately upon presentation of Waivers of Lien and receipted bills to Mortgage Department.

**TITLE II, FARM MORTGAGE "NEW CONSTRUCTION"**  
Step-by-Step Procedure

1. Forward to Mortgage Department:
  - a) Application in quadruplicate signed by Mortgagor, FHA Form No. 2375, revised June 1, 1938.
  - b) 3 photos of location, about 3"x5", dated.
  - c) 2 sets of plans and specifications in detail.
  - d) Plot plan in duplicate.
  - e) 1 copy of signed contractor's bid.
  - f) Check in the sum of \$3.00 per \$1,000 of face amount of mortgage. Minimum \$10.00.
  - g) Abstract of title or Title Guaranty Insurance.
2. Above material submitted by Mortgage Department to State (Continued to page 116)

**TITLE II—FARM MORTGAGE**

	90% LOANS		90% AND 80% LOANS		80% LOANS	
	Single Family		Single Family		One to Four Family Dwellings	
PROPERTIES ELIGIBLE	Real Estate held in fee simple, or 99-year renewable lease or lease with not less than 50 years to run.					
DEFINITION OF "FARM"	Farms producing \$350.00 annual income; 25% of property value must be agricultural. Construction after February 3, 1938, approved prior to construction, and construction begun after January 1, 1937 and before February 3, 1938 if neither lived in nor sold is eligible for 90% loan.					
RESTRICTIONS	Farm house or farm building must be constructed or repaired and 15% of amount loaned spent for materials and labor. Dwelling unit of satisfactory standard must be on property at time mortgage is incurred.					
WHO IS ELIGIBLE?	Owner Occupant		Owner Occupant		Owner	
	Responsible person with steady income and good credit record.					
WHO LOANS MONEY?	Banks, Loan Companies, Insurance Companies, Mortgage Associations, Home Loan Banks.					
WHERE?	Any community meeting Federal Housing Administration requirements.					
MAXIMUM AMOUNT OF MORTGAGE	\$5400		\$5400 \$3200		\$16,000	
DOWN PAYMENT or EQUITY	10%		10% 20%		20%	
MATURITY	Prior to July 1, 1939, not less than 4 nor more than 25 years.		Not less than 4 nor more than 20 years.		Not less than 4 nor more than 20 years	
RATE ON DIMINISHING BALANCE	5%		5%		5%	
FHA MORTGAGE INSURANCE PREMIUM	¼ of 1%		½ of 1%		½ of 1%	
INITIAL COST	\$3.00 per thousand FHA Appraisal \$10.00 minimum (returned if no appraisal made). Service fee not to exceed 1% or \$20.00, whichever is greater, may be made. Where disbursement is made during construction, service fee of 1½% or \$30.00, whichever is greater, may be made.					
PAYMENTS	Annual, semi-annual, quarterly or monthly. Including principal, premium, interest, taxes, insurance.					
SECURITY	First Mortgage on property clear of all other liens exclusive of those on growing crops.					

TITLE II—FARM MORTGAGE

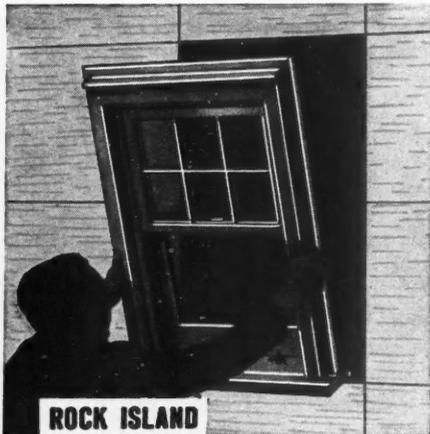
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# WEYERHAEUSER

## FOREST PRODUCTS



Key No. 3 -- Better Materials

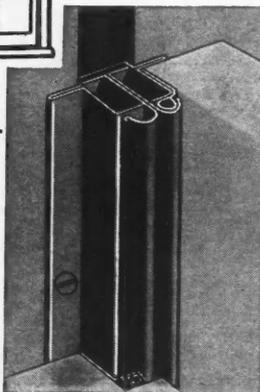


**EASY TO  
INSTALL**  
In Frame—Brick  
Stone—Veneer  
or Stucco

**WEATHER-  
PROOF**

**DUST-  
PROOF**

**AIR-  
TIGHT**



There is a real story of economy and efficiency for you in this new modern unit. Write for descriptive literature!

## ROCK ISLAND

# Uni Glide

## WINDOW UNIT

An engineering triumph in window efficiency and economy!

This new Weyerhaeuser development brings to Builders important new features in a window unit—features which hurdle the common difficulties in window installation, operation and effectiveness.

### Smooth-Working Sash under All Conditions.

The sash can never stick—the patented self-adjusting UNI-GLIDE Weather Strip compensates for all movements in the frame. No wood-to-wood contact.

### Weather-Tight and Dust-Proof in All Climates.

UNI-GLIDE Window Units are completely weather-stripped from sill to head of frame. The UNI-GLIDE Metal-to-Metal Weather Strip must maintain continuous contact regardless of expansion or contraction of the sash.

### Self-Equalizing Balance for Ease of Operation.

The twin cable window balance equalizes the weight of the sash. With this modern device both sides of the sash raise and lower evenly without tending to bind.

### Permits Narrow Casings and Trim.

The UNI-GLIDE Window Unit eliminates weight pockets, thus permitting the use of narrow mullion casings and narrow moulded trim where desired. The frame can be readily fitted on the job where wall thickness varies from standard.

### Assembled Complete for Fast Installation.

You save time with UNI-GLIDE. They arrive on the job completely assembled and ready for setting. They are water-proofed at the factory and chemically treated for permanence. They are manufactured in all standard designs and sizes.

## ROCK ISLAND

## SASH AND DOOR WORKS

ROCK ISLAND, ILLINOIS



# BETTER MATERIALS

Use this Key to guarantee lasting approval

## Progress in Structural Materials

**A**N outstanding example of the progress that has been made just in the past year in bettering the materials of home construction is plywood—that laminated sheet lumber of a thousand uses. First offered for indoor and protected uses where the bonding glues would not be endangered by moisture, the manufacturers have recently perfected plywoods for outdoor use, hot plate, resin bonded plywood that is proof against any weather.

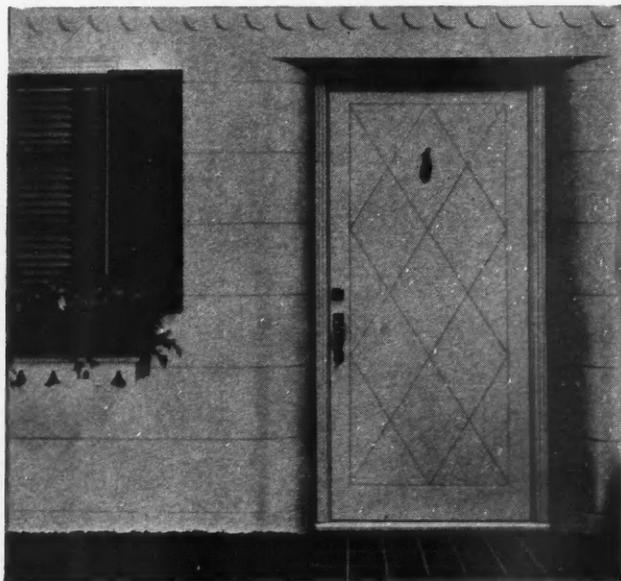
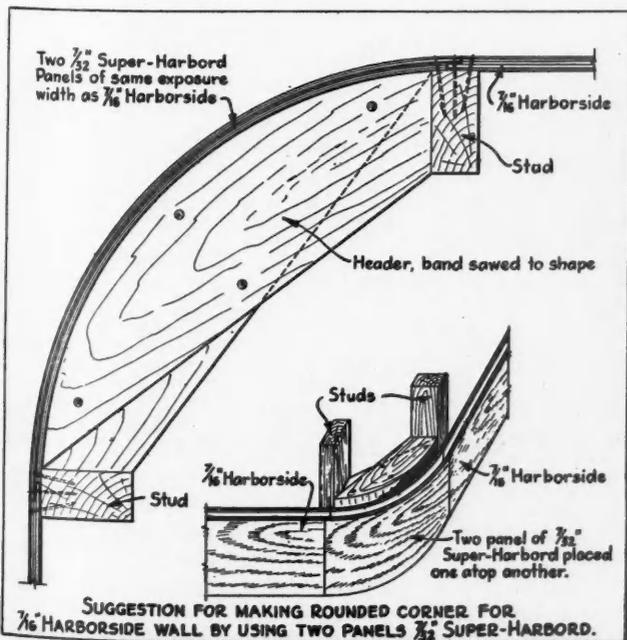
Modern rounded corners can be executed in outdoor plywood with a sculptured effect, as shown in the accompanying illustration of a Super-Harbord plywood structure. The material in the thinner panels is so flexible, builders say, that it can easily be formed to arcs and shapes.

By the simple process of bandsawing the exterior end of a header to the desired curve, two panels of 7/32-inch material are placed one atop another fitting snugly over the shaped header. Studs at either end of the header act as anchors to which are nailed the ends of the header,

ends of the curved plywood and the adjoining ends of the regular plywood siding units used for the flat wall.

Of restrained modern colonial design, employing oyster white with cobalt blue shutters, the illustration shows also the use of the plywood siding, called "Harborside," which was an innovation this spring. This siding permits of broad, smooth surfaces and paneled effects. Restrained rustication lines can be achieved with this siding, or by a simple technique of overlapping or use of accessory mouldings, pleasing shadow effects can be accomplished. Joints are made smooth and clean, since the edges are neatly double-rabbeted, and joints may be filled and finished over in such a way as to be invisible, if desired.

This new outdoor plywood siding has been found suitable for almost any architectural style, and is economical in application—labor cost and nails used being cut down considerably since the panels come as large as eight feet in length and as wide as 23 inches. The trend toward larger units in building materials is reducing costs.



MADE of outdoor plywood, this streamlined entrance has an almost molded plastic effect; details to left show easy method of construction.



## Progressive Prefabrication

**Builders Utilize More Complete Factory Finished Parts To Cut Cost And Improve Quality on the Job. Panel Materials on Increase**

BOTH FOR INTERIOR and exterior walls, large sized panels of insulating board, plywood, gypsum or fiber board are coming into extensive use with consequent reduction in costs. Illustrated at left is one of the "dry wall houses" built by Lee Perry, White Plains, N.Y., builder. Interior walls are of  $\frac{1}{2}$ " insulating board in large sheets. Joints are broken above and below windows. Exact fit around window is achieved by chalking frame and cutting with saw to fit. Wallpaper is applied over insulating board.

**F**EW persons both within and without the building industry realize the steady but nevertheless remarkable growth of "progressive prefabrication" that is taking place. Still fewer realize what an effect this movement has towards lower building costs and better product.

Building critics who quote some price on a basic material such as lumber, brick or cement, to prove that a house today is "too high" do not consider the important fact that the overall cost of a house today has been greatly reduced by the efficiency made possible by progressive prefabrication.

What do we mean by progressive prefabrication? An excellent illustration is the use of insulating board, plywood and other large size panel materials both for sheathing and interior walls. A few years ago such products were not available. Today, as a result of the scientific advance of building material manufacturers, we have a number of such products which have proved

thoroughly sound and satisfactory and are coming into widespread use.

A current installation, is the job which is done by Lee Perry, builder, of White Plains, N.Y. Perry's houses are entirely dry wall constructed. He is using sheets of one-half inch insulating board as large as 8 x 12 feet for the interior walls. Wallpaper is placed directly over these sheets. Each room is skilfully laid out so that there is no joint at all in the insulating board or else the joint falls at a window.

Perry estimates that his interior wall costs are reduced at least one-third over the ordinary plaster job. He saves a considerable item in carrying charges since the dry wall construction permits him to put up the house in thirty days or less. Two men can install the entire interior walls in one-half to two days. An exact fit around window and door openings is obtained by first chalking the opening, then placing the board against it to obtain an accurate cutting guide and then

sawing out the opening to exactly fit against the frame.

Perry also lists the advantages of large size panels for these interior walls as including elimination of plaster cracks, elimination of shrinking or cracking of trim, easy alterations at a later date, a wider wall with better acoustics, elimination of streaks in wallpaper. Nearby in aggressive Westchester County, another live builder, David Swope of County Homes, Inc., has built 40 houses during the last year employing plywood panels as his interior finish. These are just two illustrations of hundreds indicating use of larger wall units.

Progressive prefabrication is taking place throughout all portions of the home. It concerns structural and finishing materials and also equipment. Because the changes take place slowly, they are not so noticeable, yet hardly a day passes without some development.

More extensive prefabrication of units in a factory usually means higher quality and a better job, yet it also reduces costs by eliminating waste motion. A striking example of progress in this respect is the building operation of Charles Reis, veteran New Jersey builder at Kenwood in Riveredge. The Riveredge homes are in the \$3,500 to \$6,000 class, yet Reis employs progressive prefabrication. He now uses light weight metal frames exclusively. These come to the job with nailing templates and hinges attached and with the trim an integral part of the frame. A few minutes only are required to set in place and nail. They provide an ideal plaster ground, and eliminate the cost of buying and fitting trim. Furthermore, since the frames are rigidly braced and accurately made, there is no wasted time in hanging the doors.

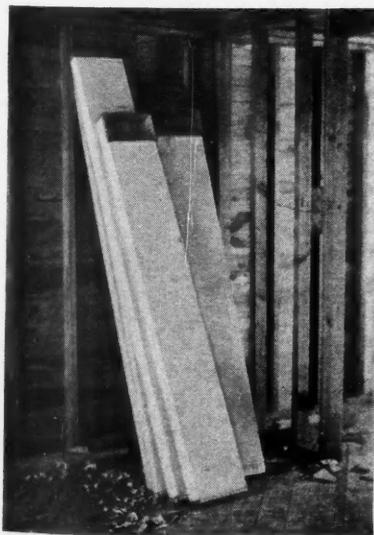
Everything else that can be done with greater efficiency in a factory is handled in this fashion by Reis. The ducts for the heating system are made in a nearby factory and come to the job ready for quick and efficient installation. The ducts are of superior quality because of the controlled operations possible in the factory.

Another example of progressive prefabrication familiar to most builders is the use of factory built window units. This is true in both steel and wood windows. Recent developments in wood windows have been im-

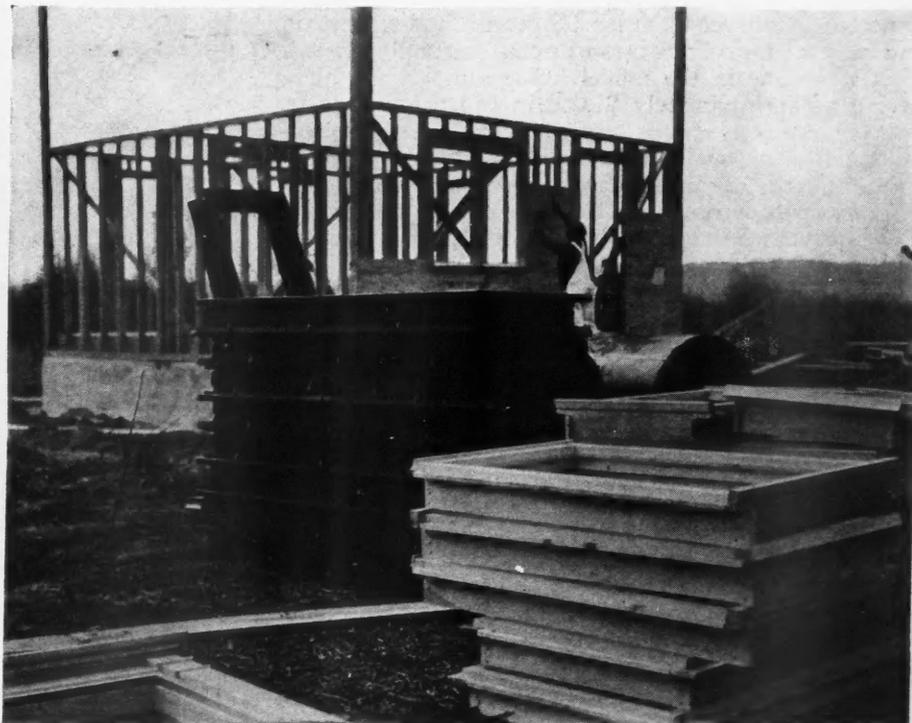


INSTALLING FACTORY CUT TRIM on one of the Westminster Ridge houses of Lee Perry, White Plains, N.Y., builder. Windows and frames are also delivered to job completely primed, weatherstripped and ready for quick installation.

pressive with the windows factory prefitted to frame and equipped with weatherstripping, screens and storm windows. They are primed and delivered to the job  
(Continued to page 64)



ABOVE—Factory fabricated ducts delivered to job ready for installation. AT RIGHT—Steel door frames and wood window frames delivered on job at Kenwood development of Charles Reis, Riveredge, N.J. Door bucks are steel.





CONSTRUCTION VIEW of a row of low-cost Gross-Morton homes at Jamaica Estates, Long Island. Large sheets of asphalt and aluminum coated Vapor-seal sheathing are used on exterior walls.

## Worth \$1,000 More

### Trend to Larger Construction Units Shown in Use of Insulating Board Sheathing

(Continued from page 27)

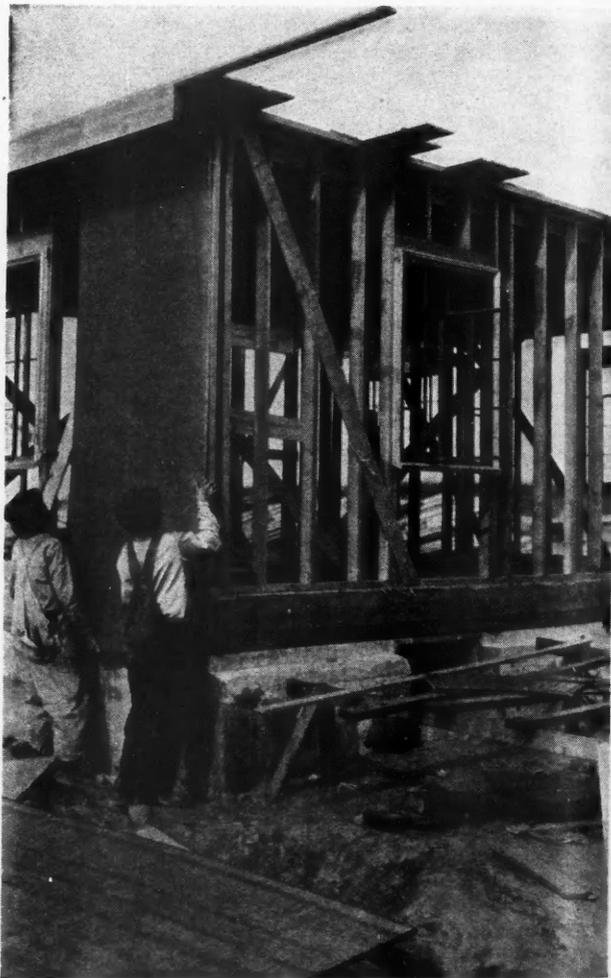
"The central hall is one of the most popular and attractive features of an American home. Yet it also can increase the cost of a house and occupy more space than its advantages warrant. Inherited from the Colonial days it has stayed with us primarily because of the gracious room arrangement it made possible. However, to combine the advantages of a central hall and still save the cost of its creation and the space it wastes has been a problem worth solving for the architect, the builder and the buyer.

"After every economy in planning has been effected in a home where the central hall scheme of room arrangement is desired it is possible to increase the efficiency of that home by at least 8 percent and still retain and increase the advantages of plans originally offered. This was done in the model home illustrated with a saving of approximately \$1,000 in construction costs.

"With the conventional center hall it would have entailed additional material cost and structural workmanship in the use of nonstandard lengths of material. Yet a comparison of its floor plan with that of the central hall type shows that its efficiency of plan can be rated at 100 against 92 percent for the latter.

"Entrance leads into a commodious vestibule which occupies only about 25 square feet. At one side is the living room; at the other side a guest closet. Ahead a door opens into a kitchen hall. From this small hall is an entrance to the basement stairs, entrance to the kitchen, a side door for deliveries and a first floor lavatory. The arrangement makes the lavatory convenient to front door, service door, kitchen and living room without the necessity of passing through another room.

"Another advantage is the placing of the kitchen in a central location with access to living room, dining room, breakfast nook, side door and front door without requiring passage through another room. The doorway from kitchen to living room opens at the foot of the staircase to the upper floor which is superimposed directly above the basement stairs saving every possible inch of space.



LABOR COSTS are reduced by use of insulating board sheathing.

"The result of this layout is the creation of large rooms all within direct access of each other. The living room is approximately 19 by 12 feet with a large fireplace and three windows. The dining room is 11 by 14 feet with two exposures. The kitchen measures 14 by 7½ feet and the breakfast alcove is 8½ by 6½.

"All benefits of a center hall are preserved in the upstairs plan where three generously sized bedrooms, unusually large tiled bath, dressing alcove and five closets are accommodated."

(Continued to page 66)



Clarence W. George, Architect, Aberdeen, Wash.

# Only SUPER-Harbord

(the outdoor plywood)

## has the stamina to serve for every exterior use!

**E**XHAUSTIVE laboratory tests—hundreds of actual service uses under every climate condition—have proved that SUPER-Harbord is permanently weatherproof. By an exclusive patented process\* the plies of SUPER-Harbord are fused together more solidly than a single board. This guaranteed outdoor plywood, with its balanced cross-banded construction, will not split or crack—no lineal expansion due to moisture or temperature changes! You are cautioned to accept no substitute for SUPER-Harbord. It is edge-branded for your protection. Ask for it by name . . . genuine SUPER-Harbord.

**HARBORSIDE**, the SUPER-Harbord siding, is outdoor plywood in convenient siding units, edge-rabbeted for builders' convenience. It affords SUPER-Harbord's weatherproof qualities in modern siding. It lends itself easily to modern or traditional designs, and new synthetic resin finishes further enlarge the design possibilities.

★ For a weatherproof plywood, guaranteed against separation of plies due to moisture or any weathering condition, specify SUPER-Harbord or "exterior plywood hot-pressed with a cresylic-formaldehyde synthetic resin binder, and then tempered."



### HARBORD PLYWOOD PRODUCTS

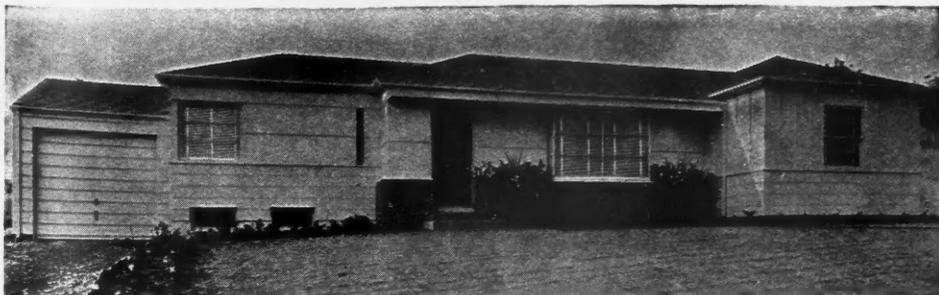
- Harbord Plywood
- Harbord Sheathing
- Harbord Wallboard
- Harbord Plycrete (For Concrete Forms)
- Harbord Industrial Plywood
- Harbord Luan Plywood

### SUPER-HARBORD PRODUCTS

- Super-Harbord Plywood (In All Grades—in Panels as Large as 8 x 16 Feet)
- Super-Harbord Plycrete (For Concrete Forms)
- Super-Harbord Luan Plywood
- Super-Harbord Redwood Plywood
- Harborside

### MANUFACTURED PRODUCTS

- Harbord Tennis Tables
- Sag-Nott Doors
- (With Cotter-Keyed Joint)



Designed by J. Wayland Owen, Portland, Ore.

## HARBOR PLYWOOD CORPORATION

Mills and General Offices, Hoquiam, Washington

DISTRIBUTING WAREHOUSES: Atlanta, Baltimore, Chicago, Cincinnati, Cleveland, Columbus, Indianapolis, Jacksonville, Los Angeles, Louisville, Milwaukee, New Orleans, Philadelphia, Pittsburgh, San Francisco, Toledo, Washington, D. C.

REPRESENTATIVES: Billings, Kansas City, Omaha, Worcester.



# What a few simple changes and Stucco can do!



1. How this house looked before the remodeling magic started to work.



2. Porch removed. Almost ready for its stucco coat of Atlas White.

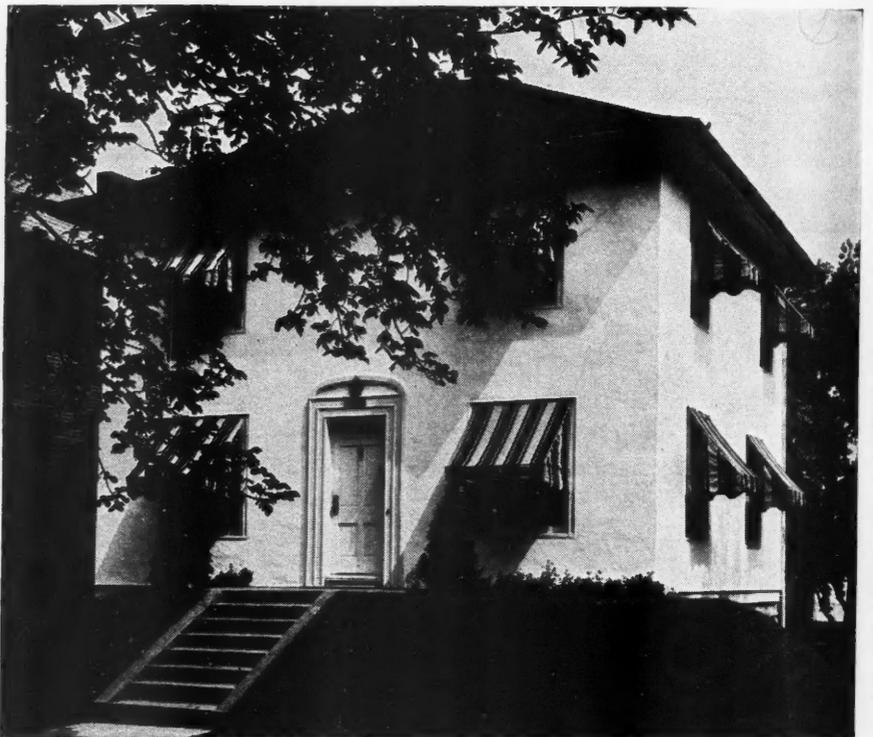
See what happened to this old house when imagination mixed with stucco!

A few deft changes in design, a coat of stucco made with Atlas White portland cement, and a gloomy back number was made modern, fresh and attractive . . . readily saleable or rentable.

*White* stucco is a natural for remodeling work—ideal for any type or size job. Remember these facts when you're planning your next remodeling job:

1. *White* portland cement stucco gives a building a fresh, attractive exterior.
2. It is permanent because it is a thin, sturdy wall of concrete with the weather resistance of concrete.
3. It can be applied in any texture and any color.
4. Its cost is moderate, and it gives service that endures in any climate.

Universal Atlas Cement Co.  
(United States Steel Corporation  
Subsidiary), 208 South LaSalle  
Street, Chicago.



3. Finished job—completely transformed from ugliness to beauty. Owner is Louis E. Rowe, Berwyn, Ill. Stucco furnished by California Stucco Products Co., Chicago.

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S-14

STUCCO MADE WITH **Atlas White** PORTLAND CEMENT

# New Ideas in Styling and Applying Wood Fibre Board as a Finish on Interiors



**I**N ANY limited presentation on such a broad subject as the use of wood fibre board products for interior finish, the scope must necessarily be limited to a survey of the field and a few selected highlights on some of the more recent developments in styling and application. When the many advancements and improvements made within the past few years are recalled, the reason for this procedure is obvious. Further, it should be remembered that such products cover only one phase of dry-wall construction; a recent article dealt with the use of metal mouldings, other types of dry-wall finish will be considered in future articles.

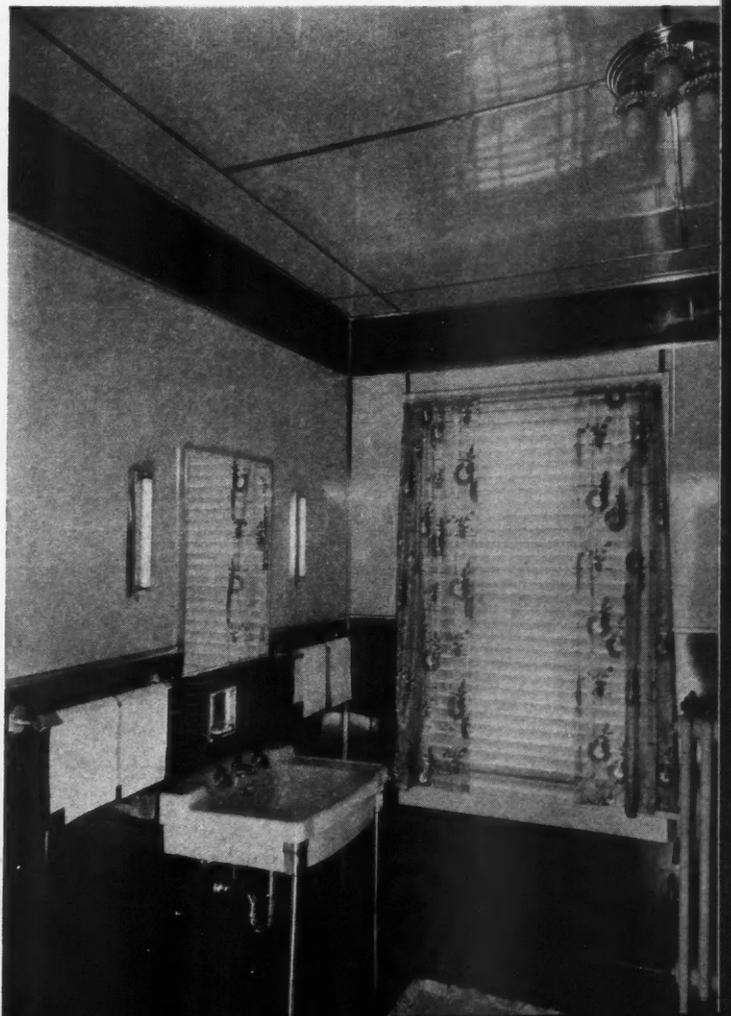
The application of wood fibre board as covered in the photographs and drawings on these pages, while it concerns new residential construction, equally well covers similar uses for remodeling and commercial structures. The many forms in which these products are available have greatly increased the number of jobs on which they can satisfactorily be used. Whereas only panel sizes were once available, most manufacturers now offer planks, tiles and panels in a wide range of sizes. Further refinements have added molded edges for concealed nailing at the joints or grooves to take splines of the same material. Color is another new feature; this is applied at the factory either in the making of the material so that it is integral, or as a washable surface finish. When walls are covered no further decorating is required. Mouldings for use as trim and also available in a range of colors widen the design possibilities. These developments will be discussed in more detail further on.

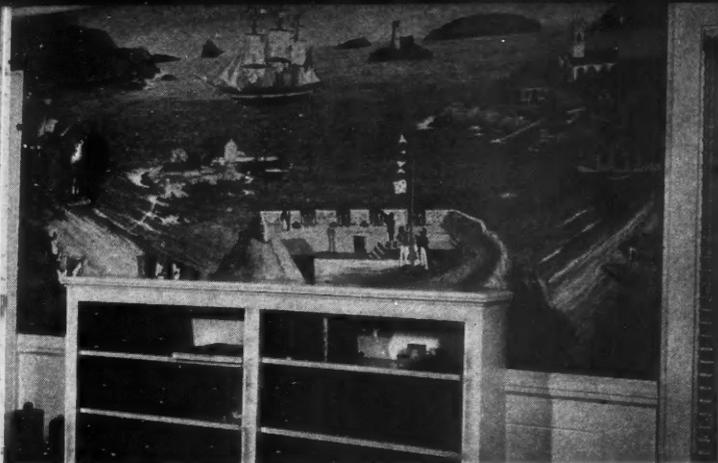
On any job where wood fibre board is to be used for interior finish, the first thing to do is to study the material carefully for maximum effect since the combinations are innumerable. Another thing to be borne in mind is that very definite insulation and acoustical values will be added, and these can either be deducted from the other wall requirements or put in as plus values.

**TOP of page:** The modern appearance of these walls was obtained with "Colorkote" panels available with a glazed, washable surface in six pastel shades. (Fir-Tex photo.) **Right:** Bath with gleaming walls of factory-finished hardboard and metal trim. (Tylac photo.)

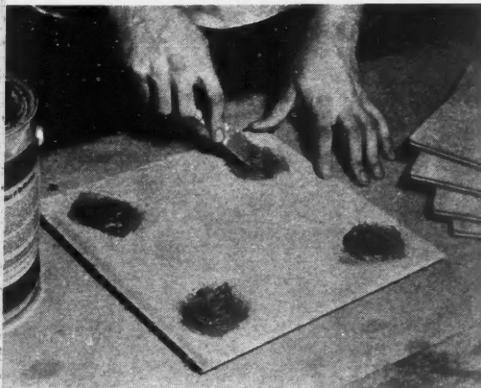
## Survey of Recent Developments in Dry-Wall Construction Shows a Wide Field of Adaptability for Board Products

By R. E. SANGSTER





**ABOVE:** The living room in a Schenectady, N.Y., residence has an interesting wall treatment obtained by use of mural paintings on "Graylite" board above the wainscot and extending to the ceiling. (Insulite photo.)



**LEFT:** For application of ceiling tile on a smooth surface, adhesives are available to be placed on the rear of individual units and applied as shown. (Wood Conversion photos.)



**FIBRE** board cutting tool for hand grooving allows a wide choice of panel and border patterns to be worked into the walls and ceilings.



In selecting a room design, an important factor is the use to which the room will be put. Naturally a playroom would want to be brighter and gayer than a living room. If the ceiling is low, a design with vertical lines will make it appear higher; horizontal lines will have the opposite effect. The style in which the room is to be done is a further factor. For instance, a very modern interior might have an accented horizontal V-joint and concealed vertical joints, such as the dining room view shown on the preceding page. Where a period styling calls for a panel treatment, stock sizes should be borne in mind and units worked out in dimensions so that a maximum number of joints are concealed. Likewise proper spacing of framing must be provided or additional studs and joists might be required for necessary nailing.

Also to be considered when designing a room for wood fibre board finish is the matter of surface treatment. A material with just the right texture for the type of decoration planned should be picked out. These textures range from smooth to quite rough burlap-like surfaces. Of course, there is no problem here if a prefinished board is used. However, it will be important if the walls or ceiling are to be painted or perhaps even given a form of mural decoration, such as shown at the top of this page. Other variations range all the way from cutting in surface designs with a special tool before the board is applied through stenciled-on or burnt-in patterns. Much ingenuity can be shown along these lines and unusual effects produced. Similar patterns or types of decoration can also be worked out for the ceiling. However, this is usually treated in a plain, tiled or paneled design which will harmonize with the sidewalls.

In kitchens and baths, the hardboard or Presdwood wood fibre boards provide a smooth, easily cleaned surface. These materials come with durable factory finishes in many colors, combinations and patterns, such as plain, tile scored or marbled. Joints are either filled or concealed with metal mouldings. The bath on the preceding page shows one of the many ways in which a clean-cut modern treatment can be obtained. Manufacturers' literature is available to give an almost unlimited number of ideas for styling all types of rooms; some have beautiful colored illustrations showing jobs as they actually appear when completed.

When all the points entering into planning and designing of rooms have been settled, the next step is to consider methods of application best suited to the products chosen. Some of them are described and illustrated in the diagrams that follow: they show recommended practice for applying these products.

Various types of application which call for the nailing of material directly to the studs will not be further discussed, a brief recommendation concerning spacing already having been made. One of the recommended installation procedures is illustrated below and consists

*(Continued to page 44)*



**LEFT:** Horizontal boarding applied over studs or furring gives a good nailing base for panels and allows joints to be placed without regard to framing. Tendency to buckle is also eliminated; crating lumber is satisfactory for this job.

Advertisements like this in eight leading national publications—and nation-wide publicity—present A NEW KEY TO HOME VALUE. This program will reach millions of home owners and prospective home builders.



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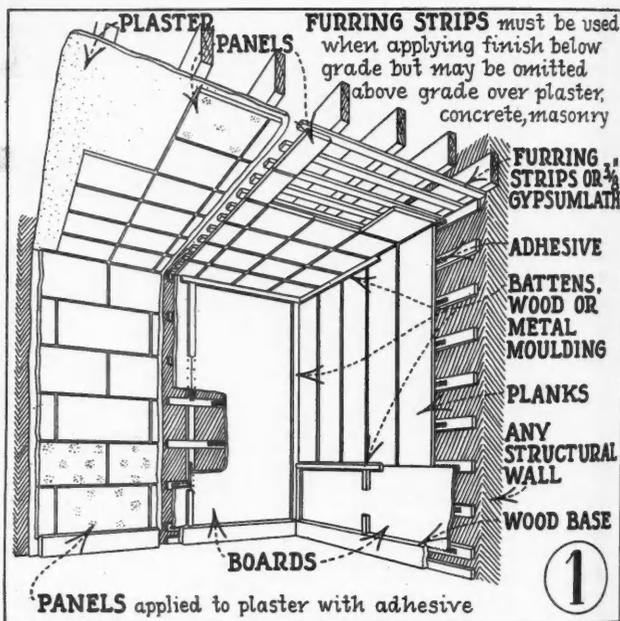
AB-10-38

## Fibre Board for Interior Finish

(Continued from page 42)

of providing a sound nailing base for which crating lumber in widths not exceeding 6 inches will be both satisfactory and nominal in cost. This procedure eliminates any tendency to buckle which might occur when panels are nailed to a stud wall. The nailing base need not be a solid surface; the boards may be spaced as much as a full width apart. There is no need of lining up these boards accurately.

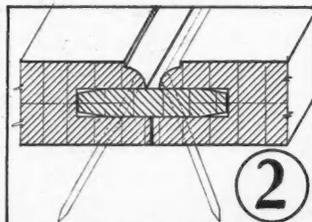
Another advantage of providing a nailing base such as this is that the joints of panels do not have to be centered on the studs. Intermediate nailing of the panels should be done first with nails driven at a slight angle and placed 6 inches apart. Edge nailing is placed 3 inches apart and 3/8 of an inch from the edge. Joints may be either concealed or exposed, the latter treated as a butt joint or grooved with one of the special tools available for this purpose. Grooves may be accented by painting in bright colors. If tile pattern is used for the ceiling, it may be nailed to properly placed furring or cemented to either a solid base or strips. The latter operation is also shown on page 42 with construction details appearing in Fig. 1, below.



RECOMMENDED application procedure for boards, planks, panels and tile on different types of wall. (Armstrong detail.)

This first diagram also shows how to apply boards, planks and panels over different types of wall using furring strips and adhesive. When using this method below grade, it is essential that these furring strips are installed. A further precaution calls for the use of ventilating holes or grilles to provide air circulation back of the finish. Above grade, over plastered concrete or plastered masonry, such furring may be omitted if the

(Continued to page 46)



KEY-JOINT units have a special spline for joining panels which have a moulded edge at open joint. (Celotex detail.)

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Guaranteed For 25 Years Against Rot And Decay.



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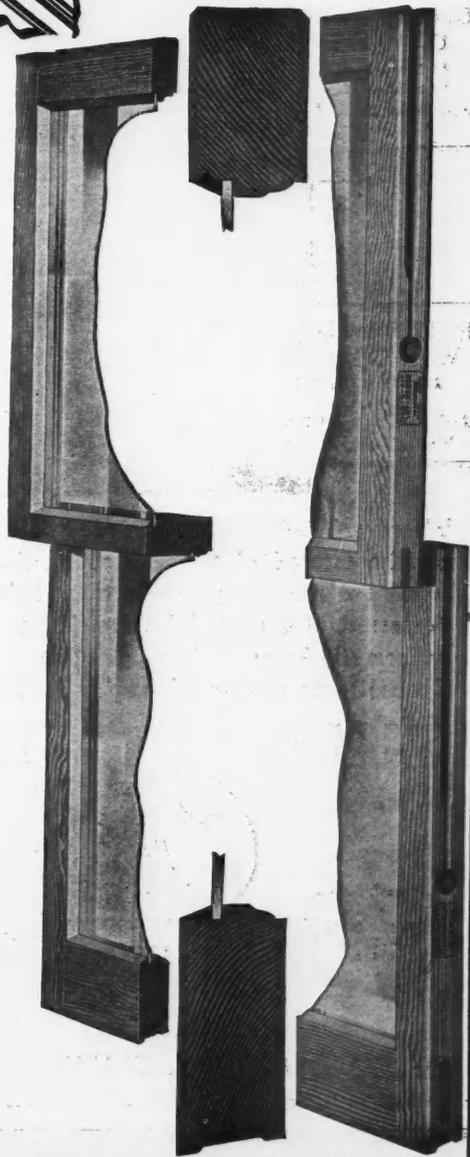
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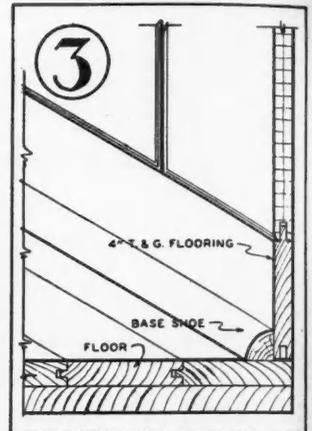
Branch Sales Offices: NEW YORK...CHICAGO...FT. SMITH, ARK.

## Fibre Board for Interior Finish

(Continued from page 44)

surfaces are true; however, this practice is not preferred.

Details 2 and 3 present a recent product which features a 3/4-inch thick fibre board on which all edges are prepared for a spline of the same material. This facilitates side and end matching, and assures uniform spacing of an open joint. The groove will take the tongue of 4-

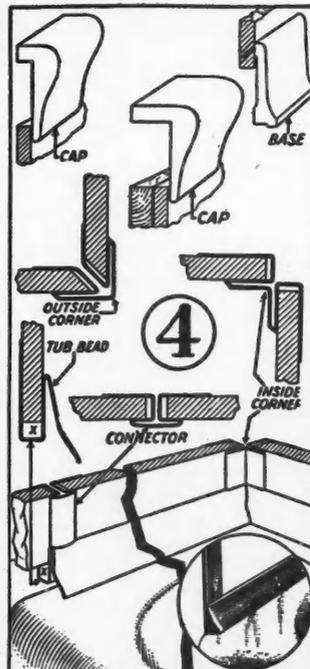


KEY-JOINT units will take the tongue of 4 or 6 inch T&G flooring used as a flush base-board or as furring for a conventional baseboard. This type of base eliminates the necessity for headers behind the units and enables 8-foot panels to reach ceiling heights of 8 feet 4 inches or 8 feet 6 inches.

inch flooring used as a flush base (see Fig. 3). This feature also provides concealed nailing, hiding the nail heads in the depth and shadow of the joints where they get a good grip on the material and a firm hold on the studs.

Fig. 4 gives details for the proper application of factory-finished tile board around a bathtub. In this case metal mouldings are used at the joints. Waterproof plastic cements are available, which do not contain an excess of alcohol or drying agent. They will not penetrate through the board and dull or affect the finish surface; they are absolutely impervious to water, and adhere to metal, wood, plaster, either rough or smooth surfaces. In remodeling, the old wall surface to be covered needs no special preparation. The cement serves as a sealer and small holes need not be covered because of this rigidity of the board. Since board tile is of such density and the adhesive cement is waterproof, no special consideration is necessary on walls where unusual conditions of humidity, temperature or vapor pressure are found.

(Continued to page 48)



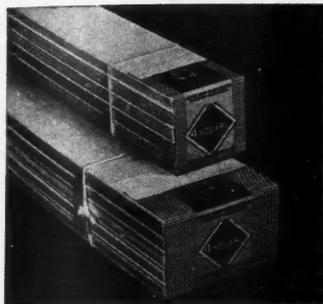
LEFT: Factory-finished board in plain, tile or patterned surfaces for use in kitchen or bath can have joints either filled or covered with metal moulding. This detail shows a method of using mouldings to give a good, tight job around a bathtub. (Monewall detail.)

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Weyerhaeuser 4-SQUARE Lumber is an important key in delivering More Home for the Money. The old idea that a "board is a board" went out when Weyerhaeuser introduced precision-cut 4-SQUARE trade-marked lumber. Even so staple a product as lumber became a better material. It is easier to use this ready-to-use lumber. Because it is properly seasoned, uniformly graded, cut to exact standard lengths, with smooth surfaces and squared ends, you save building time and promote good solid construction. That means more house for the money.

Scored lines one inch apart are pressed in squarely across the face of each piece of Guide Line Framing, with numerals every foot—thus aiding in proper alignment of the framework. Each piece is marked for grade and species, machined to exact length and squared for quick, accurate application.



This improved Weyerhaeuser 4-SQUARE Lumber is well and favorably known. When you use this trade-marked, advertised lumber you employ a product of recognized value. You further establish yourself in the minds of your customers and prospects as a user of quality materials—as a sound dependable builder. That's worth something—particularly since *there's no extra charge for 4-SQUARE.*

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CONCRETE**

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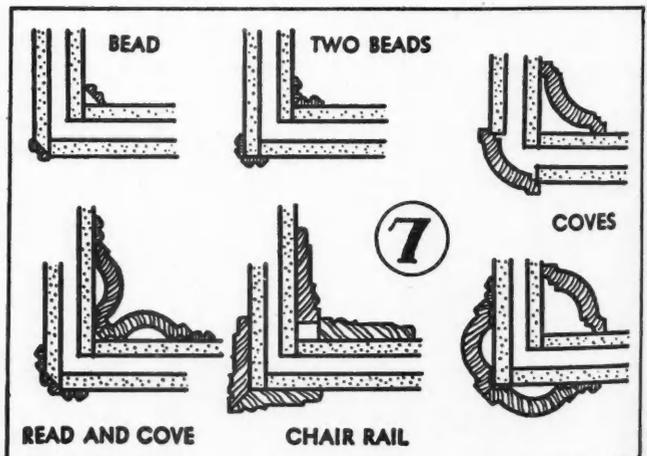
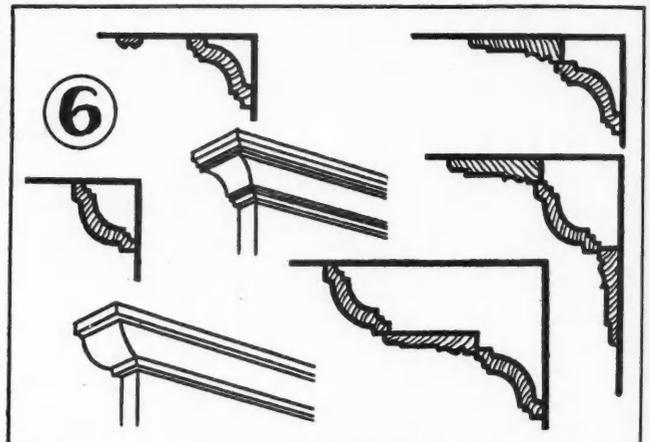
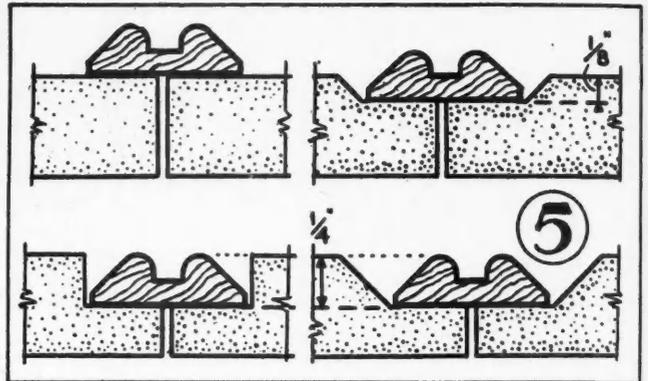
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**Fibre Board for Interior Finish**

(Continued from page 46)

As a final point on application, Figs. 5, 6, and 7 present some possible uses of pre-decorated wood mouldings designed specifically to harmonize with wood board products. They are made of Ponderosa pine, painted at the factory, and delivered on the job ready for application. The three patterns available are cove, chair rail and bead. Some suggested methods are shown for handling joints, ceiling lines and corners.



"KOLOR-TRIM" pre-decorated wood mouldings in three patterns can be used at joints as shown above. (Wood Conversion detail.)

AMERICAN BUILDER will gladly co-operate with readers requesting additional information on the subjects discussed in this article.

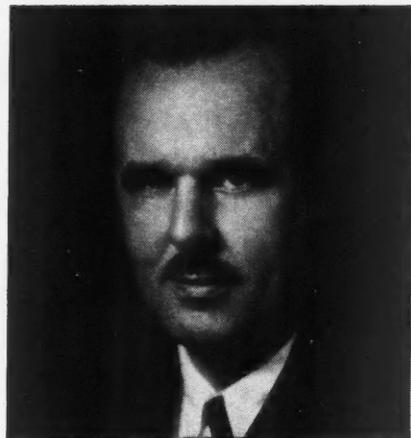


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Harold Van Buskirk, president of Harold Van Buskirk, Inc., and the Western Pines play important roles in the development of this Westchester community, overlooking Scarsdale, New York.

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Specify Western Pines  From Association Mills  
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**A. W. Holt explains how accurate yet rapid estimating the "TruCost" way helps both Builder and Owner.**

**S**UCCESSFUL men and those who are sincerely interested in attaining greater success consider their time worth money. Any worth-while man will not conduct his business on a philanthropic basis.

Since none but that calibre men would follow my *TruCost* articles since last May, I am assuming that my readers want to know how *TruCost* can help them reduce their operating costs so as to offer more home for the money—thereby making more sales at lower prices with even greater profit for himself.

Salesmen who CREATE house sales tell me that they have to figure five or more jobs for each one they sell. Most of them place it as a ten to one shot. Considering the jobs that are not built because of failure to qualify for a loan, plus the jobs that must be changed so as to qualify, plus the jobs that are changed to meet the changing minds of many prospective builders, plus the jobs that are LOST to some competitor who is either a better salesman or a fool price-cutter, anyone should feel that he has done well if he sells one house out of every ten he may figure. All right, let's see how *TruCost* can help reduce that selling time and, therefore, the selling expense.

Experienced men who make up a complete list of material for stock plans tell me that their quota is two houses per day. That's four hours time per house. After a contractor or builder gets that detailed list of material it takes at least two hours, and usually four, to transfer that list of material to his estimating forms, price each item (if board footage is given by the list as most good lists do) extend same, check and add to arrive at the

total cost. But call it six hours altogether. And two dollars an hour would not be too much for such PROFESSIONAL men. That makes \$12.00 for figuring a special job. If one sells only one job in five, that's \$60.00 as the selling cost per sale; and, like all costs, that must be paid by Mr. Consumer.

In case one makes only one sale out of ten he is worth only half as much as the five-to-one man. The cost to the consumer should be no greater. So let's agree that it is worth \$60.00 to GET READY TO SELL (estimate) the average house job THE OLD LIST-OF-MATERIAL WAY. Compare that to the *TruCost* SYSTEM that SYSTEMATIZES estimating.

A young builder in Minnesota told me that it has never taken him more than fifteen minutes to *TruCost* any *American Builder* home design and that he can take practically any other plan of the average small home and compute the various unit surfaces and be ready to close a deal in 30 minutes. That's twelve times quicker than the old ox-cart list-of-material DRUDGERY. Applying the simple ratio and proportion principle that everyone knows or should know, we have the following problem: 6 is to  $\frac{1}{2}$  as \$60.00 is to \$———?

However one may figure, the answer is \$5.00, and—deducting \$5.00 from \$60.00 means a saving of \$55.00 per house in estimating costs.

So much for the tangible saving, which is only the beginning. Consider what may happen when one sees the prospective owner, who if an average individual DREADS the HAZARD of building a home to order. Friends of his may have told him of their awful experience—what a time they had to get a definite price on the things they wanted—how everyone in the building industry tried to soak them for changes and "extras," and so on without end.

(Continued to page 52)

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"Mass production, the latest machinery, and the engineering skill and experience of our Algoma associates, covering a period of 50 years, have made it possible for us to offer Weldbord at approximately one-third the previous cost of products of equal quality."

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TO RETAIL AT  
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Here is a natural hardwood wallboard combining structural strength, water-resistance, smooth surface, *all* of these desired features at the unheard-of low cost of 6¢ per square foot or less, depending on location of your lumber dealer (much less in carload lots).

The construction of Weldbord is unique. Both faces and the core are of hardwood, welded together under heat and pressure with synthetic

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Weldbord's dense hardwood surface will resist impacts that mar other wall surfaces. And its high water-

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Weldbord is made 1/4" thick only — in sizes 96" x 48", 84" x 48", 72" x 48".

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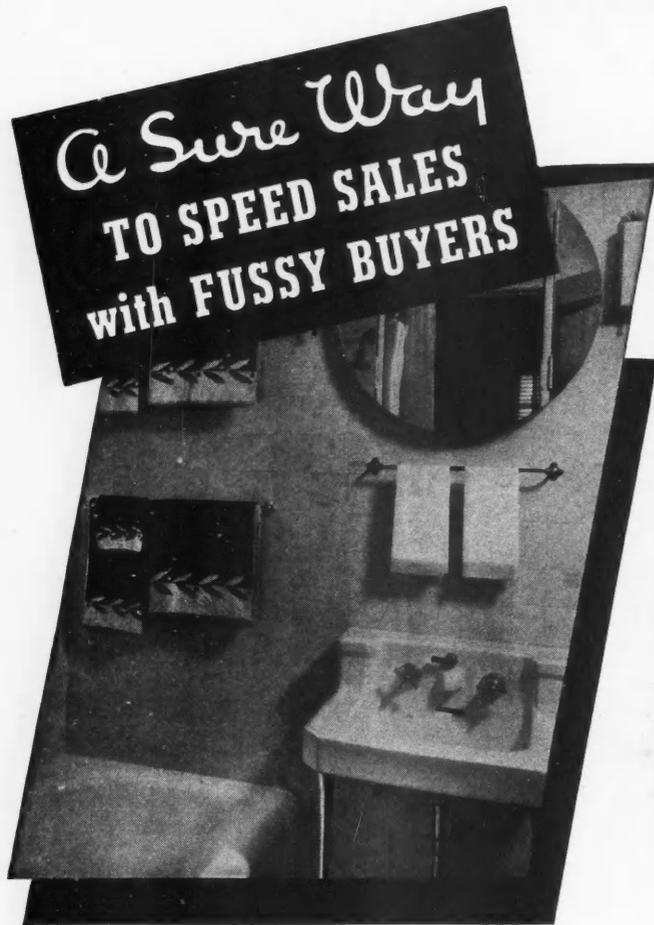
**UNITED STATES PLYWOOD CORP.**

EXECUTIVE OFFICES: 616 West 46th St., New York  
MILLS: Algoma, Wis. • Birchwood, Wis.  
Seattle, Wash. • Orangeburg, S. C.

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# WELDBORD

HARDWOOD . . RESIN-BONDED PLYWOOD WALLBOARD



**MR.** and Mrs. Prospect look over one of your jobs. They like it. The sale "looks good" . . . and then the Missus, who has been reading up and looking about . . . hesitates over those walls.

She's fussy. She wants "the last word" in construction . . . she wants *permanent, beautiful and easily cleaned walls* in the '38 style.

That's where colorful, successful Tile-Tex, the new decorative wall material, welcomes her inspection and *helps your sale*. She readily admits the modernity of Tile-Tex . . . instantly admires the exquisite colorings . . . visualizes how easily they can be kept clean.

For *new job* . . . or modernized . . . Tile-Tex Walls—and Floors—offer low cost and high efficiency . . . and our nearest Distributor has a real fact story for you. Write for his name and a copy of the new folder, "Decorative Walls By Tile-Tex."

**TILE-TEX Company** CHICAGO HEIGHTS ILLINOIS

**OR YOU MIGHT CARE TO REPRESENT  
US IN YOUR TERRITORY**

The Tile-Tex Company  
Chicago Heights, Illinois

If my territory is open, I would like to have complete information on the Tile-Tex Dealer's proposition.

Name.....

Address.....

## "TruCost" Cuts Costs

(Continued from page 50)

One thing to be remembered is that—  
—first impressions are lasting ones,—  
—the importance of getting off to a good start cannot be over-emphasized. With a systematized system of RECORDING ONE'S COSTS that will keep the interest of a prospect when he or she asks, "How much can we save if we omit this?" or "How much more if we add that?", you, Mr. Reader, can readily see that you can raise your batting average from .100 for a one-sale-out-of-ten to .200 for a five-to-one record.

But the saving of costs is only one side of the story that *TruCost* can tell serious-minded builders of homes. The ADDED VALUE as compared to costs is another very important point to consider. This can be illustrated by a concrete example of a sale made a few weeks ago by an up-and-coming builder in Minneapolis, which I will describe in his own words, as follows:

"I just sold a nice Cape Cod Colonial house to a young couple after they brought in a floor plan drawn to a one inch scale on some wrapping paper. They had the size as 26' x 26'. They gave me the impression that it was perfect and that they didn't want anything but that. They had a picture of some relative's house built years ago with wide eaves and a lot of "gingerbread" on the porch. You know the kind. Well, I didn't say a word about their bum ideas about the design. Talking with them and learning that their means were limited and that they had come to me through the recommendation of another party for whom I had built a home, I told them that I would see them that evening and have everything figured. I could see that they were in the mood for buying and I wanted to ACCOMMODATE myself as well as them.

"After they left I quickly figured the units in their 26' x 26' house. The perimeter of 104 linear feet and the floor area of 676 square feet with your rules for figuring the walls, cornice, roof and all other units of any house enabled me to apply the *TruCost* unit costs which I had compiled from your tables starting last spring (May) so I had everything figured in about thirty minutes. Knowing the cost of plumbing, heating, lighting and such things, I was ready to see them about that certain house.

"But," he continued—and this is the part that impressed me about his recoual of that sale—"I had made up my mind that I would not be involved in the sale of the house they thought they wanted. I could not afford to jeopardize the reputation and prestige I have been years in building by putting up that old-timer of a house. It was anything but architecturally correct. Besides it involved a lot of worthless features that they wanted for sentimental reasons. So I got busy and drew up a floor plan of a Cape Cod house 26' x 28' that gave them a combined living and dining room 13' 3" by 25' 0" instead of a dinky little dining room, which they would seldom use, separated by a cased opening from the 'parlor' that their relatives had built into their home years ago. By adding two feet to the kitchen they had nice room for a good old kitchen table for ordinary meals and they could easily get a new apartment-type dining table that would not be out of place in the living room for entertaining guests. And the bedroom was 13' 3" long instead of 11' 3", with a foot added also to both the closet and bathroom—points that I knew would appeal to any woman.

"It didn't take me long to draw up that revised floor plan and get its comparative cost in this way: I added

(Continued to page 54)

# More Home for the Money

## THE RUBEROID WAY



Improved products cut building cost  
**REDUCE UP-KEEP EXPENSE**



**RU-BER-OID**  
Textured Thick Butt Strip Shingles



**Eternit Colonial Asbestos-Cement**  
Siding Shingles

PICTURED are three sales leaders of a wide line of RU-BER-OID Building Products. Each contributes amazing values that enable contractors to offer their clients more home for the building dollar.

In RU-BER-OID Thick Butt Asphalt Strip Shingles, you have improved texture—the appearance of wood grain. You also have double thickness over the exposed area, extra weather protection, deep shadow lines and extra beauty.

In Ruberoid-Eternit Asbestos-cement Siding, you have colorful, time-defying, rotproof, fireproof shingles that are laid quickly. Paint or stain will never be required to prolong their life.

For insulation, you now have RU-BER-OID Rock Wool Giant Bats which are backed with Kraft waterproof paper. Only two bats are required to reach the ceiling of an average room—a boon to low application costs.

Investigate the many improvements in the complete line of Ruberoid-Eternit Building Products. You will find that they help cut building costs, reduce up-keep expenses, and provide your clients with more home for the money. Get all the facts. Mail the coupon today.

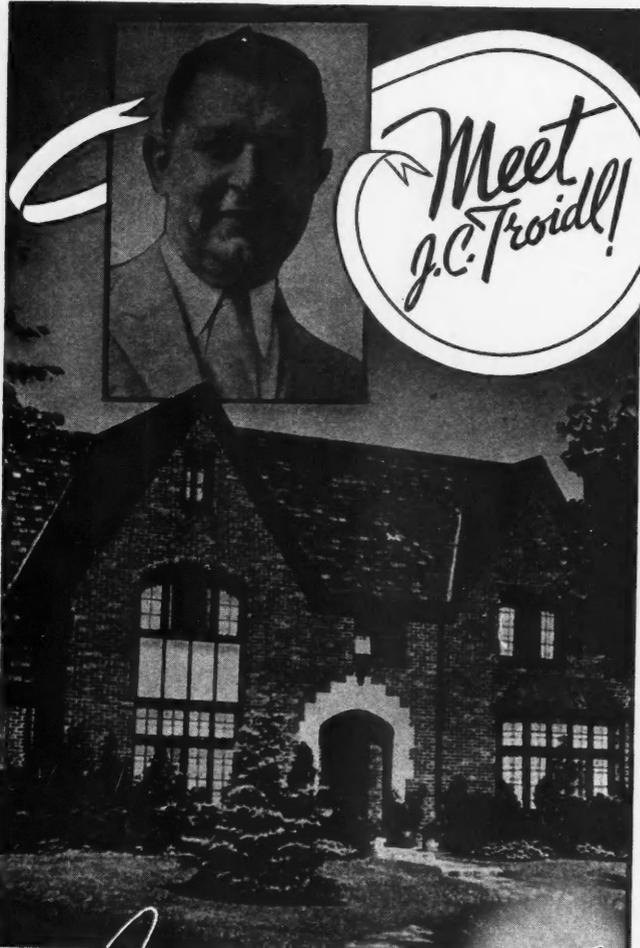


**RU-BER-OID**  
Rock Wool Giant Insulation Bats

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ROOFING AND BUILDING PRODUCTS

The RUBEROID Co., 500 Fifth Avenue, New York, N.Y.  
 Send us copy of "Home Hints," which describes the complete RU-BER-OID Line. AB-10

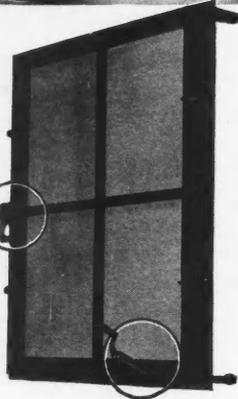
Name.....  
 Address.....  
 City..... State.....



*J.C. Troidl,*

successful Buffalo, N. Y. builder, has built and sold many attractive homes this year. Popularly known as "Troidl Homes," they are equipped throughout with Mesker Guildhall Casements.

"I use Mesker Guildhall Casements in my houses," says Mr. Troidl, "because I find them to be a distinctive selling feature. Their solid bronze hardware appeals to my customers."



*Write today...*  
for the big, free Mesker sash hand book, and let Mesker Guildhall Casements help sell YOUR houses.

**Mesker**  
SINCE 1879

MESKER BROS., 424 SOUTH 7th ST., ST. LOUIS, MO.

**"TruCost" Cuts Costs**

(Continued from page 52)

4 linear feet of foundation wall, 2 x 26 or 52 square feet of basement floor, \$5.00 for the extra excavating, 4 squares more wall (4 x 9'6") and 5 squares more floor and ceiling. I didn't bother to figure the roof because I knew that the saving on the wide cornice which they had wanted would more than take care of the extra roof. I did not deduct for the partition and cased opening between the living and dining rooms of their original plan but left that to cancel the cost of the little things that make a home complete, such as a built-in mail box, telephone shelf, etc. and other things which I furnish but don't mention so as to more than please them. The more I considered the RELATIVE VALUE of the two houses, the more confident I was that I could sell them that house that same evening."

About that time I interrupted by saying that it takes such self-confidence to inspire the confidence in a prospect's mind so that they CANNOT HELP BUT BUY.

"Perhaps that's why I sold them that house that same evening JUST AS I HAVE SOLD EVERY RE-ROOFING JOB THAT I HAVE FIGURED THIS YEAR," he told me, beaming with the ESSENTIAL enthusiasm that causes folks to want to buy.

The salesman who approaches a prospect with misgivings as to his qualifications to serve or inwardly questions his own SINCERITY OF PURPOSE should be keeping books or doing some other routine work instead of contacting prospective buyers.

That up-and-at-em builder sold that job and gave them about 25 per cent more value for less than 3 per cent more cost. And TruCost was his "Efficient Selling-tool" that kept his other efficient "building tools" busy.

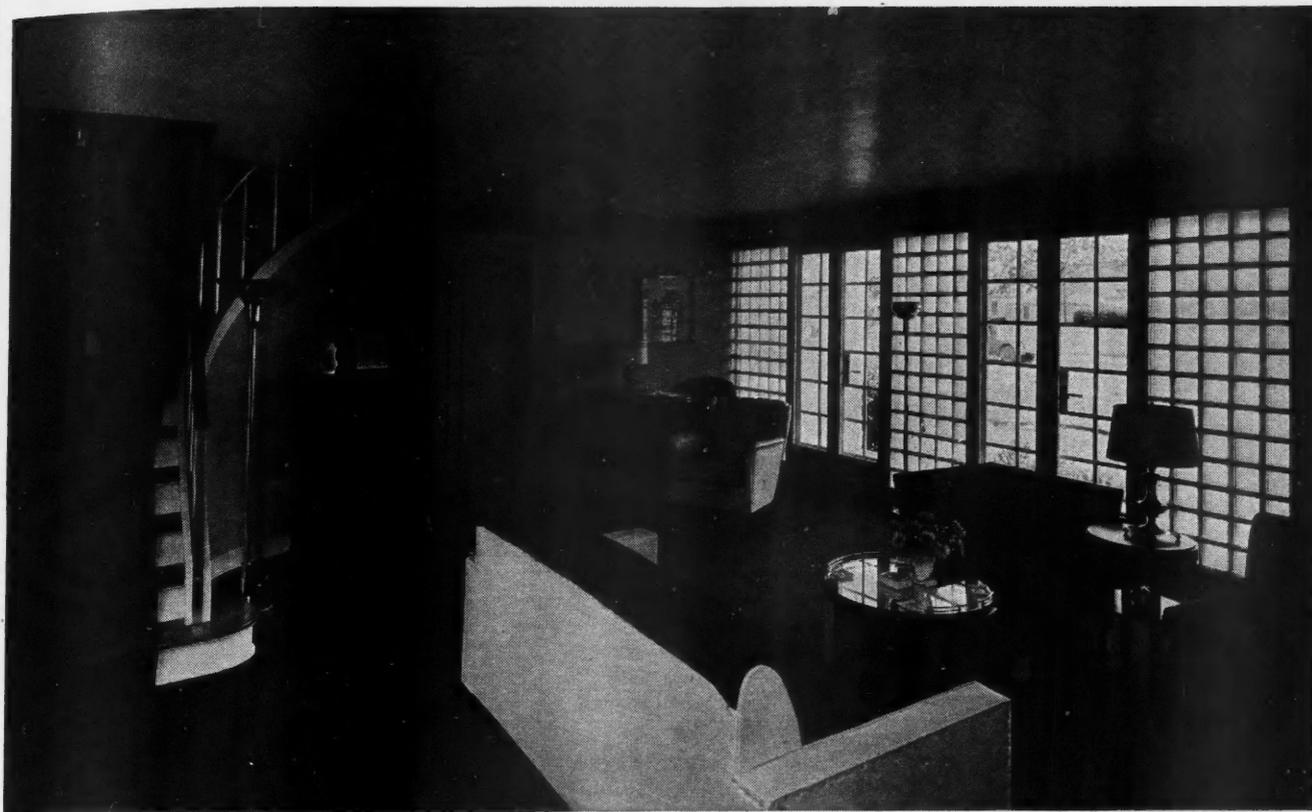
"How did you sell the job so quickly and easily when there are so many kinds of materials and other details to decide upon?", I asked, to which he replied in no uncertain words:

"I've quit asking them what they want—I'm telling them what they should have by simply asking them what they prefer in the way of wall and roof covering, finish flooring, trim and a few of the things folks can see. I took a course in salesmanship once that taught me that a positive and confident attitude made sales whereas a negative viewpoint lost sales."

Why shouldn't that be? Since dealers and their contractor friends know more about materials than the butcher, the baker and the electric light maker, isn't it about time that each one quits asking a prospect about all the minor details? Folks will be ahead if they will select their dealer or contractor and TRUST him as I trusted "Old Andrew the watch-maker" 28 years ago in buying my first and only watch. This is what happened:

Having saved up \$25.00 I took it down and handed it to Old Andrew saying: "Andrew, I want you to get me the best watch you can for this \$25.00—all I know is that I want a plain gold case and my initials carved on its back," the same as folks should say that they preferred some certain wall covering, oak floors and trim, etc. Slipping me the magnifying socket out of his eye and opening his catalog, Old Andrew started to tell me about movements, jewels and a lot of truck I knew nothing about whatsoever. He seemed surprised when I informed him that he knew watches and I didn't—that I wanted him to get me the same watch he would buy for himself for \$25.00. I have often wondered if he didn't dig down in his jeans for a few extra dollars!

(Continued to page 56)



The C. M. Joiner residence, Dallas, Texas. John Perkins, Architect. Below: exterior, Joiner residence.

# CLOSE YOUR PROSPECTS WITH "LIGHT THE MODERN WAY"

● Let INSULUX sell for you. It is just as adaptable to the modest small home as it is to larger structures. It blends equally well with almost any type of architectural design . . . creating a focal point of sparkling interest regardless of whether the specifications call for twenty blocks or two hundred. . . INSULUX permits the economic operation of winter air conditioning without curtailing the amount of light or light-giving areas. INSULUX admits light and retards heat flow and sound transmission; all of primary importance to the home prospect or purchaser. Thousands of successful installations have been made in almost every type of building. Write for complete illustrated details about INSULUX. . . Owens-Illinois Glass Company, Toledo, Ohio.



An interesting use of Insulux which suggests possibilities in residential construction.

OWENS-ILLINOIS  
*Insulux*

GLASS BLOCK

PIONEERED AND PERFECTED BY

OWENS-ILLINOIS *First in Glass*

# "TruCost" Figures for American Builder Homes

HOME DESIGNS ON PAGES AS NUMBERED

Unit of Construction	Oct., 14	Oct., 17	Oct., 18	Oct., 19	Oct., 20	Oct., 22	Oct., 23 Upper	Oct., 23 Lower	Oct., 25	Oct., 27
Basement Walls, lin. ft.	158	124	216	125	138	116	141	116	122	112
Trench Walls, lin. ft.	0	0	32	50	30	72	36	13	42	0
Basement Floor, sq. ft.	823	833	1842	874	904	832	846	728	737	768
Garage Floor, sq. ft.	196	0	0	308	220	180	171	0	210	0
Excavation per ft. deep, cu. yds.	44	35	78	41	41	40	41	31	35	33
Holt Rate on following items	1.675	1.045	1.968	1.855	1.795	1.156	1.093	.870	.972	1.504
Outside Walls, squares	22.9	17.1	20.5	27.5	24.2	18.3	15.3	12.6	13.9	22.4
First Floor, squares	8.3	8.3	18.4	8.7	9.0	8.3	8.5	7.3	7.4	7.7
Second Floor, with Fin. Flg., sqs.	7.9	0	0	8.4	9.7	0	0	0	0	7.7
Second Floor, without Fin. Flg., sqs.	0	0	0	.3	0	0	0	0	0	0
Ceiling, sqs.	8.3	8.3	18.4	11.7	11.2	8.3	10.2	7.3	7.4	7.7
Roof Pitch, inches rise per ft. run	7"	10"	5"	10"-24"	4"	10"	8"	6"	5"	7"
Roof, squares	10.3	11.9	22.7	18.1	13.3	14.7	13.1	9.3	12.2	10.8
Hips and Valleys, lin. ft.	0	32	285	10	90	0	0	24	40	0
Cornice, type and size of	C & F-154	C & F-162	12"-224	C & F-170	C & F-36	C & F-220	C & F-167	C & F-128	C & F-154	C & F-98
Cornice, lin. ft.	0	0	0	0	12"-128	0	0	0	0	12"-120
Partition, lin. ft.	182	119	245	253	214	128	163	101	96	205
Inside Finish OS Walls, lin. ft.	230	124	216	278	267	116	141	116	122	224
Front and OS French Doors, opgs.	2	1	2	1	2	1	1	1	1	1
Rear and Grade Doors, opgs.	1	1	1	1	1	2	0	1	1	1
Garage Doors 8' wide	1	0	0	1	1	1	1	0	0	0
Inside Doors and Casement Opgs., opgs.	15	13	20	22	18	14	14	10	9	18
Windows and Casements, opgs.	22	11	29	20	23	10	10	10	11	18
Gable Sash and Louvers, opgs.	0	3	0	2	0	2	2	0	3	2
Chimney, lin. ft.	36	33	27	38	32	30	28	25	26	35
Main Stairs	1	0	0	1	1	0	0	0	0	1
Porch Floor, sqs.	2.0	0	.3	0	0	.8	0	.4	1.1	0
Porch Ceiling, sqs.	2.0	0	.3	0	0	.8	0	.4	1.1	0
Porch Beam, lin. ft.	40	0	11	0	0	28	0	13	45	0
Porch and Bal. Post and Newels, No.	5	0	5	0	0	2	0	1	6	0
Porch Roof, sqs.	2.6	0	0	0	0	0	0	0	0	0
Porch Cornice, lin. ft.	44	0	0	0	0	0	0	0	0	0
Porch and Deck Rail, lin. ft.	40	0	0	0	0	0	0	0	10	0

## Necessary Home Equipment, Fixtures, Accessories, Extras

Since the above surveyed items cover only the actual superstructure of the house, you should figure and add the following items as specified or wanted (and don't forget Overhead and Profit):

Areaways, Cellar Sash, Coal Chute, Basement Partitions & Doors, Attic Flooring, Attic Stairs, Blinds, Gutters & Downspouts, Fireplaces,

Built-in Cabinets, Rail & Newels for Stairs and Stair Well, Beamed Ceiling, Weatherstrips, Tile Work, Plumbing, Heating & Air Conditioning, Lighting, Terraces, Patio Walls or Fences, Sidewalks including Porch Steps, Driveways, Unattached Garages. Also add for painting and decorating if not included in Unit Costs.

### "TruCost" Cuts Costs

(Continued from page 54)

because this watch has been cleaned and repaired only four times in 28 years and it's still, as he told me when I called for it, "a good railroader's watch."

That early experience plus a great many more has convinced me that one will be ahead if he will leave technical details to those who know or should know. In view of the fact that there are tricks in all trades, in buying things like watches and homes, one should,—

—play safe by trusting the seller and let him know it.

Among my acquaintances are many builders who will not be a party to shoddy construction; one in particular comes to mind. He has been building homes to sell as well as on contract, or "to order", for more than 30 years. He has built up an enviable reputation for building good homes. While waiting to see him I overheard him tell a prospect in so many words, "If you want that kind of a home you'll have to get somebody else to build it because I am not going to 'spoil' my reputation by building like that. If you want me to build you a good home like hundreds will tell you I have built for them, I'll build the house you WANT with your own selection of trim, etc., but I'll build it the way I KNOW it should be built."

Perhaps that's *telling* them the wrong way in many cases, but it's *telling* them. And it frequently is good sales psychology to let Mr. Buyer know that his complete

satisfaction in years to come means more than the few dollars profit now. The price-minded salesman and builders should remember that,—

—quality is remembered long after the price is forgotten.

Every "operative builder" who is doing business today in the same old stand where he was a "speculative builder" in 1929 can usually attribute his present success to the prestige he built up then; just as the old watchmaker had done in my boyhood home when I told him to get me a watch with a plain case and my initials carved on the back for \$25.00 instead of a house with "Such a roof and trim and floors." *TruCost* will sell better materials better once alternate costs are known and quotations are made on the basis of the complete unit instead of per thousand or per piece.

Obviously, the man who spends one hour estimating and five hours selling will sell five times as much as the man who wears himself out with four hours of hard work with "mind-wrecking" tools and one hour selling. And,—the ability to quote promptly in terms that interest the buyer is prerequisite to successful salesmanship of homes as well as anything else.

The price, or consideration, is absolutely essential in every contract and *TruCost* will enable anyone to close deals for new homes SAFELY as well as cheaper, quicker and easier than any other **DEPENDABLE** method of estimating, thereby contributing to the main objective of—

More Home for the Money *Today and Always.*

YOU CAN MEET THAT DEMAND OF "MORE HOUSE FOR THE MONEY TODAY" WITH

# Perforated Rocklath

## THE FIREPROOF LATH

The lath to which plaster takes a  
**WELDED and RIVETED grip**



With Perforated Rocklath,\* you can give your customers walls of the utmost character and distinction—without adding materially to construction costs. For plaster takes a double grip on this modern lath that helps keep decoration in its prime: first, the **WELDED grip** as the gypsum plaster bonds to the surface of the lath; second, the



**RIVETED grip** formed as plaster is forced through its regularly spaced perforations to expand and form "mechanical rivets" on the back.

And, in addition, with Perforated Rocklath, you are building fire protection into your homes. USG tests made at the U. S. Bureau of Standards qualify partitions made of Perforated Rocklath plastered with one-half inch gypsum plaster for a one-hour fire rating.

Don't get the idea that because Perforated Rocklath has all these advantages that it is a high-priced material. You'll find that it costs little, if any, more than the cheapest kind of old-fashioned plaster lath.



Now available to help you increase remodeling and repair sales

### THE USG MONTHLY-PAYMENT PLAN

can be used to finance all types of remodeling—regardless of the USG materials used on individual job. Write for complete details.

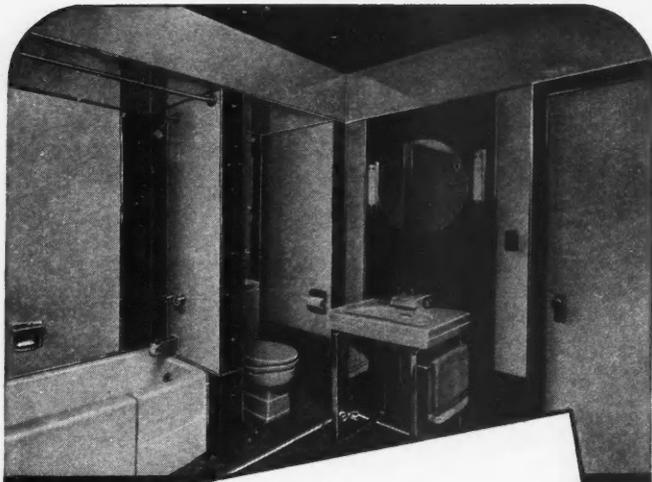
For more facts about Perforated Rocklath, send in the coupon below

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300 WEST ADAMS ST. CHICAGO, ILLINOIS

PLASTERS . . . ROCKLATH\* . . . METAL LATH  
SHEETROCK\* . . . FIBER WALL BOARD  
SHEATHING . . . INSULATING BOARD  
INSULATING WOOL . . . ACOUSTICAL MAT-  
TERIALS . . . PAINT PRODUCTS . . . STEEL  
PRODUCTS . . . ROOFING PRODUCTS  
SIDING PRODUCTS . . . LIME PRODUCTS



United States Gypsum Company AB-1  
300 West Adams Street, Chicago, Illinois  
Please send the Perforated Rocklath circular con-  
taining information on wall construction.  
Name.....  
Address.....



*Marlite makes*  
**"MORE HOUSE FOR  
 THE MONEY"**



Building homes with Marlite kitchens and bathrooms, is an ideal way to give prospective home buyers "more house for the money". . . a better investment value without increasing building costs.

Marlite entails no upkeep expense . . . saves home owners hundreds of dollars in periodic renovating. A damp cloth keeps Marlite's lustrous beauty smart and new for years. The modernity it brings long outlives less appropriate materials. These inducements will close lots of sales . . . represent an investment value that costs you nothing to provide.

Equally important, Marlite interiors never have to be standardized as to color and decorative design. 63 style-creating colors and patterns afford contractors and builders an opportunity to make even standard-plan homes highly selective . . . individual in interior treatment . . . afford buyers more choice.

Marlite is reasonable in first cost . . . economical to install. The large prefinished, wall-size panels are speedily applied to any wall surface by carpenters. Sell more homes by utilizing the beauty and smartness of Marlite to influence sales.



Write for free book that describes Marlite more fully . . . that illustrates home interiors originated with Marlite.

**MARSH WALL PRODUCTS, INC.**  
 103 Marsh Place . . . Dover, Ohio

*Marlite*  
**FOR CREATING BEAUTIFUL INTERIORS**  
 WALL-SIZE PANELS IN LUSTROUS COLORS AND PATTERNS

## More ROOF for the Money

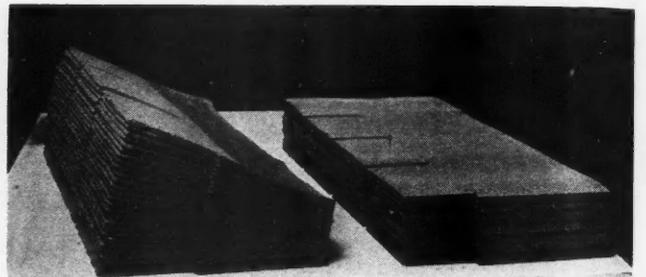
**T**HE mineral-surfaced asphalt shingle, one of the oldest and most widely used products of the building industry, illustrates in a graphic way why "more house for the money today" is possible.

Five basic improvements to the asphalt shingle within the last twelve years are listed as a result of a study of prices and quality recently completed by The Asphalt Shingle Institute. These improvements are listed as:

1. Brilliant extension of color range.
2. Heavier, longer life, thick butt shingle.
3. 23 Percent lower cost than 1926.
4. Fill coating process, quadrupling length of life.
5. Supersaturation process, insuring absolute waterproofness.

These additional values make the asphalt shingled roof of 1938 a better built roof, a less expensive roof and a more colorful roof than that of 1926:

1. **COLOR RANGE:** Color is rapidly becoming one of the most distinctive features of the asphalt shingle. In 1926, only four colors were generally used in the manu-



ALTHOUGH 23 PERCENT LOWER IN PRICE than in 1926, the modern, thick butt asphalt shingle has greater thickness and weather-resisting qualities at the exposed portion, as illustrated above.

facture of asphalt shingles: natural red, gray-green, gray and gray-black. Today, more than 20 brilliant colors are used in the manufacture of the average shingle line. Reds, browns, greens, yellows, blues, black and blends of these have been developed that are permanently brilliant, non-bleaching and can be composed to create almost any desired color effect.

2. **THE THICK BUTT SHINGLE:** The standard—most widely used shingle of 1938 is the thick butt shingle. By thickening the tab of the asphalt shingle by re-dipping and adding an additional layer of fire-resistant granules, its appearance has been improved, its life lengthened and its fire-resistance increased. Thick butts cast deeper shadow lines that give additional pattern to the color of the roof.

3. **COST:** Thick butt asphalt shingles today cost 23 percent less than the standard 1926 shingle. In addition to this reduced initial cost, the maintenance cost and year to year cost of an asphalt shingled roof has also been considerably reduced, due to its greatly lengthened life.

4. **FILL COATING:** Fill coating has done for the asphalt shingle what vulcanizing and rubber tempering did for the automobile tire—it has increased the life of the asphalt used in its manufacture as many as four times. The asphalt used in 1926 shingle tended to blister, run or become brittle when exposed to great extremes of temperature. Fill coating has corrected that, stabilized the asphalt so that it remains inactive under all normal weather conditions.

These are the important improvements that make the asphalt shingle of 1938 a better shingle, a less expensive shingle, a more fire-resistant and a longer-lived shingle than that of 1926.

# EASY TO SELL

## A Genuine Cedar Shingled Home



Here are some excellent selling points in favor of *genuine* Red Cedar Shingles.

A Red Cedar Shingled house has outward appearance—a natural “homespun” beauty that Americans have sought since Colonial days. Economical, because long life makes their per-square, per-year cost the very lowest. A Cedar Shingled house is a dependable investment.

Genuine Cedar Shingles offer unlimited opportunity for planning distinctive homes because they lend them-

selves harmoniously to any style of architecture and to a wide range of color.

The unusual insulation of *genuine* Cedar Shingles keeps homes cool in summer and warm in winter — fuel bills are cut — air conditioning more practical.

America is “sold” on Red Cedar Shingles. National magazines regularly carry a sales appeal to millions of prospective home buyers, creating an increasing demand for a product that is naturally easy to sell.



This *Certigrade Cedar Shingle Handbook*, prepared by a wood technologist, mailed free on request. One hundred pages detailing the uses, application and technical data. Write the Red Cedar Shingle Bureau, Seattle, Wash., U.S.A., or Vancouver, B.C., Canada.

FOR GUARANTEED GRADES AND QUALITY, SPECIFY—

# CERTIGRADE

## Red Cedar Shingles

*Certigrades* pass official inspection for grade and quality. U. S. Government standards.



A LAMP GLASS TO UNCOVERED SHINGLES SHOWS AN UNUSUAL GRAIN AND COLOR. SEE THE ATTACHED PHOTOGRAPH FOR DETAILS.

Sold only by established lumber dealers





The gutters and downspouts are made of Armco galvanized PAINTGRIP Sheets, and were painted as soon as installed. There was no waiting for weathering. No acid etching either, which eats off part of the protective zinc coating.

When paint comes directly in contact with zinc the oils in the paint tend to dry out, permitting peeling and flaking. Armco PAINTGRIP Sheets have a neutral surface film that insulates the paint from the zinc, yet grips it tenaciously. This insulation lengthens paint life . . . keeps paint flexible, beautiful, protective.

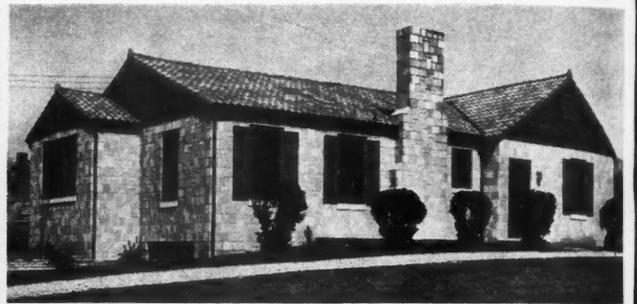
If you have never used Armco galvanized PAINTGRIP Sheets, try them on your next job. There's an Armco distributor or sheet-metal contractor near you, who will be glad to serve you. Or, write us direct for complete information. The American Rolling Mill Company, 3001 Curtis Street, Middletown, Ohio.

**Armco**  
**PAINTGRIP SHEETS**



## Local Cement Products Plants Contribute to Lower Masonry Costs

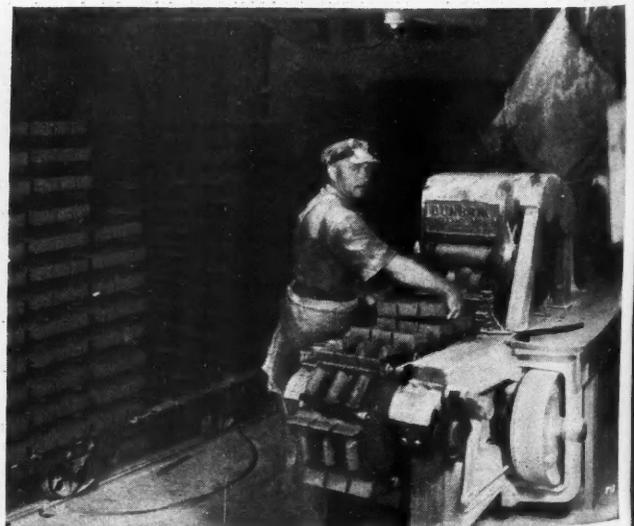
THE all-important factor of lower building cost is being secured in many communities through the operation of masonry products plants which utilize local raw materials, turning them into finished product and serving them direct to the local market. This direct factory-to-job delivery cuts transportation costs to a minimum, and the products plants are low enough in cost so that they can be set up and operated in practically any community. The first installations of the new improved plants to manufacture Dunbrik and Dunstone, two popular cement building units, were made in Kalamazoo, Mich., and in Wichita, Kans., and proved fundamentally sound the business principles on which the equipment manufacturer sponsoring these units has



HOME of Dunstone ashlar construction, Knoxville, Tenn. Mat glazed cream, buff, tan. Sizes used: Standard Dunbrik  $2\frac{1}{4} \times 3\frac{3}{4} \times 8$ , Dunstone (double brick)  $8 \times 8 \times 2\frac{1}{2}$ , and Dunstone (triple brick)  $8 \times 12 \times 2\frac{1}{4}$ .

based his proposition. Now, after eight years, more than one hundred of these plants are in operation in this country, with an even greater number in foreign countries. And in almost every section of the world, you can today see buildings ranging from the modern, elaborate architectural masterpieces down to the modest cottage, all largely constructed of local materials produced in these decentralized plants.

The building industry, being eager to improve, has found many innovations with the introduction of these new materials, because of their versatility. The various multiple sized units of the Dunstone have enabled them to devise many economies, as well as structural improvements in fire-safe, permanent buildings. These combinations  
(Continued to page 62)

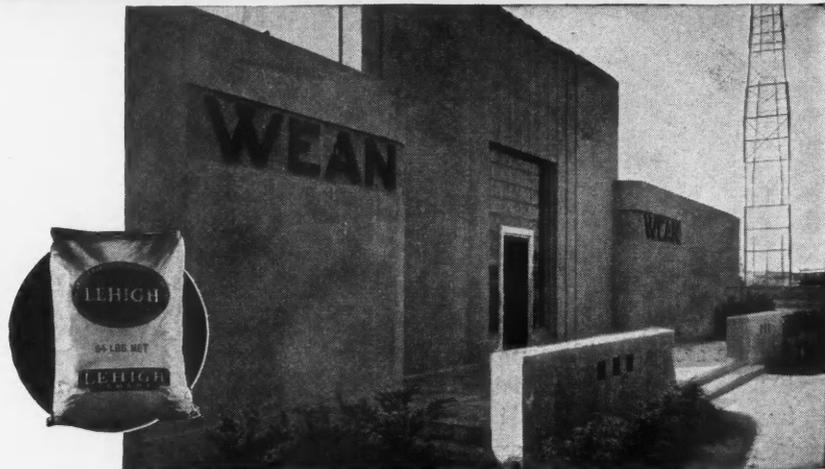


DUNBRIK line producing machine making 32 brick per minute.

# On many jobs *You can use these* three **Lehigh Products**

## Lehigh Normal Cement

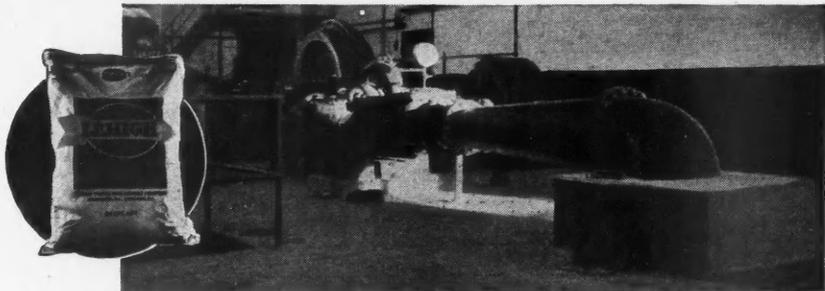
For forty years Lehigh Normal Cement has proven its dependability. Use it whenever normal curing time may be allowed for any use of portland cement. Uniform in quality, it meets the most exacting requirements. Its uniform color is desirable for architectural effect.



For the architectural beauty of Radio Station WEAN at Providence, R. I., a dependable, uniform color cement was required. Lehigh Normal Cement was used with complete satisfaction. Architects, Harry E. Davidson & Son, Boston, Mass. Contractor, A. W. Merchant Co., Providence, R. I.

## Lehigh Early Strength Cement

In addition to all the desirable properties of Lehigh Normal Cement, Lehigh Early Strength Cement has the attribute of speed—it cures to service strength three to five times faster. Use it for any work where quick use is needed. Use it in cold weather to save on heat-curing costs. Use it for concrete of maximum density and plasticity.



When the city of Manchester, N. H., installed a new pump at the Water Works, speed was essential. Therefore in making concrete alterations and the new pump foundation, Lehigh Early Strength Cement was used. The new pump was set in place within 24 hours after pouring. C. L. Ahlgren was the Engineer for the city.

## Lehigh Mortar Cement

It makes the ideal mortar for laying up any type of masonry unit. It has extreme plasticity, high water retention, strong bond, adhesiveness, minimum shrinkage, and water repellency. It meets the requirements of Federal Specification SS-C-181b, Type II. With only sand and water to add, there is less work at the mortar box. Use it for economy, speed and dependable performance.



Lehigh Mortar Cement was used for the brick work for Saunders Station, U. S. Post Office, Richmond, Va. C. Alfred Purkins, Mgr., Southern Brick Co., who were the brick sub-contractors, wrote: "Plasticity is excellent. We do not hesitate to recommend this mortar cement to anyone wanting a good workable mortar, with excellent waterproof qualities and tensile strength." General Contractor, Algernon Blair, Montgomery, Ala.

The Lehigh Service Department will welcome inquiries. Informative literature will be sent on request.

**LEHIGH PORTLAND CEMENT COMPANY**

Allentown, Pa.

Chicago, Ill.

Spokane, Wash.

# WHAT EVERY BUILDER SHOULD KNOW ABOUT



Take a sample of Wolmanized Lumber\* in your hand, you will see instantly one of its most important advantages: It is clean and odorless, in all outward appearance just like any other wood, except for a slight yellow tint. Using it is a regular carpentering job, and it can be painted and stained in the ordinary way. Handling cost is not increased.

When Wolmanized Lumber is used, there is no need for substitutes for lumber. It gives reliable protection against termites and decay, answering the modern demand for enduring construction. Yet it costs little. Used strategically, at danger points such as sills, joists, and subfloors, it adds less than 2% to the cost of the ordinary house. Banks and financing agencies recognize the value.

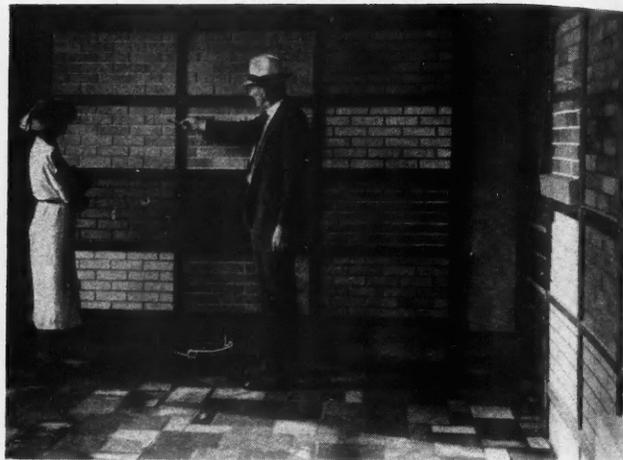
Lumber dealers in your community can supply Wolmanized Lumber promptly. For complete information on use and applications, write today to AMERICAN LUMBER & TREATING COMPANY, 1406 Old Colony Bldg., Chicago.

\*Registered Trade-mark

ENDURING • CLEAN • ECONOMICAL

## Lower Masonry Costs

(Continued from page 60)



W. W. WHITNEY, sales manager, Riverside Dunbrik Co., Milwaukee, showing a prospect wide selection of Dunbrik his plant manufactures.

tions of sizes also make it possible to construct all-masonry walls, maintaining the conventional brick exterior or the more modern variations.

As an example of actual costs, using these locally manufactured masonry units, consider the summer home of John G. Eaton of Chicago at Waukazo, Mich. The walls in this building were constructed at a cost of \$22.60 per hundred square feet, which required 226 Dunstone (or triple brick) 8x12 inches, and 113 8x8 inch Dunstone (double brick). The mortar requirement was 5 cubic feet per hundred square feet. Thus was provided a hollow, insulated, all-masonry wall with a tight plaster base. The plastering was done direct, effecting a still further saving by eliminating furring and lathing, and requiring only a scratch and finish coat of plaster.

In Harbor Beach, Mich., R. Riedel, a local builder, using about the same construction found that it provided practical and economical building foundations, his cost being only \$9.80 per hundred square feet, or a saving of more than 25 per cent over solid masonry.

With eighteen sizes available in these units and an almost unlimited range of color, the architect is provided with a broad opportunity for exercising individuality in designing and harmonizing the materials in the structure he is creating. In the manufacture of these products, all methods are standardized; and this, with definite control exercised, assures quality to the builder.

The production machine which is the basis for this local concrete products industry is automatic and uses the well known line-production methods. The efficiency of the machine is such that it has reduced manufacturing costs as much as 50 per cent over old time equipment and methods. Raw materials (aggregate and cement) enter at one end of the plant and emerge at the other in the form of perfect brick or multiples of that unit.

The Engineering Department of the originators, the W. E. Dunn Mfg. Co. of Holland, Mich., as well as the laboratories of most cement companies, are at the disposal of the Dunbrik manufacturers, helping to maintain a high standard of quality. Hundreds of tests too have been and are constantly being made by various educational institutions, government agencies and municipalities, which have definitely proved the high standard quality attained by the manufacturers of the product.

Another step to lower costs has come with the introduction of an almost limitless range of colors, shades and textures in these masonry walls. Two processes have been developed to produce this faced material.

# SIDING SHINGLES



**YOUR** houses will attract more interested prospects, sell quicker, and bring better prices if you use "Century" Asbestos-Cement Siding Shingles. These shingles work for you like salesmen, smoothing the way to speedier sales at prices that spell p-r-o-f-i-t.

**KEASBEY & MATTISON COMPANY**  
 AMBLER, PENNA.

"Century" Asbestos-Cement No. 57 Broad siding Shingles in Shell White combine eye-catching good looks with intensely practical durability on the sidewalls of this seashore home. Fire-resisting, weather-resisting—no need for protective painting.

**SEND FOR DATA ON K & M BUILDING PRODUCTS**

- Asbestos Roofing and Siding Shingles
- Asbestos Flexible Wallboard (Sheefflextos)
- Asbestos-Cement Structural Board and Sheathing (Linabestos)
- Asbestos Decorative Walltile
- K & M Mineral Wool Insulations for the home

Underline the products on which you want data and mail this coupon today.

NAME \_\_\_\_\_  
 NAME OF FIRM \_\_\_\_\_  
 ADDRESS \_\_\_\_\_

## Progressive Prefabrication

(Continued from page 37)

ready for quick installation, a real economy measure. Both window and door trim accurately pre-cut at the factory are also growing items of importance.

In the realm of tile, great progress has been made towards substituting large units of asbestos board or other composition materials fashioned to resemble tile but which eliminate much of the costly installation work. Hardwood flooring is also sold in great quantities in prefabricated blocks delivered to the job finished and ready for rapid laying.

Even such a modern product as mineral wool has undergone considerable change in recent years to make installation more simple. Formerly sold largely in bulk form, which made possible uneven and careless packing which was also costly, this product is now largely sold in rolls which are more easily installed and provide a better job at lower cost.

Mass production has had a large effect on home equipment. Take for example kitchen cabinets which formerly were laboriously and expensively built on the job. A better and less expensive product can now be obtained that is built in standard units in a factory. Kitchen sinks formerly sold as individual units are now sold as part of an assembly of counter top and cabinets. In fact the entire equipment of a kitchen is becoming more and more standard with the result that one leading manufacturer has developed the unit kitchen, a series of interchangeable parts.

Progressive prefabrication has had a noticeable effect on heating and airconditioning. Whereas formerly the heating plant consisted of a large number of small units, the tendency is now toward a single integrated efficient unit enclosed in one case.

## Florida Low Cost Homes

(Continued from page 24)

nation of the individual foremen, mechanics, clerks and laborers of our organization, together with the co-operation of the sub-contractors and building supply dealers," says Lester F. Preu. "Here I wish to state that we have a unique method, different from other contractors in that we consistently use the original sub-contractors and men that we made friends with and started up with many years ago. We never take any bids nor do we do any chiseling. We always secure the very lowest prices on materials and sub-contract work with nothing but harmony among all trades. We can always secure immediate action at any time and 100 per cent co-operation. All our sub-contractors and material dealers make money, and their employees buy our homes."

The houses are all built to one standard plan, having enough variation through different trim, bright colors and exterior details to give a block of striking and attractive homes. Many short-cut methods of construction have been evolved using jigs, templates, electric power tools, and by having certain crews for each operation. To mention just two of these saving methods, one was the use of a mechanical paint sprayer to prime all siding trim, etc., on the site before application, and a second, the use of pre-cast concrete steps leading up to the porch.

In producing these low-cost houses, neither quality of workmanship nor materials have been sacrificed, as all houses are subject to strict FHA inspection. In many instances the houses exceed FHA requirements; for instance, Insulite sheathing under the beveled cypress siding of these houses is an extra above FHA minimum standards for that section of the country. Other points of quality include the use of termite shields, reinforced concrete footings and porch slabs, treated lumber resting on masonry, braced and anchored framing, color plaster job on cypress lath with corners reinforced, three-coat painting on woodwork, creosote stained red cedar roof, sanded, filled, shellacked and waxed oak floors over sub-floors except linoleum in kitchen and bath, built-in kitchen cabinets and quality plumbing fixtures.

# A VENTO WINDOW *for Every Purpose*

VENTO OFFERS A COMPLETE LINE OF STEEL WINDOWS

CASEMENTS . PIVOTED . ARCHITECTURAL and COMMERCIAL PROJECTED

SECURITY and UTILITY WINDOWS arranged for putty glazing

VENTO has also pioneered the PUTTYLESS TYPE of windows and still leads this field due to improvements and exclusive PATENTED features obtainable only in

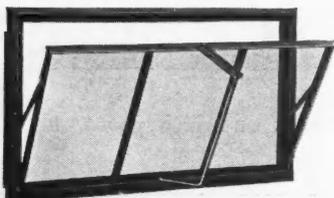
PREMIER BASEMENT WINDOWS  
VENTO SIDEWALL SASH

CHAMPION BASEMENT WINDOWS  
VENTO UTILITY SASH

VENTO for years, has held an enviable reputation thru its long established DEALER POLICY. ITS PRODUCTS are now sold by over 3000 LUMBER and BUILDING SUPPLY DEALERS.

VENTO QUALITY Windows Assure Owner and Builder Satisfaction

THAT means PROFIT for the DEALER



Premier Basement Window

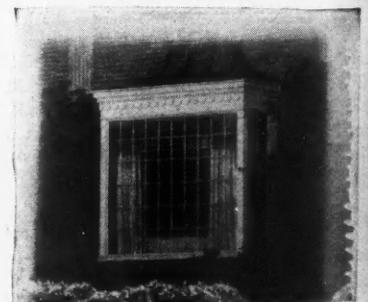
IT WILL PAY YOU TO INVESTIGATE

*Write Now for Details and Catalogs*

**VENTO STEEL PRODUCTS COMPANY**

**MUSKEGON**

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Vento Casements

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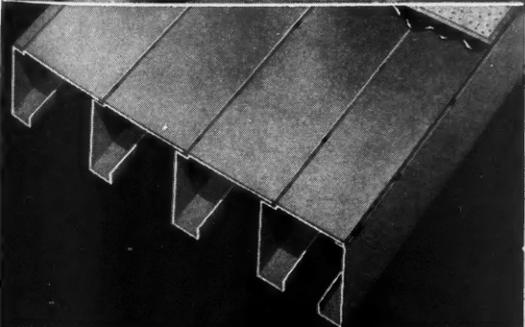
# LONG-SPAN

STEEL FLOOR AND ROOF SYSTEM

## SIMPLIFIES YOUR JOB ALL DOWN THE LINE

● Extending from girder to girder or from truss to truss, Wheeling Long Span Steel Joists require no intermediate beams or purlins. Pre-fabricated of 12 or 14 gauge Wheeling COP-R-LOY to correct dimensions, they assure fast fool-proof erection. A six-man crew can lay and weld approximately 1,000 feet of floor or roof in one hour.

The completed surface is level and immediately available for tradesmen to start roughing in. Bricklayers can work from this platform and do not need exterior scaffolding. Any type of finish can be easily and quickly applied to a Wheeling floor or roof. Strong, light weight, and fire-proof, Wheeling Long Span Steel Joists are the ideal construction for modern buildings. Write for full details!



NEW YORK  
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**WHEELING CORRUGATING CO.**  
WHEELING, WEST VIRGINIA

KANSAS CITY  
ATLANTA  
COLUMBUS, O.

MINNEAPOLIS  
RICHMOND  
DETROIT

To sell or rent faster  
dress up basement playrooms with  
**ASPHALT TILE FLOORS**



In this Model House, Kansas City, sales-appeal is added to the basement game room with an attractive, low-cost floor of Armstrong's Asphalt Tile.

You can do it at low cost by using  
**ARMSTRONG'S ASPHALT TILE**

IT'S easy and inexpensive to turn basements into cheery playrooms with colorful low-cost floors of Armstrong's Asphalt Tile. And it's a sure way to inject pep into lagging sales and rentals. Playrooms floored with Asphalt Tile have "eye-appeal" that makes prospects sign on the dotted line.

Asphalt Tile is the only type of resilient flooring suitable for installation over concrete subfloors that are below grade. Use it for basement game rooms or laundries, and for kitchens, baths, hallways, and other rooms in basementless houses.

You'll find that the name *Armstrong* is a powerful selling help. Prospects everywhere know that this famous name stands for high quality in floors.

Armstrong's Asphalt Tile is inexpensive to install. There are 38 plain or marble colors to choose from. Write today for your copy of "Gay Floors for Basement Playrooms." Armstrong Cork Products Co., Building Materials Div., 1218 State St., Lancaster, Pa.



RUBBER TILE • LINOTILE (OIL-BONDED) • ASPHALT TILE

*Armstrong's* LINOLEUM  
and RESILIENT, NON-CERAMIC TILES

CORK TILE • LINOWALL • ACOUSTICAL CEILINGS

## Worth \$1,000 More

(Continued from page 38)

In addition to savings through planning and design, the Gross-Morton Company is continually adopting improved methods and materials to enable them to give more house for the money. The work is highly organized and is the closest thing to the "assembly-line" method of production possible. As high as 25 subcontractors are employed and move in sequence from house to house, each performing a highly specialized job. One sub has a contract to install locks, another kitchen cabinets, another stairways.

In its building materials this company features such products as Delco oil burners, Fenestra Bonderized steel casement windows, Kohler of Kohler bathrooms, Thatcher boilers, Tracy sinks, Celotex Vapor-seal insulation. This last item was an innovation adopted early this year and is a practical illustration of the growing trend towards greater prefabrication of building products at the factory. The large sheets of insulating board reduce labor costs and provide a warm, sturdy wall, according to the builders.

Gross-Morton does everything possible to make the home easy to buy and easy to own. The buyer has a large selection of model homes to inspect and can make his selection from 75 different designs on a lot of his own choosing in the development.

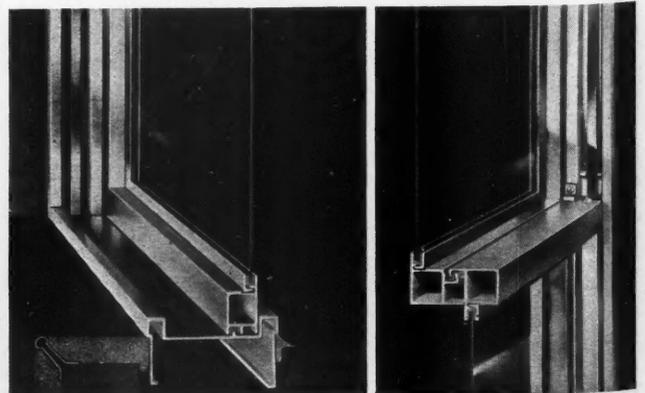
To illustrate the high value of the Jamaica Estates homes Gross-Morton early this year featured full-page newspaper advertisements in colors under the title, "New York's Biggest Home Value—\$7.50 a Room Per Month." This price was figured on the basis of a six-room house with oil burner and garage, priced at \$6,200 with an \$800 down payment. This is "more house for the money" than a buyer can get in any apartment, including housing projects subsidized by the government.

\* \* \*

## Window Prices Reduced to One-Third of 1930 Level

THE Kawneer Company of Niles, Mich., pioneer producer of aluminum windows designed and priced for the average home, reports that these products which were first available about 1930 would have cost approximately three times that of types on the market today. This firm reports that such a phenomenal reduction which means so much "more window for the money today" is largely due to recent developments in the field by Kawneer.

The new series 220 Sealair windows, as illustrated below, for residences and most other types of buildings, are available in 30 standard sizes for openings up to 5 by 9 feet. They are fitted with patented inside metal glazing stocks instead of putty glazing. Other features listed are rich lasting beauty, weather-tight protection, easy operation and minimum maintenance expense.



CROSS sections of Kawneer all-aluminum sash showing construction.

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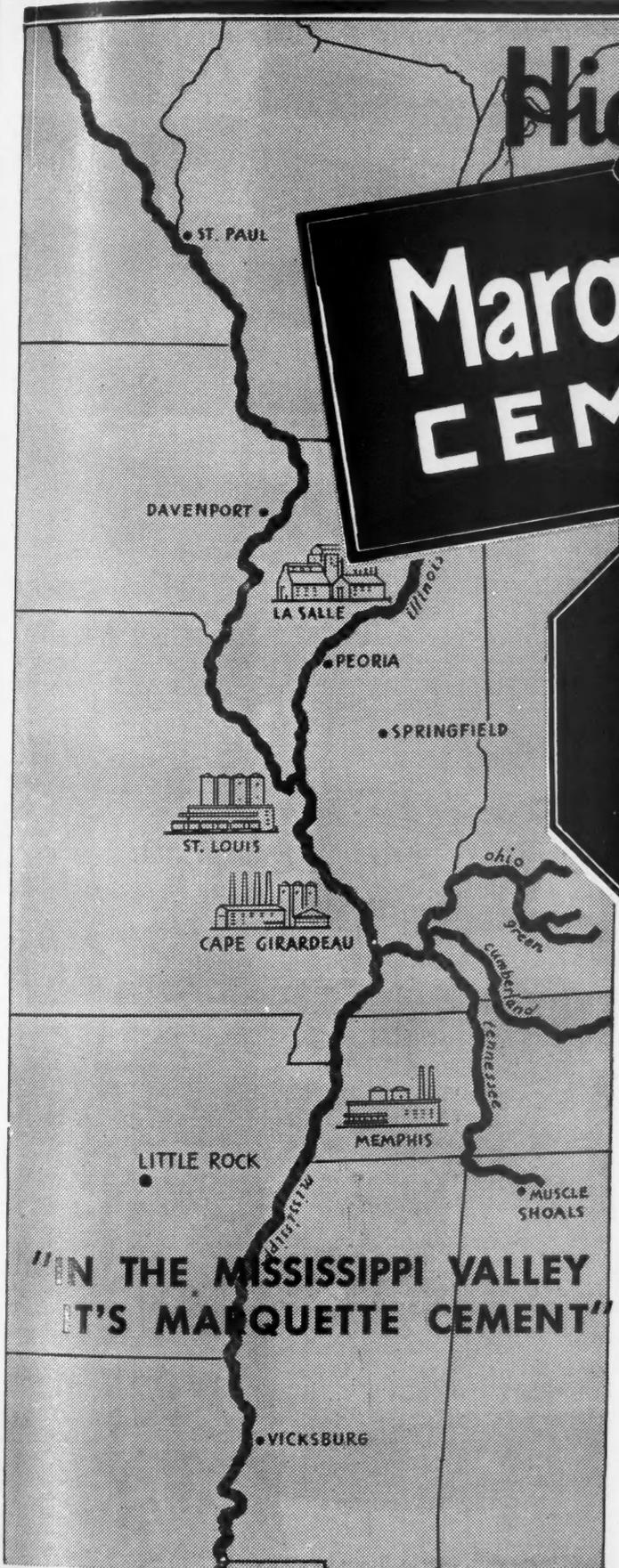
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# High Test!

## Marquette CEMENT

### MARQUETTE

### HIGH EARLY STRENGTH

### PORTLAND CEMENT

**"IN THE MISSISSIPPI VALLEY  
IT'S MARQUETTE CEMENT"**

Marquette Cement Manufacturing Company is an integral part of the great Mississippi Valley. Here are its plants . . . its central office . . . and all its customers. The majority of its stockholders are employees in the plants, in the offices, and among the salesmen on the road, who, like you, work and live in this great fertile valley and spend their money here. When you see the Marquette Cement Trademarks or hear the words "Marquette Cement," think of us as a group of individuals—with good building our common cause.

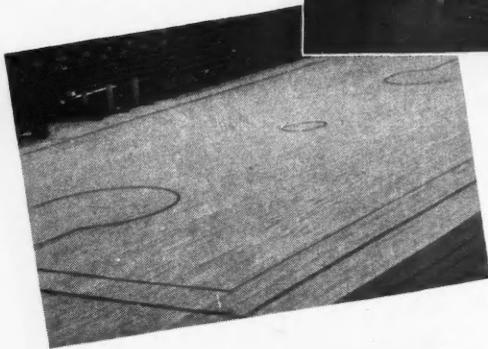
# MARQUETTE MASONRY CEMENT

## MARQUETTE CEMENT MANUFACTURING COMPANY

CHICAGO • MEMPHIS • *Plants at* LA SALLE, ILLINOIS, CAPE GIRARDEAU, MISSOURI

For Schools or Homes, Stores, Bakeries, Mills, Factories

# Still the most Practical Flooring Material!



**SCHOOLS** • The same general principles of floor construction used 20 years ago, still govern school flooring today—not because new materials have not come in, but because nothing takes the place of Northern Hard Maple for school floors—in classrooms, shops, gymnasiums, and assembly halls.



**FACTORIES** • To the factories of today, time has brought no substitute for Hard Maple—the comfortable flooring which seems never to wear out, which speeds up traffic and slows up fatigue. But new, penetrating, heavy-duty finishes now seal Hard Maple's surface, resist soil, eliminate scrubbing—make cleanliness simple routine.



**STORES** • For today's stores, Hard Maple continues that happy meeting place between low-cost-per-year-of-service and satisfaction-in-use. Smooth, dry, resilient Maple is kind to shoppers' feet and comfortable for employees, and with simple maintenance, keeps its bright clean beauty long after inferior flooring needs replacement.

Compare buildings of 20 years ago and today, and you'll see many changes in building technique. Few indeed, are those products as commonly used today, as yesterday—and no greater proof of value can be offered, than a preference sustained through the changing years.

A leading architect recently said this about school floors: "It seems to me a remarkable tribute to Hard Maple, that this beautiful, sturdy material is still being accepted today as the most economical floor. I have seen several substitutes come and go, but for appearance, maintenance, and economy, Maple Floors in school rooms stand ahead of all flooring."

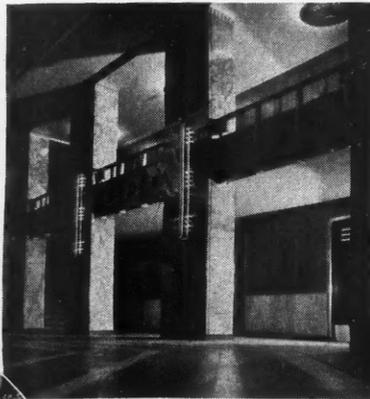
In the most modern schools built today, you will find Hard Maple floors—and in the most modern stores, factories and warehouses, mills and bakeries, ballrooms and homes. For of the qualities so important to flooring, no other material offers an equal fund. Today, Northern Hard Maple,\* with its greater versatility, easier maintenance, and lower prices, is still the most practical flooring that money can buy.

## MAPLE FLOORING MANUFACTURERS ASSOCIATION

1781 McCormick Building, Chicago, Illinois

See our catalog data in Sweet's, Sec. 11/76.

Write for our folder on "Heavy Duty Finishes" for old and new Maple floors.



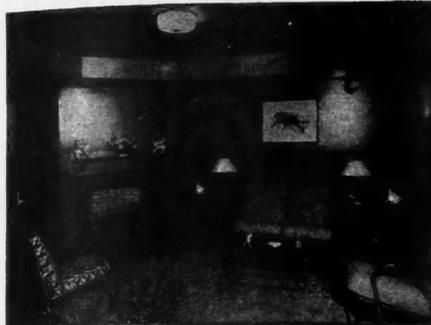
## BALLROOMS and other

**fine interiors** • To the ballrooms, public buildings, and homes of today, Hard Maple offers the same unmatched smoothness and permanence—but with a new beauty, made possible by the great variety of patterns and finishes (natural and color) available to match any decorative scheme.

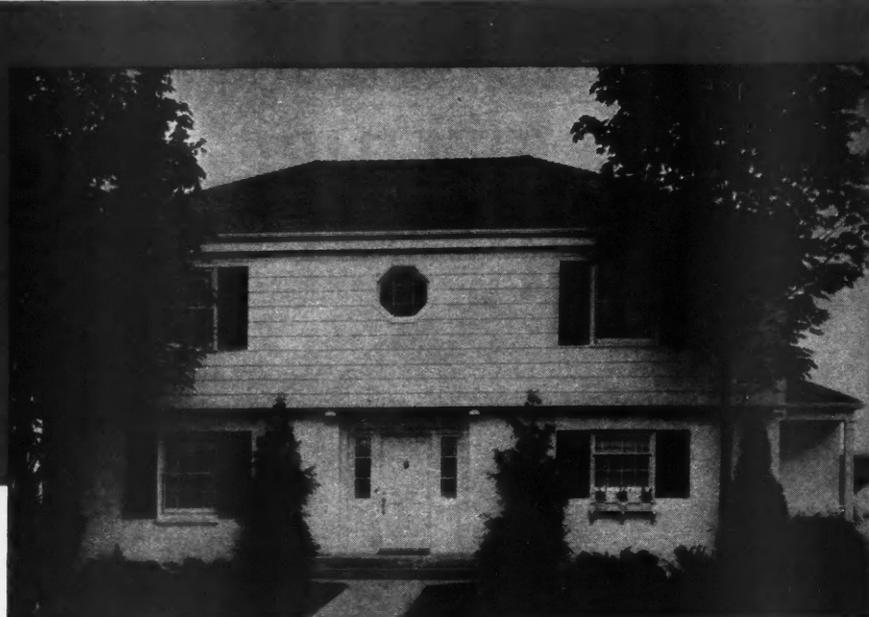


Floor with **MFMA Maple**  
(NORTHERN HARD)

\*To be sure of Association guaranteed grading, and Northern Hard Maple, specify and look for the MFMA trademark (indented and stamped) on the flooring you buy.



The Wallboard grade of Plywood gives this unique octagonal playroom. Many would use Standard Panel, good one side if used perfectly matched pairs were desired. Cabinet doors and built-ins are Standard Panel, good one side or sound two sides. Wallboard grade plywood was also used as backing for tile in kitchen and bathroom.



FROM BASEMENT  
TO ROOF...

# DOUGLAS FIR PLYWOOD

*proves a "better material" in this Blue Ridge exhibition home!*

More than 11,000 square feet of Douglas Fir Plywood were used in construction of this beautiful home, awarded the Good Housekeeping Shield for "excellence in construction." You, too, can save

time, labor and money with Douglas Fir Plywood. Use this "better material" in the next home you build. Your lumber dealer has Douglas Fir Plywood in grades to meet your needs. See him TODAY.



As it will do for you, PLYSCORD Sheathing cut sheathing cuts 25% or more on tight, wind-proof walls and adds structural strength of the home. Plyscord guide lines for quick, easy work. The panels are easily handled by one man.

Plywood for sheathing—sub-floors—foundation forms—wall paneling—and built-ins . . .

- SPEEDS WORK
- SAVES LABOR
- GIVES BETTER APPEARANCE
- ADDS STRUCTURAL STRENGTH
- CUTS COSTS

• "I was particularly impressed with the speed with which the contractor was able to apply the PLYSCORD Sheathing, as well as its tight, smooth appearance. Noteworthy also is the smooth surface of the concrete where Plywood form material was used and later reused for the sub-floors." —Tennys Francis Bellamy, architect of this model home, built by Hugh Russell, developer of Blue Ridge, a restricted community, Seattle, Washington.

In addition to the regular grades used in this home, Douglas Fir Plywood can be obtained in special grades for any construction need, including hot-pressed, resin-bonded Plywood for permanent exterior exposures. Our well-equipped Technical Division offers cooperation in recommending Douglas Fir Plywood to produce the utmost serviceability and economy. Address DOUGLAS FIR PLYWOOD ASSOCIATION, Tacoma Building, Tacoma, Washington.



Versatile PLYSCORD Sheathing can be used for foundation forms—concrete partitions in residential construction. When used for joint formwork, the smooth concrete surface and ease of stripping the forms are noted.



Here's how Plywood Plyscord made from the foundation forms and reused as sub-floors—proving a solid, strong, clean, and ready for use from both flooring



★

Answering your question  
about **SOFT TEXTURE**  
in just 3 words!



A lot of words are going the rounds about soft texture in pine, but the three which protect you with all the answers are

## ARKANSAS SOFT PINE

### Because—

In thoroughly seasoned piece stuff, boards and sheathing for framing, it works easily, grips nails without splitting, cuts clean for snug toe-nailing and tight "knife" joints.

For window jambs, outside finish and drop siding, its tough fibre, close grain and absence of rosin take paint and hold it with no later leaching and no subsequent rot where vertical and horizontal members join.

For painted woodwork, its Satin-like Interior Trim, dried to correct moisture content, free from rosin and hard streaks, absorbs priming coats evenly, protecting the finished surfaces for years against discoloration, fading or raised grain.

This practical HANDBOOK tells you how and why Arkansas Soft Pine gives you grade-marked protection wherever Soft Texture is a requirement. Write for your complimentary copy.\*

\* SENT ON REQUEST

### Arkansas Soft Pine Bureau

938 BOYLE BUILDING  
LITTLE ROCK, ARKANSAS

\*Free to contractors residing east of the Rockies, excepting the Gulf States east of the Mississippi.



## ★ Mills "High Quality Specs"

(Continued from page 17)

All concrete footings, foundations, floors, walks, steps, etc. (excepting only top dressing or facing for inside of basement walls) shall be composed of one part cement, three parts clean, sharp Torpedo sand, and five parts clean, broken 1" to 1½" lime stone or washed gravel. All to be thoroughly mixed by careful measurement with just enough water added so as to mix easily. All concrete shall be thoroughly rammed and spaded into place and shall not be so wet as to "wash." Any "honeycomb" spots to be brushed with pure cement grout and plastered smooth. Into the concrete mixture as indicated there shall be mixed also approximately 10% of lime for waterproofing purposes in the foundation walls only. Concrete for both footings and walls shall be soft poured. Footings shall have a 2 x 2 key joint between footing and wall which shall be well grouted with a 1-1½ mix grout before pouring the wall proper. After forms are removed inside of all foundation wall shall be brushed or troweled with a sand and cement grout to a smooth and workmanlike finish. Outside wall from plate line to finished grade line shall be brushed with the same grout using white cement. Basement floor shall consist of 3½" thick concrete (of mixture heretofore specified) over a 4" sand or cinder fill and carefully graded to basement drain or drains as shown on plans. This shall be topped with a finish coat ½" thick of a 1-1½ mix of clean, sharp Torpedo sand and cement, and finished with a smooth, steel troweled finish, making a total floor thickness of 4". Walks shall be as shown on plot plan and shall be of 2-2½ flagstone laid in stepping stone manner. Concrete steps and platforms where shown on plan shall be approximately 6" thick of concrete mixture as heretofore specified over a sand fill which has thoroughly been tamped, watered and compacted into place; and finished on top and sides with a ½" finish coat of 1-1½ mix, which finish coat shall be finished with a smooth, straight and true, steel troweled finish. Footings for foundation walls shall be 18" x 8". Column footings to be 24 x 24 x 12". Chimney footings to be 8" thick of size as shown on plan. All basement windows shall be furnished with a concrete window sill as shown on drawings, and finished off in a good and workmanlike manner.

**MASONRY:** Chimney shall be built of concrete chimney blocks approximately 16" square with an 8" round flue as far as the bottom of the rafters. From this point to the top of the chimney, the flue shall be built with face brick and lined with 8" vitrified tile, design of chimney cap to be as shown on plan.

**CARPENTRY, MILLWORK, AND LUMBER:** All timber and framing lumber shall be No. 1 kiln dried pre-shrunk Southern yellow pine of 12% average moisture content, sizes and dimensions as shown on plans, except studding which shall be No. 1 kiln dried pre-shrunk hemlock. All exterior finish lumber shall be No. 1 white pine, cypress, or quarter-sawn red cedar. Exterior siding shall be clear quarter-sawn "B" grade, ¾ x 8" beveled red cedar siding laid over 25/32 asphalt coated

(Continued to page 72)



ON MILLS AND SONS houses, joists of stock length quickly set in place for spiking after box sills are built and leveled.

# HERE'S ANOTHER REASON FOR INSISTING ON ROOFING ASPHALT CONTAINING **THE VITAL ELEMENT**

(TRINIDAD NATIVE LAKE ASPHALT)

WE have a testing device known as the Weather-Ometer. With it, we can produce accelerated weather conditions—in our own laboratory. Weeks can equal years of actual exposure likely to be encountered by the roofs you recommend and use. Now let's see how roofing asphalt containing *The Vital Element* stands up in the Weather-Ometer Test. Repeated cycles of three weather conditions constitute this test.



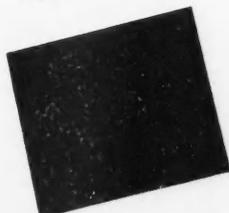
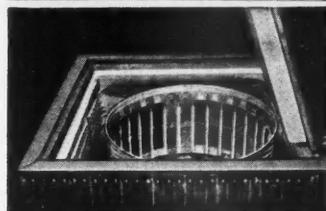
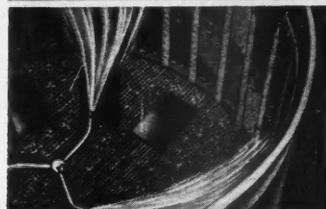
• **FIRST**, actinic or active rays of sunlight generated continuously by electric arcs inside the Weather-Ometer. Even under these destructive beams, roofing asphalts containing *The Vital Element* show a definite superiority over those made without it.



• **SECOND**, a drenching similar to a soaking, steady rainfall. Long after other asphalts have failed, those that contain *The Vital Element* still effectively shed water.



• **THIRD**, sub-zero temperatures. This completes a cycle of heat, rain and cold. Imagine a climate that offers such a supreme test for the roofs you recommend and use.



And here's how roofing asphalt containing *The Vital Element* looks when taken from the Weather-Ometer. Even after sufficient cycles to cause many other roofing asphalts to fail, its surface is scarcely blemished. And, above all, it still sheds water! Clear evidence of the balanced weather-resisting properties of roofing asphalts containing *The Vital Element*.

When you recommend and use roofings, be sure you insist on BARBER GENASCO—the only roofings that offer you the added protection of genuine Trinidad Native Lake Asphalt. And when you have questions involving roofings and other asphalt uses, Barber will be very glad to co-operate with you in finding a correct, authentic answer.

BARBER ASPHALT CORPORATION  
NEW YORK, N. Y. • BARBER, N. J. • MADISON, ILL. • CHICAGO, ILL.



Residence of Arthur Dreyfus, Cranston, R. I., roofed with Barber Genasco Extra-heavy Individual Shingles.

## BARBER Genasco ROOFINGS

SHINGLES • SIDINGS • ROLL ROOFINGS  
BUILT-UP ROOFINGS

## Mills "High Quality Specs"

(Continued from page 70)

Celotex called "vaporseal" as far as the plate line. Attic sheathing shall be  $\frac{7}{8}$  x 8 kiln dried No. 2 shiplap covered with black waterproof building paper or slaters felt. Roof boards shall be laid reasonably tight with only slightly open joints to be determined by owner to allow for expansion and contraction, and shall be  $\frac{7}{8}$  x 8 kiln dried No. 2 yellow pine shiplap. Sub-floor shall be kiln dried 1 x 6 No. 2 yellow pine, square edged boards, nailed double, all joists to occur over bearing. Where linoleum floor is indicated on plans, sub-floor shall be the same with an 1 x 4 D & M quarter-sawed fir finish floor. Partitions shall be constructed of 2 x 4 studs, 16" on centers with a single 2 x 4 bottom plate and double 2 x 4 top plate. All corners of door openings shall have double studs on sides, and double 2 x 4's turned edge-wise as headers. All openings in bearing partitions and outside walls shall be trussed. All stairwells shall be surrounded by double joists and headers. Double joists under all partitions. Wall plates and box sill shall be 2 x 8. Rafters 2 x 6, spaced as shown on plan, with 2 x 8 ridge and valleys. All other rough lumber shall be kiln dried. All building corners shall have 3-2x4 studs. All joists shall be kiln dried and of sizes and spacing as shown on drawings, and shall run in one length from wall to wall, or from wall to supports. All joists shall have a minimum of  $3\frac{1}{2}$ " bearing on each wall or beam support. All first floor joist spans shall have one double row of 1 x 3 bridging. Door frames for exterior doors shall be made of 2" material, clear white pine, and shall not be of less than  $1\frac{3}{4}$ " net finished thickness. All openings where wood trim is to be used shall be fitted with 1 x 1 wood plaster grounds. All partitions as well as the outside wall shall be fitted with a 1 x 6 plaster ground.

Finished floors on entire first floor except kitchen, bath and dinette shall be  $2\frac{3}{4}$  x  $1\frac{1}{8}$ " clear red oak laid over wood lath strips and red rosin paper and to be finished with a power sander and hand scraped at edges and corners to a smooth and workman-like finish.

Basement partitions where shown on plans shall be 2 x 4 stringers and 1 x 6 No. 2 common D & M yellow pine.

Trim throughout shall be gum (except window stools which shall be birch). All trim shall be stock band design with three member base (except in closets where two member base shall be installed). Back band shall be eliminated on closet side of closet openings. Plumbing panel of  $\frac{3}{8}$ " Plywood shall be provided and trim for same. Picture moulding shall be installed in living room, vestibule and bath hall.

Doors—Exterior front door shall be  $1\frac{3}{4}$ " white pine of size and design as shown on plan. Rear door shall be  $1\frac{3}{4}$ " 3X panel, 4 lite, white pine of size as shown on plan. All interior doors over 2' in width shall be  $1\frac{3}{4}$ ", 6 Colonial panel, white pine; all doors 2' and under in width shall be of the same material and design  $1\frac{3}{8}$ " thick. Medicine case shall be steel, first quality, Lawco Manufacturing Company's, with an 18 x 24 plate glass mirror in chromium frame, furnished by others but installed by this contractor. Kitchen cases shall be constructed as shown on drawings, and be of white pine, with birch or poplar face and doors. Casetops shall be of white pine or  $\frac{3}{4}$ " Plywood to receive linoleum. Cutting board shall be birch. Kitchen case hardware to be chrome or bakelite. Hinges to be chrome plated.

Stairs—Attic stairs shall be of cypress or white pine erected on the job by the carpenter contractor. Basement stairs shall be No. 2 white pine with 2 x 12 stringers, 2" treads and 1" risers and shall have 2 x 4 hand rail and post.

HARDWARE: Interior hardware shall be Corbin (or equal) cylinder lock set, with a grip handle and thumb latch on exterior, and knob on interior, and shall be hung on  $1\frac{1}{2}$ " pairs of 4" full mortise loose pinned dull brass butts. Rear door shall be fitted with a cast brass face three tumbler lock set with wrought bronze trim and shall be hung with  $1\frac{1}{2}$ " pairs of 4" half surface, black Japan butts.

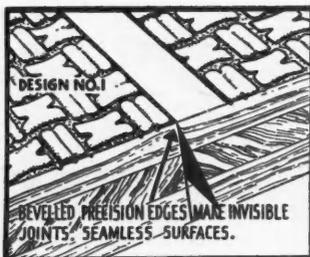
ROOFING: Roofing shall be Bird Roofing Company's three tab "Thick Butt" slate-surfaced asphalt shingle weighing not less than 210 lbs. to the square of color to be selected and to be laid

(Continued to page 74)

## WASHINGTON VENEER COMPANY

Presents—

Entirely new . . . Seamless surfaces . . . No battens . . . Easy to apply . . . Easy to finish . . . Revolutionary to the wood finish line . . . Embossed Westboard is not ordinary wall panel . . . It is a rich finish panelling that will add charm and character wherever used . . . The pattern is actually embossed into real Douglas Fir Plywood.



Beveled precision edges make invisible joints. Panels are drawn together tightly.

### MADE IN TWO DESIGNS

#### DESIGN NO. 1

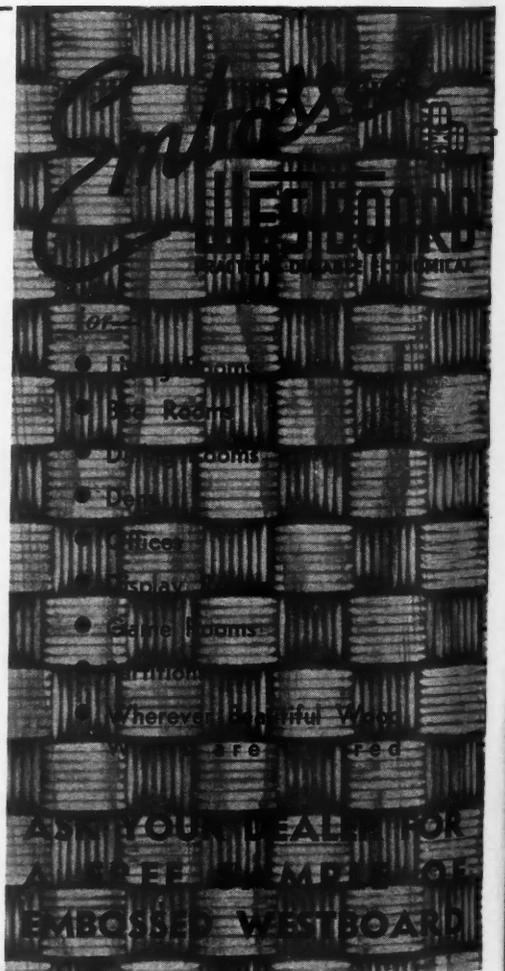
Finely embossed woven effect.  $\frac{3}{16}$ " wide clear stripes run vertical the full length of the panel and spaced 5", 11", 8", 8", 5" and 11" to produce staggered plank design and center on 16" wall studing.

#### DESIGN NO. 2

Attractive basket-weave design (shown at right) for ceilings, wainscoting and partitions.

The Ideal Wall Panelling for DRI-BILT Homes

Washington Veneer Company  
OLYMPIA WASHINGTON



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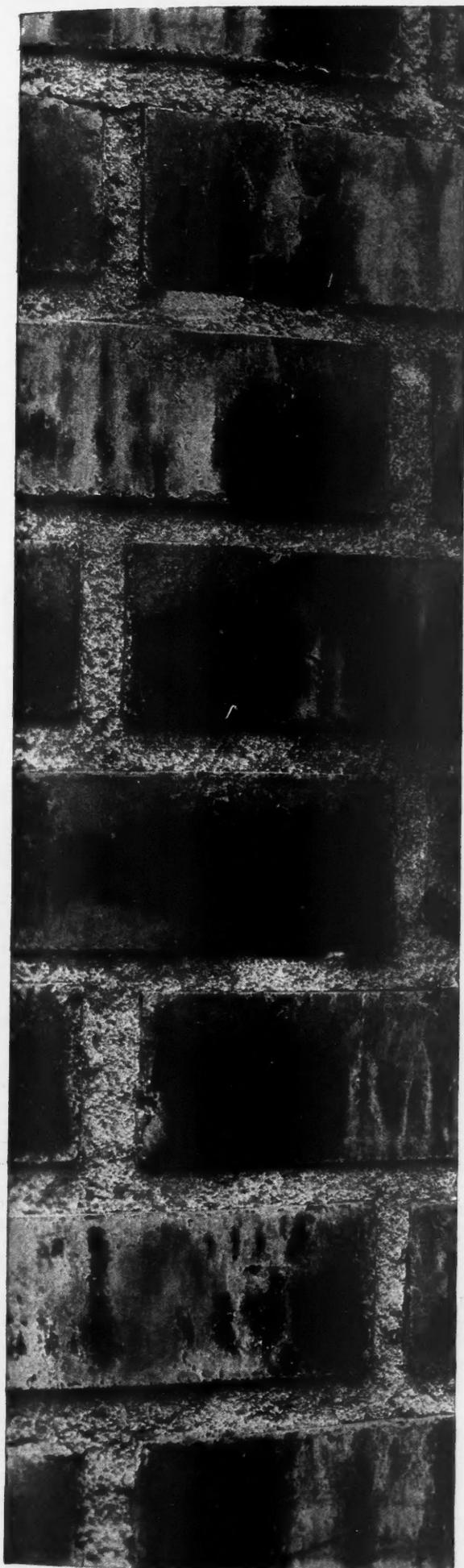
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# BRIXMENT

## HELPS PREVENT

## EFFLORESCENCE

**E**FFLORESCENCE on brickwork is caused by the presence of soluble salts in masonry materials. When reached by water, these salts dissolve and work their way, in solution, to the surface of the wall.

★ ★ *The use of Brixment for mortar has proven to be a very effective way of preventing efflorescence.* ★ ★ Brixment itself is practically free from soluble salts—therefore cannot cause efflorescence. Moreover, even when such salts are present in the brick or sand, the waterproofing in Brixment resists their passage in solution, and usually prevents them from coming to the surface. ★ ★ Because of the protection Brixment gives against efflorescence, manufacturers of face brick strongly recommend it for use with their products . . . If you have been having trouble with efflorescence, use *Brixment for mortar*. This is the most effective safeguard you can employ. ★ ★ Louisville Cement Company, Incorporated, Louisville, Ky.

# HOPE'S WINDOWS

1818 *The Name Guarantees* 1938



Residence at Buffalo, N. Y.—J. C. Troidl, Builder

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Plus features are providing the essentials of consistently profitable business for dealers who are selling Hope's Steel Casement Windows. For example, unusual artistry in design . . . unequalled strength in construction . . . beautiful finishes that endure. And with these, a price schedule geared to today's highly competitive market. Write us today.

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Jamestown, N. Y.

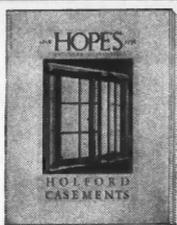
HOPE'S WINDOWS, Inc.  
Jamestown, N. Y.

Send copy of descriptive literature of Hope's  
Windows and dealer proposition.

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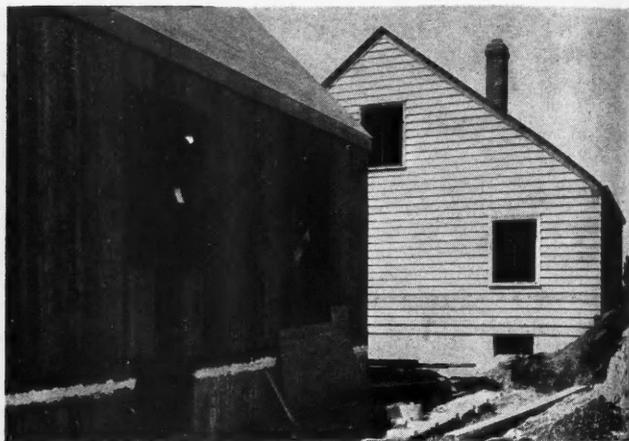


## Mills "High Quality Specs"

(Continued from page 72)

over 15 lb. felt using 1¼" galvanized roofing nails. Ridges to be Boston type laid double and shall be of 9 x 12½" rectangular shingles to match balance of roof. Valleys shall be of strip slate surfaced asphalt roofing material of the same type as roof, and extending under the roof shingles not less than 6" at any point. Completed roof shall be guaranteed water tight and leakproof five years.

**STRUCTURAL IRON AND STEEL:** Main supporting steel girders in basement shall be "I" beams, size and weight as indicated on plans. Steel supporting columns shall be L. W. lally columns of size as shown on plan. All steel shall be given one coat of grey or red lead paint at the shop, before delivery to the job.



A MILLS HOUSE ready for siding over Celotex sheathing; note cement grout to seal at foundation line and tight fit around Fenestra sash.

**PLASTERING, LATHING AND INSULATION:** 1" Celotex lath shall be applied to the first floor ceiling joists. All outside walls and inside partitions shall be lathed with standard U. S. Gypsum Company perforated rock lath. All lath shall be securely nailed to joists or studding with blue lath nails of appropriate gauge and length using five nails in the width of each piece of Celotex lath and four nails in the width of each piece of rock lath. All exposed corners of plaster arches, etc. shall be finished and reinforced with standard gauge, galvanized corner beads. Arches shall be reinforced with black expanded metal lath. All corners of walls and ceilings shall be reinforced with a 6" strip of 3.4 lb. black expanded metal lath.

**Plastering** shall be as follows: Three coat work. Scratch coat to be composed of one part lime putty to two parts of sand and ½ part hair. All scratch coat work to be well laid on and surface covered with a full coat which is to be scratched with wire scratcher so as to be well under-cut for the brown coat. All lime mortar scratch coating to be dry before applying brown coat. Brown coat to be composed of proper proportions of lime, screened sand and hair. Sand must be absolutely free from loam, clay or other impurities which might cause a defective finished job. All brown coating to be well applied, allowing only sufficient space for finish coat, and to be rodded and screened. All angles to be straight and true, and all arches to be true and even curves. Hard finish to be composed of equal parts of lime putty and plaster of paris, trowled and brushed to a smooth, hard, finished surface. Finish coat shall be tested with a 6 ft. straightedge and at no time shall there be more than ⅛" variation from a straight and true line. Particular care shall be taken to make a straight line where all picture mould and base is to be applied.

**ELECTRIC WIRING AND LIGHTING FIXTURES:** All wiring shall be run in corrosion proof, thin wall metal conduit. All work shall conform to the rules of the National Board of Fire Underwriters. All bends in conduit shall be made smooth and easy without kinks or bruises. All wires shall be new code, rubber covered, single braid, copper wire run in continuous

(Continued to page 76)

# WEYERHAEUSER

## FOREST PRODUCTS



KEY No. 3—Better Materials

### 5 BUILDING VALUES FOR A *Single Cost*

#### BEAUTY—COLOR

You can get a blending of rich warm tones, or effective pleasing color contrasts that cannot be imitated.

#### ECONOMY

Inch for inch, dollar for dollar, the most economical roof and side wall covering on the market. Low initial cost. Low upkeep cost.

#### INSULATION

Properly laid, these shingles provide a triple layer of efficient, natural insulation. Average fuel savings 10% to 15%.

#### DURABILITY

Will not warp, rot, curl, or rattle. Will not split under extreme temperature variations. The coloring process lengthens their life.

#### PROTECTION

Made of Western Red Cedar, Nature's unrivalled roof and side wall covering that provides years of dependable protection against all the elements in any climate.

#### ARCHITECTURALLY CORRECT

Traditionally correct, Red Cedar Shingles today are one of the most individual and adaptable exterior house coverings. The simple lines of today's homes demand quality of detail. Edham KOLORITE Processed Red Cedar Shingles offer unlimited possibilities in detail treatment for new homes, and for restyling old homes.

and Modern Selling Plans

Edham **KOLORITE**  
PROCESSED RED CEDAR SHINGLES

## FOR ROOFS AND SIDE WALLS OF NEW AND OLD HOMES

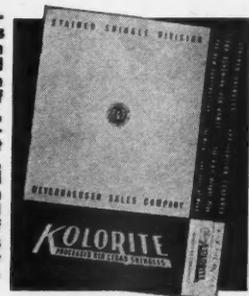
"Better Materials" because Weyerhaeuser has perfected a scientific oxidation process that provides a better product through absolute machine control. An exact standardized procedure assures constant control of staining and drying factors and eliminates the extreme variations of color, coverage, and penetration common to the antiquated "dunking" or brushing methods. Due to the oxidation process, the linseed oil content of the stain assists the physical binding between color pigment and shingle surface, and provides a protective film that adds life and color retention to the pigment.

USE THEM—DON'T IMITATE THEM  
Nothing Equals the Warm Friendliness of Wood



Only Selected Certi-grade Shingles Are Used.

Send for this free illustrated booklet. It shows how to lay Edham KOLORITE Processed Red Cedar Shingles on roofs and side walls of new and old homes, over old shingles, siding, stucco, brick. It shows staggered, thatched, irregular and angle butts, ribbon courses, and hand splits, with a table of coverages for various exposures. It tells how these shingles are processed.



## STAINED SHINGLE DIVISION



**WEYERHAEUSER SALES CO.**  
2563 FRANKLIN AVE. ST. PAUL, MINN.

For other Weyerhaeuser contributions to "More Home for the Money" see pages 26, 30, 34, 47 and 82.

## Mills "High Quality Specs"

(Continued from page 74)

lengths between openings and without splicing. No wire shall be less than 14-gauge. Outlet boxes to be properly and firmly secured in position so that the outer edge of box will not extend beyond finished plaster wall but will be flush with the same. Where necessary to cut studding, this cut shall be made not greater than  $\frac{1}{8}$ " deeper than the outside diameter of the conduit.

*Service wires* shall enter building at a point not less than 12' above grade. From point where service wires enter building this contractor shall run service mains to meter center to connect same to square "D" circuit breaker unit as shown on plan. Base plugs to be standard, flush receptacle, Pass & Seymoure ivory "Alabar" plug openings and escutcheons and shall be double outlets. One set of Pryne Satin Brass Duo Door Chimes (4'-6" size) shall be installed. Switches shall be of the toggle type encased in iron box and manufactured by Pass & Seymoure, and shall have ivory "Alabar" escutcheons and toggles.

**GUTTERS AND SHEET METAL:** Gutters, downspouts and metal flashings shall be 26-gauge galvanized iron, gutters shall be of moulded hanging type and securely hung and nailed with galvanized nails, and to extend not less than 2" under roofing. Downspouts as shown on drawings shall be 26-gauge stock design,  $2\frac{1}{4}$ " x  $3\frac{1}{2}$ " corrugated.

**GLAZING:** All basement glass shall be  $\frac{1}{8}$ " hammered glass. All other glass shall be clear "A" grade, double strength, paper packed, as manufactured by Libbey-Owens-Ford back and face puttied. Putty shall be as manufactured by the Plastoid Company (or equal) "plastic type" made especially for steel sash and consisting of approximately 50% pure linseed oil, 40% saponified oil and 10% dryer as a liquid content; with 70% English whiting and 30% Domestic whiting as a dry content. Back putty on the inside of steel sash shall be cut at right angles to the glass and not under cut—and shall be a true and even line.

**PLUMBING, SEWERAGE, GAS FITTINGS:** Water supply

shall be  $\frac{3}{4}$ " lead pipe from main into the building. Water tap and sewer tap shall be paid for by owner. All supply lines inside of building shall be galvanized iron. Sillcock shall be furnished and equipped with self-draining shut-off valve inside of building, and located as directed by owner. Any and all pipes located in outside walls shall be insulated against freezing with balsam wool or equal and guaranteed against freezing. Sink waste and vents to be 2" galvanized pipe with a 2" cleanout. All other soil pipes and stacks shall be 4" extra heavy, tar coated, cast iron with a 4" cleanout at the bottom of each stack. Where vent pipes pass through roof they must be increased at least 1" in diameter and well flashed with lead flashing apron. Waste stack from sink and laundry tray to be connected with cast iron catch basin installed under basement floor. All cast iron soil and vent stacks shall be carefully caulked with lead and oakum, and be completely leak, gas and odor free. All downspouts shall be connected with the sewer outside the building using 4" salt glazed vitrified tile properly cemented with a strong sand and cement mortar. All sewer or drain lines under the basement floor shall be salt glazed vitrified tile, properly cemented with Portland cement mortar. Laundry tray drain line shall be equipped with a  $1\frac{1}{2}$ " brass gate valve. Floor drain shall be equipped with a 2" threaded brass plug.

*Fixtures*—Plumbing fixtures shall be Standard Mfg. Co., colored acid resisting enamel.

*Kitchen sink* shall be 42" single drain board roll rim with enameled steel cabinet to match and equipped with "duo-strainer" and combination non-splashing faucet and soap dish.

*Hot water supply* shall be 30 gallon galvanized tank equipped with side arm gas heater and connected with heating coil installed in furnace. Step-saver stations shall be located in kitchen, bath, and basement for automatically turning on gas water heater.

*Laundry tray* shall be two part granitine on legs complete with traps and swing spout faucet.

*All fittings, faucets and exposed metal parts* shall be chrome plated, except in basement.

(Continued to page 80)

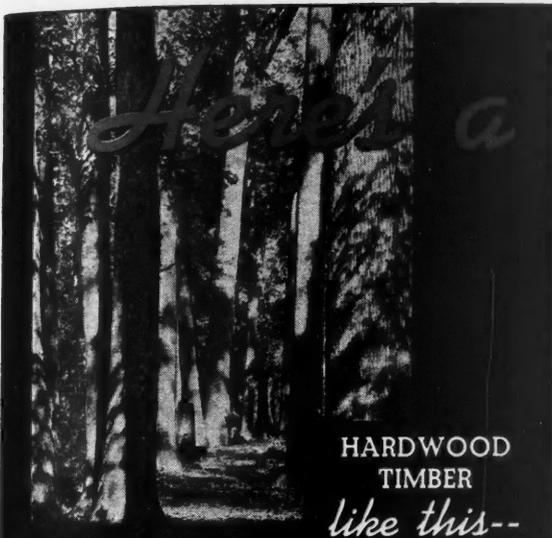
The  
Original

**OHIO WHITE  
LIME FINISH**

—For Better Plaster at Low Cost

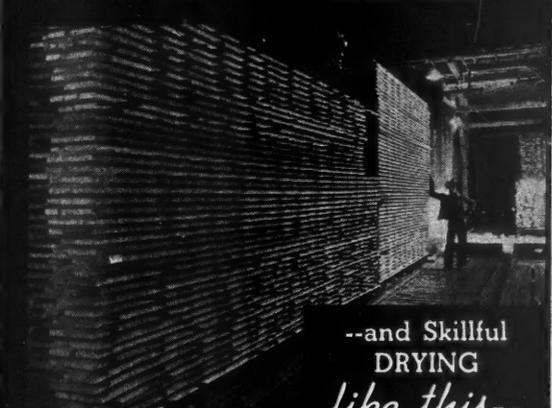
Write for free 16-page book "Lime for Plaster and Stucco."  
The Ohio Hydrate & Supply Company. Woodville, Ohio.

OHIO PRODUCTS SOLD EVERYWHERE IN FAMOUS ZIG ZAG BAGS  
Ohio White Finish—Hawk Spread White Finish—Ohio Ritewall Fibered Lime Plaster—Ohio Sanlime Finish—Mastite Masonry Mortar—Ohio Masons Lime—Ohio Ground Lime.



*Here's a*

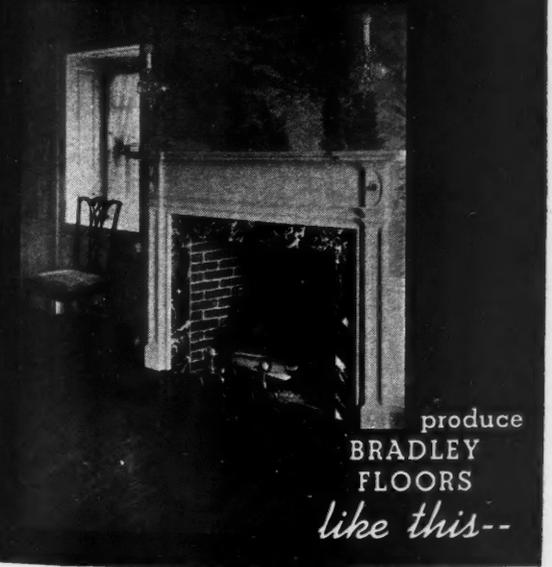
**HARDWOOD  
TIMBER**  
*like this--*



*--and Skillful  
DRYING*  
*like this--*



*--plus Accurate  
MANUFACTURE*  
*like this--*



produce  
**BRADLEY  
FLOORS**  
*like this--*

# Tip on the How and Why of "BRADLEY BRAND" Oak Flooring

Here are four close-ups which show you at a glance how "BRADLEY BRAND" standards follow through from forest to finished floor.

In these you see fundamental "reasons why" for the inherent quality which distinguishes "BRADLEY BRAND" hardwood flooring itself . . . quality reflected in years of splendid service, fine appearance and owner satisfaction.

Yet, behind Bradley's standards are more than adequate timber resources and modern equipment. These are essential, but equally important are the factors of long establishment, intelligent study of trade and builders' requirements, research, and the *intention* to make a better product.

It is in these respects, too, that Bradley qualifies: as a pioneer operation (since 1901) . . . by constant improvement through experiment and testing under conditions of practical use . . . and through painstaking policies which have established "BRADLEY BRAND" as the standard of comparison in hardwood flooring.

"BRADLEY BRAND" hardwood flooring includes standard strip and "Nail-Seated" stock in Oak and Beech, also Oak Plank Flooring in both V and flush-joint design, the latter including plugs and butterflies, if desired. For literature and quotations, call our nearest representative or address:



\*U. S. Pat. No. 1936028

# BRADLEY

**LUMBER COMPANY**

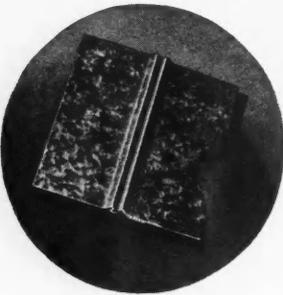
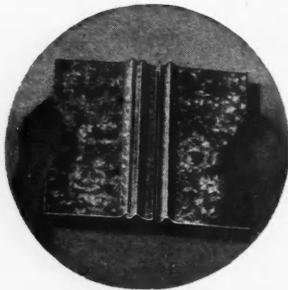
OF ARKANSAS

**WARREN, ARKANSAS**



## EDWARDS LOXSEAM STEEL ROOFING

### Your Hands Sell it to Your Customers' Eyes



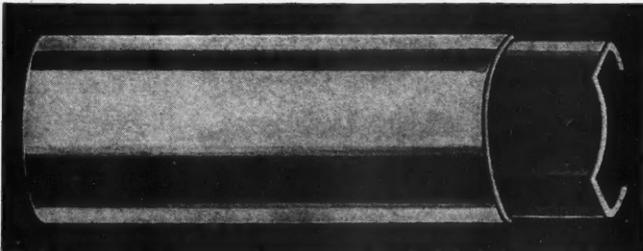
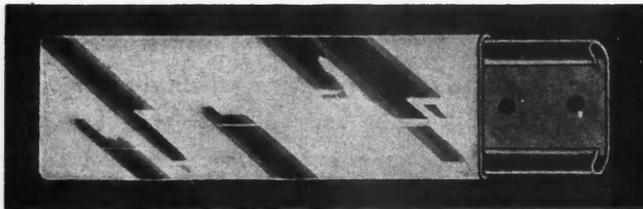
There's no trick about selling Loxseam—no argument needed to prove that it is the greatest improvement in the sheet metal roofing field in the past 40 years. Just "snap" two sample sections together and show your prospect how the "spring" of the interlocking joint makes it water-tight. The harder you press, the tighter the joint. That's how it works on the roof, too. Covers the entire roof like a single piece of metal that clings tighter to the framing when the wind blows ordinary roofing off. All nails and nail holes are covered; heavy galvanizing assures long life. The price is right to assure you a satisfactory profit and to get the business.

Write for Loxseam literature and Roofing Catalog No. 92

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

## HER-ZIM SNAP-ON MOULDINGS

Covers of Polished Stainless Steel



Available in widths from 3/8" to 1 1/2". Easily applied by nailing retainer in place and snapping on the cover.

Write Today for Illustrated Catalog

Illustrates many new types of decorative metal mouldings, with hundreds of sectional views—colored insert mouldings, with Her-Zim filler, linoleum and beading; wallboard and wall-tile mouldings; aluminum cove mouldings and stair nosings; linoleum edging, angles and tees. Get your copy at once.

**HERRON-ZIMMERS MOULDING CO.**  
3900 E. Outer Drive Detroit, Mich.

## Specify— HELYX FLOOR SCREWS

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**NO SPLIT TONGUES—NO SQUEAKS**

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Positively lowest price on white hexagon Ceramic Floor Tile. We take a very small profit to do a volume business. Satisfaction or money back. Mounted on sheets of paper 12x24 inches—simplifies the laying process. We can furnish all other styles and colors of floor tile.

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No substitutes can compete at this price for Bathrooms, Kitchens, Hospitals, etc. Choice of 6"x3" or 4 1/4"x4 1/4". Order direct from this ad. Satisfaction or money back.

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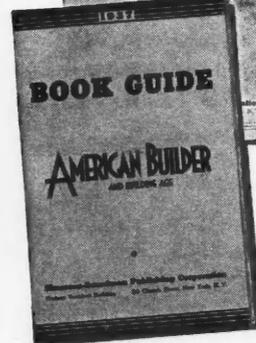
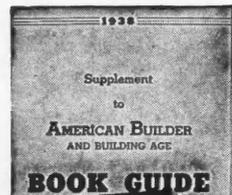


Write for Big Tile Catalog showing complete line in colors. We sell direct to Builders, Tile Setters, Bricklayers, Contractors, Home Builders at Wholesale Prices.

Lloyd Floor & Wall Tile Company  
1523 Walnut St., Kansas City, Mo.

## The New 1938 BOOK GUIDE SUPPLEMENT

of American Builder and Building Age

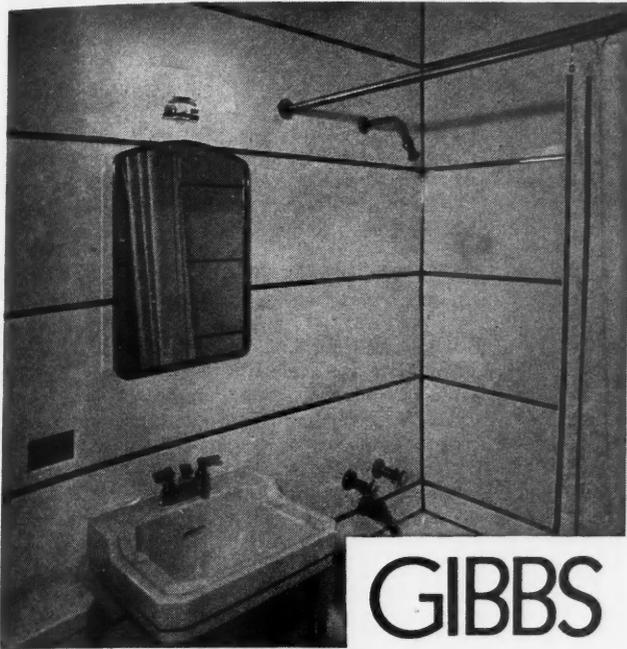


This 32-page Supplement to the 1937 BOOK GUIDE lists all changes in prices and editions that have occurred since it was published. It also describes all the new books which have been brought out within the past 15 months. The 250 new books are indexed for ready reference.

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Sheets of beauty for new or old walls and ceilings! Duotones, pebble-grains, varitones, marble and wood-grain replicas, 18 plain colors, varied tile effects available in gleaming hard surfaces for modern decorative artistry at low cost. Write for color-chart invaluable for making your prospects customers. Use our planning department.

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Quick shipment from stock of everything the contractor needs, from Reinforcing Bars to Stainless Steel—Foundation Bolts to Structurals, is carried in conveniently located Ryerson stocks. Experienced crews—complete equipment and special dispatching methods assure accurate cutting or forming to specifications and delivery according to schedules. When you need steel, order direct from Ryerson. No order is too small for personal attention or too large for Immediate Shipment. Joseph T. Ryerson & Son, Inc. Plants at: Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Philadelphia, Buffalo, Boston, Jersey City.

### RYERSON Certified STEELS



**USE MINWAX**  
THE COMPLETE PENETRATIVE STAINWAX FINISH FOR WOOD... FOR A BETTER FINISH FOR FLOORS

*Minwax is a finish that...*

**FREE TEST KIT**

Mail this ad to us with your office letterhead.

- Improves with use
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- MINWAX CO., INC. Dept. AB10**  
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MADE TO SUIT YOUR REQUIREMENTS

WE MANUFACTURE DESIGNS SUITABLE FOR THE INTERIOR AND EXTERIOR

Also Iron & Wire Fence of every description. Swinging, Sliding and Folding Gates, Iron & Wire Window Guards, Grills, Area Gratings, etc.

Write for our latest Folder.

Send measurements.

**CINCINNATI IRON FENCE CO., INC.**  
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Look for the COLORED SPOTS



● Samson Spot Sash Cord can be instantly identified by the colored spots, our trade-mark. Its installation means at least 25 years of service without replacement. Spot Cord comes in one quality—the best we can make. In cost per year of service, it is the least expensive material for hanging double-hung windows, and it is noiseless.

## SAMSON SPOT SASH CORD

Write for Specification Data and Samples  
**SAMSON CORDAGE WORKS**  
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Wright Rubber Tile floors have a tough, impervious surface that wears years longer, makes cleaning easy. Their resiliency quiets every step and imparts cushion-like comfort. Many beautiful colors and patterns harmonize with any decorative scheme. Easily laid on new or old floors—yet costs no more than good grade linoleum. Spark up your flooring profits with Wright. Give more floor for the money. See Sweet's catalog or write—

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Contractors and owners alike will find an amazing amount of helpful information in the new International Steel Catalogs—information that will enable them to build a better building at lower cost, using International's standardized steel.

Write for these catalogs today. And, if you are considering a new building at this time, send your rough sketches or specifications to us. Our Engineering Service can help you. There is no cost or obligation.

# INTERNATIONAL STEEL COMPANY

1301 EDGAR ST.,

EVANSVILLE, INDIANA

## Mills "High Quality Specs"

(Continued from page 76)

**STEEL SASH AND SCREENS:** All sash, including basement, shall be steel, Detroit Steel Products Co. manufacture, and shall be of the horizontal muntin type. All steel sash shall be treated before delivery to job with a special paint process known as Bonderizing as a rust inhibitor. All first floor sash that open shall be equipped with a steel frame, bronze mesh, screen hinged to the inside of the steel sash frame.

**PAINTING AND DECORATING:** All exterior wood frames shall be given one coat of lead and oil before installation in walls. All exterior wood and metal (including gutters, downspouts, steel sash, metal roof deck, etc.) shall be given one coat of special Devoe & Raynolds primer and a finish coat of Devoe & Raynolds special house paint. All interior trim and cabinet work except window stools shall be given one coat of primer, one coat of enamel undercoater and one coat of gloss or eggshell enamel. Window stools shall be given one coat of stain, one coat of shellac and two coats of spar varnish. All ceilings (except kitchen and bath) as well as closets above hook rail shall be calcimined. Vestibule, living room, bath hall, bedrooms and closets below hook rail to be papered.

Kitchen and bath walls and ceilings as well as attic stair well and basement stair well shall receive one coat of lead and oil primer and a final coat of semi lustre stipple paint. Basement and attic stairs shall be given one coat of lead and oil paint. Color to be selected by owner. All materials shall be evenly spread and smoothly flowed on without runs or sagging. All interior woodwork shall be carefully sanded between each coat. Any knots or sap stains shall be shellaced before priming. Where any rust is found on sheet metal or iron, or steel sash, rust shall be removed with a wire brush or sanding before priming. All putting of nail holes, cracks, etc., shall be done after the first coat of paint or wood filler. Inside putty shall be white lead putty tinted to match color of final coat. All coats of paint, varnish, or enamel shall be bone dry before application of succeeding coat or coats. All interior trim shall be oiled on back immediately on delivery from mill, and before installation by carpenter contractor. Exterior painting shall not be done during freezing or rainy weather, or until all surfaces are thoroughly dry. All oak floors shall receive one coat of filler and two coats of varnish thoroughly rubbed with steel wool between coats.

**Kitchen, dinette and bathroom floor** shall be covered with standard-gauge inlaid linoleum as manufactured by Armstrong cemented down to a 1½ lb. dry felt which is in turn cemented down to under-floor, all carefully rolled into place. All door openings to adjoining rooms shall be equipped with stainless steel edging. Kitchen casetops shall be equipped with standard gauge inlaid linoleum carefully cemented down and finished at the edges with a stainless steel edging.

**WINDOW SHADES:** All first floor windows shall be equipped with window shades of Waverly linen installed on Standard or Hartshorn rollers.

**HEATING EQUIPMENT:** Heating plant shall be a Niagara, coal fired, gravity, 22-inch fire pot, warm air furnace. All warm air ducts shall be wrapped with asbestos paper. All joints in smoke stack shall be fastened with sheet metal screws.

**LANDSCAPING:** Upon completion of the building and after all rough grading is done appropriate shrubs shall be planted in the front and rear of the building.

**GENERAL:** Front and rear door shall be equipped with extruded brass threshold installed on top of oak threshold as well as spring bronze metal weatherstrips on side and head jambs. A white enameled memorandum pad manufactured by Pryne & Co. shall be built into kitchen wall and a G.E. Hostess Model electric clock installed. Each clothes closet shall have one Pryne metal shoe rack built into wall as located by owner. Bathroom shall be equipped with enameled clothes hamper with chrome hardware as manufactured by Pryne & Company, Los Angeles, Calif. Bathroom fixtures will include one 24" towel bar, one 18" towel bar, one soap dish, one tumbler holder, one robe hook and one toilet paper holder. All fixtures to be Du Lux quality, heavily chrome plated over solid brass metal by Felt-Rice Corp.

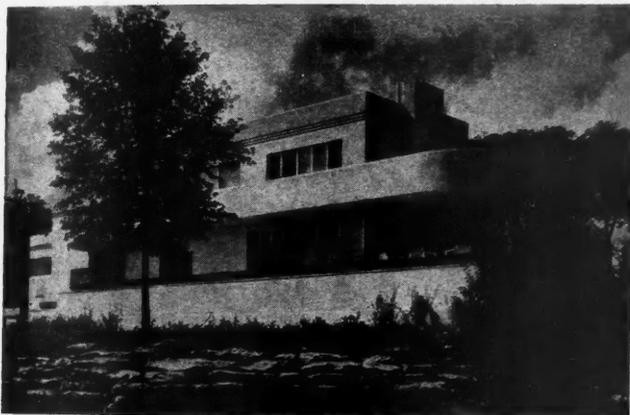
# SEALAIR WINDOWS OF ALUMINUM OR BRONZE— TODAY'S OUTSTANDING WINDOW VALUE!



Chicago, Illinois. Elmer Carlson, Architect.

● Hundreds of recent installations, like these, show why the trend is to Kawneer SEALAIR Windows. These improved windows represent greater value. They offer more in lasting beauty, in low upkeep cost, in weathertight construction, in ease of operation. A luxury only a few years ago, aluminum or bronze windows are now suitable and economical for every type of home or building—thanks to Kawneer!

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For additional data see catalogs in SWEET'S; or write The Kawneer Co. at Niles, Michigan, New York, Chicago, or Berkeley.

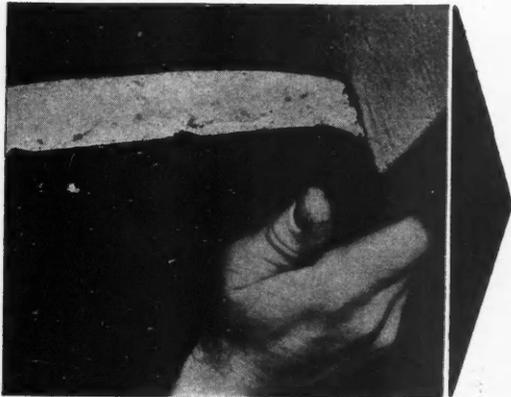
Dealers in principal cities.

# WEYERHAEUSER

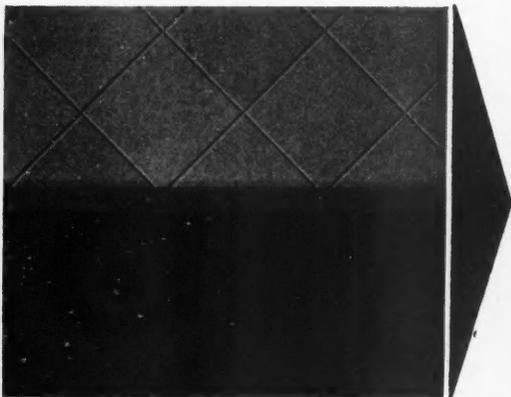
## FOREST PRODUCTS



Key No. 4—All-Year Comfort



Cut end of Balsam-Wool showing Spacer Flange\* as it fits over framing members to form a tight, wind-proof joint with air spaces front and back. Lath is eliminated. Easier, faster, positive application is assured with the staple hammer. Balsam-Wool cannot sag or settle.



Above is a typical wall showing Nu-Wood Variegated Tile, Kolor-Trim Chair Rail, and the new Nu-Wood Wainscot. Note the attractive texture and contrasting color value of the Wainscot. With these products Nu-Wood Interior Finish has taken another step ahead—adding greater color harmony to the already outstanding Nu-Wood Interior Finish Line.

## Balsam Wool

SEALED INSULATION



The improved Balsam-Wool is a better product than ever though it costs from \$5.00 to \$15.00 less per thousand square feet installed. The Spacer Flange\* saves application time. Insulation efficiency is increased because of the positive air spaces front and back. The Fibre Cleat seals cut ends and provides a neater, tighter job.

The moisture-barrier demanded in modern construction by insulation engineers comes as an integral part of Balsam-Wool. The material is wind-proofed, termite-proofed, and fire-proofed. It cannot sag, settle, or pack—its insulating efficiency is controlled at the factory. Balsam-Wool is available in 1/2", 1", and Wallthick and in widths to fit all standard framing.

\*Patent Pending.

## NU WOOD

Plank • Tile  
Wainscot



Board • Roof Insulation • Lath  
Kolor-Trim • Insulating Sheathing

Now, both the dealer and contractor can offer more for the money in Nu-Wood Products because three improved items have been added to the line. They are companion items to the outstandingly beautiful and practical Nu-Wood Interior Finish Products.

1—Kolor-Trim pre-decorated wood moldings are available in three patterns and a variety of glossy enamel colors. They eliminate the use of paint on the job, assuring color harmony and economical application.

2—Nu-Wood Wainscot is entirely new—richer in color with a scuff-proof surface for use over areas which must stand abuse.

3—Nu-Wood Insulating Sheathing is a superior product with a double moisture-proofing coat on both sides. It offers greater protection against moisture, wind and weather—a worthy companion to the V-Joint Nu-Wood Insulating Lath.

Balsam-Wool and Nu-Wood are sold only by lumber dealers—no mail order or transient "Specialist" competition.

## WOOD CONVERSION COMPANY

First National Bank Building

St. Paul, Minn.

Balsam-Wool and



Nu-Wood Insulation

For other Weyerhaeuser Keys to More Home for the Money see pages 26, 30, 34, 47 and 75.



# ALL-YEAR COMFORT

Use this Key to demonstrate advantages of today's home from angle of health and comfort

## Survey Shows Air Conditioning Advance

WITH the new mechanical magic called air conditioning a man sees himself living in the castle he calls home, completely independent of climate, with inside temperature and humidity at the most comfortable level, without effort on his part. Therein lies the sales appeal of air conditioning equipment.

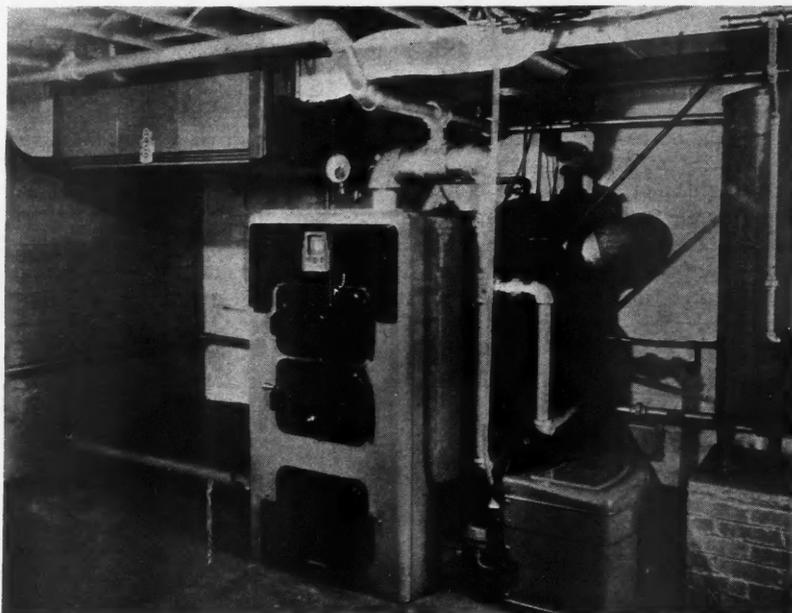
Any discussion of the subject immediately raises the question, "What is air conditioning?" Building professionals in their advice and explanations to clients and prospects should be careful not to misuse the term. For trade convenience it is customary to refer to "winter" and "summer" air conditioning. Winter air conditioning equipment must simultaneously heat, humidify, clean, and circulate air. Summer air conditioning equipment must simultaneously cool, dehumidify, clean, and circulate air. "All-year" equipment combines these functions. Anything that does not combine the foregoing controlled operations is not air conditioning equipment. Most general references to "air conditioning," have winter conditioning in mind. The bulk of this discussion will be devoted to winter air conditioning equipment, since it is in more general use than summer equipment.

The advent of automatic heating equipment in homes was accompanied by rapid gains in sales of automatic heating equipment, and a battle of fuels. This intense struggle for new markets has been fought with improved equipment and service. Each improvement has made home heating more convenient, more automatic, more uniform, healthier, or less costly. Owners have benefited from this competitive warfare, for they today get more heating plant for the money than ever before.

The value of residential construction rose from \$204,000,000 in 1933 to \$1,222,007,000 in 1937, a gain of 499 per cent, indicating the importance of new home building in sales of coal-, gas-, and oil-fired heating equipment during this period.

Experience shows that the most successful sales appeal of automatic heating equipment is *convenience*. This advantage seems to outweigh other considerations such as uniform temperatures, healthier living conditions, and cleanliness. Modern heating equipment has helped provide "More Home for the Money" in two ways; by providing greater comfort and convenience; by converting basement space that formerly could be used only for laundry, workroom or storage, into playrooms, dens, and home hobby shops.

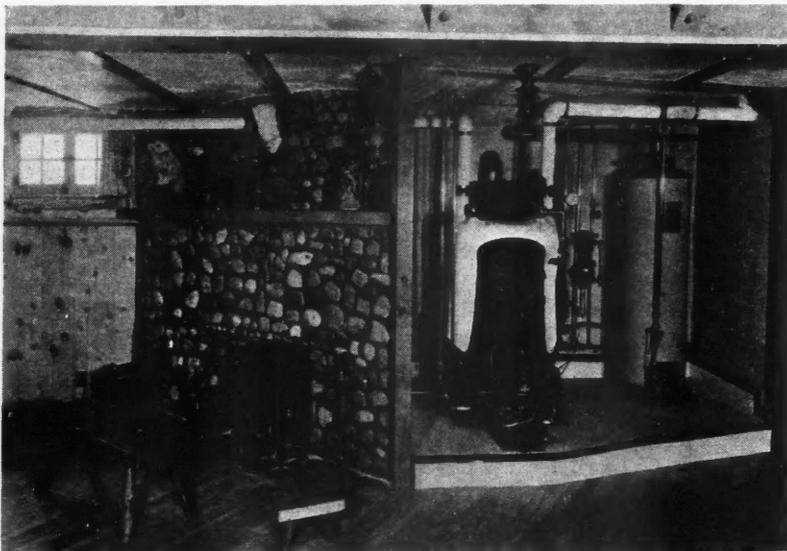
Not all of the increase in utilization of space has been confined to automatic heating equipment. A leading coke producer is devoting his attention to homes of average cost, and to the familiar hand-fired gravity furnace. The company has issued instructions showing how almost



SPLIT-SYSTEM heating and air conditioning plant. A bin-feed stoker fires this boiler automatically. The boiler is connected with a heat exchanger that furnishes conditioned air to most of the rooms above, and is connected to radiators that supply heat to small rooms in which it is inexpedient to install return ducts.

any basement can be converted into a recreation room by adopting modern hand-firing methods. Fuel is stored in a sealed, self-emptying bin with side walls of tongue and grooved stock, a sloping floor faced with galvanized sheeting, a shovel box and door that can be closed when the bin is not in use. Antiquated, oversize or worn out shovels, make-shift pokers, and unwieldy ash cans are replaced by specially designed, lightweight firing tools and easily handled ash pail. Tools are stored in special cupboards in the fuel bin.

Automatic heating equipment, as we know it today, could not operate without some inconspicuous mechanical marvels known as automatic controls. These reliable devices regulate room temperature and humidity more accurately than if it were done by hand. They start and stop, increase or decrease the supply of heat, turn circulating fans on and off, check flue temperatures, regulate dampers, stop the fuel flow in case of a mechanical failure, shut off the fire when water gets too low in a boiler, and in other ways insure safe operation of the heating plant at all times. Automatic controls for coal-, gas-, and oil-fired equipment have an entertaining story of their own. Building professionals should be able to tell this story to their clients and prospects. Illustrated, literature can be obtained from control manufacturers.



**GAS-FIRED boiler and automatic hot water heater.** The heating plant in this conversion job has been placed on a white tile platform, raised above the floor level of this unique basement, with its attractive fireplace of field stones, and rustic furniture.

Research engineers are constantly improving heating equipment, firing methods, extracting more heat from each pound of coal, and eliminating manual operations. Improvements in automatic coal burners are emphasized by organizations such as Anthracite Industries, Inc., the National Coal Association and National Stoker Manufacturers Association, in co-operation with manufacturers of heating equipment.

#### Coal Industry is Active

The Anthracite campaign, largest in the industry's history, is diversified. A research laboratory is constantly at work on better fuel utilization. New equipment of all kinds is tested for approval. A merchandising school trains dealers and salesmen. Exhibits and permanent display rooms have been opened and a complete Anthracite demonstration home recently was opened for public inspection in an eastern city.

Bin-feed stokers eliminate all fuel handling. A recently announced magazine-fed boiler operates without atten-

tion from 22 to 48 hours. Special attention has been given to ash handling. Some Anthracite burners have ash cans in a pit below the fire box. Others have "all-season" ash pits. Mechanical ash handling equipment also has been developed to make anthracite burners fully automatic. Recent developments include a package kindler and electric ignition that fires the stoker by pressing a button upstairs.

The National Coal Association is conducting a nationwide educational campaign to improve hand-firing of Bituminous coal and to demonstrate the advantages of automatic firing. Special literature has been prepared to show how to plan home basements for coal-burning equipment of all kinds. The importance of having driveway, coal bin, and heating plant close together for easy, economical fuel handling is illustrated and emphasized. Elevations and details show how to construct modern, enclosed coal bins of lumber, plywood, masonry, and concrete. Simplified methods of ash removal are described. Booklets and portfolios of basement plans and heating layouts have been distributed by the hundred thousands to contractors, builders, architects, fuel dealers and home owners. The portfolio shows how to get maximum basement space by building enclosed coal bins outside the foundation walls. Outside bins are filled from a driveway or through a manhole in the floor of an attached garage.

Many mechanical refinements have been introduced in automatic, coal-burning equipment. Bin-feed stokers will fire a heating plant so long as coal is in the bin. This development has increased the number of automatic coal-burning installations in new homes. Clinker-removal type stokers are being developed to make operation fully automatic. A number of air conditioning units and boilers now are designed especially for stoker operation.

Improved methods of washing and treating coal have encouraged better utilization of basement space in homes heated with solid fuels.

#### Gas Heat in Homes

The gas industry is making a strong and successful bid for home heating business. According to C. G. Segeler of the American Gas Association, approximately 2,000,000 homes now are heated wholly or partially

with gas. More than half of this number are served by space heaters, floor furnaces or unit heaters.

Such rapid strides have been made in developing inexpensive gas-fired plants that gas heat today is frequently found in low-cost homes. Much of the new equipment has been developed especially for this market. Small gas-fired boilers now can be installed on wooden floors. Compact floor furnaces are particularly suited to basementless, one-story buildings. A new forced-circulation gas furnace now can be installed in a compartment or closet of a basementless house. Construction costs can be reduced still further by installing a gas-fired *attic furnace* which requires a very inexpensive vent and saves cost of chimney and basement excavation. Gas-fired, steam radiators, vented or unvented, and gas-fired unit heaters are used as auxiliary space heaters.

The American Gas Association is actively promoting the construction of "All-Gas Homes" in which gas is used for the "4 Big Jobs"—Cooking; Water Heating; Refrigeration; House Heating. Contractors and builders,

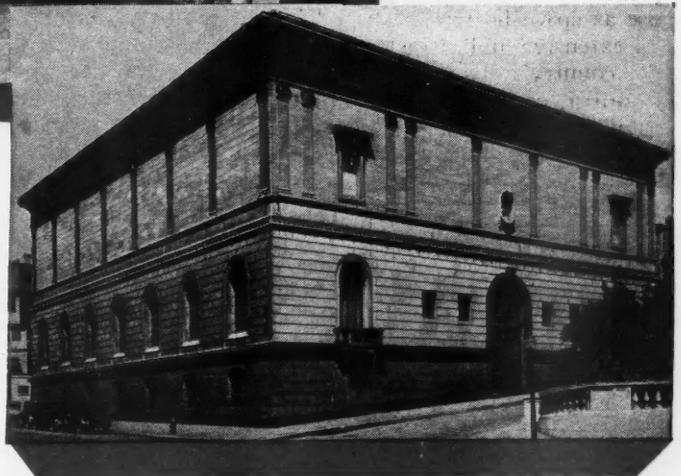
(Continued to page 86)

# A Striking Example OF ANTHRACITE'S ADVANTAGES OVER OTHER FUELS



Left. Central court of Walters Art Gallery. The white marble floors as well as priceless works of art, require the cleanliness of Anthracite heat.

Below. Exterior view of the Art Gallery, where Anthracite heat was selected to preserve the building as well as the irreplaceable works of art it contains, from dirt and corrosion.



## Famous Walters Art Gallery Adopts Automatic Anthracite Heat

Builders hear many opinions as to which fuel gives the cleanest heat. Here is convincing evidence on the question.

When the famous Walters Art Gallery of Baltimore, Md., was faced with the selection of an automatic heating plant, and the question of cleanliness involved the preservation of thousands of priceless art treasures, Anthracite was selected.

The gallery houses a costly collection of stained glass windows, white marble statues, rare old books, unreplaceable oil paintings and water colors, century-old tapestries, imported bronzes and Oriental ceramics. Caring for such unique creations requires a ceaseless battle against destructive elements which might stain, corrode, and ruin the delicate art objects. Such objects can not be handled vigorously and frequently for purposes of cleaning. Gallery officials, when considering the addition of automatic firing, were determined to use no fuel which might add smoke, soot or destructive elements to the air. Chimney smoke and grime, they felt, would pollute the atmosphere about the building.

As a result, Walters' authorities, knowing Anthracite is smokeless, sootless and odorless, voted for an automatic Anthracite stoker.

Cleanliness is but one of the many advantages of Anthracite in addition to its greater heat value and economy. The book "Modern Anthracite Equipment" describes the newest developments in automatic heat and air conditioning. A copy will be mailed upon request.

Anthracite Industries, Inc., Chrysler Bldg., New York



This Seal of Approval appears on Anthracite equipment only after it has passed the most rigid tests in the heating field.

# Pennsylvania ANTHRACITE COAL

**COLORFUL**, attractively finished heating equipment, such as this oil-fired winter air conditioner, encourages the building of basement recreation rooms, and has made home heating fully automatic.

(Continued from page 84)  
in co-operation with local utility organizations, have erected and thrown open to the public many All-Gas demonstration homes.

#### Oil-Fired Heat is Automatic

According to the Oil Burner Institute, there were about 1,550,000 domestic oil burners in operation at the end of 1937. In addition to these burners in central heating plants there are about 1,200,000 distillate oil burners in use as space heaters. The oil burner industry, through its extensive and attractive advertising, has been one of the country's strongest advocates of automatic heating. Comfort, convenience and utilization of basement space have been stressed.

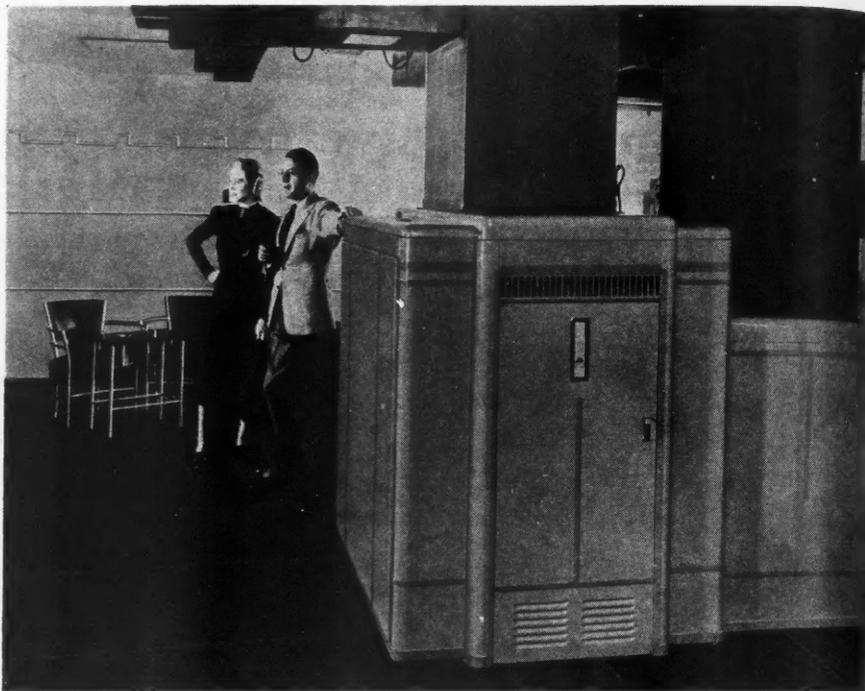
During the past five or six years, noteworthy advancements in oil-fired heating plants have been made. Furnaces and boilers with long heat flow have been designed especially for oil burners. The modern oil-fired, forced-circulation, winter air conditioning unit is an attractive piece of basement furniture, efficiently engineered and fully automatic. It has played an important part in placing air conditioning equipment in new homes. Oil-burning air conditioning plants originally were regarded as equipment for costly homes, yet during the past few years, compact, oil-burning, winter air conditioning units have been developed for the low-cost field; particularly for basementless dwellings in which the heating plant is installed in a small, centrally located utility room on the first floor. Some of the newest, compact, low-cost air conditioning units occupy a floor space of approximately 24" x 36".

Distillate space heaters likewise have been improved mechanically and are more attractively designed than ever before. Compact, new models are made for automobile trailers, tourist cabins, and fishing shacks, while larger units are used to heat small homes. Because of their design, these heating units can be placed over wood floors or rugs, if desired.

Small homes now are successfully heated with circulating fireplaces, equipped with a heating chamber and grilles that produce a flow of heated air, by gravity or supplemented with fans. A more recent development is a water-jacketed fireplace that serves as a hot water boiler and may be connected with radiators.

#### Split System Efficient and Flexible

Most people think of winter air conditioning equipment in connection with warm air heating plants, yet the so-called "split system," in which steam or hot water is used for both heating and air conditioning, is efficient and very flexible. Central type boiler conditioners take



care of an entire building. Unit types supply conditioned air to a single room. Heat is generated in a steam or hot water boiler that serves both radiators and conditioners. Steam or hot water passes from the boiler to a heat transfer coil in the conditioner, where it warms the filtered air before it is humidified and circulated through ducts, as in a typical warm air plant. Radiators are used to heat kitchen and bathroom in this type of installation. It is not expedient to return air ducts from these rooms because of their small size, and because of odors. Radiators also may be installed in exposed rooms that otherwise would be hard to heat. Thus the split system provides complete air conditioning and so-called "zoned" heat control. By installing a mechanical cooling and dehumidifying unit the same central system can be used for summer air conditioning.

#### Summer Cooling Systems

Portable room coolers have a mechanical cooling unit like that in an electric refrigerator, supplemented by a dehumidifying unit, filters, and a circulating fan. Central cooling systems operate on the same principles, but on a larger scale.

Deep well water, which is cool the year around, is increasingly popular for summer cooling of homes, particularly suburban estates that have their own water systems. Cold water is passed through a heat exchanger where it cools the air that is circulated through the house. Well water provides a comparatively inexpensive way to cool homes.

The least expensive way of cooling a home in summer is with an attic ventilating fan. An attic fan is not an air conditioner—"comfort-cooling" is a better descriptive term for the service it performs. Initial cost of the installation is within the reach of most home owners, and operating costs are low. For that reason attic fan installations are increasing rapidly.

Insulation and "window-conditioning," discussed in a subsequent article, play an important part in providing all-year comfort.

Before circulating fans were introduced, gravity warm air furnaces had to be placed approximately in the center

(Continued to page 88)

# Discriminating Home Buyers Know

## YOU DON'T FIND HOLLAND FURNACES IN "JERRY-BUILT" HOMES!



WHETHER a home is built to order or on speculation, a Holland Heating Plant is a valuable asset to the builder. In the one case it insures the builder against dissatisfaction due to insufficient or too costly heating; in the other, Holland prestige insures an easier sale. The widely known efficiency of Holland equipment and Holland's scientific installation plainly says to the prospect, "This is a home of quality construction . . . no 'jerry-building' here!"

In either case Holland's broad guarantee of "perfect heat in every room" transfers all responsibility for the buyer's satisfaction from you to the manufacturer. Why not find out all about these and many other benefits to builders dealing with Holland. Simply mail the coupon below.

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ENGINEER ANALYZES BUILDER'S PLANS



WORKS OUT SYSTEM TO MEET EVERY NEED



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HOLLAND'S OWN EXPERT MECHANICS INSTALL

# HOLLAND FURNACE COMPANY

HOLLAND, MICHIGAN

World's Largest Installers of Home Heating and Air Conditioning Systems

HOLLAND FURNACE COMPANY  
Dept. AB-10, Holland, Michigan

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- Holland Automatic Oil Burners
- Have Holland Heating Engineer Call
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With incredible quietness and smoothness, the Payne gas-fired Beverlyair Unit contributes to year 'round home comfort in four ways.

It heats, cleans, circulates the air and automatically controls humidity. True winter air conditioning with budget pleasing economy.

The Payne Beverlyair Unit is made in America's most modern furnace plant. It is a magnificent result of 25 years of concentration on gas-fired appliances exclusively.

Payne offers engineering service on heating and air conditioning plans for both commercial and residential application. Please write for information.



*Payne*



**FURNACE & SUPPLY CO., INC.**  
BEVERLY HILLS, CALIFORNIA

(Continued from page 86)

of a basement. Large, round duct work was required to get a proper flow of warm air. Circulating fans made it possible to locate the heating plant practically anywhere in the basement and brought about a considerable reduction in duct sizes. Flat, streamlined ducts gave additional head room in the basement and thereby stimulated the building of recreation rooms. Most duct-work is produced locally by sheet metal contractors. A recent development is found in factory-made prefabricated duct-work in either sheet metal or moulded asbestos.

A great deal of inventive genius has been devoted to methods of supplying domestic hot water. Coal-, gas- and oil-fired boilers now are equipped to supply domestic hot water throughout the year. Automatic controls maintain the hot water supply and keep heat out of the radiators in summer. Furnaces are equipped with hot water coils, but supplementary heaters are required when the furnace is not in use. Gas-fired heaters are most familiar. Many others are available, such as diminutive, coal-fired and "bucket-a-day" heaters. A small coal stoker has been designed especially for domestic hot water heaters. Gas-fired heaters are operated manually, are semi-automatic, equipped with remote controls or are fully automatic. Attractively finished, insulated hot water storage tanks are increasingly popular. Electrically heated, insulated hot water tanks are popular where power rates are low. Operating costs are kept down by heating water at bulk rates during early morning hours, when the power load is at a minimum.

The heating and air conditioning industry has made more progress during the past eight years than during the previous fifty. By improved and new equipment it has made many contributions to greater home comfort, and to More Home for the Money.

\* \* \*

### Calking Compound Cartridges

A SPECIAL cartridge has been developed by Lastik Products Co., Inc., Pittsburgh, Pa., for loading "Lastikalk" calking compound into guns. The cartridge saves loading-time and eliminates waste. Inserting a cartridge in the gun is an easy matter. Simply remove cellophane wrapping and the lids at each end of the cartridge. After removing nozzle of gun, pull back the

THIS new cartridge containing a pint of calking compound saves time and eliminates waste in loading a calking gun.



plunger. Insert the cartridge, replace nozzle, and gun is ready to use. Each cartridge holds about one pint, packed twenty-four tubes to the carton. Lastikalk is manufactured in standard medium gray, limestone, natural, cream, black, brown, green, white and red; available in cartridges, large cans, and drums.

### Home Ventilator in Complete Package

THE new Rex-Airate attic ventilator package is a product of Air Controls, Inc., Cleveland, Ohio. The package unit includes a metal vent box that can be assembled in a few minutes; an automatic ceiling shutter, canvas connector, ceiling moulding, and fan

(Continued to page 90)

# NON-SETTLING

## it stays where it's put



•Kimsul\* offers homes complete protection. It is flexible, so can be shaped to snugly seal areas through which heat escapes. Even more important, that protection can be lastingly complete. Properly installed, Kimsul "Stays put" ..it does not settle and develop transoms through which cold can seep.

**KIMSUL**  
REG. U. S. & CAN. PAT. OFF.  
*Expanding Blanket*  
**INSULATION**

Nailed on at top and bottom and fastened with sheathing nails at intervals of 15 to 18 inches as shown in the illustration, Kimsul stays put. Vibrations caused by heavy trucks and speeding automobiles do not cause it to

settle. It does not shred nor sift.

### For Homes With Unfinished Attic Floors!

Heat naturally travels UP. Hence large heat losses occur through attic floors and roofs.

If a home has an uninsulated attic floor, one or two layers of Kimsul laid directly on the plaster base, between joists, will save a lot of the fuel that's been wasted and keep the home far warmer. The cost of doing this is very little, compared to the comfort Kimsul gives.

### See that the Insulation you choose meets all these requirements

- 1 **EFFICIENCY:** Kimsul is made of wood fibers, their natural high resistance to heat increased by interweaving, creping and laminating.
- 2 **FLEXIBILITY:** Kimsul fits snugly. It can be tucked into odd spaces, around windows, electric wires, pipes, etc.
- 3 **PERMANENCE:** Kimsul is highly resistant to fire, vermin and moisture.
- 4 **NON-SETTLING:** Kimsul stays put. Leaves no unprotected spots; will not shred, sift or settle.
- 5 **LIGHTNESS:** 1,000 sq. ft. of Kimsul only weigh 131.5 lbs. It adds practically nothing to the structural load.  
\*Reg. U. S. & Can. Pat. Off.
- 6 **PROPER THICKNESS:** One-inch Kimsul provides maximum comfort and fuel savings for the investment.
- 7 **NO WASTE:** Every square inch is usable.
- 8 **EASE OF HANDLING AND INSTALLING:** Practically no cutting or fitting when installing Kimsul.
- 9 **EXPANDABILITY:** The small sample of Kimsul (in photo at left) has been expanded to 6 times its original length without lessening its thickness or its heat stopping effectiveness. This feature speeds up and lessens installing costs.



KIMBERLY-CLARK CORPORATION (Kimsul Division), Neenah, Wisconsin

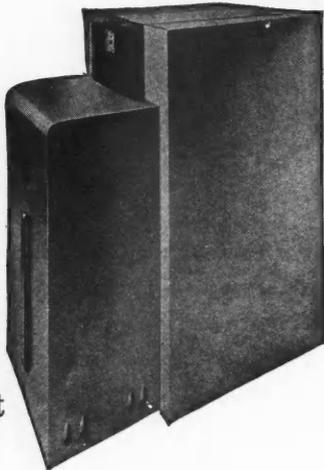
Established 1872

NEW YORK, 122 East 42nd Street • CHICAGO, 8 South Michigan Avenue

AB10

Mail me, without obligation, copy of booklet describing Kimsul, also a full sized sample. Name \_\_\_\_\_ Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

That front stoop is available to cover the oil burner. If you burn coal, you leave off the stoop. If you go back to oil, the stoop's all ready to put over the burner again.



*Hank's*

**NEW  
Yello-Jacket  
BURNHAM**

**Stings The Coal Bill**



Sort o' looks to me, like as if buying a boiler what will only burn coal or only oil may not be too smart.

Course you can put an oil burner fast to a coal boiler. But there the burner is all sticking out in front and no covering. Or if it has one, it don't

match the boiler's jacket.

Such ain't so with this new Yello-Jacket Burnham what stings the fuel bill so hard. See what it sez beside the corner cut. And now another thing. This Yaller Jacket has a combustion chamber what runs all the way from the boiler's cellar to its garret.

Not only is the crown sheet over the fire *direct* surface, but all the way upstairs as well. The Jacket is just one of the swellest enamel yellows you ever saw. Two coats. Both baked on.

There's no hinges in sight on the doors. There's just enough chromium used to give a bit of snap and sparkle. The women folks like the jacket and that's important. It can at any time be changed over from oil to coal, or coal to oil, easier than you might think.

Bother to send for the printin' matter about it. You might be more bothered yet if you don't.

*Hank Hinds*

**BURNHAM BOILER CORPORATION**  
Distributed Through Wholesalers  
Irvington, N. Y.                      Zanesville, Ohio  
Branch Offices in All Principal Cities  
Export Department: 80 Church St., N. Y. City

*Burnham Boiler*

(Continued from page 88)

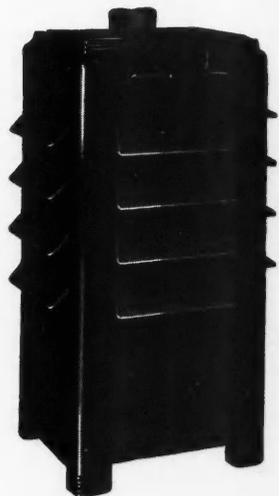
unit with rubber-cushioned rests. Except for temporary help when hoisting the fan unit into an attic, one man can make the entire installation in one day.

The automatic ceiling shutter has aluminum blades set into an angle-iron frame. The blades open when the fan is started and close tight when the fan stops. An automatic control switch can be furnished as additional equipment, if desired.

The switch is set by hand when the fan is started, and is adjusted so as to shut off the fan automatically any desired time between three to ten hours.

**New Superfex Oil Heater**

**M**ODEL 1047, a new pot-type, Superfex oil heater has been added to the line of the Perfection Stove Company, Cleveland, Ohio. The new heater is designed to heat 9,400 cubic feet of space in buildings of average construction, in territory where the temperature seldom drops below 20 degrees above zero, and 6,600 cubic feet where occasional zero weather occurs.

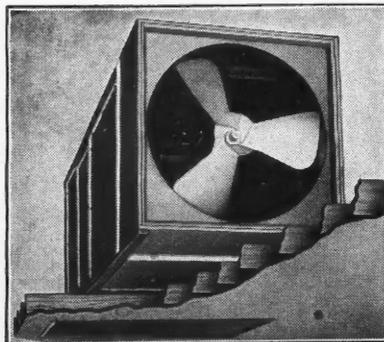


SHUTTERS on three sides of this new oil-fired space heater can be used to direct heat downward to warm floor areas.

The new unit is of the Heat-Director type, supplying both radiating and circulating heat. Adjustable shutters on three sides make it possible to direct heat downward to warm the floor. The company's Heat-Directors are finished in porcelain enamel, and the radiating heaters in either porcelain enamel or polished steel. They are adapted for operation with either No. 1 or No. 2 fuel oil and can also be operated successfully with either kerosene or distillate.

**New Attic Fan Furnished Complete**

**T**HE Victor Attic Fan "500" series, is made by Victor Electric Products, Inc., Cincinnati, Ohio, in 36", 42", and 48" sizes. The fan unit is shipped with everything needed to install it, including



**PHANTOM-VIEW** with joist cut away to show fan unit and suction box connected with ceiling grille.

suction box, grilles, fire door with fusible link, canvas connectors, felt insulating strips, pulleys, rope, bolts, nuts and tacks.

The Victor "600" series fan is recommended for an installation in outside attic walls in homes that have attic stairways, the "500" series for use with suction boxes.

# Everybody seems to want the new FIR-TEX COLOR PANELING

## Here's why:

"Makes homes quieter"



"Does two jobs at one cost"



"Such attractive colors"



"Marvelous insulation; cuts fuel bills drastically"



"Speeds up building completion at least two weeks"



"Beautiful yet inexpensive"

### FIR-TEX SALES SOAR



People are reading, talking, buying Fir-Tex as never before!

Since we introduced our color line, last spring, sales have skyrocketed. Cash in on this widespread enthusiasm for Fir-Tex, which is being fanned by a vigorous national advertising campaign.

#### Color a Big Talking Point

Fir-Tex Paneling sells itself with COLOR—apple green, apricot, sky blue, shell pink and ivory. Yet it costs no more than ordinary unfinished insulation board.



#### Cash in on Fir-Tex advantages

- 1 Makes homes easier to sell (because of color feature and insulating efficiency).
- 2 Lowers your building costs; panels as it insulates.
- 3 No lath, plaster, wallpaper or calcimine required. Fir-Tex is complete interior finish in one board.
- 4 Goes up fast; self-supporting; clean and easy to handle.
- 5 Provides unbroken area of uniform insulation. No cracks, knot-holes, thin spots or open spaces.
- 6 Washable, durable; practical. Can't settle. It's a solid board.

### KILL 2 BIRDS WITH 1 STONE

Fir-Tex Insulating Boards are *double duty* building materials. Each does two jobs at one cost.



Fir-Tex Color Paneling panels as it insulates.

Fir-Tex Insulating Lath provides insulation plus superior plaster base, both in one board. Eliminates lath marks entirely; greatly reduces plaster cracking.

Fir-Tex Sheathing replaces wood sheathing and building paper and also insulates at the cost of insulation alone. No shiplapping waste; greater bracing strength.

—Send in envelope or paste on penny postcard—

DANT & RUSSELL, INC., Porter Building, Portland, Ore.

Please send:

- Free catalog, in color, covering entire Fir-Tex line.
- Free samples.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

# FIR-TEX

## INSULATING-BUILDING BOARD... DOES 2 JOBS AT 1 COST

# Insulation and Window Conditioning Assure Maximum Home Comfort

**I**NSULATION, caulking, weatherstripping, and the double-glazing of windows, by cutting down heat losses in homes, encouraged and stimulated the use of automatic heating and air conditioning equipment. Increased use of automatic humidifiers in heating plants has in turn brought important improvements in fuel-saving methods and greater comfort to home owners.

Houses of former years were soundly but "loosely" built when measured against the present standards of "tight" construction. Air infiltration around windows and doors in winter formerly was taken for granted, as were heat losses through walls and ceilings. The building industry provided improved heating equipment, and at the same time made the home-buying public BTU conscious. "Stop those heat losses!" was the order of the day. Weatherstripping and caulking answered the call by making doors and windows weathertight. Insulation went still farther by reducing heat losses in walls and ceilings to a minimum, and introduced new standards of all-year comfort by making homes warmer in winter and cooler in summer. Air conditioning sales leaped ahead.

But progress brought new problems. Some owners of well insulated, air conditioned homes reported excessive moisture in side walls and attics during cold weather,



**MINERAL WOOL** in batt form simplified installation. The latest improvement is the addition of vapor-proof paper backs. All forms of insulation now are available with vapor seals, to eliminate condensation in sidewalls and attics.



**A HOME** with modern prefabricated double-glazed sash can be "window conditioned" in a few minutes. The extra, insulating sheet of glass is fitted into a special recess in the sash.

resulting in water-stained walls and ceilings, loose plaster, and outside paint failures. L. V. Teesdale, senior engineer, Forest Products Laboratory, Madison, Wisconsin, after a series of tests, made the rather startling announcement that vapor seals should be placed on the *inside* walls.

Winter air in heated homes formerly was dry—at times as dry as that over the Sahara desert. Air conditioning changed that situation. The evaporation of 10 to 15 gallons of water a day into a house caused water vapor to work through the finished inside walls. This vapor congealed when it struck the colder outside temperature within the walls. The cure for this condition is to place a vapor barrier between the finished wall and studding, or ceiling finish and joist. If the moisture cannot escape it cannot congeal.

A number of inside vapor seals are available. Asphalt impregnated paper, laminated sheathing kraft paper cemented together with asphalt, or double faced reflective insulation mounted on paper is applied vertically, with edges lapping on studs after insulation is installed and before lathing. The barrier should be sealed around openings. The paper is applied loosely when walls are to be plastered, so that the plaster

(Continued to page 94)

IF YOU  
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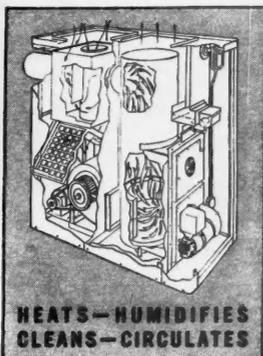
**YOUR PROBLEM**  
How Best to Heat the  
Small House at Low Cost.

**THE SOLUTION**

The new Round Oak X-80 Oil  
Fired Winter Air Conditioner  
makes oil heat practical in  
homes costing as little as \$4,000.

**ROUND OAK  
X-80\***

FOR SMALL HOMES



HEATS—HUMIDIFIES  
CLEANS—CIRCULATES

IF YOU are planning the design or erection of small, low priced homes, you will welcome the new Round Oak X-80 Oil Furnace as a practical solution to your heating problem. It provides the luxury of automatic heat and conditioned air at unusually low cost. Ample capacity for five to seven room houses. Designed as a unit in an attractive blue steel cabinet, it is the newest development of one of the oldest manufacturers of quality heating equipment. See your Round Oak dealer for details, or write direct to the factory.

\* In addition to X-80 Round Oak builds larger Oil Fired Air Conditioners — also Coal burning Steel and Cast Iron Furnaces, Oil Burners, Heating Stoves, Coal and Gas Ranges.



**ROUND OAK**

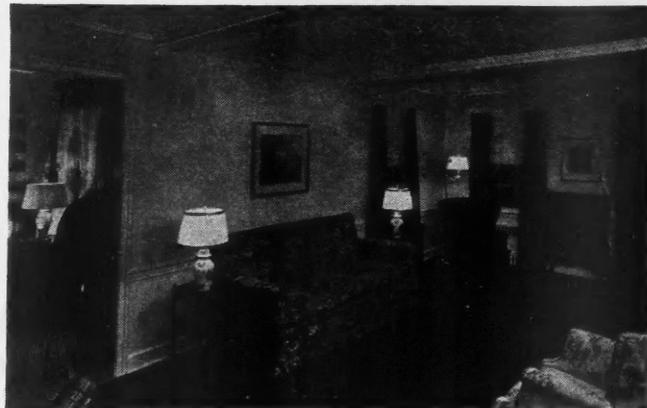
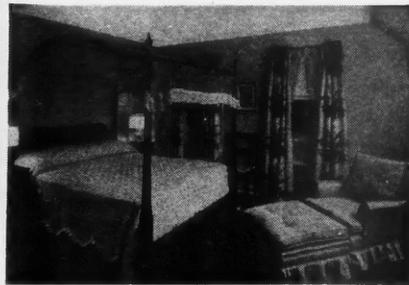
STOVES • RANGES • FURNACES  
OIL BURNERS • AIR CONDITIONERS

The Round Oak Company, Dowagiac, Mich., Dept. 110  
Please send literature and complete information describing your  
 X-80 Air Conditioner  Other Heating Equipment  Oil Burners  
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*One-piece,  
crack-proof walls*  
IN  
**PRECISION-BUILT  
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That is just one of the compelling and exclusive features this method of construction offers you. Almost \$2,000,000 worth of Precision-Built houses have been built in less than 2 years. Let us send you a booklet which shows why—and how.

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plans) and local labor. You get the support of your local materials dealer and realtors—plus our practical, trained representatives. Precision-Built houses are eligible for FHA.

The whole plan is tested and proved. And we supply sales plans and advertising support which sell homes now. Mail the coupon today. Let us send you our Simplified Method of Estimating—greater accuracy in far less time.

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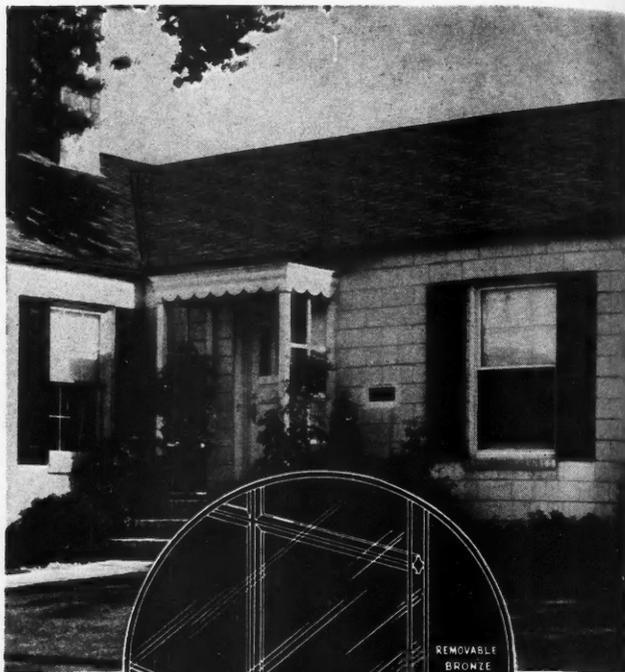
will push the barrier away to form keys. The barrier is applied in the same manner on ceilings.

Insulation manufacturers quickly adapted their products to the new condition. Structural insulation boards now are impregnated, or are surface-coated with a vapor seal. Tuck-in, or blanket-type insulations and mineral wool batts are faced with asphalt treated papers.

One more problem remained. Windows and doors were tightly caulked and weatherstripped. Air infiltration and heat losses were cut to a minimum. Walls and ceilings were insulated and vapor-sealed. But a single pane of glass in each window frame was all that stood between the comfortably heated interior and the icy blasts outside. A house with well insulated walls and ceilings, and loosely fitted, single-glazed windows has been compared to a chicken yard with a fence 15 feet high on three sides, and only one foot high on the fourth side. Heat losses in such a house are terrific.

There also arose the problem of condensation on windows. When vapor-laden air on the inside of heated homes struck the cold window panes the moisture congealed. So much condensation occurred that frames soon showed stain, or signs of decay. The building industry

(Continued to page 96)



THIS demonstration home erected by Detroit Builders is equipped with double-hung, double-glazed, Non-Stick Windows, made by the N.S.W. Company, Detroit. The inner sheet of glass is held in place by a spring-bronze retaining strip which allows easy removal of the glass. Muntin grids may be placed between the two sheets of glass to give the effect of a cut-up sash.

## The Master Key to

**W**ANT VALUE that helps you sell your homes? . . . Want COMFORT that makes people buy? . . . Then here's the key to both—the *Best Known Name in Heating*. It is an outward sign of inward quality . . . the mark of a good builder whose homes include the best materials.

AMERICAN RADIATOR HEATING need cost no more, despite the sales advantages that go with it. There is equipment for every home and every fuel and every price range. All of it with the name that tells the buyer—"This home is a *good home!*"

**AMERICAN RADIATOR COMPANY**  
DIVISION OF AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

40 West 40th Street, New York, N. Y.



**AMERICAN IDEAL**  
RADIATORS BOILERS



**"LUCKY 7" IDEAL BOILER**—Low-cost. Hand-fired model easily converted to oil, gas or stoker-fired coal. Provision for domestic hot water. As good to live with as it is to look at.



**ARCO RADIANT CONVECTORS**—A million dollars worth of selling points for about \$25 extra in the average size home, with extra comfort and beauty that can't be valued in dollars.



**NO. 300 ARCO-DETROIT MULTI-PORT VALVE**—Extra-fast venting makes low priced steam systems give high-price comfort. Assures even warmth in every room. Adjustable for *balanced heating*.

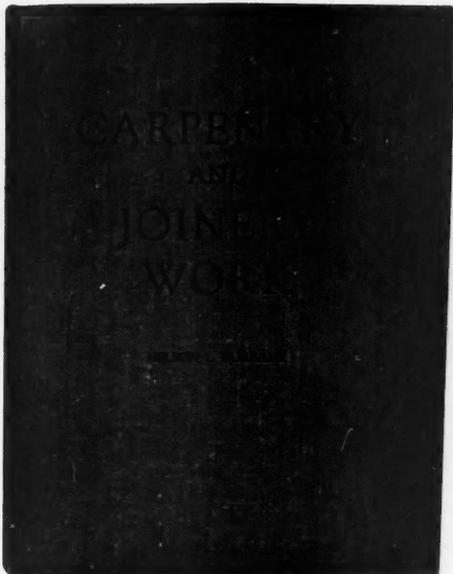


**ARCO AIR CONDITIONER**—A deluxe addition to American Radiator Heating where winter air conditioning is desired. Easily installed without extensive ductwork. Circulates filtered, humidified fresh air.

# CARPENTRY and JOINERY WORK

By Nelson L. Burbank

Formerly Instructor, Building Vocational High School, Cincinnati, Ohio



The new second edition has been thoroughly revised.

The manuscript was carefully checked by a former contractor and ex-editor so that this book combines the practical outlook with the author's trade teaching experience. The cardinal principles of modern residential construction are set forth simply and logically with the aid of many photographs and line drawings. The Second Edition contains 90 revised pages with new illustrations and descriptions of new methods and materials.

The program of study as presented in this latest textbook for students of carpentry work involves class discussion, practical job work and related studies. These include Architectural Drawing, Plan Reading, Carpentry Mathematics, Business English, Applied Science, Civics and First Aid.

280 pages, illustrated, 8½x11 inches. Cloth Bound, \$3.00

BOOK DEPARTMENT

**American Builder and Building Age**  
30 Church Street New York, N. Y.

## Homes Equipped with these Fans Bring Premium Prices—Sell Faster

*Buffalo*

### ATTIC FANS

for Summer Cooling Comfort

● These large-capacity, quiet fans, when turned on after sundown quickly force out the hot air and draw in the cool night air through open windows in the lower rooms, assuring cool comfort all summer. A real feature that is helping the sale of better homes. Write for Booklet 3085.



*Buffalo*

### KITCHEN FANS

● Quickly catch the eye of the housewife. Remove cooking odors. Keep kitchens well ventilated. Furnished complete with wall case for easy installation. No modern home should be without one. Write for Bulletin 2892.



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## MASTER WEATHERSTRIPS

Keep Bad Weather  
OUT  
And Good Weather  
IN!

Air conditioning and insulation have created an entirely new need for MASTER Weatherstrips. In addition to keeping out bad weather, it is necessary to retain the healthful indoor atmosphere created by modern air conditioning plants. MASTER Weatherstrips will greatly increase the efficiency and economy of all air conditioning units.

Installed by reliable dealers in all parts of the country.

Agents: Write for catalog and agency plan

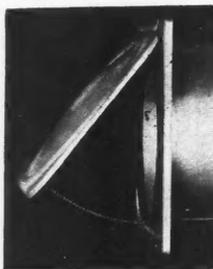
## MASTER METAL STRIP SERVICE

1720 North Kilbourn Ave., Chicago, Ill.

**MILWAUKEE  
EXHAUST FAN**

10" Fan, G.E. all enclosed motor rubber seal model 40 w. Door inside and outside, special feature.

**ONLY \$12<sup>90</sup>** In Lots of 6. \$18.95 each



MODEL 40 W.

Finest construction—a real value—big demand. Order now.

**MILWAUKEE SALES & MFG. CO., MILWAUKEE, WIS.**  
Shipping facilities New York-Cleveland-Dallas-San Francisco

... THIS SEASON  
**MAKE THAT  
EXTRA  
PROFIT**

**GET YOUR SHARE of the  
WEATHERSTRIP BUSINESS**  
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New building and remodeling jobs are creating big demands—the time is right for quick action. Team up with easy-to-install, always satisfactory, **ALLMETAL WEATHERSTRIP**. Write now for price list and free display charts. Over 20 years satisfactory service



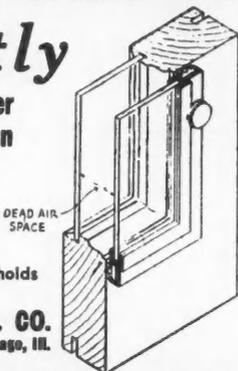
**Insulate Your Windows  
Permanently**

and save more than any other form of single insulation

Easily accomplished on new or old wood or steel windows by installing winter panes—Attractive—Light weight, extruded aluminum frame—Refrigerator gasket seal. Costs very little more than ordinary storm-sash.

**PROTEX**—Weatherstrips, Storm-sash, Thresholds  
Write for illustrated data

**PROTEX WEATHERSTRIP MFG. CO.**  
2308 West 60th St. Chicago, Ill.



**MAKE EXTRA PROFITS ON  
DENNIS  
DOUBLE CUSHION  
BRONZE WEATHER STRIPS**

*Easily installed without removing sash or doors!*

Now you can make quick, new profits by selling genuine Dennis Double Cushion Spring Bronze Weather Strips for modernizing jobs and new homes. The easiest to install—comes attached to new parting stop. Patented "S" fold gives double spring action. Prevents cold air leaks. Makes snug weather-proof seal conforming to all warping, shrinkage and expansion of sash and doors. Endorsed by architects and builders for saving fuel. Ask your jobber or write for illustrated Weather Strip Catalog.

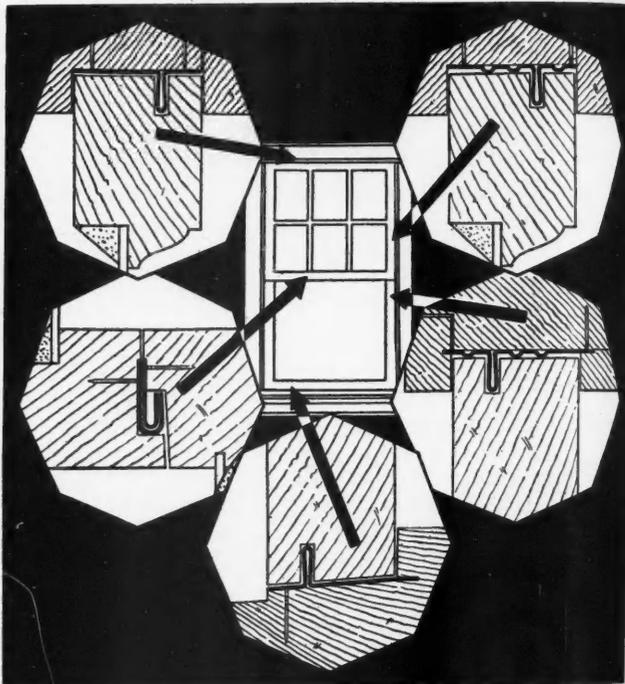
**W. J. DENNIS & CO.**  
2110-20 WEST LAKE ST. CHICAGO

(Continued from page 94)

quickly found the answer—window conditioning, or double-glazing. As a result, the well dressed, air conditioned house will wear good old fashioned storm windows this season, or the more modern, improved type of prefabricated double-glazed sash with an extra, insulating sheet of glass that can be set in place in a moment, and can as easily be removed for cleaning or storage. The principle of double-glazing is very simple. The extra pane of glass, by creating a dead air space between inner and outer windows, provides very effective insulation. This insulation permits the inner pane to stay warm, so that moisture no longer condenses on it.

**Metal Weatherstrips Cut Heat Losses**

WITH the advent of air conditioning, a new need for metal weatherstrips has been realized. The healthful and comfortable indoor atmosphere afforded by a modern air conditioning plant must be retained. Literally, the good weather must be kept in, and the bad weather kept out. Experience has shown



that metal weatherstrips assure more successful and economical operation of air conditioning plants.

The accompanying illustration shows how weatherstripping protects double-hung windows. Note how grooves are plowed in the sash at the head, sill and sides to conform to the tongue of the rib weatherstrip. At the meeting rails the accepted practice is to apply interlocking hooks, as shown.

Actual installation of metal weatherstrips is done by carpenters or other mechanics who usually specialize in this work. The skilled weatherstrip mechanic is careful to correct irregularities in the sash to insure perfect operation of the equipment. Efficiency tests indicate that under ordinary conditions, a properly installed weatherstrip job will eliminate 85 per cent of the air infiltration around windows and doors.

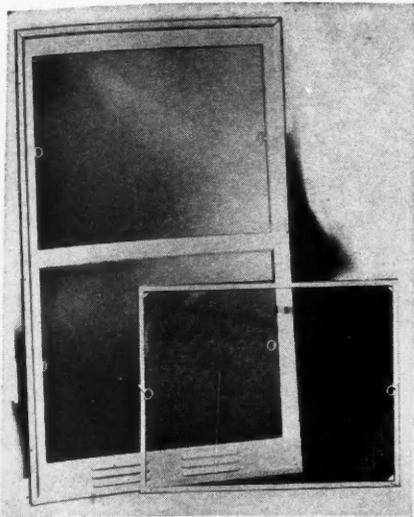
**Metal Combination Screen and Storm Window**

A PATENTED all-metal combination screen and storm window has been announced by the F. C. Russell Insulation Company, Baltimore, Md. It is known as the "Phoenix" window.

When installed, a rust-resisting, metal frame is permanently affixed to the window casement with a closure strip that forms a permanent weatherstripping seal. Sturdy, metal-bound panels of glass or screen are locked to the outside frame. The screen and glass panels can be changed from inside the house in less than a minute. A shutter in the bottom of the frame can be opened for winter ventilation. The Phoenix unit is made to fit any

window in new homes or old; whether of brick, wood, concrete, stone veneer, or steel construction.

Frames are made from Armco ingot iron galvanized "paint-



METAL-BOUND, glass or screen panels can be changed in less than a minute in this all-metal combination screen and storm window.

grip" sheets, Bonderized to preserve paint finish, and guaranteed rust proof. Windows are applied to wood frames with cadmium screws and to metal frames with Parker screws. Prices range upward from \$10.00 for 22" x 28" window; weight, about 12 lbs.

\* \* \*

Largest Mineral Wool Order

THE largest residential insulation order ever placed in the United States calls for three and a half million square feet of mineral wool, to be installed in an apartment development now being constructed in the Bronx, New York City, by the Metropolitan Life Insurance Company. The development will comprise 171 structures from 7 to 13 stories high, will cover 120 acres.

No Special Experience Required

MAKE MONEY MEN WANTED

Metal weatherstrip is a necessity in all buildings. Stops drafts. Saves fuel. Any handy man can install. Build your own profitable business with Accurate, the 35 year leader. Write for proposition.

—ACCURATE—

METAL WEATHER STRIP CO. 218 East 26th St., New York

FREE FOLDER ACCURATE METAL WEATHER STRIPS

COMPLETE CATALOG IN 1938 SWEET'S

New Jobs in Building

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Test the famous C.T.C. "Blue Print" Way to get into the real money brackets in Building. Send today for our FREE BOOK.

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CHICAGO TECHNICAL COLLEGE

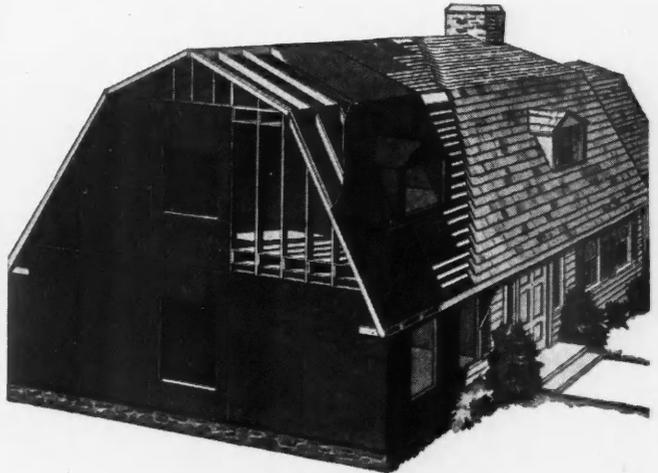
For 35 years . . . The School for Builders

N-128 Tech Building, 118 E. 20th St., Chicago, Ill.

MASONITE DUBBLSEAL SHEATHING

WORKS 4 WAYS FOR YOUR CUSTOMERS\*

...AND WORKS 4 WAYS FOR YOU



★INSULATES. MASONITE DUBBLSEAL SHEATHING is MASONITE STRUCTURAL INSULATION 25/32-inch thick. It is coated on all sides and edges with a special water-proof asphalt . . . a super-effective barrier against the passage of heat and wind infiltration!

★STOPS MOISTURE INFILTRATION. The asphalt coating prevents insulation from absorbing moisture. A curb for damp walls!

★ADDS STRENGTH. The 25/32-inch thickness and the tested-and-proved rigidity of MASONITE INSULATION reinforce the entire frame of the house . . . assure a stauncher structure!

★COVERS LARGE AREAS. One piece of MASONITE DUBBLSEAL SHEATHING covers 48 square feet of area. . . Fewer joints—more economical and efficient construction!

The four-way structural advantages of MASONITE DUBBLSEAL SHEATHING mean many obvious comfort, money-saving and investment advantages to the home owner. To you, the builder who wisely uses this unusual product, must come the invaluable advantages of:

- ◆ A simplification of insulation problems. ◆ Satisfied clients. ◆ A growing reputation as a builder. ◆ More contracts.

Mail coupon for free sample and further information



MASONITE

THE WONDER WOOD OF A THOUSAND USES A Mississippi Product

SOLD BY LUMBER DEALERS EVERYWHERE

Copyright 1938, Masonite Corporation

MASONITE CORPORATION, Dept. AB-10 111 West Washington Street, Chicago, Ill.

Please send me a FREE sample and full information about MASONITE DUBBLSEAL SHEATHING.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

# HERE IS THE ANSWER TO EVERY WOMAN'S DREAM

## .. *A Kitchen Beautiful*



I-XL kitchens will help sell your homes and boost your reputation as a modern up-to-the-minute builder. They have the warmth, strength, durability, attractiveness and quietness found only in this high quality wood construction.

I-XL SERV-U-WELL Kitchen Units have adaptability to fit your individual plans—plus design, material and construction to satisfy the most exacting requirements. Bases, Wall Cabinets, Utilities, space saving Corner Cabinets and the new one piece Sink Cabinets (illustrated below) provide a wide selection of combinations. I-XL hardwood units come completely assembled, finished and trimmed ready for installation.

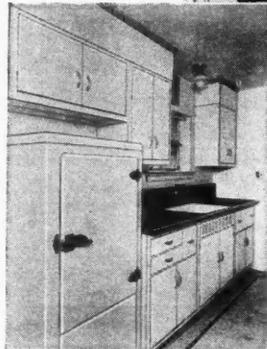
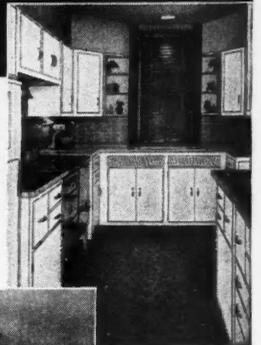
Each unit is built independently. The warp-proof plywood doors are of dustproof lip construction with smooth, flat surfaces and nicely rounded edges. Extra heavy hinges and drawer pulls are attractive in both design and finish. Sink and cabinet tops are furnished in stainless steel, porcelain or linoleum as specified.

See your dealer or write direct for complete information showing wide range of sizes, construction details, kitchen layouts and photos of installations. USE THE COUPON.

**THE I-XL FURNITURE COMPANY, INC. GOSHEN, INDIANA**  
84 Years Woodworking Experience



Illustrations show three widely different layouts where I-XL Units gave complete satisfaction. Whatever the wall space, I-XL Units will fit.



Distributors, dealers, salesmen: Exceptional opportunity in some unassigned territories. Write us.

The I-XL Furniture Co., Dept. 10, Goshen, Indiana.  
Please send complete information about I-XL Kitchen Units, including kitchen layouts and installations.

Name .....

Address .....

Builder  Dealer

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# CONVENIENCE EQUIPMENT

Use this Key to outmode the old house and exhalt the new

## Buyers Want "Automatic Housekeeping"

### New Mechanical Specialties for the Home Are Best Sales Aid

**S**OME have complained that the majority of home building and home buying prospects today are educated up to the point where they insist on all the luxuries of modern home equipment even in the smaller homes, and will often skimp on basic construction quality in order to indulge their fancy for automatic mechanical marvels.

Builders who understand this popular trend are not fighting it; but are rather playing to it by offering a carefully selected group of equipment items in line with the size and cost of the house, and are making these features their real lead in their advertising and sales work. The tastes and requirements of each local market of course vary considerably; and so the experienced builder, putting up houses for sale or when advising with contract clients, naturally chooses those which he knows to be best suited. These are all included in the original financing set-up and so are acquired by the buyer on long term mortgage terms, at quite a saving.

For the benefit of builders and their clients everywhere we present here a rather complete list of equipment items for the several parts of a home. Choose those that work in best with your building and market needs—and then *sell them* with confidence and energy.

### Check List of Popular Home Equipment Items

- |                                           |                         |
|-------------------------------------------|-------------------------|
| <b>EQUIPMENT FOR LAUNDRY AND BASEMENT</b> | <b>Waters Heaters:</b>  |
| Laundry Tubs:                             | Storage Automatic, Gas; |
| Enameled Pressed Steel                    | storage, electric       |
| Slate                                     | Instantaneous Gas       |
| Enameled Iron                             | Steam Coil              |
| Soap Stone                                | <b>Laundry Dryers;</b>  |
| Concrete                                  | Gas                     |
|                                           | Electric                |
- (List continued to page 102)

**ULTIMATE** in convenience appeal for today's suburban home owner is the Barber-Colman radio control for garage doors and gates. Installed in any "model" or exhibit house, this latest gadget draws the crowd and interests the buyers.



# SELLS A \$4335 HOME

*All-American Home* Completely Furnished  
OPEN TODAY  
For Your Inspection

**\$28<sup>75</sup>** PER MO. Including—

- All-Electric Kitchen with
- Modern Electric Range
- Electric Dishwasher and Sink
- Electric Disposal (for garbage)
- Electric Refrigerator (on display)
- Steel Porcelain Cabinets
- General Electric Heating Plant
- Bigelow, all-wool carpeting
- G.E. Radial Wiring System

Will Buy an ALL-AMERICAN HOME

Including all costs of ownership (taxes interest principal and insurance)

**In Beautiful CRESTVIEW ADDITION**  
Highway 69 5 miles north of A S B Bridge—5 minutes from Downtown Kansas City

NOW—a home with modern electrical conveniences—at a price you can afford to pay — A CRESTVIEW home of your own—cheaper than rent

We offer better construction from quality materials — dependable workmanship in homes designed for permanent satisfaction. When you buy a CRESTVIEW home you get a concrete foundation and footings reinforced with steel. Every home is of fire resistant type construction.

You get rustproof steel casement windows throughout, 2 closets in every bedroom, diffused lighting, built-in basement garage, 65-ft lots sodded and landscaped. Completely restricted by the Home Association.

General Electric heating system with cast iron sections provides automatic heat. Air is cleaned and filtered winter and summer. You have conveniences of all city utilities paved streets well lighted and complete sewerage system.

No future assessment, school bus service to North Kansas City and bus service to Kansas City. Mo. 6 a m to 12 midnight. Only 5 minutes from shopping district.

See this Exhibition Home today! Bigelow carpets in living room dining room hall and stairway. Furnishings by Jones Store Co., Kansas City, Mo.

All plans copyrighted by Neal O. Reyburn architect. All houses built to meet FHA specifications and inspections.

Here's how Freedom for the woman. The instant you step into this all-electric kitchen you will realize it is a kitchen that helps to make life really worth living. There's the gleaming General Electric Range that keeps the kitchen clean and cool. The Electric Dishwasher that does all the dish washing. The Electric Disposal that forever ends the handling of garbage. The General Electric Refrigerator is on display and may be included with the home. See how modern electrical servants now do all the kitchen work—and at little cost.

The typical All-American Home that may easily be owned for only \$28 a month. This includes all loan costs.

**\$4335** NO CITY TAXES  
ONLY 10% DOWN

**HOME BUILDING CORPORATION**  
NEAL O. REYBURN, Architect  
Crestview Addition  
Gladstone 1340

Reprinted from the Kansas City Star, Aug. 28, 1938

All Reyburn plans copyrighted

# GENERAL



# EVERY 36 HOURS

## COMPLETELY G-E EQUIPPED



**HOME BUILDING CORPORATION**  
Builder of the All American Home  
KANSAS CITY, MO.

September 17, 1938

General Electric Home Bureau  
570 Lexington Ave., New York, N.Y.

Dear Sir:—

I wish to express my appreciation to the General Electric Co., for the cooperation they have given me in putting over my All-American Home, and for making possible equipment which has given me the opportunity to conserve every inch of space which naturally is necessary in a \$4,000.00 home.

If it were not for the General Electric Unit Kitchen with its electric stove, sink and dish-washer which saves so much space because it does so much work, my kitchen would have been impossible. My free work area is only 5 ft. by 8 ft., but the kitchen with its equipment was large enough to prepare and serve a dinner to some twenty prominent people in the recreation room. Ten minutes after the dinner was over I suggested we go up the five steps to the kitchen and see the dishes being washed, and to my surprise the dishes were all clean and put away and the kitchen completely cleared. This to me was quite an accomplishment since I have been used to the dish washing going on for hours.

The entire house from the bedrooms with their ward-robres, the bath with its colored fixtures, the living room with its mahogany paneling, the completely plastered basement with its General Electric Air Conditioning and other mechanical equipment completely tucked away under the steps is designed with the same idea of conserving space, yet using only the best construction and nationally advertised products.

The reaction of the public has been tremendous since we have had over 20,000 people go through the house in less than three weeks and over 500 have registered asking for full information. The houses are selling at the rate of one every day and a half which proves the fact that the little fellow will buy when shown a modern home with every convenience and comfort that he justly deserves at a price he can afford.

We feel that General Electric has given us quality in the eyes of the public which heretofore has always been the scapegoat in low cost housing. I feel that it is to our mutual benefit to continue in this low cost field because here is the greatest part of our population renting at a greater cost than is necessary to buy one of these homes.

Thanking you again for your cooperation, I remain,

Your friend,

*Neal O. Rebyburn*

HOME BUILDING CORPORATION

● The G-E Home Bureau, a department specializing on builder's problems and needs, offers you the same services which Mr. Rebyburn and many other builders have used to their advantage:

1. A tested merchandising plan—an aid in selling which builders in all sections of the country are using successfully.
2. Architectural Service—the Home Bureau does not furnish plans, but its staff of architects will check *your* plans from an electrical point of view and will prepare layouts and specifications for wiring, heating and air conditioning, lighting, kitchens, and laundries.
3. Advertising Service — tested advertising campaigns, layouts and copy are ready and adaptable to your use.

Let the G-E Home Bureau tell you more about this tested plan for the merchandising of houses—applies whether you are building one or one hundred houses. Mail the coupon today.

**GENERAL ELECTRIC HOME BUREAU**

570 Lexington Avenue, N. Y. C.

I am interested in further information regarding General Electric's merchandising plan.

Name .....

Address .....

City .....

# ELECTRIC

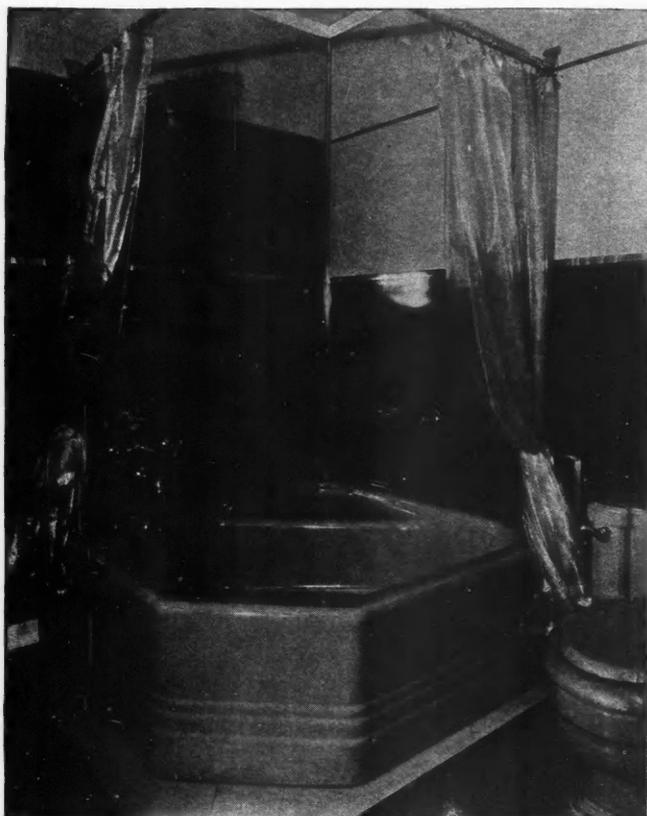


**SUBURBAN Model Kitchen in the Nela Park, Cleveland, display of the General Electric Co. wins favor with the women.**

### Check-List of Home Equipment

(Continued from page 99)

Washing Machines	Gas Burners
Rotary Ironers (in closet provided)	Coal Stokers
Electric Panel with Fuse Blocks or No-Fuse Load Center	Ash Hoists
Basement Lighting Fixtures	Coal Chutes
Convenience Outlets	Oil Storage Tanks
Heating Plant:	Pipe Insulation
Air Conditioning Systems	Furnace Fan Installations
Hot Water	Draft Regulators
Vacuum	Air Conditioners (Filters)
Steam	Garbage Incinerators
Warm Air	Ash Dump
Oil Burners	Water Softeners
	Water Systems (Electric Pressure Pump)
	Cellar Drainers



**MODERN type tub of new shape and styling, installed with colorful "Micarta" panel walls. Baths that are "different" continue to have a strong sales appeal.**

Steel Basement Sash  
Cellar Bulkhead Doors  
Basement Workshop Equipment:  
  Bench  
  Vise, Tools, etc.  
Recreation Room:  
  Gymnasium Equipment  
  Billiards, Pool, etc.

### EQUIPMENT FOR KITCHEN, PANTRY AND DINING ROOM

Ranges  
  Gas  
  Electric  
Oven Regulators  
Dishwashing Sinks  
Laundry Sinks  
Special Faucets  
Kitchen Cabinets and Case Assemblies  
Modern Cabinet Hardware  
Built-in Ironing Boards  
Refrigerators  
  Electric  
  Gas  
  Outside Icing  
Milk and Package Receivers  
Dumbwaiters  
Ventilating Fans  
Water Filters  
Water Pumps and Supply Systems  
Garbage Incinerators  
Fold-Away Dinettes  
Breakfast Nooks  
Safety Rear Door  
Combination Storm and Screen Door  
Special Lighting Fixtures  
Convenience Outlets  
Door Bells, Buzzers and Transformers  
Marble Window Sills  
Telephone Cabinets  
Nickel Stove Pipe  
Double Acting Spring Hinges

### EQUIPMENT FOR LIVING ROOM, LIBRARY AND HALL

Space Coolers  
Radiant Gas Heaters  
Thermostat Heat Controls  
Radiators  
Radiator Cabinet Heaters  
Radiator Furniture or Covers  
Concealed Radiation  
Special Radiator Valves  
Warm Air Registers  
Passenger Elevators and Lifts  
Special Door Hardware  
Door Chimes  
Drapery Fixtures  
Window Shades  
Venetian Blinds  
Casement Adjusters  
Special Windows  
Special Screens  
Weatherstrips  
Stairs in Hardwood or Wrought Metal  
Special Lighting Fixtures  
Ornamental Switch Plates  
Up-to-Date Switches  
Radios and Radio Connections  
Built-in Telephones  
Open Fireplace Throat and Damper  
Fireplace Fittings

Special Mantels  
Bookcases and Shelves  
Mail Boxes:  
  Built-In  
Disappearing Stairs  
Attic Ventilating Fan  
Convenience Outlets  
Inter-Communicating Telephones  
Burglar Catches for Windows and Doors  
Clocks

### EQUIPMENT FOR BATHROOM AND BEDROOM

Plumbing Fixtures in Colors  
Special Tubs  
Tub Showers  
Special Shower Curtains  
Shower Stalls and Cabinets  
Chromium Plated Accessories  
Flush Valves  
Improved Toilet Seats  
Medicine Cabinets and Mirrors  
Bathroom Accessories:  
  Towel Bars  
  Soap Holders, etc.  
Space Saving, Folding and Roller Beds  
Efficiency Wardrobes:  
  Telescoping Hangers  
  Special Racks, etc.  
Cedar Lined Closets  
Radiant Gas Heaters  
Electric Heaters Built-In  
Convenience Outlets  
Mirror Doors  
Wall Safes  
Moth-proof Steel Vaults  
Special Lighting Fixtures  
Skylights  
Scales  
Window Ventilators

### EQUIPMENT FOR GARAGE AND GARDEN

Special Garage Doors  
Garage Door Hardware  
Garage Door Opener, Electric  
Radio Control for Doors  
Garage Heaters  
Garage Plumbing  
Steel Sash  
Wire Glass  
Pressed Metal Columns  
Sewage Disposal Systems  
Conservatories and Sun Rooms  
Swimming Pool Equipment  
Special and Ornamental Fencing  
Ornamental Gates  
Garden Furniture  
Trellis, Pergolas and Sun Dials  
Clothes Posts and Dryers  
Awnings and Awning Hardware  
Lighting System, Electric Generating  
Gas Systems for Cooking and Lighting  
Burglar Alarms  
Window Guards  
Lawn Irrigating  
Fountains

# TRACY ANNOUNCES PERMASHEEN ZEPHYR LOWER COST CABINET SINK

## Will Stimulate New Kitchen Cabinet Business In Lower Cost Housing Field

Tracy Manufacturing Company, builders of highest quality sinks for mansions and fine homes, have announced a new line of Linoleum Sinks on a steel base with patented construction, in a lower price field. All of the Tracy fundamentals construction details are maintained.

The addition of the Zephyr Cabinet Sink enables Tracy to offer four lines of superior sinks in four price classifications. The Builder or Dealer can now satisfy all his requirements from Tracy Sinks, regardless of the value of the home to be equipped.

For details on the new PermaSheen Zephyr line, as well as the PermaSheen Imperial, PermaSheen De Luxe, and SilviSheen Stainless Steel Sinks, ask your dealer, or write Tracy Manufacturing Co., N.S., Pittsburgh, Pennsylvania.



With four Tracy Sink lines now available, to fit any type of Cabinet, in any housing field, your sales possibilities are practically unlimited. Write for interesting information.

# Our Profitable Lines of TRACY FAMOUS CABINET SINKS

- 1 SILVI SHEEN Beautiful Stainless Steel moderately priced.
- 2 PERMASHEEN DE LUXE Heaviest Battleship Linoleum with Stainless Steel Bowls, suitable for any type of home.

- 3 PERMASHEEN IMPERIAL Heaviest Battleship Linoleum, very sturdy, with Porcelain Bowls.
- 4 PERMASHEEN ZEPHYR Battleship grade Linoleum, includes the usual exclusive and patented Tracy features, priced for the lower cost housing field.

# They'll Pay that Extra \$1,000—

**So Says Leo P. McManus of Aronimink Estates, Who Features Extensive Modern Equipment in Houses "Designed for Better Living"**



LEO P. McMANUS and son

**L**EO P. McMANUS of Aronimink Estates, a new development in the Drexel Hill section of Philadelphia, is an enthusiastic advocate of convenience equipment and specialties as a strong sales inducement.

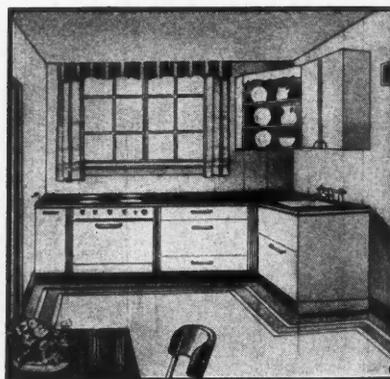
"We asked some of our prospects whether they would prefer our houses without the full and complete equipment we include, at a price \$1,000 less," he told an *American Builder* editor. "In every case they said they would pay the extra \$1,000—the equipment was more than worth it."

The Aronimink Estates houses are well planned, medium-sized six-room houses with all-electric kitchens, oil-burning winter air conditioners, recreation room in basement, attached garage and many other attractive features. They are in the \$8,000 to \$10,000 range.

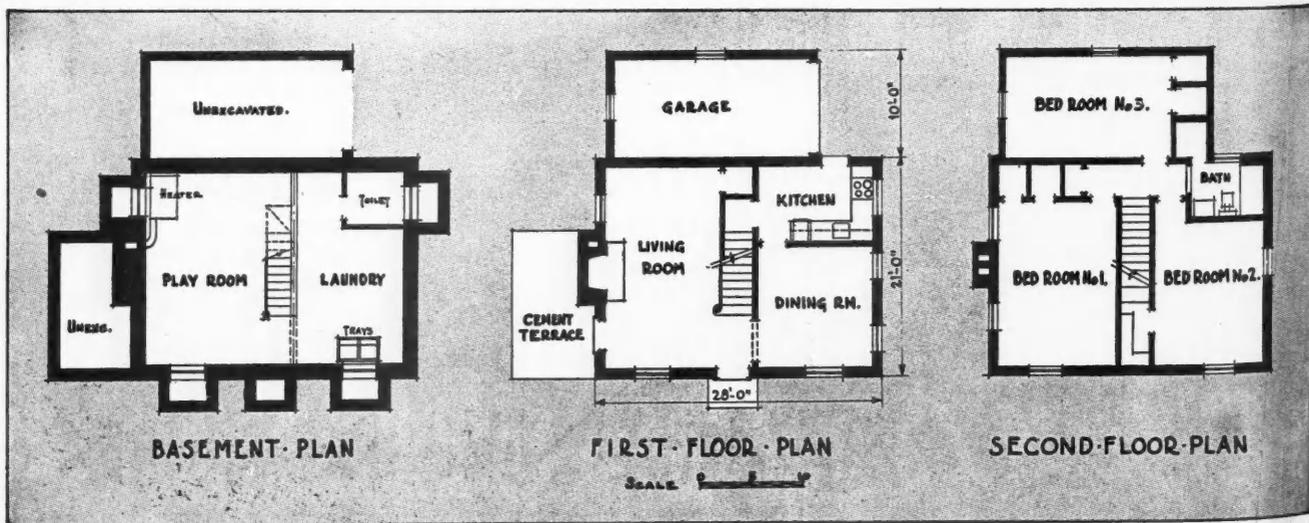
McManus built four houses early this year, one of which was given extensive publicity as a model home and attracted thousands of visitors. He is planning an extension of activities to include a group of houses in the \$4,000 to \$8,000 range. The site obtains its unusual name from a famous Indian chief, and an Indian head is prominently featured on billboards, advertising and sales literature giving a distinctive note. (Continued to page 106)



ROW OF HOUSES in Aronimink Estates. Model home is at extreme right in this group of well equipped McManus houses in Philadelphia.



MODEL ELECTRIC UNIT kitchen with metal walls and convenient arrangement.



FLOOR PLANS of the Aronimink Estates model home shown at extreme right, above. Rooms are spacious, well arranged, with attached garage at rear; the third bedroom is located above garage giving compact second floor layout.

# Yes, Sir! "More for the Money" IN GARAGE DOORS



*That's what we offer you in the New Model "J"*

## **Rō-WAY**

*Overhead Type Garage Door for Residences*

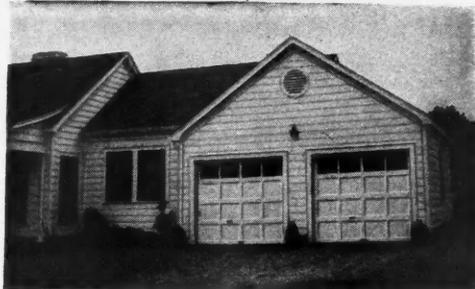
The Ro-Way Garage Door you buy today comes to you at a price 16% lower than home owners paid at the depth of the depression. Along with this contribution to lower building costs, Ro-Way Doors also bring you greatly increased value and service. "User-convenience" . . . undreamed of 6 years ago, is available today in the new Model "J." One patented improvement alone has revolutionized this type of door operation. By one simple mechanical achievement, all side-drift and binding are forever eliminated. A new operating ease is given, so quiet and free that it can be best described as "coasting" action. Adjustment bothers are done away with. Installation is greatly simplified. The secret of these revolutionizing improvements lies in a new type of lifting power, known as . . .

**-No Side Drift  
-No Binding  
-New Operating Ease  
-Quiet Coasting Action  
-No Adjustment Bothers  
-Simpler Installation**

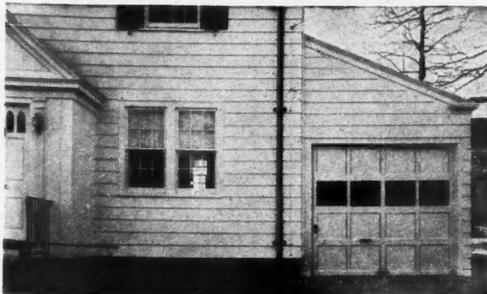
## **Rō-Tō Live Spring** (Patented)

It consists simply of one powerful single coil. One end of it is attached to the rotating ball bearing shaft which carries the far sheave, or pulley. The other end of the spring is attached to the near sheave, or pulley, as shown in the large illustration. Closing the door immediately starts both ends of the Ro-To Live Spring into operation. One pulley turning one way and the other pulley another way results in double-quick coiling of the spring and double storage of lifting power.

*Balanced Lifting Power . . . Always!*



Ro-Way Model "J" Door, Installed in Double Garage.



Ro-Way Model "J" Door, Installed in One-Car Garage

When the Ro-Way Model "J" Door is opened, power is immediately transmitted smoothly, evenly, quietly to both ends of the door in a powerful, balanced lift, which is absolutely vertical . . . always free from side-drift, binding and sticking. No turnbuckles are required for balancing, because the door is always self-balancing in operation. It cannot jump the track.



## **No Off-set Brackets . . . Track Protected**

The New Ro-Way Model "J" Door vertical tracks are attached directly to the door jambs. No off-set brackets are used. Track is therefore always protected from damage. Required sideroom, 3 3/4"; required headroom, 9" for J-WA; 14" for J-Y.

Get all the facts about this sensational new type door . . . already in use in nearly 6,000 residence garages. Illustrated Folder sent Free on request.

**{ Other Models of Ro-Way Doors are available for all sizes . . . all buildings . . . electrically operated if desired. }**

## **ROWE MANUFACTURING CO.**

772 HOLTON ST., GALESBURG, ILL., U.S.A.



## JUST PRESS THE BUTTON...

A great convenience feature for every modern home! Save all the work, time, trouble, and worry of opening and closing garage doors . . . let the magic of Barber-Colman Radio Control do it for you! Press the button on the instrument board without stopping the car or getting out . . . the door opens automatically. Press it when you are driving away from the garage, and the door closes . . . it's as easy as that! The new Model "C" brings you Radio Control in simplified form . . . completely reliable for year-round service, time-tested in hundreds of satisfactory installations, and at a moderate price. Ask our nearest representative for a demonstration.

### OTHER

#### BARCOL PRODUCTS

The Barcol OVERdoor—the Improved Overhead Door for Residence and Commercial Garages, Service Stations, etc. (See cut at right.) Electric Operators for Swinging, Sliding, Overhead, and Steel Rolling Doors, and for Swinging and Sliding Gates. Sales, Installation, and Service by Representatives in Principal Cities.



BARBER-COLMAN COMPANY • ROCKFORD, ILLINOIS

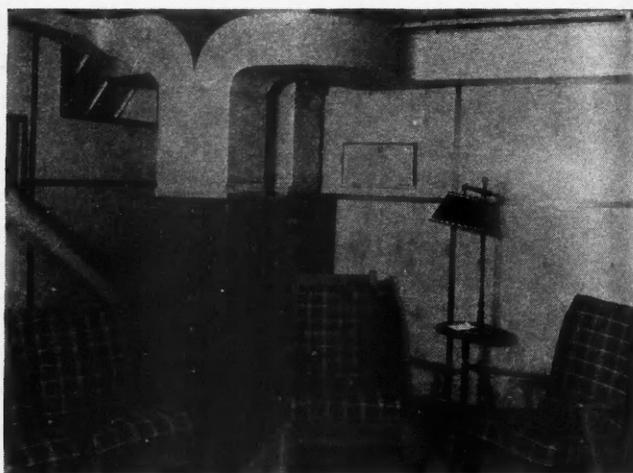
## That Extra \$1,000—

(Continued from page 104)

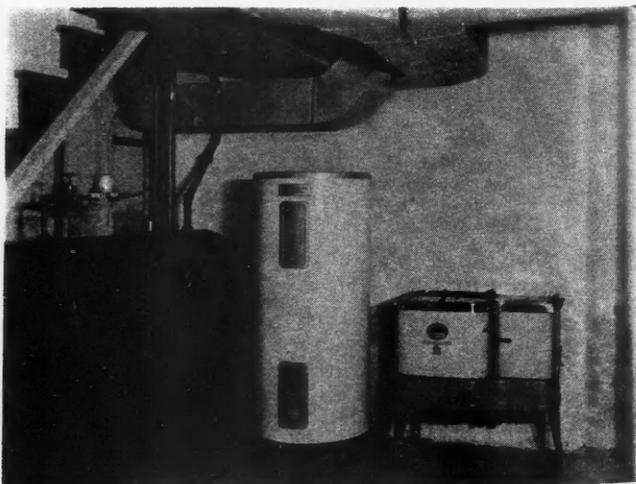
According to McManus, the prospective customer today is very conscious of such improvements as air conditioning, insulation, automatic heat, modern kitchens and convenience equipment of all kinds. The extra value and comfort of complete equipment more than pays for the few extra dollars a month it costs under a 20-year amortized loan.

The Aronimink kitchens are particularly attractive, having been laid out by the Kitchen Planning Department of the General Electric Company and equipped with modern G-E kitchen units, including electric range, refrigerator, cabinets and sink. Kitchen walls are of metal panels with baked-on sanitary finish, a new type of dry wall construction perfected by the Martin-Parry Corporation of York, Pa. Other well-known products and materials featured by McManus as part of his sales appeal are: Lok-Joint insulation and plaster base by The Insulite Company; Colonial hardware by the Lockwood Hardware Manufacturing Company, and knotty birch plywood interior finish for the basement recreation room supplied by N. A. Considine Company of Philadelphia. An important feature of his "equip-

(Continued to page 108)



RECREATION ROOM in basement is finished in knotty birch. An oil-fired General Electric winter air conditioning unit is featured.



INCLUDED in the Aronimink homes equipment is a 66-gal. off-peak load storage electric water heater,

# *A complete line of*

## **BEAUTIFUL METAL MEMBERS FOR QUALITY STORE FRONT WORK**

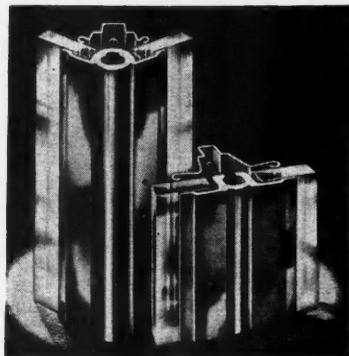


TYPICAL BARS AND MOLDINGS available in the Pittco Metal line for use in creating good-looking, successful store fronts. Builders will find that there is a Pittco Store Front Metal member to fill every need.

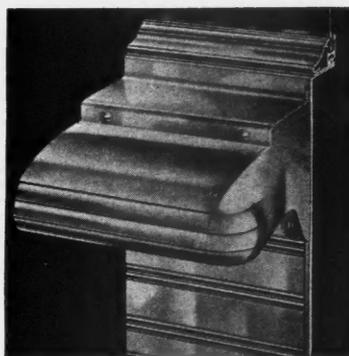
**I**N the Pittco Metal line, there's a sash, a molding, a bar to fill every decorative and practical need. All are beautifully designed, harmoniously related to each other, calculated to aid in the creation of unified, striking store fronts. Pittco units are strong and sturdy, built for severe usage though designed for graceful beauty. And all setting operations take place on the outside of the show windows, simplifying installation.

Write Pittsburgh Plate Glass Co., 2391A Grant Bldg., Pittsburgh, Pa., for our free file folder containing complete data and detail drawings of various applications.

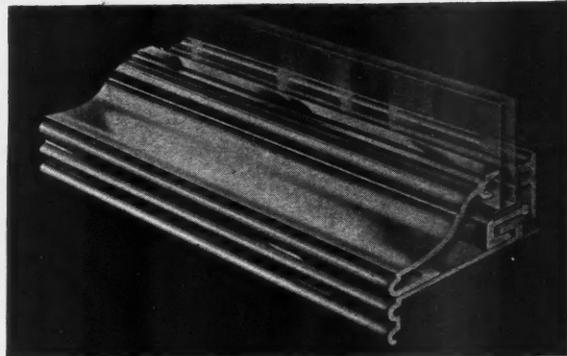
**PITTCO**  
STORE FRONT METAL



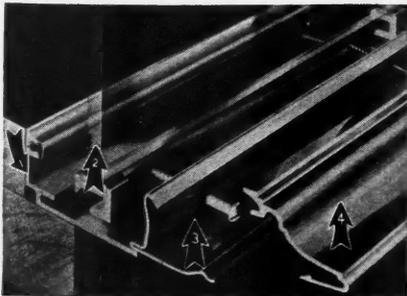
**PITTCO METAL VERTICAL BARS** are clean-cut, trim and attractive in appearance. They are readily adjustable to all angles, a feature which greatly simplifies installation.



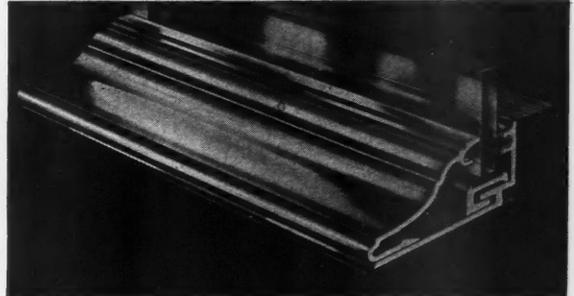
**PITTCO AWNING BAR NO. 60**, in the opinion of many, is the best designed hooded awning bar ever developed. Reversed, it can be used as an ornamental light trough.



**PITTCO SASH** is distinguished by its sharp, clean contours, its pleasing depth, and its double-yielding cushion grip on glass, which means better glass protection. Formed by the extruded process, Pittco Sash is available with (above) or without (below) the new beaded face member.



**OUTSIDE INSTALLATION** is a feature of Pittco Metal vitally important to speed and ease of application, and to glass replacement in the future. As shown, the inner member (1) is set; the setting block is pressed into its groove and the glass lifted into place (2); then the glass holding member is installed (3); and finally the face member (4) snaps on to finish the assembly.



**PITTSBURGH PLATE GLASS COMPANY**



**I**N NEW homes or old, even when space and budget are both limited, the added livability of an extra bath is now easily possible with a Weisway Cabinet Shower. Guaranteed leakproof, Weisways are easily, quickly installed without special treatment of building walls or floor. Vitreous porcelain receptor with patented non-slip floor. Models for all homes from simplest to most luxurious.

Mail the coupon now for detailed information.

Henry Weis Manufacturing Co. (Est. 1876)  
 1001 Oak St., Elkhart, Indiana  
 Gentlemen: Please send information on Weisway Cabinet Showers for  new homes  present homes  industrial or commercial buildings.



Name \_\_\_\_\_  
 Street \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_

**That Extra \$1,000—**

(Continued from page 106)



THE ARONIMINK SIGNS feature the Indian head trademark of the firm; named from an Indian chief reported to have lived near the site of the development.

ment that sells" is the oil-fired General Electric winter air conditioning system. He also includes in the sales price a 66-gallon electric hot water heater of the storage type which operates on off-peak electric loads.

The Aronimink specifications also include Nazareth cement; Curtis millwork; Vento steel sash; U. S. Gypsum Company plastering materials; Standard plumbing fixtures; Anaconda copper pipe, downspouts and gutters; Pittsburgh Plate glass; Penn paint and varnish; Armstrong linoleum.

McManus believes that the use of well-known, advertised products is a sales help to him. He pointed out that it takes just that much less time in describing the house and its equipment to an owner.

"There are more than 400 oil burners on the market," he said. "It is a great help to have a heating system, the name of which the public is familiar with and which I can heartily recommend because I myself am familiar with the history and the record of the company."

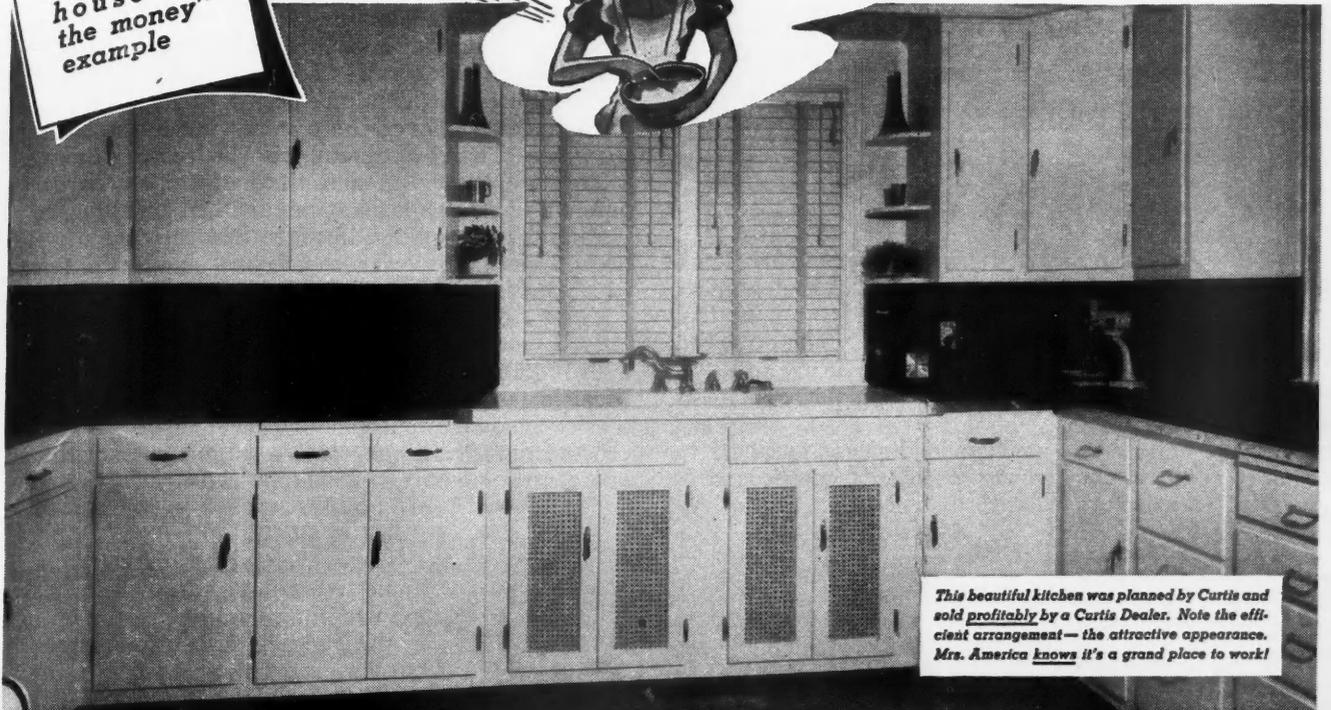
Not only does McManus make extensive use of convenience equipment in his sales arguments, but he is a firm believer in the truth of the argument that the buyer gets "more house for his money today."

"Our houses today are miles ahead of those we were building and selling with great success in the 1925-1929 period. In those days we were selling a house in this same price range on a 25 by 100-foot lot—a semi-detached structure, the actual size of which was 16 by 30 feet. Just compare that with the 50 by 140-foot lots today—we're giving two and a half times as much land.

"Those 1925-'29 houses had coal-shovel heat, exposed radiators, bucket-a-day water heaters, flat slag roofs, no insulation, the cheapest kind of gas range, no basement play room, magnesite stucco exteriors, much smaller rooms than today.

"The contrast with our 1938 houses is almost unbelievable. For the same price the buyer gets an individual house with solid brick walls, on a large lot. There are 50 percent more electric outlets, a cabinet shower, air conditioning, the most modern kind of a kitchen, good Colonial design, insulation, a host of modern comforts and conveniences we couldn't give a few years back."

A "more house for the money" example



This beautiful kitchen was planned by Curtis and sold profitably by a Curtis Dealer. Note the efficient arrangement—the attractive appearance. Mrs. America knows it's a grand place to work!

# Mrs. America asks for nothing more than a CURTIS PLANNED KITCHEN

When you're talking kitchens to your customers, treat them to the story of the Curtis Kitchen Planning Service!

Here's America's foremost kitchen-planning recipe—over 50,000 times it has completely satisfied American housewives. For at a glance, women recognize the step-saving efficiency and the economy which Curtis Kitchen Planning makes possible. And that is why Curtis service is known from coast to coast—why it has been so successful.

Besides this outstanding planning service, Curtis gives you and your customer two exclusive factors—

First, "Mrs. America" gets modern, durable, sanitary cabi-

net units—the most efficient that science knows how to design. They are made of wood for lasting satisfaction and for economy.

Second, "Mrs. America" selects her own color scheme—she may develop her own individual color arrangement. Curtis Sectional Cabinets come to the job in dustproof cartons, ready to put in place quickly, economically.

When you plan a kitchen, do it right—do it the Curtis way. Then "Mrs. America" will have a happy place in which to work, an efficient kitchen at a reasonable price. And you'll have another satisfied customer—another booster for your Service!

Full details on the Curtis Kitchen Planning Service are available from your Curtis Woodwork Dealer—or, use this coupon to get complete information.

## CURTIS COMPANIES SERVICE BUREAU DEPT. AB-10K • CLINTON, IOWA

If you live in Canada—write to 25 Bayswater Avenue, Ottawa, Ontario, for information.

CURTIS WOODWORK IS SOLD BY RELIABLE LUMBER DEALERS EVERYWHERE

AND OTHER CURTIS PRODUCTS Silentite Double-Hung and Casement Windows • Exterior and Interior Doors • Frames • Trim Entrances • Molding • Panel Work • Cabinet Work • Mantels Stairways • Shutters • Screens • Storm Doors and Windows Garage Doors • Miterite Door and Window Trim.



CURTIS COMPANIES SERVICE BUREAU, Dept. AB-10K, Clinton, Iowa  
I want to know more about the Curtis Kitchen Planning Service. Tell me about other Curtis Woodwork, too.

Name.....  
Address.....  
City..... State.....  
My lumber dealer is.....

# 100% Increase In Livability—Only 2% In Cost

**Adequate Wiring Makes Vast Difference in Convenience Equipment Possible Today. Philadelphia Builder is First to Win New Wiring Certificate**

**A**DEQUATELY wired homes offer "more house for the money." They provide a one hundred percent advance in livability at not more than two per cent increase in building costs. The difference between adequate wiring and the present average type of house wiring layout is ninety-eight per cent a difference in planning.

To the builder this means added sales appeal. Now that there are new wiring standards which can be applied to add real value to any house at a relatively

low cost, many builders are featuring the electrical installation as a major appeal. This has been made practical through the services of more than 150 Adequate Wiring Bureaus which have been formally or informally organized all over the country under the National Adequate Wiring Program, launched earlier this year.

Through these Bureaus, the national standards for minimum wiring adequacy are adapted according to all sizes and types of dwellings, to add the ease of "electrical living" to lower cost homes, and still remain within essential economic limitations.

Fifteen of these Adequate Wiring Bureaus already offer a certification service which provides builders with tangible evidence of the lasting value of the electrical installation in the adequately wired home. The service includes approval of plans, inspection during construction, the affixing of a permanent seal of approval to some part of the home's electrical equipment, and the award of a duly attested certificate to be added to the owner's papers.

These "certified adequately wired" homes record quick sales. Many have been built and sold since the opening of the building season this year. The purchasers of these homes testify to the popularity of "electrical living" and to the sound promotional instinct of the builders who feature this sales factor.

B. Franklin Theobald, of Philadelphia, claimed for the suburban resi-

"Adequate Wiring Sold This House," Says B. F. Theobald, Philadelphia Builder. Photos below show wiring details in Philadelphia Electric Co.'s house exhibit.

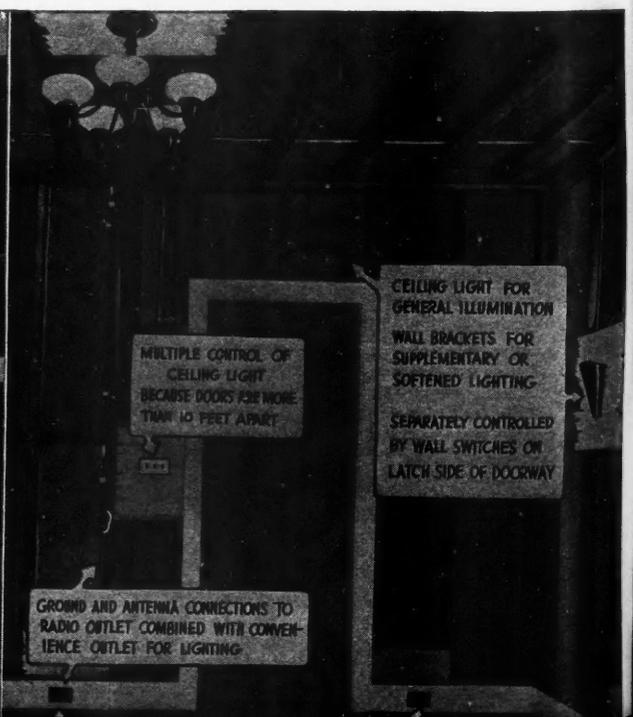
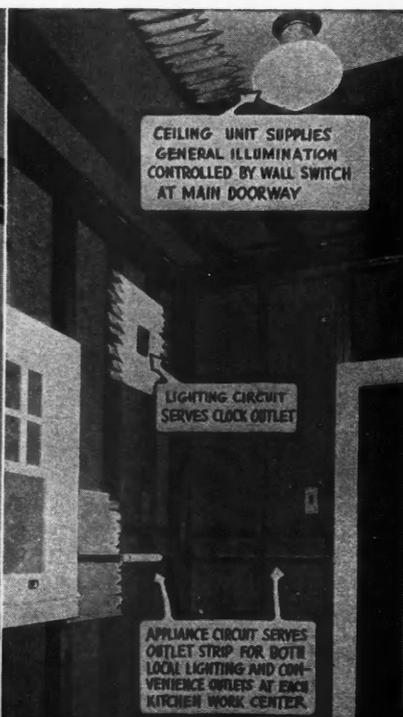


## THESE WIRING DETAILS MAKE POSSIBLE FULL USE OF MODERN CONVENIENCE EQUIPMENT IN THE HOME

SERVICE ENTRANCE—OUTSIDE

KITCHEN

LIVING ROOM



dence illustrated herewith the first adequate wiring certificate issued. Dozens of applications were filed in other communities during the same week.

Mr. Theobald states, "Adequate wiring sold this house. The man who now owns it wanted for his family the most advantageous purchase possible. He asked for positive assurance of controlled operating and maintenance costs, every possible precaution against pre-amortization obsolescence, and built-in living comfort.

"The advantages of adequate wiring had been effectively publicized in Philadelphia by the local Electrical Association through its Adequate Wiring Bureau. When I applied to the Bureau for certification service, I knew that my customer would recognize that he was getting a lot more for his money when I handed him that certificate—and when the newspaper reporters photographed his house as an outstanding example among modern, well-equipped homes."

This kind of publicity is more than a direct sales help. Any good builder's reputation is strengthened by identification with practical advances which enhance property values. Here is how the trick was turned in Philadelphia:

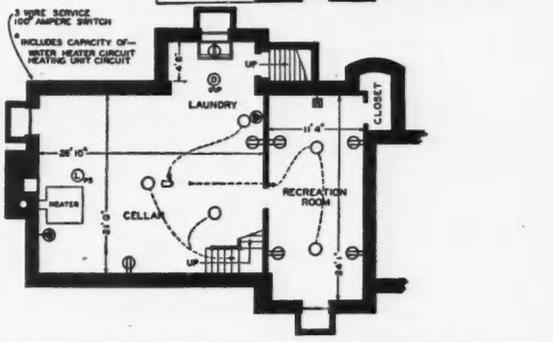
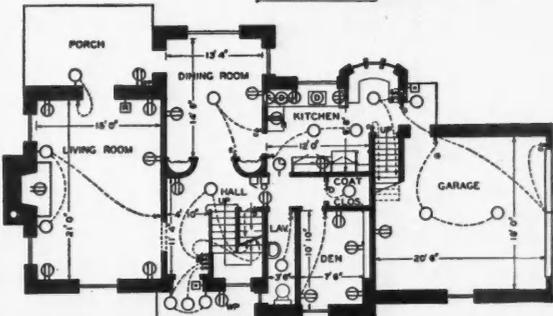
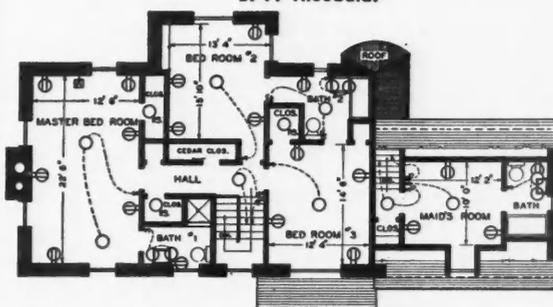
The local Adequate Wiring Bureau was set up in March, 1938, a few weeks after the national announcement of the program. In April the Philadelphia Electric Company initiated active participation with the exhibit of an adequately wired house-framework. Photographs of important details appear below.

Thousands of the populace inspected the exhibit. Representative builders began to study the idea seriously. The advantages of certified adequate wiring were amplified in subsequent newspaper publicity. Philadelphia became eli-

(Continued to page 116)

### Fully Wired for Convenience Equipment

Floor plans show closely-detailed wiring procedure in adequately wired Philadelphia home built by B. F. Theobald.



**SYMBOLS**

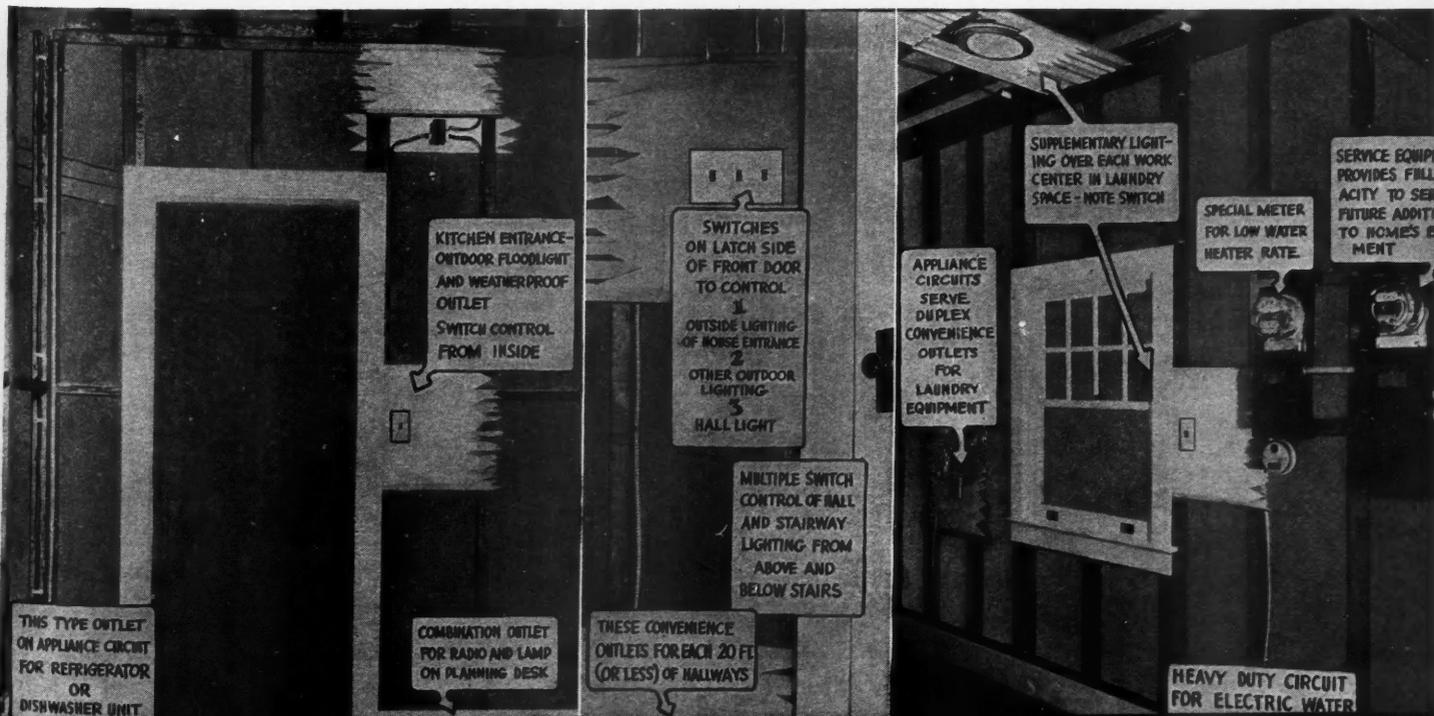
- CEILING OUTLET
- WALL OUTLET
- CLOCK OUTLET
- ⊕ DUPLEX CONVENIENCE OUTLET
- ⊕ SINGLE CONVENIENCE OUTLET
- ⊕ WEATHERPROOF CONVENIENCE OUTLET
- ⊕ SWITCH AND CONVENIENCE OUTLET
- ⊕ RADIO AND CONVENIENCE OUTLET
- ⊕ RANGE OUTLET
- ⊕ SINGLE POLE SWITCH
- ⊕ 3-WAY SWITCH
- ⊕ SWITCH AND PLOT LIGHT

## SUGGESTIONS FOR SWITCHES, OUTLETS, LIGHTING AND EQUIPMENT DETAILS FOR ADEQUATE WIRING

BACK DOOR TO KITCHEN

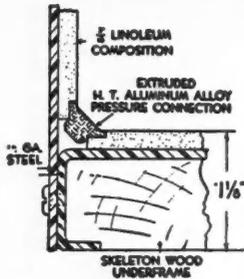
FRONT HALL ENTRANCE

BASEMENT—LAUNDRY

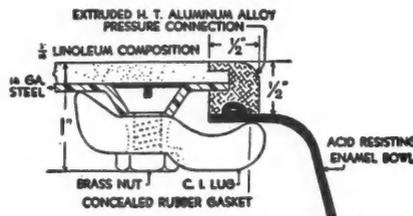




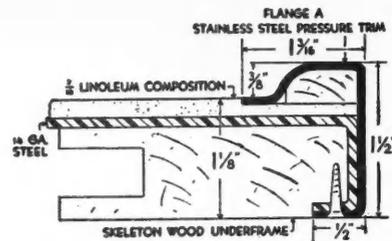
1-XL Kitchen in Home at Cresco, Pa.; E. K. Crothers was the architect.



Detail of Back Splasher.



Detail of Bowl Connection.



Flange A—for Cabinet Sinks or Tops.

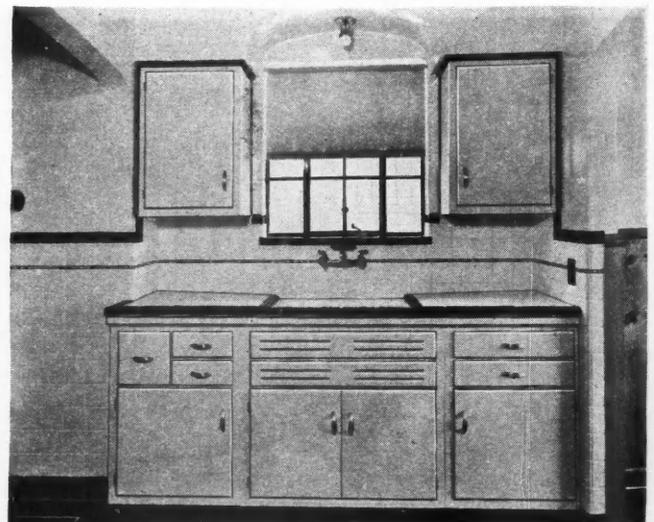
Details of Tracy Linoleum sink and cabinet top assembly.

## Factory-Finished Kitchen Units Attract Buyers

THE interest in beautiful, well planned, time- and step-saving kitchens was never greater. Kitchen appliance manufacturers with millions of dollars to spend for local and national advertising are picturing their products in modern kitchen settings.

"Serv-U-Well" units such as pictured here come to the job assembled and finished, ready for installing. They are liked by contractors and architects because of the ease with which they can be installed, and the fact that they come assembled and enameled. They represent a substantial saving in materials and labor over "knocked down" cabinets.

In selling combinations of units to fit a given space, all that is needed is a rough floor plan of the room showing the size and location of doors, windows, and equipment such as stove, refrigerator, etc., and the dimensions of the wall space to be filled. The selection of the units then becomes a problem in simple arithmetic, plus an understanding of customer's storage requirements.



1-XL Cabinet Units made this attractive kitchen for Gustav Klein, a Cincinnati builder; Wilbur Firth, Architect.

# Specify and Use



Manufactured by

Overhead Door Corporation, Hartford City, Indiana

THE DOOR WITH THE

## MIRACLE WEDGE

*Wedges Tightly YET Opens Easily!*

EVEN A CHILD CAN OPERATE IT

TRACKS AND HARDWARE OF

### Salt Spray Steel

*Blends with every type of construction*

### Adaptable!

Home Garages  
Public Garages

Factories  
Fire Stations

Boat Wells  
Warehouses

Greasing Stations  
Similar Buildings

**BACKED BY A NATION-WIDE SALES INSTALLATION SERVICE**

### CLIP THIS COUPON *Today!*

For further information—  
See coupon.

MADE IN ANY SIZE FOR ANY OPENING, ELECTRIC OR HAND OPERATION

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

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

- Private Garage \_\_\_\_\_
- Public Garage \_\_\_\_\_
- Warehouse \_\_\_\_\_
- Filling Station \_\_\_\_\_
- Wood Doors \_\_\_\_\_
- Steel Doors \_\_\_\_\_
- Factory Doors \_\_\_\_\_
- Other Buildings \_\_\_\_\_
- Electric Controls \_\_\_\_\_



AB-10-38

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

# Planning Saves on Plumbing Costs

By H. E. GOSS,

Manager Plumbing Sales, Crane Co., Chicago

**T**HE young man who built a boat in the basement of his home and then had to tear the house down to get it out has a counterpart in home building construction. That counterpart is the home builder who doesn't plan his plumbing installations until the construction is pretty well advanced.

The importance of this too common circumstance comes into special focus at this time when most of the sharp-shooting artillery of the building industry is trained on the problem of cutting home construction costs. And certainly the fundamentals of economy are not being observed when there must be last minute compromises—often elaborate—to meet the wishes of the home builder in such an important regard as where and how his plumbing fixtures will be located.

There can be but one result of this sort of planning or, rather, lack of planning. The originally low cost of plumbing installation soars unnecessarily high. Shocked by this sudden onslaught on his pocketbook the home builder does just what he should not do—tries to cut costs by installing cheap fixtures in his bathrooms, powder rooms, kitchens and laundries. The net result—from a plumbing standpoint—is dissatisfaction and waste.

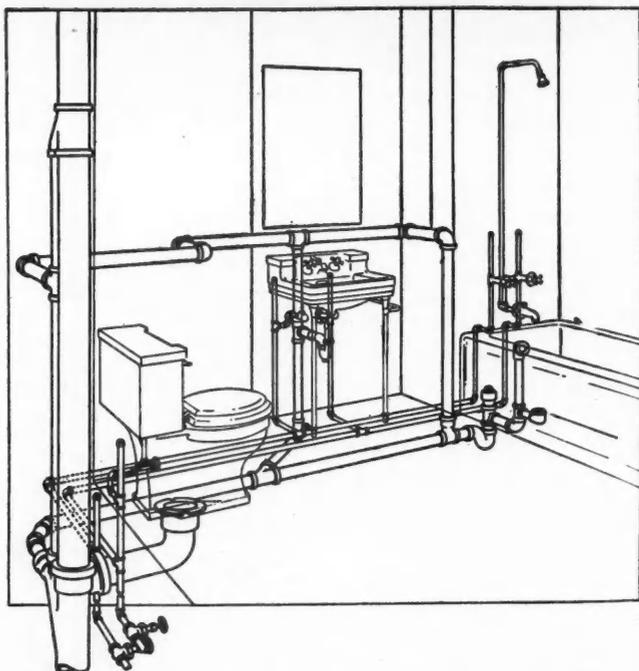
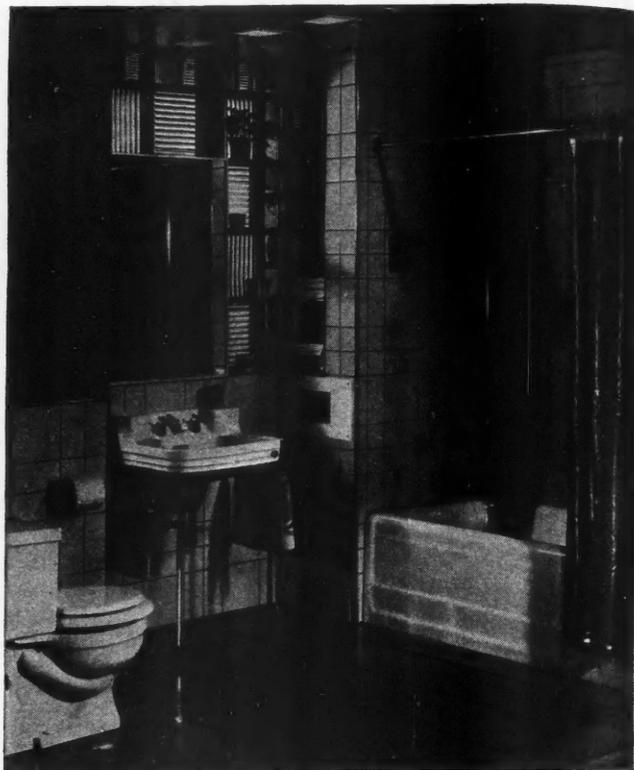
It is true enough that the architect and contractor cannot be blamed for the eccentric and obdurate whims of a client. If he insists on having a bathroom flung to some distant and barely accessible part of the home, entailing extensive piping, there is only one thing to do and that is to do the best under the circumstances. But such a situation should not be allowed to transpire without the client being made fully aware of the difficulties and expense he is bringing upon himself.

The remedy for all this confusion and excess cost in plumbing installations obviously is adequate planning—planning which anticipates the client's needs and which observes best building practice.

Every architect and contractor has portfolios of evidence testifying to the difficulties which ensue when plumbing is unplanned. One of the most common nightmares of plumbing installation is delay in planning arrangement of bathroom fixtures. If the client delays final determination of these arrangements until the last minute obviously such fundamental members of the house as joists cannot be so placed as to accommodate drain pipes and traps to the best advantage. In many instances this delay has been disastrous. In order to run drain pipe from fixtures these important cross members sometimes are weakened to the point of a structural defect.

There are other considerations in this matter of planned installations of plumbing which cannot safely be ignored by the home builder. Proper planning will, for one thing, insure anticipation of and protection against the danger of frozen pipes. Properly planned plumbing will arrange hot water pipes to function with a minimum of heat loss and, therefore, with a maximum of economy. Proper planning will see that cold water pipes do not inadvertently become carriers of warm water because they, through error, are placed close to uninsulated hot water piping.

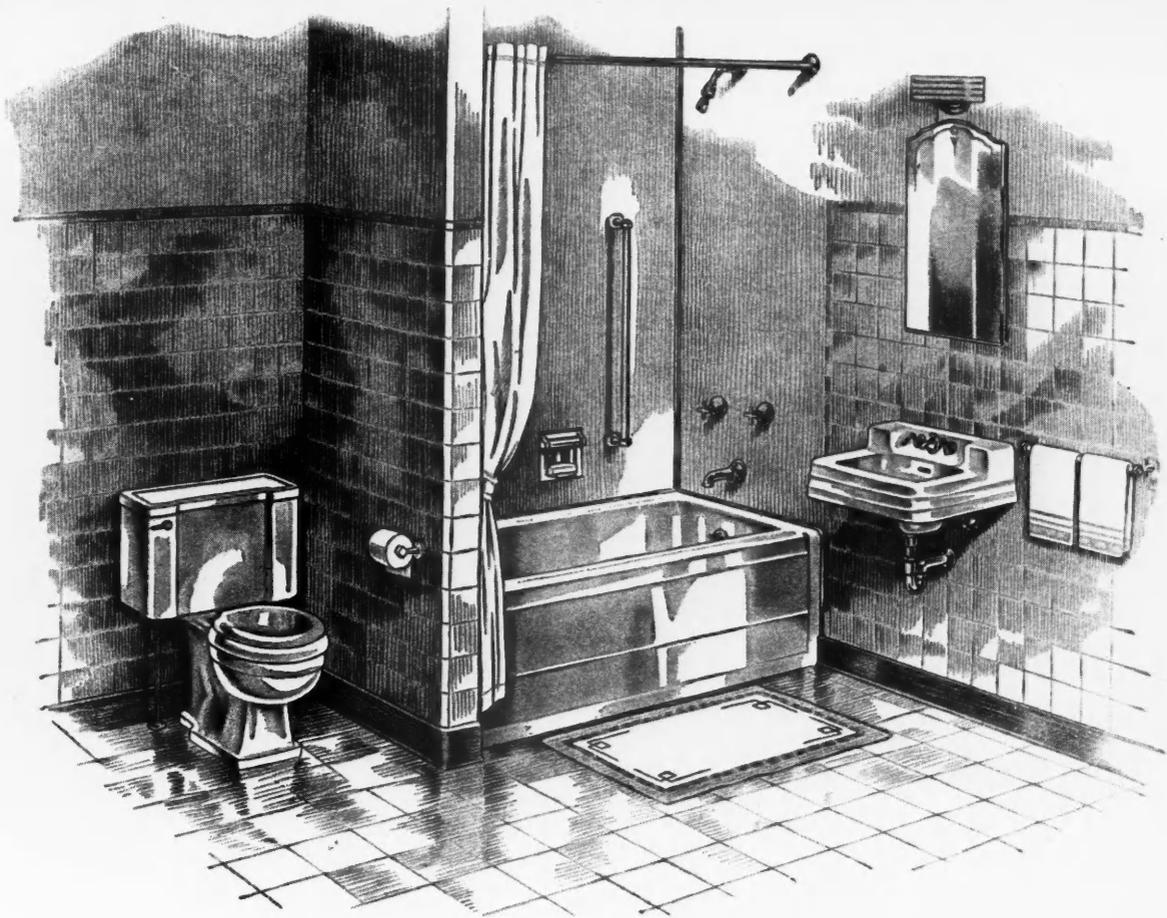
Without adequate planning many home builders might overlook the fact that, as a rule, it's a good idea to put the lavatory opposite the entrance door and near a window if possible. Many home builders might be unaware of the accepted belief that it is not wise to put a bathtub under a window, especially if it is in combination with a



A MODERN bathroom of the less expensive type. While many plumbers would feel that a more simple system of piping would be satisfactory here the diagram illustrates the complexity of piping installed to meet the maximum code requirements in a city district.

shower. A certain amount of seclusion for the water closet, generally regarded as advisable, may not occur to the home planner unless he has adequate guidance.

All these are matters which planned plumbing will take into consideration whether it's a bathroom, kitchen, powder room or laundry. The net result is heightened satisfaction for the home owner—and an economy which he might not have thought possible.



# More Bathroom for the Money in the CRANE-EQUIPPED HOME

How greatly bathrooms have been improved within the last few years—how much more you can give for the same money today! Now tempered water from a single faucet may be had even in inexpensive Crane lavatories—a luxurious shower is a commonplace in the low-cost home; and Crane closets are not only lower and handsomer in appearance, but quiet and efficient in action as well.

Crane-Equipped bathrooms are vastly improved in appearance and quality—and vastly superior in design and construction—they make home sell-

ing easier and represent only a small part of the building dollar—far less than their beauty would lead you to expect.

In a recently issued booklet, "Quality Plumbing and Heating Equipment for the Low-Cost Home," Crane Co. illustrates and describes a number of inexpensive bathrooms planned for the low-cost home of today. A copy is yours for the asking—mail the coupon below.

# CRANE

VALVES • FITTINGS • PIPE • PLUMBING • HEATING • PUMPS

CRANE CO., GENERAL OFFICES: 836 SOUTH MICHIGAN AVENUE  
CHICAGO, ILLINOIS

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS,  
PLUMBING AND HEATING CONTRACTORS

Crane Co., 836 S. Michigan Ave.,  
Chicago, Ill.

Gentlemen: Please send me a copy of your  
book "Quality Plumbing and Heating  
Equipment for the Low-Cost Home" with-  
out obligation on my part.

Name.....

Address.....

Town..... State.....

AB 10-38



## 100% Increase in Livability

(Continued from page 111)

gible for the first certificate when plans for the Theobald house were submitted to the Bureau. Later in the season, many other builders marketed certified adequately wired homes with equal success.

Prospective home owners respond to the appeal of adequate wiring because it assures the kind of electrical service that will mean easier living, cleanly, economical home management and maintenance, increased home safety and many minor luxuries that would otherwise be beyond reach. Whether or not the average citizen knows enough to demand adequate wiring, sight unseen, he is, oddly enough, quick to appreciate its advantages when they are displayed.

In those communities where the local electrical interests do not offer a certification service, plans for adequate wiring installations are available to builders.

Most of the larger and many of the smaller marketing centers are convenient to a local Adequate Wiring Bureau. Electrical associations, power companies and leading electrical distributors can supply detailed information upon request.



PAINE LBR. COMPANY'S "Rezo" doors are popular home selling helps; used for room doors and cabinet doors.

## Procedure for FHA Farm Mortgage "New Construction"

(Continued from page 33)

FHA Office for approval.

### 3. Processed by FHA:

- a) Preliminary examination. (If rejected, all returned.)  
The State FHA Office submits all of the above papers to the District Farm Office who in turn process the case.
- b) Plans and specifications and cost checked by FHA.
- c) Chief Farm Valuator makes physical examination of farm and buildings.
- d) Mortgage Risk Examiner determines rating of applicant.

- e) Chief Farm Valuator coordinates reports and recommends "Commitment" or "Rejects Application" and Mortgage Department notified accordingly.
  - f) If "Commitment" is issued, Mortgage Department notifies dealer and until then no labor or material is furnished.
  - g) "Construction loan," if any, and signing of note and mortgage. Note and mortgage supplied by Mortgage Department; sent to Dealer for customer's signature. These documents are to be returned immediately to the Mortgage Department for inspection and recording.
  - h) Three inspections by FHA:
    - (a) When footings are poured.
    - (b) When building is roughed in.
    - (c) When building is completed and ready for occupancy.
  - i) Mortgage Department receives Final Inspection Report from FHA.
  - j) Closing charges and Initial Service Charge, Taxes, Insurance, etc., paid by mortgagor to Mortgage Department.
  - k) Note and Mortgage submitted to FHA for insuring and "Construction Loan" terminated.
  - l) Mortgagor makes first monthly, quarterly, semi-annual or annual payment following the insurance of note and mortgage.
4. When Construction Loans are made by Mortgage Department @ 6% interest per annum, Dealer will be re-imbursed as building progresses immediately upon presentation of Waivers of Lien and receipted bills to Mortgage Department.

## TITLE II, FARM MORTGAGE "EXISTING CONSTRUCTION"

### Step-by-Step Procedure

#### 1. Forward to Mortgage Department:

- a) Application in quadruplicate signed by Mortgagor, FHA Form No. 2375, revised June 1, 1938.
- b) 3 photos of existing building, about 3"x5", dated.
- c) 2 sets of plans and specifications in detail. (Necessary if structural changes are to be made).
- d) 1 copy of signed contractor's bid.
- e) Check in the sum of \$3.00 per thousand face amount of mortgage. Minimum, \$10.00.
- f) Abstract of title or Title Guaranty Insurance.

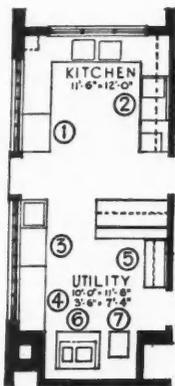
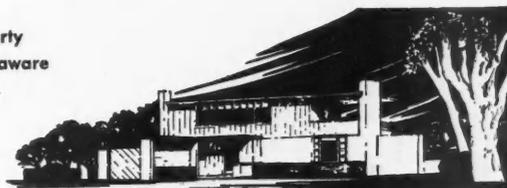
#### 2. Above material submitted by Mortgage Department to State FHA Office for approval.

#### 3. Processed by FHA:

- a) Preliminary examination. (If rejected, everything returned.)  
The State FHA Office submits all of the above papers to the District Farm Office who in turn process the case.
- b) Chief Farm Valuator makes physical examination of farm and buildings.
- c) Mortgage Risk Examiner determines credit rating of applicant.
- d) Chief Valuator coordinates reports and recommends "Commitment" or "Rejects Application" and Mortgage Department notified accordingly.
- e) If "Commitment" is issued, Mortgage Department notifies dealer and until then no labor or material must be furnished.
- f) Note and mortgage supplied by Mortgage Department; sent to Dealer for Customer's signature. These documents are to be returned immediately to Mortgage Department for inspection and recording.
- g) Mortgage Department receives Final Inspection Report from FHA if structural changes have been made.
- h) Closing Charges and Initial Service Charge, Taxes, Insurance, etc., paid by mortgagor to Mortgage Department.
- i) Note and mortgage submitted to FHA for insurance.
- j) Mortgagor makes payments monthly, quarterly, semi-annually or annually as per agreement.

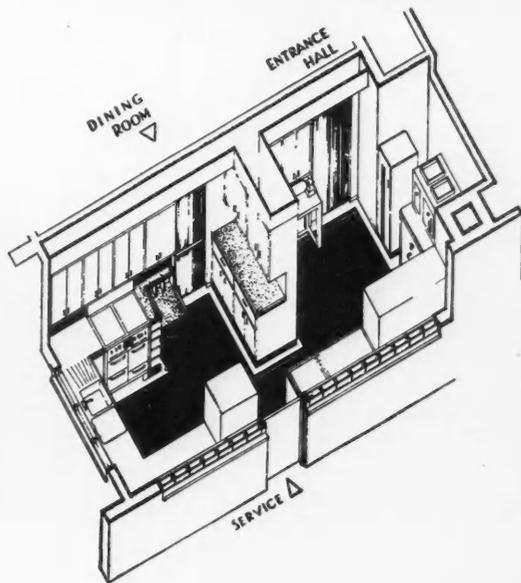
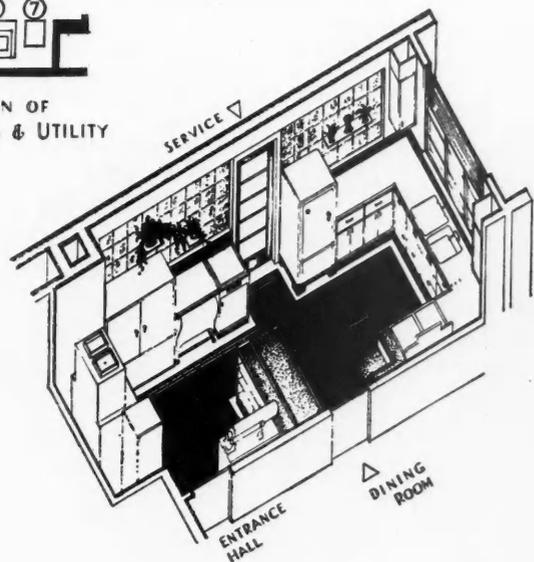
# Another prize-winning All-Gas Home

ARCHITECT:  
Frank S. Dougherty  
Wilmington, Delaware



PLAN OF  
KITCHEN & UTILITY

1. Gas refrigerator.
2. Gas Range.
3. Washer.
4. Gas laundry dryer.
5. Gas Ironer.
6. Gas house-heating unit.
7. Automatic Gas water heater.



Now build an  All-Gas Home ... enter the \$10,000 prize competition for builders and their architects.

The All-Gas Home Building Competition closes July 1, 1939. Write for entry blank and free booklet, containing all the information you need. Competition Director, American Gas Association, 420 Lexington Avenue, New York City.

## Kitchen and Utility room side-by-side, thanks to cleanliness of Gas

**N**O dust ... no soot ... no smoke ... so laundry equipment may safely be placed right next to the heating unit—right next door to the kitchen.

Such neat coordination of house-keeping facilities is practical only when Gas does the 4 big jobs. The new gas appliances are simple, compact, efficient. No fuel storage space is required. Gas offers greater living area per dollar of building money.

And the absence of complicated mechanisms and delicate parts makes gas appliances cost less to buy—to install—to maintain. That accounts for the increasing popularity of All-Gas Homes among architects and homeowners both.

For full information and detailed specifications of the new gas ranges, refrigerators, water heaters, and house heating equipment, get in touch with your local Gas Company.

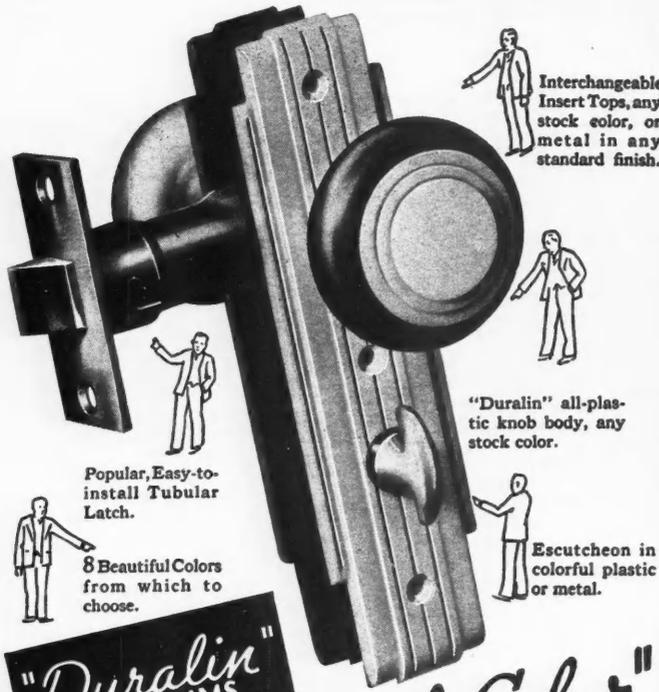
**AMERICAN GAS ASSOCIATION**

LET 

**DO THE 4 BIG JOBS**

**COOKING  
WATER HEATING  
REFRIGERATION  
HOUSE HEATING**

 Be sure the gas appliances you specify bear the Approval Seal of the American Gas Association Testing Laboratories.



Interchangeable Insert Tops, any stock color, or metal in any standard finish.

Popular, Easy-to-install Tubular Latch.

8 Beautiful Colors from which to choose.

"Duralin" all-plastic knob body, any stock color.

Escutcheon in colorful plastic or metal.

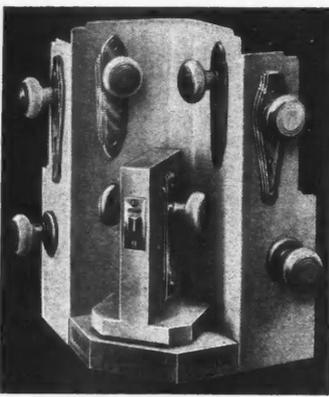
**"Duralin" DOOR TRIMS**

**"Hardware of Color"**

**"Color-toned" CABINET HARDWARE**



**FREE:** These Merchandisers (Free, dealers purchase only the Hardware on the "Space Saving Ivory Metal" Displays) boost sales and profits, allow customers to see the full beauty and value of "Hardware of Color."

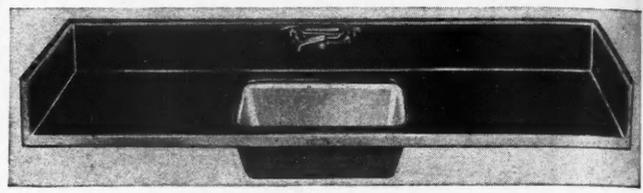


Color Magic! Bring to your home the zip of fresh, exciting color. Modernize—chase the drab of tired faded rooms with glamorous color. It's the Hardware of tomorrow for your new home today! "Duralin" Door Trims and "Color-toned" Cabinet Hardware are New. If your dealer does not have complete information—have him write us, NO OBLIGATION.

**National Brass Company, Mfrs.**  
 GRAND RAPIDS, MICHIGAN  
*Certified* Builders Hardware  
 Cabinet Hardware  
 Screen Door Hardware

**New Equipment Items Add to Home Convenience**

MANUFACTURERS have made remarkable progress in recently offering equipment features which give more home for the money through added convenience. Along this line the Tracy Mfg. Co., Pittsburgh, Pa., has announced PermaSheen Zephyr, a New Linoleum Cabinet Sink for the lower cost housing field. This sink is the result of the adaptation of "mass production to a custom-built product."



NEW linoleum cabinet sink with backsplashes.

In the Zephyr sink, an especially rolled, stretcher leveled steel with a copper coating forms the basic structure. This base supports a resilient battleship grade linoleum 1/8 inch thick, which can be secured in a variety of colors. Bowls are joined to drainboard by the Tracy patented construction. Trim around drainboard and backplasher is of genuine 18-8 stainless steel. Backplasher is joined to drainboard by new improved method using genuine 18-8 stainless steel.

Linoleum is held firmly to steel base by patented construction at bowl and around edges of drainboard and backplasher. A special process, developed by Tracy, is used for impregnating the linoleum to increase resistance to acids and alkalis. A trim of one piece construction, fitting into the rabbeted section of the linoleum, effects a sanitary joint and serves as an additional bond between the linoleum and the steel base.

**Door Chimes a Proven Sales Maker**

THE A. E. Rittenhouse Co., Honeoye Falls, N.Y., is making several larger models of door chimes in addition to its regular line of calls. For instance, the Ambassador models play the eight notes of the Westminster chimes. Also there are available two additional single-note signals for rear door signals, maid calls, etc. They operate on alternating current on the transformer supplied with the chime.

A patented mechanism uses a synchronous motor drive; timing cannot get out of adjustment. Sound volume is easily adjusted to suit each individual installation. The chime tubes are made of a special alloy which gives a beautifully rich, clear tone quality.

RICH appearance of these electric door chimes adds to beauty of the room; tubes are of burnished brass.



**New Beauty with Hardware of Color**

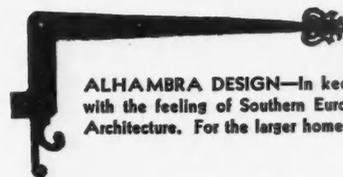
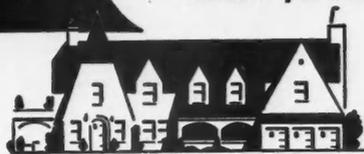
THE National Brass Co. of Grand Rapids, Mich., has brought into the market an entirely new line of door trims and cabinet hardware in color. The trade name "Duralin" identifies the all-plastic door trims which are offered in a range of eight colors. A unique knob construction provides for insert tops which are interchangeable. These tops may be had in Duralin of any stock color or metal of any finish. The escutcheons, as well, are available in all the new designs in either the colorful plastic or  
 (Continued to page 120)

*Now...*  
**GENUINE MCKINNEY FORGED IRON HARDWARE AVAILABLE  
 IN 3 PRICE RANGES**

No need now to specify 5 YEAR HARDWARE for 20 YEAR HOMES. Architects, builders and home owners have long appreciated the high quality and true authenticity of McKinney Forged Iron. This same hardware is offered to you now at a price within reach of everyone.



**WARWICK DESIGN**—Heavy, massive. Dates back to the early days of England.



**ALHAMBRA DESIGN**—In keeping with the feeling of Southern European Architecture. For the larger home.



**CURLY LOCK DESIGN**—Reflects the true Colonial spirit.



**HEART DESIGN**—Graceful yet sturdy. Maintaining the texture of early Colonial days.



**DORCHESTER DESIGN**—A popular design of high quality and texture.



**BEDFORD DESIGN**—One of the newer numbers which has proven popular with builders of small homes.

**MCKINNEY MANUFACTURING COMPANY • PITTSBURGH, PA.**

**DESIGNERS AND MANUFACTURERS OF GOOD HARDWARE FOR 72 YEARS**

**TWO GOOD ESTIMATING FORMS**

**The Old Builder's Estimator**

A complete estimating form for one residential job, with a 300 item check list, 7 pages of estimating data and memo sheets for use on the job. With this booklet you can prepare a complete, itemized, accurate estimate. Three columns are provided for checking every line of the detailed estimate. The forms follow the order in which a residential job progresses.

48 pages, 4 x 7 1/2, stiff paper binding, \$.25

5 for \$1.00 or 12 copies for \$2.50

**The Small Job Estimating Kit**

This Kit contains 10 complete sets of forms for quickly and accurately estimating 10 modernization, repair, maintenance or other small job projects costing under \$500. You fill out the list of items covering labor, materials, sublet, etc., and when the estimate is complete you transfer the figures to the detachable form which is the Letter of Proposal. This is given to the prospect. The record of actual costs of each job is kept on the back of the stub which remains in the Kit.

10 sheets, 11 x 8 1/2 inches, folding to 4 1/4 x 8 1/2, stiff paper cover, \$.35. 4 Kits for \$1.00; 12 Kits for \$4.00.

BOOK SERVICE DEPARTMENT

**AMERICAN BUILDER AND BUILDING AGE**

30 Church Street

New York, N. Y.

**GIVE THEM WHAT THEY WANT!**



Today, women demand efficient kitchen ventilation—freedom from embarrassing cooking odors and thorough elimination of greasy fumes and smoke. That's why they expect to find an electric exhaust fan in the kitchen of every new home.

That's why a Victor Ventilator is the most powerful sales aid per dollar of cost of all modern building features. There's a model for every type and size of home—all of them easily installed in any kind of construction. Write for your free Ventilation Data Book today!

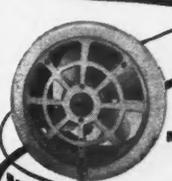
**VICTOR ELECTRIC PRODUCTS, INC.**  
 730 Reading Road Cincinnati, Ohio



The De Luxe



The Standard



The Master

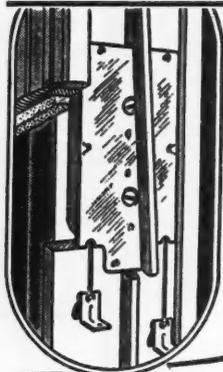
**VICTOR**  
**IN-BILT**  
**VENTILATORS**



**FREE!**

# Only DUPLEX

## ADJUSTABLE SASH BALANCE



### CHECK THESE ADDED DUPLEX ADVANTAGES

- ✓ Patented glider hooks prevent rattling or jamming.
- ✓ Only four sizes for all standard requirements.
- ✓ Amazingly simple installation.
- ✓ Permanently lubricated—enclosed in a plaster-tight steel case.
- ✓ Bulky weight boxes eliminated.
- ✓ Guaranteed for the life of the building.
- ✓ Costs less than sash weight installations or non-adjustable single-spring balances.

### GIVES YOU ALL THREE OF THESE Outstanding Features

1. **ADJUSTABLE**—Duplex is adjusted to perfect balance after installation.
2. **INSTALLED FLAT**—Duplex fits flat within an opening in the standard pulley stile. Allows narrow mullions and casings.
3. **ONE BALANCE FOR BOTH SASH**—Duplex' two-in-one feature cuts shipping and installation cost, and produces a more satisfactory job.

Write for details

## DUPLEX, Inc.

634 N. LA PEER DRIVE  
LOS ANGELES CALIFORNIA

## Here's Your Lucke Catalog!



Lucke Leak-Proof Tub Hangers prevent seepage between walls and tubs. End unsightly cracks and ruined plastering. Eliminate settling. Specified everywhere by leading architects and contractors for remodeling or new construction. All types of tubs. All types of wall construction. Catalog free. Send for it.

Patented and Manufactured by  
**WILLIAM B. LUCKE**  
WILMETTE, ILLINOIS

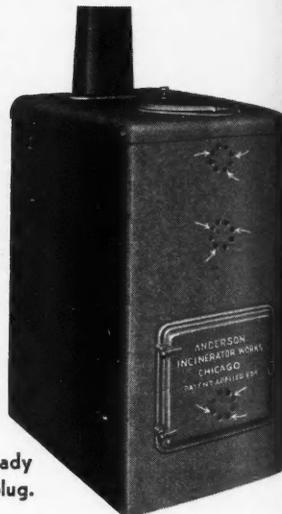
(Continued from page 118)

metal. Many pleasing color combinations with metal may be had by arranging these integral parts. The eight colors are: red, ivory, yellow, green, blue, orchid, walnut and black.

"Color-toned" cabinet hardware is a line of kitchen hardware. Upon the sparkling chrome finish of these smartly designed items are imbedded gay lines of color.

### Incinerator Provides Convenient Disposal

THE Anderson Incinerator Works, 4914 S. Rockwell St., Chicago, is marketing the forced draft "Burnit" incinerator designed for waste material disposal in homes and other buildings. It is designed to do an efficient job. Sawtooth sides all around provide draft lanes, and the roof is dome type for perfect combustion and burning of all gases and acids. An electric motor is used where needed, for forced draft, causing the fire to burn into the debris for 100 per cent disposal, leaving only a fine fly-ash. These units are built in three sizes, 6, 9 and 12 bushel capacity.



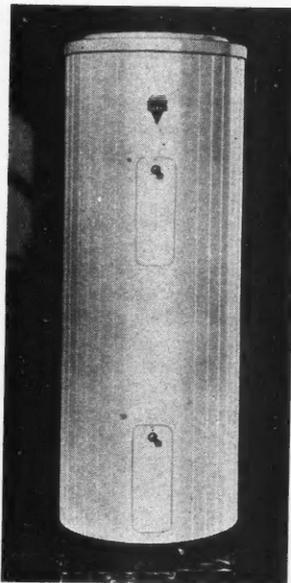
THIS incinerator is delivered all ready to connect to chimney and electric plug.

### Electric Water Heater

AN electric water heater, automatic in action, designed and heavily insulated for economical operation, has been announced by Crane Co., Chicago, for marketing under the trade name of "Selectric." A round type is available in eight sizes with storage capacities of 8, 16, 30, 40, 52, 66, 80 and 100 gallons. It rests directly on the floor, eliminating legs and rust catching areas. A cabinet type of square construction is available with capacities of 30, 40 and 52 gallons. A table type is made in 30 gallon size.

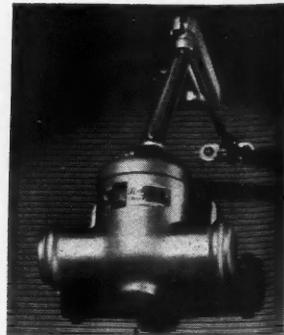
Mechanical features include: Multiblade, long-life heating element operating at low surface temperature and, therefore, not easily limed; an automatic accurate temperature control of simple but positive trouble-free operation; cold water inlet spray directly into element giving a flushing effect to the element.

NEW electric water heater has special 3-inch insulation under lustrous enameled jacket.



### Ball Bearing Door Closer

THE Lockwood Hardware Mfg. Co., Fitchburg, Mass., has placed on the market the first ball bearing surface-type closer. It features improvements and refinements in design such as new rack and pinion operation, with positive action through use of an unusually powerful spring and smoothness from the ball bearing shaft. Extra large parts to carry stresses and special materials afford life-long operation.



BALL bearing door closer.

# Cottage or "Castle"

## FITS EVERY PURSE AND PURPOSE



No building budget is too modest nor plans too pretentious for "OVER THE TOP" Door Equipment. Its simplicity pleases every prospect . . . simplifies installation . . . keeps costs low. It's the choice of particular people . . . city citizens and rural residents. Builders everywhere have rapidly recognized this . . . that's why today "OVER THE TOP" Door Equipment, a Frantz Guaranteed Builder's Hardware product, is the leader of the lot. Why fuss with failures . . . sell and install the "over head" device that takes less labor and makes you more money. Write today for facts.

FRANTZ MFG. CO., STERLING, ILLINOIS

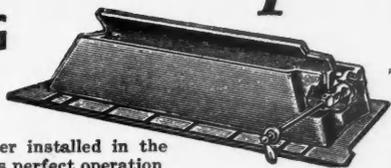
**ONLY 2 1/4 IN. Headroom Required**

Low ceilings, which eliminate many types of "over head" doors, offer no problem to "Over-the-Top" Door Equipment. If a 1 3/4" door is used, then 2 1/4" of headroom is all that is required; thicker doors need proportionately more.



# PEERLESS dampers

## FOR HEATING EFFICIENCY



A Peerless dome damper installed in the fireplace not only assures perfect operation of the fireplace, but is essential to the efficient operation of the heating system. Peerless dampers are built to last a lifetime. Made in three styles, rotary, poker and chain control. Obtainable in all standard sizes.

Write for prices and details.

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

### OTHER PEERLESS PRODUCTS

Fireplace, fixtures—ash dumps, coal windows—ash pit doors—garbage receivers and gas heaters.

## ADD A ROOM TO YOUR HOME



GET THE GOOD OUT OF YOUR ATTIC, BY USING OUR IMPROVED FOLDING STAIRWAY.

NO RAFTER CLEARANCE NEEDED  
NO OBSTRUCTION TO ATTIC FLOOR—NO CABLES OR PULLEYS.

CONVENIENT—ATTRACTIVE—MAKES ANY HOME WORTH \$500 MORE.

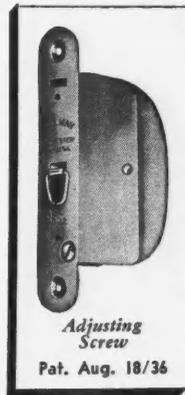
Write for free Folder A-48

**THE MARSCHKE CO.,**  
551 University Ave.,  
St. Paul, Minnesota

## Greatest Improvement In Sash Balances In 40 Years -

The New PULLMAN Adjustable Unit Spring Sash Balance is radically different from all others. It SELLS because it SAVES. Eliminates use of pulleys, weights and cords, thus effecting a big saving in time, labor and materials. All pressed steel construction with all moving parts entirely encased and protected. Light in weight and non-breakable. The New PULLMAN Spring Sash Balance is easy to install.

A double hung opening can be



Adjusting Screw

Pat. Aug. 18/36

### Completely Installed In 10 to 15 Minutes

"More savings in time and labor. A new Adjustable Device permits quickly changing the tension of the inside coiled spring with an ordinary screw driver and without removal of sash or Balance from the opening, insuring smooth, easy and quiet operation impossible with any other type of adjustment."

The New PULLMAN Spring Sash Balance which represents: "A Half Century of Progress," is Now Guaranteed for the Life of the Building. This kind of "Life Insurance" makes sales and profits for every dealer.

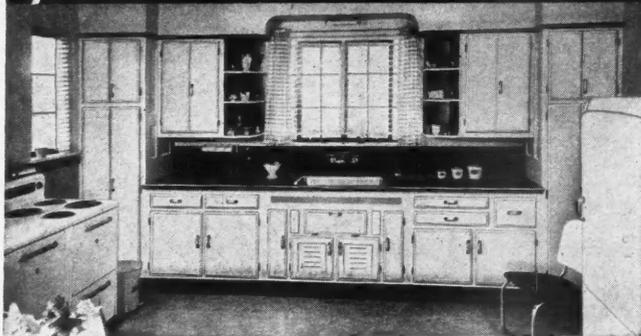
Send for Trade-prices, also literature showing Complete Specifications and Architectural Details.

## PULLMAN MFG. CORPORATION

Established In 1886

1180 UNIVERSITY AVE., ROCHESTER, N. Y.

## Greater Value IN KITCHENS TODAY!



COMPARE a kitchen of 1928 with the beautiful culinary studio of today. What a difference! And 1938 home owners appreciate this difference. They demand the utmost in efficiency, cleanliness, beauty . . . and economy. To help way, Kitchen Maid today offers far better cabinetry than ever before; yet prices are no higher! Best of all, a wide choice of units in three price ranges makes this well known line unusually adaptable to any type of home or apartment. Write for new full color catalog and details.

The Kitchen Maid Corp., 810 Snowden Street, Andrews, Indiana.  
Send new catalog and details on standard unit Kitchen Cabinetry.

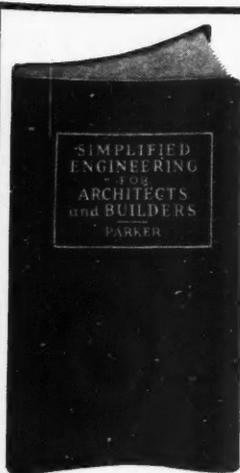
Name \_\_\_\_\_

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- Architect
- Builder

- Dealer
- Owner





An easy way to acquire a knowledge of the design of structural members in building construction.

## SIMPLIFIED ENGINEERING for ARCHITECTS and BUILDERS

By HARRY PARKER, Professor of Architectural Construction, University of Pennsylvania; Editor, Kidder's "Handbook" (18th Edition).

Here at last is a book which presents the design of beams, columns, slabs, etc., so simply, so concisely, that you can readily follow the explanations without previous training in the subject. Now you can have at your fingertips the important terms and basic principles employed in the design of structural members in building construction, and a host of examples with their solutions illustrating just the sort of problems that must be faced in practice. Timber construction, steel construction, reinforced concrete, and roof trusses all receive treatment. This book is a real time-saver.

Send for an "on approval" copy.

214 pages, 96 illustrations, 5 by 7 $\frac{3}{4}$ , Flexible binding, \$2.75

JOHN WILEY & SONS, INC., 440 Fourth Ave., New York

# News of the Month

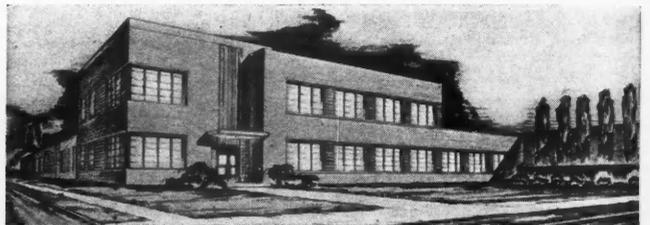
## Building Activities and Meetings

### Residential Building Upturn Continues

AUGUST residential contract awards in 37 eastern states, as reported by the F. W. Dodge Corp., continued the sharp upturn reported in July, and forecasts active fall and winter building. August residential contracts totalled \$99,632,000, a 35.6 per cent gain over August 1937, and 13.2 per cent over July this year. The August figures are the largest since April, 1937. This month's total for all types of construction of \$313,141,000 shows a 12 per cent gain over August last year, and 30 per cent gain over July of this year. Both privately financed and publicly financed projects increased over the preceding month.

### Skilsaw Building New Daylight Plant

CONSTRUCTION has been started on a new two-story factory and office building for Skilsaw, Inc., Inc., at Elston and Winnemac Avenues, Chicago. The building, 140' x 200' occupies a site with a maximum depth of 574', which will permit future expansion more than double the original structure. Increasing sales and the addition of several new products to the Skilsaw line of portable electric tools were responsible for the decision to erect the new plant, according to J. W. Sullivan, president.



PRODUCTION begins this fall in new plant of Skilsaw, Inc., Chicago.

The two-story section will include general and private offices, display rooms, and a large reception room. Continuous sash throughout the factory section and two high monitor aisles will provide daylight inside the plant.

### Fire-Resistant Paint in Plywood Gym

THE new 90' x 90' school gymnasium at White Salmon, Wash., is 85 per cent Douglas Fir plywood, and is painted with Rezitex, the new fire-resistant paint made by I. F. Laucks, Inc., Seattle. Beams, sheathing, sidewalls, roof, and interior finish are of plywood. Beams are of laminated, glued-up, truss construction. Outside walls and roof are of synthetic, resin-bonded plywood.



A LARGE and enthusiastic audience watched "Miss America" break a champagne bottle over this new "American" portable saw mill at the annual sales meeting of the American Saw Mill Machinery Co., Hackettstown, N. J.

# MAJESTIC

BUILDING NECESSITIES

Majestic



YOU'LL WANT A COPY OF THIS  
VALUABLE REFERENCE BOOK

Send for It! It's Free

THE MAJESTIC COMPANY

HUNTINGTON 706 ERIE STREET INDIANA

**Extra Profits!**  
Don't pass up this chance to get added business.



**BROWER'S "Save-All" Fresh Air Intake** for all poultry and hog houses and other buildings. Automatic by-pass damper. Well constructed of heavy galvanized steel and aluminum. Widely used in all parts of the country with great success.

**BROWER'S Ventilating Units for Farm Buildings**



**BROWER'S "All-Purpose" Ventilating Window** for broiler plants, laying and brooder houses, barns, etc. Heavy galvanized steel. Ribbed glass tilts in 8 positions. Leak-proof. Cannot rattle. Glass 20" x 28" x 3/16". Frame 25 1/4" x 33 3/4". Very popular.

**BROWER'S Suction Cupola** for poultry houses and other buildings. Responds to slightest breeze. Heavy, rust-resisting Armes Ingot Iron—silver aluminum finish. Bird-proof screen. Can be fitted to any style roof.

Write for Builders' prices and full details  
Brower Mfg. Co., Box 1517, Quincy, Ill.



**How to build FIREPLACES**



that circulate heated air... **NO SMOKING!**

Covert Radiheater Fireplace draws fresh air from outdoors . . . supplies a constant circulation of this fresh, heated air. Users are enthusiastic boosters for this scientifically-designed metal fireplace form that insures satisfaction . . . helps to sell the house.

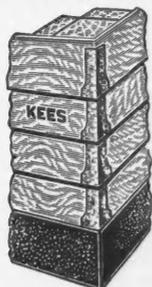
We also make the Covert Damper . . . the favorite among architects and masons. Send for "Attractive Fireplaces, and How to Build Them" . . . free . . . 16 pages of pictures, charts, vital data.

We also make the Covert Damper . . . the favorite among architects and masons. Send for "Attractive Fireplaces, and How to Build Them" . . . free . . . 16 pages of pictures, charts, vital data.

Write **H.W. COVERT CO.**  
339 E. 48th St., N. Y. C. . . . Fireplace Equipment Since 1896

**SAVE MONEY on STORM SASH!**

Smart builders everywhere use Kees Storm Sash Hangers. They're not only the quickest, easiest way to put up or take down storm sash, but one set of hooks attached to the building serves both for storm windows now and screens in the spring.



**FREE!** Get Free sample Kees Hangers, and FREE Kees Catalog of Metal Siding Building Corners, (right) and other builders hardware. Write to-day.

**F. D. KEES MFG. CO.**

Box 293

Beatrice, Nebraska

**DOORS THAT END DOOR WORRIES**



**KINNEAR RoL-TOP DOORS**

Through exclusive construction features Kinnear RoL-TOP Doors simplify installation and insure customer satisfaction. Angle mounted tracks form a rigid frame. Malleable iron hardware is applied with through bolts. A "Keystone" sealing arrangement makes them truly weathertight. Ball bearing rollers are of especial Kinnear design. The rugged cylinder lock gives real burglar protection. These and other RoL-TOP features make this definitely a better door. Be sure to have the facts. Write for details.

**KINNEAR MFG. CO.**

1560-80 Fields Ave., COLUMBUS, OHIO

Kinnear RoL-TOP Doors are built in any size, of any wood or metal, with any number of light sections. Easily installed in any opening.

*Don't plan homes with DEAD END CELLARS*



Specify **BILCO**  
COPPER STEEL  
CELLAR  
BULKHEADS

**T**HINK how easy to move large furniture in or out of a basement with an exit like this. A really convenient, safe cellar has a Bilco all-metal bulkhead. Shipped knocked-down complete for quick installation, to replace old wood hatchway, or on new homes designed for a modern, outside basement entrance. Three standard sizes and to order. Last virtually forever. Burglar-proof. Moderate in price. See Sweet's or write for complete data. If dealer can't supply order direct.

Agents: Write for territory.

**BILCO MFG. CO. 165 Hallock Ave. NEW HAVEN, CONN.**  
Sidewalk Doors - Cellar Bulkheads

**A TRIP TO Washington**

FIRST of all, reserve your room at the hotel best suited to your convenience and purpose when in Washington—the modern downtown Willard, "The Residence of Presidents."

**COFFEE SHOP**

Popular Priced Food Specialties

*The* **WILLARD HOTEL**

WASHINGTON, D. C.

H. P. SOMERVILLE, Managing Director



**MAKE  
BIG  
MONEY**  
with this new  
**AMERICAN  
MACHINE**

**BIG PROFITS**

Here's your chance to make some big money—be your own boss and get into something for yourself. There is no reason why you should not be a big success in the floor surfacing business—you already know a lot about the building game, so you naturally have a head start on the other fellow.

**EFFICIENT ONE-MAN MACHINE**

An American Floor Sander is easy to run—truly a professional machine. No skill is required to operate and within a few hours you can run one as well as an "old timer." American floor sanders are easy to take from job to job. You don't need any helpers.

**SEND COUPON**

Be sure to sign and mail coupon below and get complete details and prices without cost or obligation. It costs you nothing to investigate. So, if you are in a rut, now is the time to get out and become independent—have your own American floor surfacing business.



**AMERICAN**

Floor Surfacing Machine Company  
511 So. St. Clair St., Toledo, Ohio

Gentlemen:

I am checking the following for free details on your machines without cost or obligation.

- Am a building contractor and want a machine for my own use.
- I want to get into something for myself.
- I already own one. Make \_\_\_\_\_ years old \_\_\_\_\_ Quote trade-in allowance.

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_



**THIS IS WHAT COSTS YOU MONEY!**



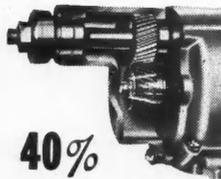
ONLY  
**\$151.75**  
COMPLETE WITH  
1 H.P. MOTOR

*A Walker-Turner*

*10" Tilting Arbor Saw*

**MAKES MONEY FOR YOU  
FROM THE FIRST HOUR  
ON THE JOB**

Here's one way to make money from close-figured competitive jobs. Cut your stock on the job with this precision-built saw.



**40%  
More Power**

with this *Geared Motor Drive*. Found only in saws costing much more.

Handles every cut up to 3". Tilting arbor makes it easy to cut large or unwieldy pieces to any angle up to 45°—table is always horizontal. Size of table: 27"x36".

See it at your Walker-Turner dealer's or write for catalog. Walker-Turner Co., Inc., 10108 Berckman St., Plainfield, N.J.

*Bench Saws, Circular Saws, Band Saws, Jig Saws, Jointers, Shapers, Lathes, Surfacers, Grinders, Flexible Shafts*

**WALKER-TURNER**  
*Engineered* **POWER TOOLS**



## EFFICIENCY TOOLS

*Use this Key to prove good work, low costs and modern industrial skill.*

### How Power Tools and Equipment Serve Home Building Contractors

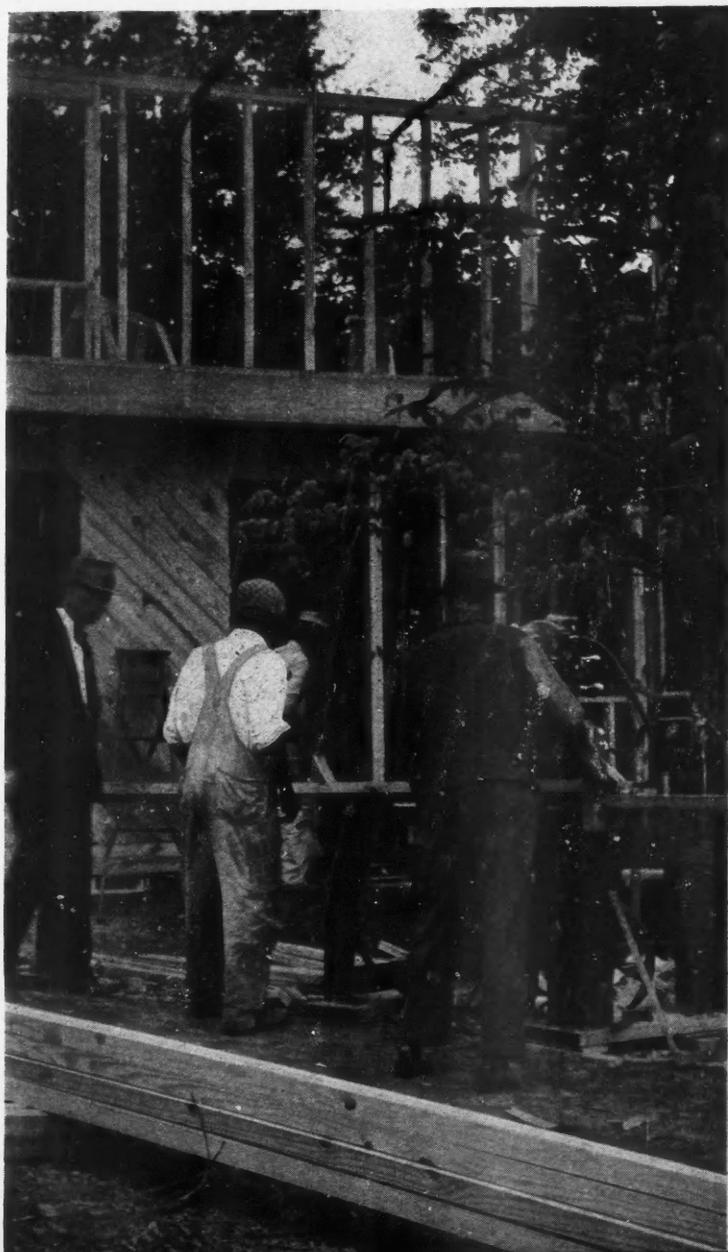
THE reason American builders lead the world in efficiency, speed and quality workmanship is that power and precision equipment is more extensively used here than in any other country. Most of the people who complain about the "inefficiency" of the American home building industry do not know how mechanized it is. It is true that houses are not built in factories like Fords, and never will be. Neither will battleships, nor will agricultural production.

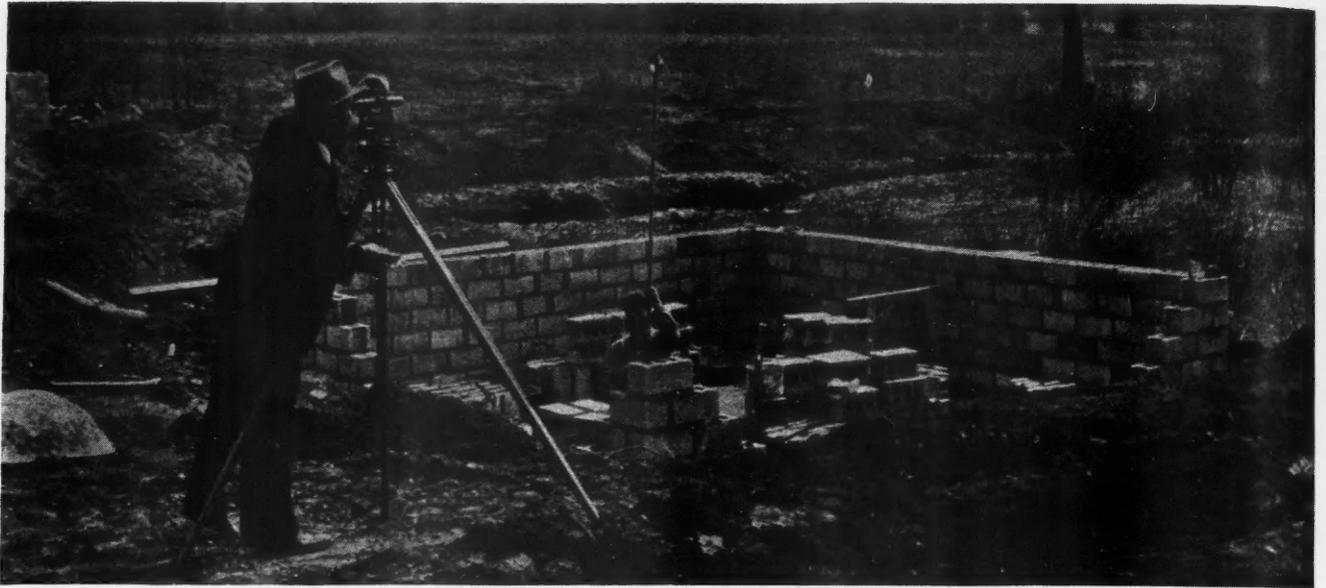
But the use of efficiency tools on the job is constantly progressing. A bulldozer will do the grading around a house in a few hours that formerly would have taken several men a week. A contractor's level sets the proper grades in one-tenth the time and insures much more accurate work. A power saw cuts the lumber to exact size and length in a fraction of the time required by hand. Speedy trucks with modern pneumatic tires handle materials quicker and at less cost. Powerful floor sanders produce perfect floors in hours instead of days. New power drills, mortising machines, paint spray equipment, concrete mixers, hoisting apparatus and a host of other devices make home building highly mechanized and efficient.

This is a movement that is bound to increase. The builder is caught between a demand for lower-priced houses on one hand and rising labor costs on the other. The only answer is a further use of efficiency power tools and equipment. This will create more work for everyone, since lower costs will make possible a greater volume of sales.

#### POWER SAW ON THE JOB.

Here we see a construction picture of one of the houses in the "Laboratory Community," the group of lumber houses built as part of the National Small Homes Demonstration program of the National Lumber Manufacturers' Association at Fairway Hills, near Washington, D.C. Speed, accuracy and efficiency are keynotes, and the result is a better-built, lower-priced house today.





WITH SEVERAL FEET YET TO GO, foreman establishes exact level points with pencil mark at each corner. Masons then measure up from pencil marks. Result is a finished foundation true within one-eighth inch. Saves masons' time and eliminates delays in leveling sill.

## Reis Gets Better Job, Lower Cost with Efficiency Equipment

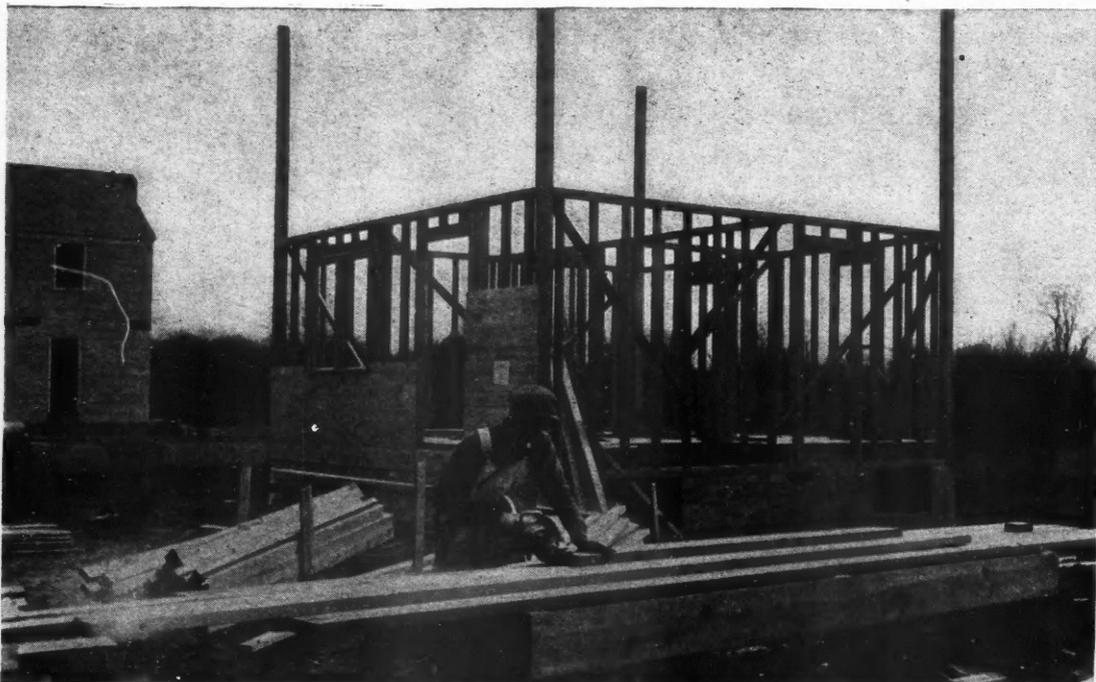
**I**N HIS River Edge development in Bergen County, N. J., Charles H. Reis has been building and selling six-room houses, with oil burning, winter air conditioning systems, at \$3,990 and \$4,990. This is a low price, and the reason it is possible is that the houses are built with a skill and efficiency comparable with that of any automobile manufacturer. Reis uses power tools and equipment to the utmost. Furthermore, he has developed a smooth-working system to make the power equipment effective.

Perhaps a word should be said here about the Reis

organization. As construction superintendent in direct charge of the building operations he has a man peculiarly fitted for such a job—Stanley Leeks, a highly trained and competent architect who is more than an architect—he came up through the ranks working as a carpenter before he went to college to study architecture.

When Leeks draws a line on a piece of paper, he knows what that line means to the carpenter on the job. His plans are detailed with unusual accuracy and completeness. He is right on the job, keeping the work or-

*(Continued to page 128)*



**WALTER PATTERSON**, skilled carpenter working for Charles H. Reis, cuts complete framing for the small house shown in 4 hours. Bridging is cut in 20 minutes.

# Announcing House Construction Details

By NELSON L. BURBANK  
Author of "Carpentry and Joinery Work"

This new details book will combine the best features of two predecessors: *Building Age Construction Details* and "American Builder's" *Good Construction*. The material is based largely on reproductions of house construction details which have appeared in *American Builder and Building Age*.

The various sections are presented in construction sequence. They constitute a working guide in detailing every step in the construction of a dwelling, from foundation to finish. Scale drawings and reproductions of photographs, many showing step-by-step procedure, with just enough text to explain general principles, make this book particularly suitable for the carpentry shop drafting room.

Latest building materials, including a large section on veneer paneling, are shown. New equipment, machine methods of assembly of equipment and building short-cuts are pictured. The details represent standardization recommended by housing organizations and other authorities. The complete cross-index will enable contractors, carpenters, architectural draftsmen and students to locate any particular detail quickly.

## Chapter Headings

Floor Plans, Sets of House Plans—Excavations, Foundation Forms, Foundations—Sills, Girders, Joists, Sub-Flooring—Outside Walls—Inside Walls—Wall Sheathing, Ceiling Joists—Roof Construction, Bay Construction, Roofing—Cornices, Porches—Exterior Wall Construction—Interior Wall Coverings, Interior Trim—Stair Construction—Windows—Doors—Hardware—Closets, Shelves, Built-In Equipment—Finished Flooring—Chimneys, Fireplaces—Scaffolds—Garages—Heating, Air Conditioning—Elements of Electric Wiring for Modern Homes—Insulation, Sound Proofing—Gates, Garden Furniture—Shopcrafter's Corner—Camps, Cabins, Cottages—Farm Buildings—Wood Connectors—Prefabrication, Modern Building Materials—Painting, Finishing—Modern Homes.

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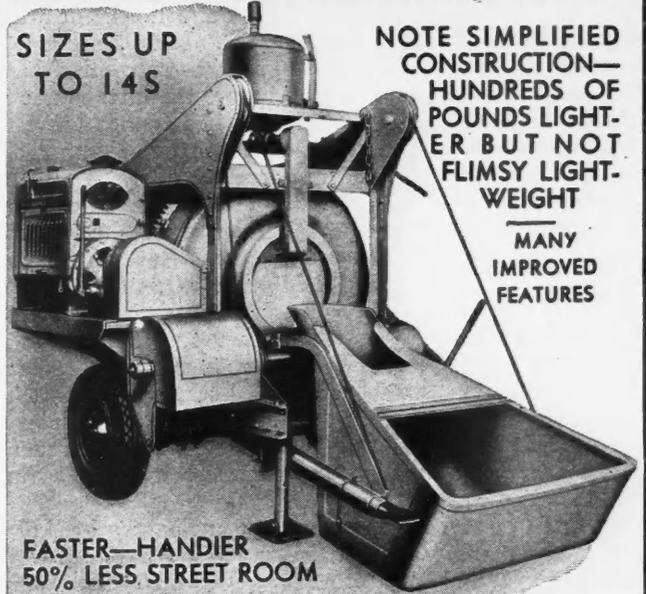
# Jaeger's LATEST SPEEDLINE END DISCHARGE TRAILERS

1939 TYPE, SENSATIONAL IN  
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SIZES UP  
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NOTE SIMPLIFIED  
CONSTRUCTION—  
HUNDREDS OF  
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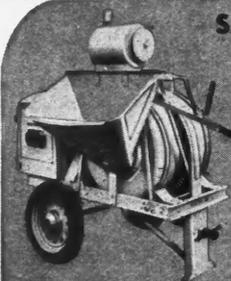
MANY  
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Pay about half the price of heavy  
55 Non-Tilts, get up to 40 cu. yds.  
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JAEGER "UTILITY"  
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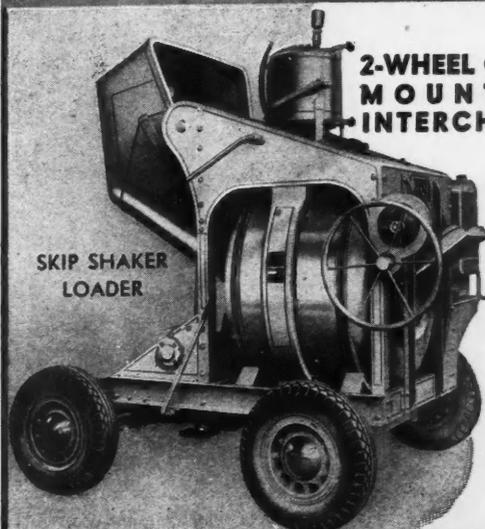
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THE JAEGER MACHINE CO.

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## Efficiency Equipment

(Continued from page 126)

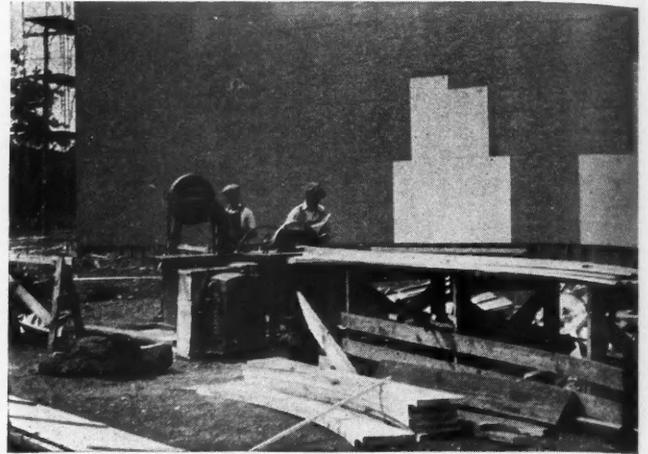
ganized, laying out new houses and supplying the men with technical information at the time it is most needed.

The day your *American Builder* correspondent visited River Edge, Leeks was establishing levels on the foundation of a new house. This is an excellent illustration of the efficiency methods he employs. The foundation was within three or four feet of completion. Leeks has standing orders with the masons when the wall reaches that point to let him know. He set up his level and proceeded to establish an accurate grade to guide the masons, as shown in picture on page 126. This was done simply by putting a pencil mark on the wall at each corner. The masons then go ahead and finish the wall, measuring up from the pencil marks. If they are a few inches out when the levels are given, as sometimes happens, the error can be made up before the final course is reached. The result is that the finished foundation wall is absolutely level and is exact within one-eighth inch. Considerable time is saved in a number of ways. In the first place, the masons have a convenient mark to measure from and can work to it without waste motion. In the second place, there is no time spent in leveling up the final course or correcting any error in grade. In the third place, the sill and joists will require no shimmying up or further leveling as the finished foundation wall is already perfectly level.

This may be a small point, but Leeks considers it an important one, and he believes that the cost of the instrument and the few minutes spent are compensated many times over by the better job that results and the saving in otherwise wasted time and labor.

Working under Leeks are several small crews of skilled men who specialize in a particular job. Three men work on footings and floor forms. One man digs water trenches, two men work on trim. A crew of four headed by a skilled carpenter who operates the power saws does the framing.

The two power saws—No. 77 Skilsaws—are an important part of the Reis efficiency plan. A table is set up, as illustrated in accompanying photo, which provides an efficient outdoor workshop. Several hundred feet of cord are used so that the saws can cover a considerable range of ground. The foreman in charge of the carpen-



POWER SAW and woodworker operated by compact gas engine in use in construction of buildings at New York World's Fair by the A. L. Hartridge Co. The bandsaw made possible a particularly large saving in the cutting of the circular units shown in the foreground.

try work who does all the cutting is Walter Patterson, an expert with the saw. He first makes patterns for the principal framing members required, such as partition joists, rafters, first-story outside studs, second-story outside studs, etc. Frequently these patterns can be used for a whole row of houses where the basic framing dimensions are the same.

On the small River Edge houses in which the foundation size is approximately 20 by 22, Patterson reports the entire framing is cut in four hours. It takes only 20 minutes to cut the bridging, which would take an hour or more to cut by hand.

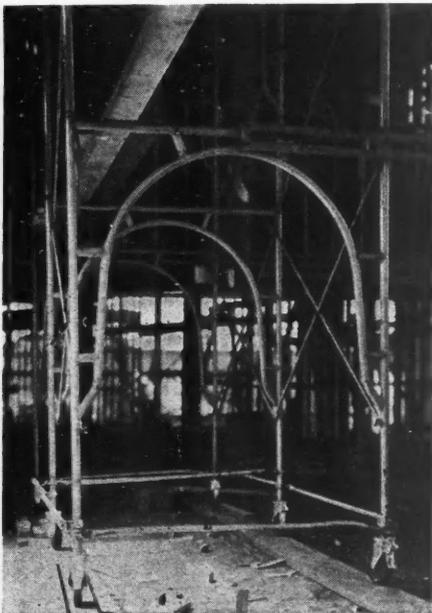
As the photograph of the house under construction shows, a braced frame type of construction is used. This calls for wind bracing. The notching-in and cutting of the wind bracing members is normally a laborious and expensive job which on these houses would take the better part of a day for a good workman. With the power saw, Patterson reports, the whole job of cutting, notching and putting in is done in less than two hours.

As articles in *American Builder* have frequently pointed out, modern power equipment, such as a power saw, can achieve great savings for a builder—but the amount of the savings is greatly increased by the skill, efficiency and "headwork" of the operator. Patterson is thoroughly sold on his power saws and is an enthusiastic student of the subject of power cutting. Working with Stanley Leeks, he is able to analyze each job and cut the necessary members without the slightest waste.

The same principle holds for the other "old timers" of the Reis organization. There are three subforemen who have been with the firm many years and can go ahead with a minimum of supervision, turning out a large volume of work that is accurately and efficiently performed.

Stanley Leeks declares that the building of houses consists of the successful handling of "a multitude of little items." He points out that "even the bolts on a Ford are counted and indexed," and attempts to figure out the parts of a house with almost as high a degree of planning.

Stanley Leeks believes that *good construction is more economic than cheap construction*. He repeatedly pointed out items of construction that did a great deal to make a longer-lived, better house but yet cost no more or, if at all, only a slight percent in the total cost. The use of modern efficiency equipment is one of the best examples of a practice that produces tighter fitting units and a better job throughout at a lower cost.



NEW TYPE movable steel scaffolds in use inside one of the buildings at the New York World's Fair. Scaffolds are of sectional style, quickly erected or taken down. A. L. Hartridge Construction Co., builder.

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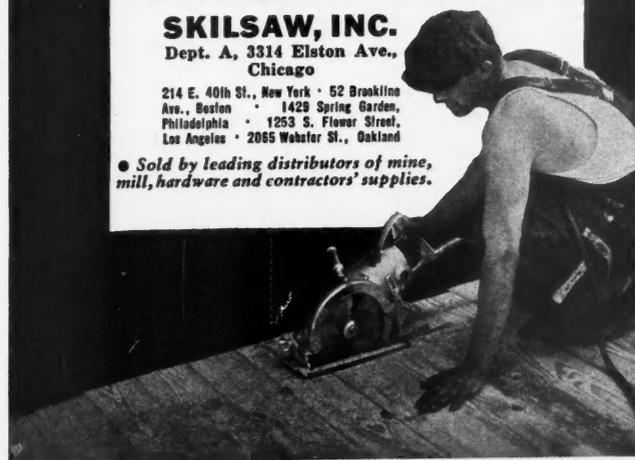
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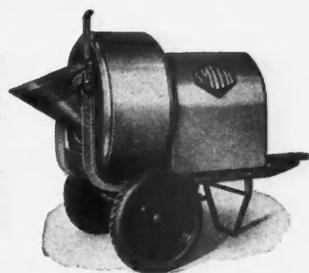


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## Survey Shows Power Equipment Gaining

**S**URVEY returns from a very small but typical cross-section indicate that every second contractor owns one or more concrete mixers; approximately one out of nine rents a mixer occasionally; while one out of five uses some ready-mixed concrete. Approximately five out of eight contractors have power shop machines. One out of four has a well equipped shop with four or more power machines. Seven out of ten own portable power equipment, of which power hand saws are the most popular item. Every second contractor owns one or more motor trucks. Three out of each ten contractors plan to buy additional power equipment.

These and other conclusions that throw new light on contractors operations, equipment, and methods, are based on survey returns from 442 typical contractor builder readers of *American Builder*. Since this small cross-section of replies is less than 1% of the total number of contractor builders, each figure in these survey returns should be multiplied by at least 100 to show conditions in the country at large.

### How Survey Was Conducted

Questionnaires were mailed to 3,000 *American Builder* contractor-builder subscribers, selected without regard for size of communities in which they are located, but apportioned according to the total number of subscribers in each state. No questionnaires were addressed to con-

cerns that take sub-contracts exclusively. Replies were received from 442 subscribers, a return of approximately 15 per cent. Replies were grouped according to populations of the communities in which they originated:

Population of towns	No. of Replies
Under 2,500	87
2,500-5,000	48
5,000-10,000	51
10,000-25,000	82
25,000-50,000	46
50,000-100,000	30
100,000-250,000	36
250,000-500,000	28
Over 500,000	34

Each contractor was asked to list the number and kinds of buildings he erected during the past twelve months. He also was asked to tell types of work he handles with his own crews, and the work that is sub-let.

### What They Built

The very small, but typical sample covered in this survey showed well diversified building activities. Only six returns reported "no building done." Others listed projects ranging all the way from a few home modernization or farm-building jobs up to complete residential developments, new stores, factories, and public buildings. Out of 442 replies, 340 typical contractors and builders reported that they erected 1,551 new houses during the past year; 90 contractors erected 162 apartments; 12 built hotels; 286 handled 1,160 home modernizing jobs; 236 built 778 private garages.

(Continued to page 132)

# BIG OPPORTUNITIES

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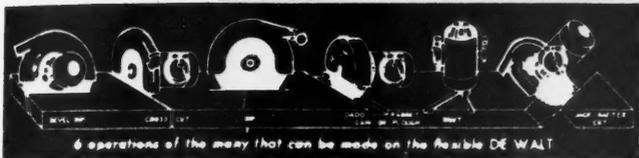
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6 operations of the many that can be made on the flexible DE WALT

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This machine uses the new modern principle of **VIBRATION** which assures Super-Dense concrete Units. 240 ft. of Joists can be produced in one operation, at low labor cost.

The R & L Joist Machine is adaptable to the production of many standard and special concrete products.

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FIG. 1178 A

**New MONARCH Ball Bearing JOINTERS 12", 16" and 20"**

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Lower Production Costs with Modern Monarchs

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60 Main Street Hackettstown, N. J.

**Equipment Survey**

(Continued from page 130)

In the farm field 85 contractors built 185 farmsteads; 82 put up 132 new barns; 45 constructed 98 poultry houses; 20 erected 35 hoghouses; 12 put up 17 silos.

A considerable volume of commercial building was handled during the year, for 83 typical contractors built 130 new stores; 105 accounted for 295 store modernizing projects; 90 built 115 public garages; 99 accounted for 150 filling stations; 34 constructed 38 taverns.

In the industrial field 45 contractors built 67 new factory buildings; 52 handled 95 plant modernizing jobs; 47 erected 54 warehouses, and a considerable variety of miscellaneous, industrial projects was reported. In the non-residential field, 41 contractors erected 46 office buildings; 42 accounted for 59 new schools; 28 built 31 new churches; 22 constructed 25 new theatres.

**Work Handled With Own Crews**

Ninety of the 442 contractors who returned questionnaires did not answer the question regarding operations handled with their own crews. Replies from the remaining 352 indicate that the majority take general contracts and handle three or more structural operations with their own crews. Some, obviously, also take sub-contracts on types of work at which they are particularly efficient. Of the 352 who answered this question, 18 indicated that they are builders (both contract and operative) who sublet all operations. Twenty-one others reported that they handle all work with their own crews; 93 indicated that they handle all work except plumbing, electric, and heating; occasionally, plastering and painting.

Carpenters stood at the head of the list, for 202 of the 352 answers were from contractors who handled carpentry with their own crews. In addition, 81 handle masonry; 86 do concrete work; 48 include painting; 28 take care of excavating and grading (usually include foundations); 25 do plastering, and 8 take care of plumbing with their own crews.

**Many Own Power Equipment**

Contractors were asked to list the number of shop machines and portable power tools that they owned. Replies show that 61% own one or more power shop machines, while 26% own four or more. Two out of five stated that they own "no power shop equipment." In the very small but typical cross section indicated by 442 replies, considerable power equipment was listed. Those who answered the question stated that they own 138 band saws, 268 table saws, 129 combination woodworkers; 89 lathes; 129 jointers; 69 planers; 74 belt sanders; 90 drill presses, and miscellaneous equipment.

Those who own four or more shop machines were predominantly small town contractors. Of the 114 who own four or more shop machines, 87 (76%) are located in towns of 25,000 or less. The reason for this situation apparently is that the contractors in smaller towns do not have ready access to planing mills and large millwork warehouses. For that reason they equip efficient wood-working shops.

Returns show that 72% of the contractors own portable power machines, and that 21% own four or more portable machines. Only 28% own no portable power equipment. Replies from those who answered the question listed 264 power-hand saws; 141 saw rigs; 149 power drills; 186 floor sanders; 68 edgers; 71 waxers.

Under the heading of concrete and masonry equipment those who answered the question listed, 117 hand hoists; 80 gasoline hoists; 36 electric hoists; 16 tractor hoists.

(Continued to page 134)



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to come out  
"ON TOP"  
ON ALL ROOFING JOBS**

*... because he uses*  
**"TROUBLE SAVERS"**

*Time-Saving Adjustable Roofing Brackets*

You make more money—you save more money when you use TROUBLE SAVERS! These safe, ADJUSTABLE Roofing Brackets increase working efficiency, reduce material cost, save on time and labor—and assure POSITIVE SAFETY at any pitch, for any type of roof, decking or dormer work! Sliding tongue extends 13", and three Safety Notches permit instant adjustment without removing plank—ing. Can't mar or damage roofing material. Start using TROUBLE SAVERS now—and increase your margin of profit on every job!



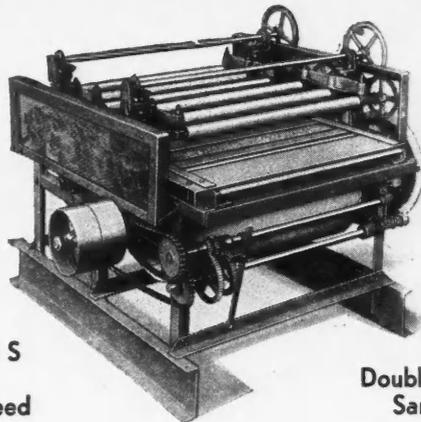
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**A MODEL FOR  
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MALL Portable Electric Handsaws are the tools you need for cutting rafters, sheathing, bridging and trim. They are powerful, safe, accurate saws that will help you do a better job and increase your profits on every concrete. Available in many models—2 3/8", 2 1/2", 3 13/16", and 4 1/2" straight cutting capacities. Each model fitted with swivel bases for cutting lumber at angles up to 45 degrees.

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**Don't guess about future earnings,—insure them with the Wallace No. 1 Radial Saw.**

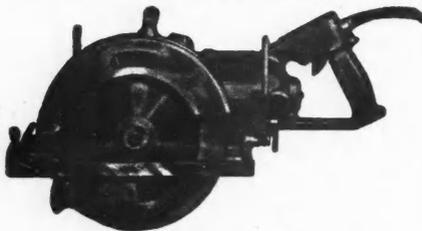
We'll gladly refer you to the experiences of other builders who are using this powerful and efficient machine,—for cutting heavy framing stock, making cabinet work, shelving, trim.

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Your Costs  
with a

**"POWER  
KING"  
SAW**



Safe—Compact—Easy to operate—Sturdy Construction—Powerful motor  
—Full Ball Bearing—Automatic Telescoping Guards—Adjustable for  
Bevel Cutting

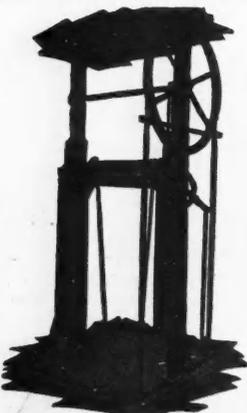
MADE IN 6 SIZES 6" TO 11"

Write for full information

**POWER KING TOOL CORP.**

DEPT. AB

WARSAW, INDIANA



## KIMBALL HAND POWER ELEVATORS

A complete line of efficient Hand Power and Electric Elevators built to suit any requirement.

Fitted for rapid installation in your building. These straight-line-drive machines are little giants of lifting power and are surprisingly nominal in costs.

### FREE Engineering Data

Give us your problems and let our engineers help you. Full descriptive literature on request.

**KIMBALL BROS. CO.**

915-989 Ninth Street Council Bluffs, Iowa

## Equipment Survey

(Continued from page 132)

Forty-five contractors have towers; 36 have concrete chuting equipment; 31 breakers; 33 compressors.

The list of excavating equipment included 22 power shovels; 4 trenchers; 19 drag buckets; 99 pumps; 24 tractors. One hundred ninety contractors stated that they own scaffold brackets; 43 gave the number owned, ranging from 8 to 300 per contractor, an average of about 40 per concern, totaling 1,714. Replies also listed 72 paint sprays.

### Concrete Mixers

Contractors were asked to list the number, makes, and capacities, of the concrete mixers they own and to indicate whether they rent mixers or use ready-mixed concrete. Returns in this very limited cross-section show that more than half of the contractors own one or more mixers. Some did not answer the question, but out of 442 who returned questionnaires, 240 (54%) reported that they own 403 mixers. Fifty contractors (11%) stated that they rent mixers; sometimes to supplement the equipment they own. Eighty-nine contractors (20%) reported that they use ready-mixed concrete; some only occasionally to supplement owned equipment.

### Motor Trucks Widely Used

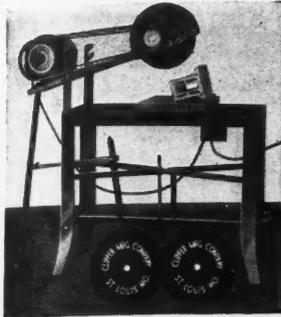
Contractors were asked to list the number, makes, and capacities of the motor trucks they own. The small, typical sample covered by this survey, indicates that half of the contractors own one or more trucks—approximately one and one-half trucks per owner. Although not all those who returned questionnaires answered this question, 215 (49%) of the total replies stated that they own 133 motor trucks. Ownership, when measured according to sizes of towns, was quite evenly divided. Capacities of 122 trucks were not stated. Of the remaining 209 trucks, 105 were described as "pick up," 1/2-, or 3/4-ton capacities; 23 are of 1-ton capacity; 66 are 1 1/2-ton; 9 are 2-ton; 2 are 2 1/2-ton; 4 are 3-ton; 2 are 5-ton capacities.

### Many Buying Additional Equipment

Answers to the question "What additional equipment do you expect to buy to take care of improved business?" were particularly interesting. One pessimist asked, "What improved business?" Replies showed that while some contractors have little business at the moment, the majority are reasonably active and many purchases of new equipment are planned. One contractor wrote, "We have 26 houses under construction and in process of starting, ranging from \$3,100 to \$8,000. This is the largest number we have had since the spring of 1936."

Many did not answer the question regarding purchases of new equipment, yet three out of ten listed equipment that they intend to buy. Returns from only 129 contractors listed a wide variety of equipment. Power-hand saws are the most popular item, mentioned by 40 contractors. Nine announced the intention of buying combination woodworkers; 26 plan to buy new motor trucks. Other equipment items include 15 band saws, 6 table saws, 3 lathes, 7 jointers, 3 planers, 4 belt sanders, 4 drill presses, 5 power drills, 2 sanders, 2 edgers, 6 hoists, 2 compressors, 2 power shovels, 5 pumps, 3 tractors, 1 chuting equipment, 2 compressors, 1 paint spray.

Considerable miscellaneous equipment not included in the questionnaire was listed.



# The Clipper MASONRY SAW

DESIGNED TO CUT  
GLAZED TILE . . . FACE BRICK . . . FIRE BRICK  
TERRA COTTA . . . PARTITION TILE . . . STONE  
CEMENT BLOCK . . . ROOFING TILE . . . ETC.

Saves Its Cost On Every Job  
**CLIPPER MASONRY SAW \$145**  
Complete with single phase  
110/220 volt AC 1/2 H.P. dust  
proof motor. F.O.B. St. Louis, Mo

**The CLIPPER MFG. CO.**  
4030 Manchester, Dept. M, St. Louis, Mo.

**GENUINE CLIPPER BLADES**  
12x1/2-1 inch bore Clippers F.O.B.  
St. Louis, Mo. Packed (6) and (12)  
in a box Each

## FREE TRIAL ON YOUR OWN JOB!



### For 40 Years Contractors Have Made **BIG MONEY** With The Improved *SCHLUETER*

The heavy-duty high-speed sander that roughs out both old and new floors, without ridge cutting or chatter marking, in record time with minimum effort. Its perfectly balanced sanding drum, with soft, resilient rubber covered roller, conforms to all floor irregularities without the manipulation of levers by the operator, leaving a ballroom finish that will advertise your work.

#### OTHER IMPORTANT FEATURES

- NO DIRT** ★ Surfaces up to quarter-round.
- NO DUST** ★ Vacuum dust collector.
- NO MUSS** ★ Full V-Belt drive.
- ★ Voltage change switch for 110 or 220 volt.
- ★ Ball-bearing roller.

Write TODAY for details of our 5-Day FREE Trial Offer.



**LINCOLN-SCHLUETER**  
FLOOR-MACHINERY CO. INC.  
222 W. Grand Ave.  
Chicago, Ill.

★ **GUARANTEED**  
FOR 5 YEARS

## ROOF FRAMING TABLES

### For Steel Square and Protractor

By Ira S. Griffith



These tables provide in the most condensed form the necessary information for framing the various members of square cornered and octagonal roofs, both in degrees and by means of the steel square. The tables are read through slits in the celluloid cover and the tabular card is operated in a manner similar to using the slide rule. A booklet gives directions for using the tables and furnishes example problems for laying out the miter cut of a plate, and common, hip, valley and jack rafters, with either steel square or protractor. With these tables you can save the time necessary to figure layouts and cuts.

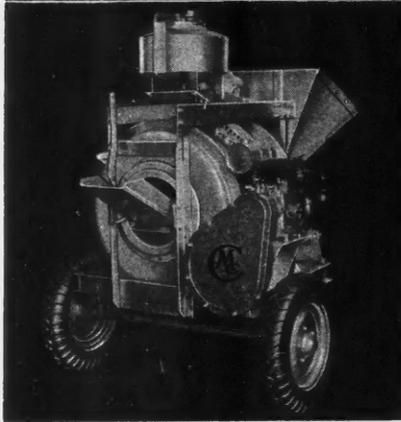
4 1/2 x 5 inches, with 8-page booklet, in leather slip case, \$1.00.

Money Back if Not Satisfactory

Book Department

**American Builder and Building Age**  
30 Church Street, New York

# ANOTHER PROFIT MAKER



## LOOK!

Trim End Discharge design for easier handling and greater convenience.

Real roadability and maneuverability.

Balloon Pneumatic Tires—Timken Bearings—Gantilever Springs, Disappearing Tongue.

Biggest production with low front, high back gated batch hopper. Up to 40 yards a day.

CMC proved double quick mix and remix action. Beats all competition in design—performance—high production.

And the PRICE will surprise you.

## The NEW C.M.C. 3 1/2 End Discharger

It hits the "spot" with contractors and builders everywhere. Big Mixer efficiency with small Mixer speed and handling ease. The price makes it today's best buy in the 3 1/2s Mixer field. Write.

Whatever you need in a Mixer, we've got it—also Dual Prime Pumps, Hoists, Saw Rigs, Pneumatic Tired Carts and Barrows.

### CONSTRUCTION MACHINERY COMPANY

WATERLOO, IOWA

#### YOU CAN SAVE TIME

in making layouts and in giving lines and grades—consequently

#### YOU CAN SAVE MONEY

by reducing labor costs, and

#### YOU CAN OFFER GREATER VALUES

to your Customers or Clients on every job by using a

### WARREN-KNIGHT TRANSIT-LEVEL

Made for the Contractor who knows that he can work more efficiently with up to date equipment. This instrument gives you what you have always wanted in a low priced instrument—high power telescope—close focus—vertical arc with clamp and tangent—sensitive level—compass—plate level—projected circle—vernier reading to one minute—extra large shift—sturdy construction—low maintenance costs.

10 Day Free Trial—No obligation to purchase. For complete details write for Bulletin F-310. Liberal allowance for your old instrument.



Patented  
Transit-Level  
No. 38-b  
\$150.00

Made also without compass and arc at lower prices.

### WARREN-KNIGHT CO

136 N. 12th St. PHILADELPHIA, PA.

#### IT HAS NO EQUAL SUPERIOR PERFORMANCE UNFAILING DEPENDABILITY

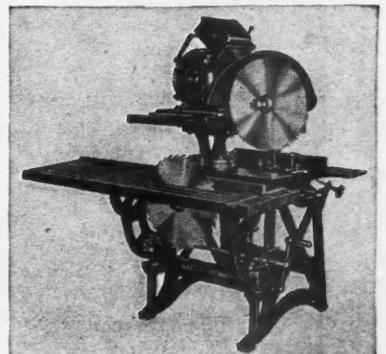
These are advantages that give the Master outstanding preference amongst Lumber Yards and Building Contractors. You will find it the most SATISFACTORY UNIVERSAL WOOD-WORKER. Stood the test for 20 years.

Powerful—Sturdy—Portable  
This "Handy Man" will take care of your jobs—quickly—economically and safely.

**The Master Woodworker Manufacturing Co.**

Congress and Brush, Detroit, Mich.

Let MASTER make you GREATER profits.



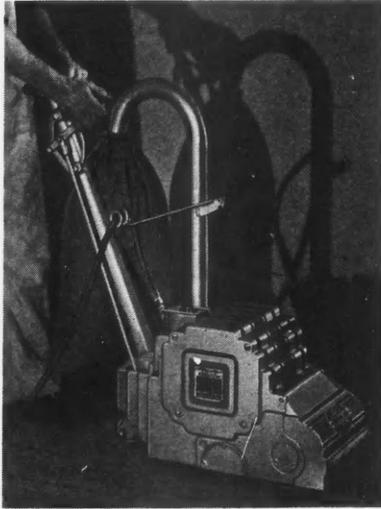
Overhead Cross cut. Underslung rig. 5 SIZES—Gasoline or Motor Drive.

## New Contractors' Equipment Gives Increased Efficiency

CONTRIBUTING their share to the progress which has made more home for the money possible today through the use of better tools and equipment, builders are able to offer lower construction cost, better quality, workmanship and at the same time show greater profits themselves. For instance through the use of a Floor Sander such as the "Little American" manufactured by The American Floor Surfacing Machine Co., Toledo, Ohio, the contractor can offer much finer floors at a lower cost.

This efficient time and money-saving tool is constructed almost entirely of cast aluminum, and embodies such features as extra large vacuum fan, full width paper clarap, handy dust pan, quiet double "V" belt drive, drum control lever and long-life motor.

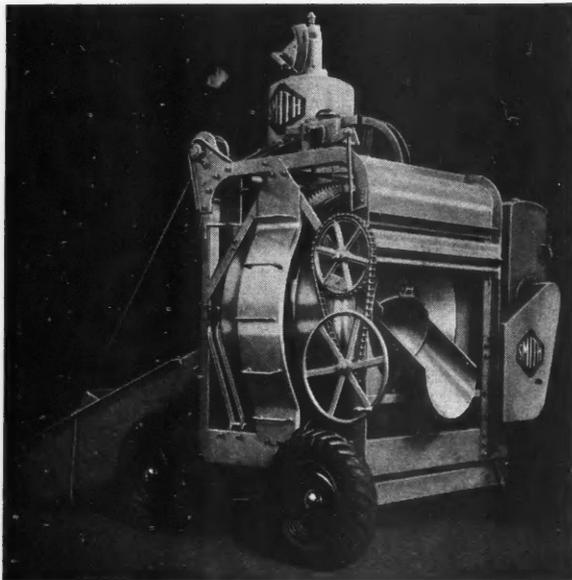
COMPARING this efficient modern American floor sander at right to those in use a few years ago is like comparing today's home with the house of 1926.



## Mixer Speeds Up Concrete Work

THE T. L. Smith Co., Milwaukee, Wis., has announced a new 14-S non-tilt mixer in four wheel end or side discharge models which incorporates many refinements that speed up all three phases of the batch cycle—loading, mixing and discharging. It has an "End-to-Center" mixing action. Ten full-width buckets continually work the batch from the ends to the center. The drum is unusually narrow with an extra large diameter and bigger drum openings. The complete machine is of sturdy all steel construction, compact and light weight.

Features include: Single center gear ring and roller tracks, drum rollers turning on dustproof ball bearings, enclosed gear reduction, multiple "V" belt drive, outside band clutch and skip brake, oversize streamline skip equipped with automatic skip vibrator, accurate syphon-type water tank, auto type steering, spring mounted axles, anti-friction bearings throughout.

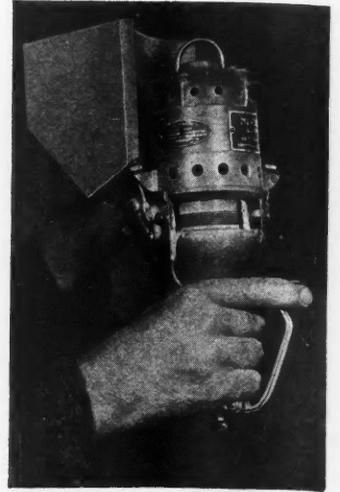


NEW Smith 14-S non-tilt mixer

## Electric Painter Is Five Times Faster

A NEWLY improved electric painting machine that has proved to be five times faster than a brush is being marketed by Jas. H. Matthews & Co., Pittsburgh, Pa. It enables any painter to paint 1500 square feet of finished surface per hour and does a two-coated stipple job in one operation. Paint is thrown out by centrifugal force in a perfectly even fan shaped spray. Paint stream can be adjusted to widths from less than 1 inch up to 18 inches; it will paint directly up to door frames, picture mouldings and baseboards with great accuracy without spattering or paint fog. A compact self-contained unit, 1/10 horsepower motor, gun and three pint paint can, no compressor or other accessory equipment. It plugs into any 110 volt AC or DC outlet, and uses no more current than a vacuum cleaner. The machine weighs 5½ pounds and can be conveniently carried in a small bag.

IMPROVED electric painting machine held in operating position.

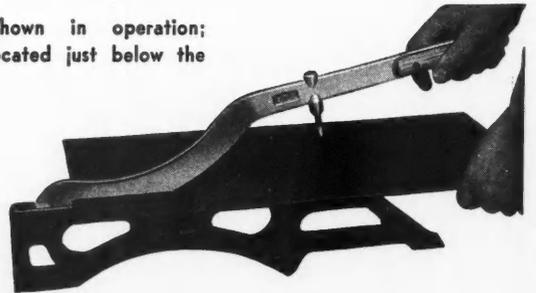


## Cutters and Punches Simplify Shingling

SLATE and asbestos cutters are being manufactured by the Parsons Bros. Slate Co., Pen Argyl, Pa., that greatly increase the efficiency of mechanics applying slate and asbestos roofing and siding material. This device is light in weight and extremely simple in operation. Material is quickly and easily cut to conform to all angles of the valley, hips, starters, end row pieces, etc.

The contour of the hollow-ground edges on the cutting blade makes two simultaneous cuts, leaving the severed piece intact and usable. This blade is drop-forged of special steel, heat-treated and electro-plated to resist rust and insure long life.

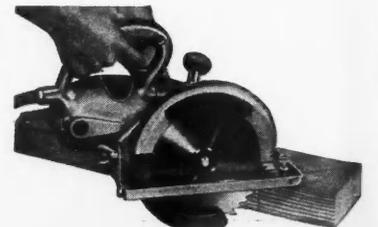
CUTTER shown in operation; punch is located just below the handle.



## Electric Handsaw Is Real Cost Cutter

FRED W. WAPPAT, 7323 Penn Ave., Pittsburgh, has developed a new portable electric handsaw having several new construction features. The 8-inch blade allows a maximum cutting capacity of 2½ inches. It will bevel cut 2¼ inch lumber at a 45 degree angle simplifying the cutting of jack rafters, etc. Weighing but 19 pounds, it is well balanced for easy one-hand operation and can be operated either vertically or horizontally. It is also possible to invert the saw, set it on a stand and use it as a table saw for cutting small pieces. It is claimed to cut a 2 x 10 inch in two seconds, and can be equipped with abrasive wheels for cutting other materials than lumber.

NEW electric handsaw has special safety guard and switch.





## LOCAL INDUSTRY SERVICE

*Use this Key to win local home  
building teamwork*

### Low Costs Result from Co-operation

"Here's a good looking little house that interests me; how much will it cost to build?" is the regular first question from a prospective home building client. And on the answer hangs the whole matter of home building volume for building industry men and satisfaction-giving service to the general public. The answer to the question, "How much will this house cost?" cannot be given for any particular community without knowing what the building industry conditions are in that community. There is often a difference of 25 to 30 per cent in the actual cost of the same house built by different contractors and mechanics.

In those communities where building industry teamwork has been perfected, low costs and efficient production are the rule. On the other hand, some communities suffer from a lack of skilled workmen and experienced management, and in those communities home building is indeed a trying and a costly experience.

A house is assembled and manufactured at the building site and a considerable variety of service goes into its production. Planning skill, financing skill, the proper warehousing of building materials and their delivery to the job on time and in good condition, skilled workmen of the several trades required, and over all the experienced management that understands how to co-ordinate all these factors and direct them so that both quality and economy result for the benefit of the home owner—all these are "in the picture" and some knowledge of them in any given community must be had before the question can be answered, "How much will this house cost?"

The two most important factors in local building are unquestionably the retail building material dealer and the contractor. They dominate the situation; and they have it within their power today to build good houses at a low price. Several general types of industry organization are encountered in different parts of the country, each aiming to accomplish this necessary teamwork to handle the complex home building operations efficiently and with guaranteed satisfaction to the consuming public.

One of these systems is a rather loose and informal grouping of responsible contractors around a lumber and building material dealer. Through friendly understanding and informal co-operation these contractors and supply dealers work together to promote local home building and to assure the home seeking public the service

desired. Arrangements for financing are set up by local banks and building and loan associations and the sub-contract men to handle the plumbing, heating and electric work are brought in to complete the service. This type of informal organization is the one most frequently encountered and is entirely satisfactory provided the contractors have the necessary skill and experience and the dealers the proper amount of enterprise and sales initiative to acquaint the property owners and prospective home builders with the service that is offered.

A good example of this sort of arrangement is found at Neenah, Wis., where the Lieber Lumber and Millwork Company recently ran a series of seven full-page advertisements in which under the company name were listed the names and telephone numbers of nine contractors, three loaning institutions, a plumbing and heating man, a painter and decorator, and a wiring and electrical fixture establishment.

Another type of local industry organization goes a step further and organizes the several home planning and financing and building factors into an incorporated bureau. A current example of this is the Madison (Wis.) Small House Bureau which the J. J. Fitzpatrick Lumber Company has been instrumental in organizing. In this bureau the Madison lumber and building material dealers, architects, contractors, realtors and financial institutions have co-ordinated their services to stimulate private construction. It is expected that as soon as this bureau is functioning, it will be possible for a prospect to consult with only one individual to get the combined service of the group. A portfolio of model plans has been prepared and the cost of each house determined in advance so that the prospect can select a plan to fit his income and pay for it on a monthly basis, like rent, including all fees, interest charges and amortization.

Home building being a strictly local business, efficiency, quality and costs necessarily hinge on these local industry factors. People today are accustomed to buying packaged goods and the packaged home is what they want. Those communities that are organized to produce and deliver a modern packaged home are enjoying a substantial volume of home building at the present time. Leadership is needed in other communities to perfect this type of inter-industry teamwork and the results will certainly repay the effort required for such leadership.

# BUILDERS and CONTRACTORS:

If you are not satisfied with your annual income, you'll be interested in this plan!

**A**LL OF US REALIZE that the local building industry, in every community in this country, is not getting its share of the consumer's dollar. Although some contractors and dealers are making a satisfactory profit, there is convincing proof that thousands upon thousands of dollars worth of potential building and remodeling work is never realized upon, for the simple reason that *the local building industry has no consumer selling organization!*

### Johns-Manville Offers a Plan

*This lack of consumer selling has been to a great extent the cause for such a disastrous depression in our industry and for the failure of so many dealers and contractors to make profits today. Such a condition naturally affects the profits of everyone in the industry. Johns-Manville, realizing that someone should take the lead, has spent five years and thousands of dollars in creating and perfecting an organized consumer-selling plan for the local building industry. This plan, known as the National Housing Guild, is now operating successfully in hundreds of towns and cities.*

### Effective Selling Help for You

*Under this plan the building material dealer is no longer merely a source of supply. He has organized his business to assist his contractors in doing the consumer-selling job. Today hundreds of J-M dealers, members of the National Housing Guild, are co-operating with their contractors in creating desire on the part of more people to build or remodel; and to develop the selling tools, find prospects and co-operate with the contractors in getting the selling job done.*

*Johns-Manville has backed this effort to the limit of its resources, supplying prospect-finding promotional material and, as a result of its national advertising, pouring thousands and thousands of prospects into the hands of the local industry.*

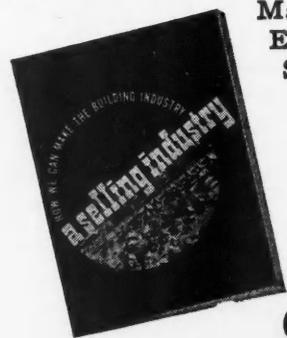
### This Book Shows the Way to Increased Business

*Realizing the vital importance of a complete understanding of this development on the part of contractors and dealers, realtors, architects and lending institutions, Johns-Manville has prepared a book which*

*tells the complete story. It is entitled "How We Can Make The Building Industry A Selling Industry." This book tells how the Guild Plan enables you to put more of your time to productive use; how the Guild protects your interest and individuality while bringing you extra business; how it benefits the consumer by providing a complete building service from one local headquarters.*

*These and many other timely questions are answered in this constructive and interesting discussion of your most important problems. Send the coupon now for your copy, and find out how this successful selling plan can create new and profitable business for you.*

Johns-Manville, 22  
East 40th  
Street, N.Y.



**MAIL  
COUPON**

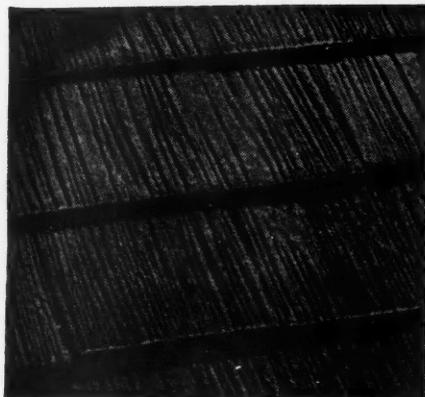


The **NATIONAL HOUSING GUILD** is Sponsored

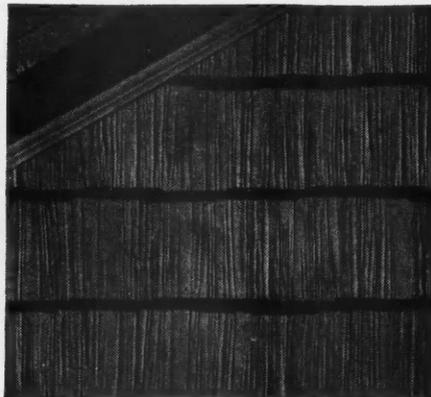
# THESE STATEMENTS ARE TYPICAL OF WHAT PRACTICAL CONTRACTORS EVERYWHERE HAVE EXPERIENCED IN WORKING WITH THE NATIONAL HOUSING GUILD PLAN

- **MILLARD MATTHIAS, NEW HAVEN, CONN.:** "I've made a profit on every Guild job I've done. And that's the way every contractor who does good work should operate."
- **MARIO QUARELLO, NEW HAVEN, CONN.:** "Why shouldn't I like the Guild Plan? It dumps in my lap many jobs I couldn't get otherwise. I've been busy all year. With the Guild salesmen doing the selling, I don't have to worry about that and use up time which should be put into building."
- **C. W. H. WEBBER OF HOLBROOK, MASS.:** "My experience with the Guild System as sponsored by Johns-Manville has been very profitable, especially in regard to direct contact of prospects by a salesman using the Guild method of selling. From my experience I believe that Johns-Manville in the Guild has started a movement that should be supported by all contractors who have pride in their profession."
- **C. M. SPAYTH, OF C. M. SPAYTH & SONS, SPRINGFIELD, OHIO:** "Our experience as Guild Contractor Members, since we were franchised by the Springfield Housing Guild of The Clark County Lumber Company in March 1936, has been 100% satisfactory."

## THESE PRODUCTS—BACKED BY A NAME KNOWN TO MILLIONS—MAKE JOBS EASIER TO SELL . . . BUILD PROFITS



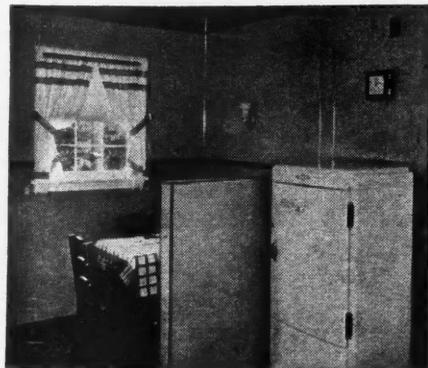
**J-M ASBESTOS ROOFING SHINGLES**, fireproof and durable, last as long as the house. They will not split, rot or decay . . . are a definite saving to the home owner.



**J-M ASBESTOS SIDING SHINGLES** make any home look better. Fireproof, permanent as stone, they require no painting to preserve them—reduce maintenance to a minimum.



**J-M ROCK WOOL INSULATION**, now offered at lower prices than ever before, makes any house a better value. This extra protection is soon paid for by fuel savings.



**J-M FLEXBOARD**, the asbestos-cement sheet material that is tough, durable and fireproof. Ideal for kitchens, game rooms, etc. Can be used in almost any building job from a shed to a baseball park.



**J-M INSULATING BOARD**, with new Glaze-Coat Finish, a complete decorative line which permits unlimited wall and ceiling treatments. Also Weathertite Sheathing, Insulating Lath, etc.

### Other J-M Products that are Profit Makers

- J-M Asphalt Shingles, J-M Roll Roofings
- J-M Asbestos Clapboards
- J-M Roof Coatings, Putties, Waterproofings, etc.
- J-M Asbestos Wainscoting
- J-M Hardboard Products
- J-M Steeltex and Welded-Wire Reinforcements
- J-M Building Papers and Deadening Felts

### MAIL THIS COUPON NOW!

JOHNS-MANVILLE,  
22 E. 40th St., New York, N. Y.  
Please send me your Booklet, "HOW WE CAN MAKE THE BUILDING INDUSTRY A SELLING INDUSTRY."

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ AB-10-38

by **JOHNS-MANVILLE** 



STUART FONDE (left), partner, and C. A. Riley, designer, of H. C. Fonde & Son, developers of Forest Court. At top of page: office building of H. C. Fonde & Son, and (right) affiliated firm, Builders Supply Co.; a sign was yet to be put up when photographed.

## How Fonde of Knoxville Sells High Value Homes

Co-ordinated Builder-Dealer Arrangement in Tennessee Is Effective in Delivering More Home for the Money to Satisfied Customers

*(THIS story gives the merchandising particulars of H. C. Fonde & Son, whose operations are described under Key No. 1.)*

CONTINUING the story of H. C. Fonde & Son's successful "high value at low cost" home project near Knoxville, Tenn., in this portion of the story points will be considered which have led to home owner satisfaction through dealer-builder responsibility and effectiveness. It will deal with local home building teamwork and methods of building operations which mean sales through customer satisfaction; planning, designing and construction were covered in the article under Key No. 1.

Along these lines Mr. Fonde believes that to comply with the growing demand for more home for the money, everything possible must be done to bring about a closer integration of all factors in the industry. To him the logical solution seems to be some degree of affiliation between builder and supply dealer. He states, "The close co-operation of our Builders Supply Company and H. C. Fonde & Son contributed largely to the success of Forest Court. Although the supply company sells to the construction department as to any other company, and is an entirely separate business, the operations of the two are co-ordinated for maximum efficiency. The construction department, knowing ahead what its demands are going to be, notifies the supply department and the material, when needed, is ready for delivery. Much overhead is saved by their joint operation. Delivery costs are cut by one-half due to the fact that numerous items can be sent to several jobs on each delivery. One especially great advantage is that the shop can be kept running steadily getting out frames and finish which will be used in future houses. This eliminates laying off and men stalling around on their jobs when work is slack."

Of course, this is only one way in which increased efficiency means better values. The Fonde organization has done a thorough job from start to finish on their Forest Court project. In subdividing the plot, for instance, much thought was given to the layout of the ground and to the attractions that could be worked into them. A court was made in the center of the plot pro-



MAIL boxes such as this one are installed on all vacant sites of H. C. Fonde & Son's Forest Court addition. The cleverly prepared sign tells its own sales story.

viding tennis courts and fully equipped children's playground. All houses were built to face this court, which has roads of gravel and asphalt (see subdividing plan below).

The individual yards are graded and landscaped appropriately, with driveway and all recreational facilities included in the price of the house. Natural slate stoops and walks were installed to add a note of beauty and permanence. This slate, a new product quarried in Eastern Tennessee, has a range of beautiful dark green and purple hues. The fireplace facings are of this same slate, polished to display its beautiful graining.

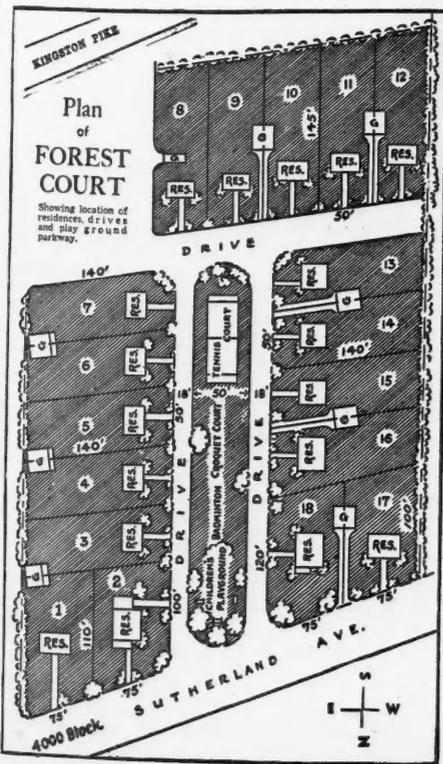
Fonde was not satisfied merely to deliver a house which was livable from the standpoint of a practical plan and attractive exterior. He spent much time in selecting convenience equipment which would mean lasting customer satisfaction. All homes in Forest Court were designed to be electrically equipped; where specified, water heaters and stokers are installed. Mr. Fonde states, "There is a decided trend toward automatic heating plants. All homes since the first group have winter air conditioning units or forced hot water systems with stokers. The combination unit for hot water heating was selected and is proving entirely satisfactory. When it is shown a prospect that a

stoker-fired hot water system installed for year 'round use provides an incinerator, year 'round hot water and automatic heat and that it costs so little more in the purchase price and is economical to operate, it is easy to sell this type of heating system. They especially appeal to home owners beyond the area of garbage collection and gas mains.

"Four or five years ago insulation and weatherstripping were considered luxuries; many a competent builder allowed his customer to convince him that he could not afford to insulate and weatherstrip the home he was building. The builder did not have the facts concerning temperature differences and heat losses, and he had not figured the economics involved. It is now an easy matter to convince a home owner that insulation is as good an investment as any other part of his home—it is one item the home owner pays for if he leaves it out. From our study of climatic conditions in this locality, we decided to use several types of insulation. In order to keep the cost of the homes to a minimum, we endeavored where possible to make the insulating material do double duty. In the exterior walls of a number of the houses we used Insulite sheathing. With very little additional cost per house, foil-back gypsum board was (Continued to page 144)

SEE PAGES 22 AND 23 FOR EXTERIOR VIEWS, PLANS AND FURTHER DETAILS ON THESE H. C. FONDE HOUSES

BELOW: Plot layout of Forest Court showing recreational facilities. Right: Newspaper advertisement which dominated a full page in the Knoxville News-Sentinel (actual size 12x16).



As little as **\$22.00\*** PER MONTH

WILL BUY YOUR DREAM HOME IN Beautiful **FOREST COURT**

F. H. A. Approved and Inspected  
Financed on F. H. A. Insured Mortgage

INVESTIGATE BEFORE YOU INVEST

**OPEN HOUSE TODAY 2:00 TO 6:30 P. M.**

Drive Out and See These Homes—You Will Want to Own One!

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NEAR BUS LINE AND SCHOOLS

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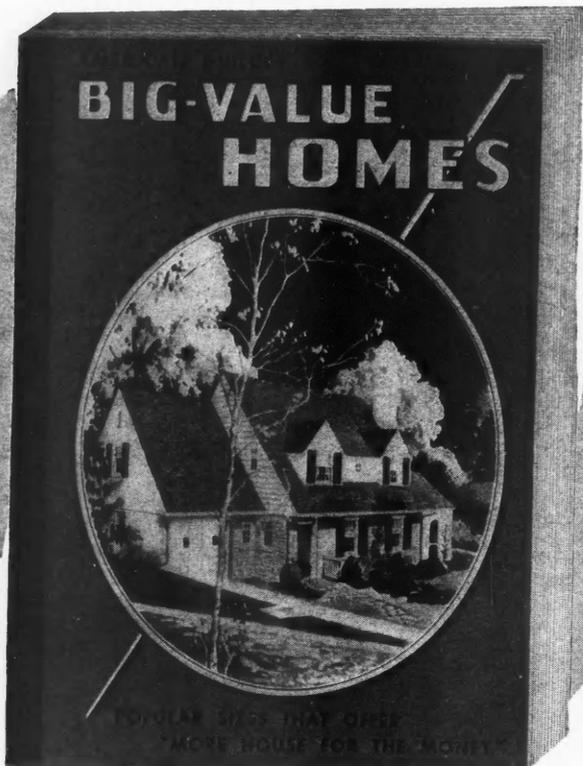
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(Continued from preceding page)



Chapter Four provides a Key to planning, building and equipping "LARGER HOMES WITH ADDED VALUE"

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among other outstanding home designs selected from North, South, East and West: Shingled Home from the Northwest, making effective use of red cedar shingles and wood paneling for interiors. . . . California-Monterey Style Hillside House, designed to take full advantage of the terrain and of the view offered on all sides. . . . California Farmhouse style, with views of the noble living room and the cozy breakfast room. . . . Three Cheel houses showing 50% better values than 1926. . . . Among the Pines at Orlando, Florida, with lots of rustic charm in its rambling layout. . . . The Hardwood Model Home at Memphis, with view of the kitchen designed to save time and to make the time spent in it a joy and not a burden. . . . Country Homestead with City Conveniences, with three pages of plans and specifications. . . . French Norman at Moderate Cost. . . . Attractive Georgian Home on Wooded Site. . . . Mott Bros.' "Prescott" and "Dorset" Homes with 33% greater value than in 1926. . . . New Jersey Colonial Home of Simple Charm. . . . Five Exterior Style Variations of Harmon's "Chatham" Plan. . . . An Old-Brick Home in Old Virginia. . . . Stately Colonial with 2-story portico. . . . Wichita Home Designed for Entertaining . . .



Chapter Five holds the Key to the planning and building of "MODERNE HOMES FOR ECONOMY"

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Chapter Six can be used as a Key to open up the immense possibilities for "SAVINGS IN GROUP HOME BUILDING AND APARTMENT HOUSES"

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## How Fonde of Knoxville Sells High Value Homes

(Continued from page 141)

also used, thereby giving two types of insulation and the maximum insulation efficiency was obtained. The occupants have all expressed their pleasure at the comfort of their homes."

Sales methods have been as unusual as other features of the project. One of these novel ideas is illustrated on page 140; it consists of putting up a mail box on each vacant lot and pointing out that for a small monthly payment the prospect can have his name on it when his home is located there. FHA financing is featured in the advertising, as seen in one of their newspaper ads, page 141, which shows the wooded site of the project. Very definite restrictions covering minimum building cost, future improvements, use of premises, and race, give added assurance to prospective buyers.

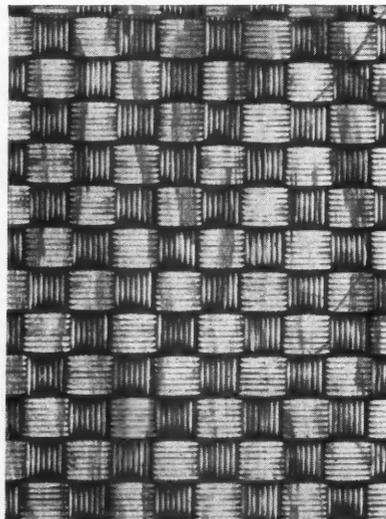
A second group of houses, most of which were sold before starting, are now under way. These will combine added features, experience showing them to possess further salability with today's buying public. The first six houses, however, met with approval as they were sold within three weeks after completion. Commenting on this, Mr. Stuart Fonde states, "In spite of the bad weather encountered, all estimates were remarkably accurate and all the purchasers were more than pleased with their houses.

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THE illustration at the left shows one of the patterns available in embossed Westboard plywood panels. This pattern is reproduced at slightly larger than half actual size.

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**244—Tracy Cabinet Sinks**—Two very attractive and informative booklets, one entitled, "PermaSheen Sinks by Tracy," the other, "SilviSheen, a Mark of Distinction on Tracy Sinks and Tops," are being distributed to builders and dealers. They show numerous reproductions of actual cabinet and sink installations. At this particular time these booklets make very desirable reading for the building trade who are taking advantage of the irresistible movement toward the efficient and modernized kitchens equipped with built-in kitchen cabinetry and custom-made cabinet sinks. The Tracy line of linoleum and stainless sink and cabinet tops is fully presented in these two new catalogs.—TRACY MFG. CO., 3125 Preble Ave. N.S., Pittsburgh, Pa.

**245—G-E Kitchen Planning**—"Planning a General Electric Kitchen" is a new 28-page brochure carrying a wealth of practical suggestions on the layout, design and equipment of the thoroughly modern kitchen. Some of the important subjects discussed are: The importance of an efficient kitchen, basic kitchen layouts, determining kitchen size, electrical equipment, accessories, wiring, etc. Dimensioned drawings make this a very practical and helpful book for those planning modern homes.—GENERAL ELECTRIC CO., New York City.

**246—Serv-U-Well Portable Built-In Kitchen Units**—"Modern Kitchens for Old Homes and New" is one of the new brochures illustrating the beauty and economy of modern kitchens equipped with factory-finished sectional kitchen units. Detail drawings, photographs and detailed instructions show how to plan or to measure any kitchen to utilize these ingenious ready-built cases. The well known Tracy sink and counter tops are a part of this service.—THE I-XL FURNITURE CO., Inc., Goshen, Ind.

**247—Disappearing Attic Stairs**—"Floor Space in Dollars and Cents" is a little circular that will start you thinking along lines of utilizing attic space reached by the convenient Marco folding stairways. Several models are illustrated and priced.—THE MARSCHKE CO., 551 University Ave., St. Paul, Minn.

**248—Residence Elevators**—Information regarding the Sedgwick Lectro-Lift, the new automatic residence elevator at a low price, is contained in a new 4-page folder showing designs, dimensions and method of installation.—SEDGWICK MACHINE WORKS, Inc., 150 W. 15th St., New York City.

**249—Huttig Windows and Doors**—The Red-E-Fit rot-proof window is detailed and described in a new 4-page data sheet, "I Want That Window." A companion piece, an 8-page folder, illustrates the Huttig doors which are moisture-proof, made with genuine waterproof glue. Several popular styles are illustrated.—HUTTIG MFG. CO., Muscatine, Ia.

**250—Uni-Glide Windows**—"Introducing the New Rock Island Self-Adjusting Weatherstripped Unit for All Types of Buildings," an impressive 4-page data sheet in two colors makes clear the revolutionary improvement in this product of an old established millwork house. Uni-Glide, the self-adjusting metal weatherstrips which come with the frame and sash all factory-assembled and pre-fitted, assure added value. Large size details of this novel construction are included.—ROCK ISLAND SASH AND DOOR WORKS, (Div. of Weyerhaeuser), Rock Island, Ill.

**251—Super-Harbord, the Outdoor Plywood**—Full information regarding this new type of plywood which is guaranteed against weather, opening new methods for building summer cabins and cottages, besides truck bodies, trailers, boats, greenhouses, etc.—HARBOR PLYWOOD CORP., Hoquiam, Wash.

**252—"Weldbord," The New Low-Cost, All-Hardwood, Resin-Bonded Plywood**—Full information regarding this new development in hardwood plywood, an outstanding addition to the very complete and varied line of plywood produced and distributed by the U.S. Plywood Corp., is now available. Other interesting handbooks and catalogs presenting these modern materials are: "The Plywood Catalog," a handbook of 24 pages, and "Plywood," a 48-page illustrated treatise.—UNITED STATES PLYWOOD CORP., 616 W. 46th St., New York City.

**253—"Marsh Mouldings"**—An 8-page brochure in color illustrating Presdwood mouldings, Marstag mouldings, extruded white alloy mouldings, snap-on stainless steel mouldings, kalamein and rolled chromium mouldings, and Marsh wonder walls.—MARSH WALL PRODUCTS, Inc., Dover, O.

**254—"Window Sills and Copings of Alcoa Aluminum"**—A 30-page architectural handbook of impressive beauty illustrating many fine buildings and detailing completely their construction as to aluminum copings and sills, of which many types and shapes are now produced.—ALUMINUM CO. OF AMERICA, Pittsburgh, Pa.

**255—"Cold-Weather Concreting"**—A very timely and helpful booklet of 16 pages recording the experiences of engineers and contractors in handling cold weather concrete. Detailed procedure for safe and economical construction is fully explained. The importance of Incor 24-hour cement for such work is made clear.—LONE STAR CEMENT CORP., New York City.

**256—Parsons Bros. Roofing Slate**—Complete information regarding the lines of roofing slate from the famous Blue-Grey Slate District at Pen Argyl, Pa., is now available upon request from—PARSONS BROS. SLATE CO., Pen Argyl, Pa.

**257—Red Star Multiplex Woodworker**—Complete information regarding this ingenious labor-saving woodworker which makes "Two Cuts or Two Million at a Profit" is contained in a new 8-page brochure which illustrates the machine very completely in its several details and work operations, showing clearly just how the various attachments operate to do the work commonly required of such a machine in the hands of a retail lumber dealer or an up-to-date house building contractor. Two models of the Multiplex are included.—RED STAR PRODUCTS, Inc., 12910 Taft Ave., Cleveland, O.

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

(Oct., 1938)

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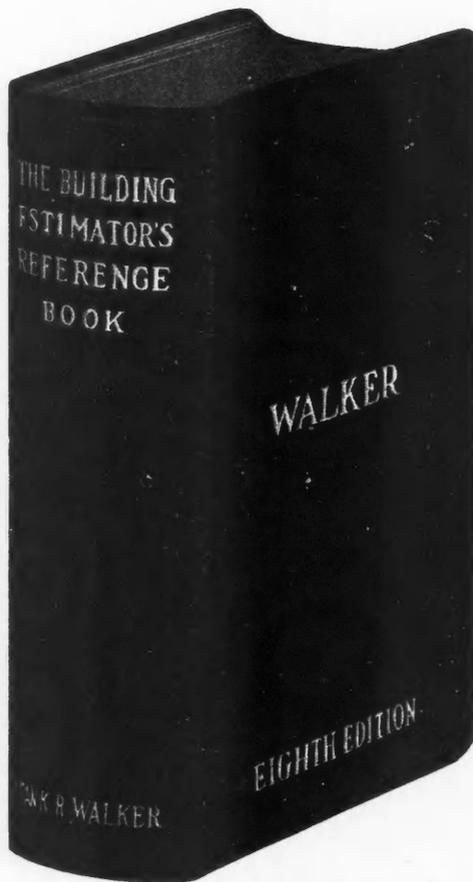
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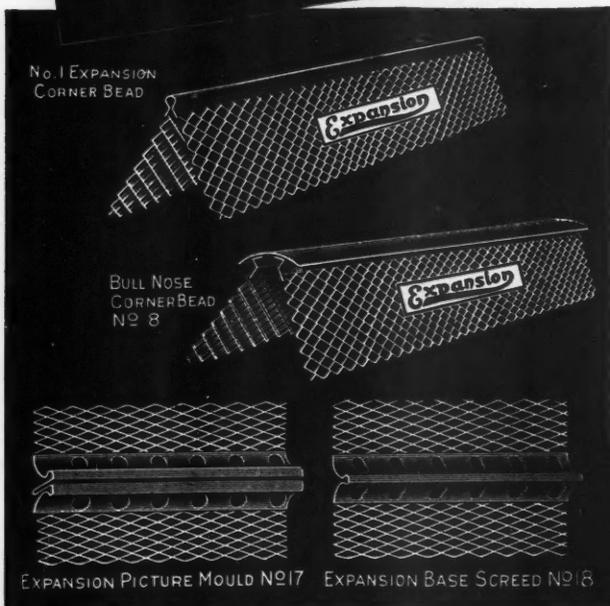
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**NOTICE TO ADVERTISERS**—Forms for the November number of the American Builder and Building Age will close promptly on October 15. New copy, changes, order for omissions of advertisements must reach our business office, 105 West Adams St., Chicago, not later than the above date. If new copy is not received by the 20th of the month preceding date of publication the publishers reserve the right to repeat last advertisement on all unexpired contracts. **AMERICAN BUILDER AND BUILDING AGE.**



Safeguard your customer's investment and keep his good will — be sure your plaster surfaces will stand up with **MILCOR** Expansion Products

Unit of the **MILCOR** System of Fireproof Construction



When you figure on a contract, or build to sell—you have the advantage with Milcor's complete line of Expansion Corner Bead, Picture Mould, Base Screed. Your customer is assured of perfect protection for plaster surfaces.

The plaster job stays new—no unsightly cracks, chipping or cleavage — no patching or repairs after a short time — for every square inch of the vulnerable points is reinforced against abuse with wings of expanded metal.

You get definite economy of labor on the job, due to the simplicity of erection—these products can be wired, nailed, stapled or spotted as best adapted to the particular type of wall construction — without the use of clips.

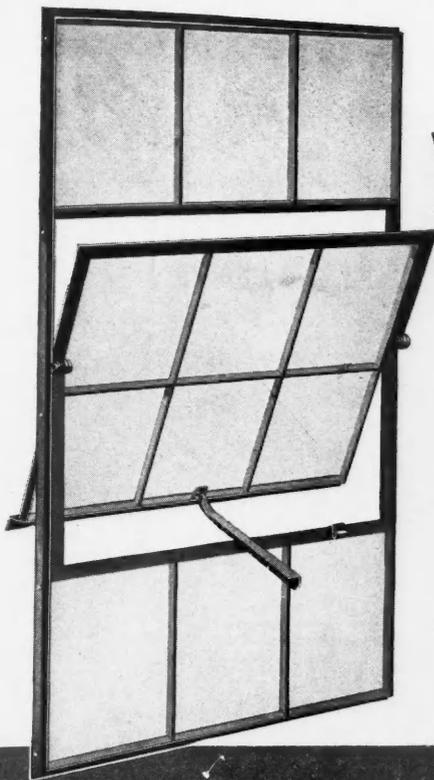
There is a Milcor Expansion Product for every structural condition in small homes or large projects. You know, from the record of thousands of installations, that Milcor Construction stands up — assuring permanent beauty in plaster interiors. Write for the Milcor Manual, today.

Patent Nos. 1,419,232, 1,482,600, 1,678,813

F-36A

**MILCOR STEEL COMPANY**

MILWAUKEE, WISCONSIN CANTON, OHIO  
 Chicago, Ill. Kansas City, Mo. La Crosse, Wis.  
 Atlanta, Ga. New York, N. Y.



Truscon Pivoted Windows are permanent, fire-safe, never stick or warp and admit maximum light. Made of heavy, hot-rolled rust-resisting steel sections.



*Quick over-night deliveries* of Truscon Pivoted Windows are made possible by Truscon's 24 strategically located warehouses stocked with 21 types and a wide range of sizes. All types are available in 12"x 18" and 14"x 20" glass sizes. *Quick cooperation* from the nearest of Truscon's 57

Sales-Engineering offices in the event you require recommendations regarding details of specifications. Also available in Truscon warehouses are complete stocks of steel casement windows and doors, metal lath and related accessories, basement sash, coal chutes and many other products.

# TRUSCON STEEL CO

YOUNGSTOWN, OHIO

57 SALES-ENGINEERING OFFICES . . . 24 WAREHOUSES

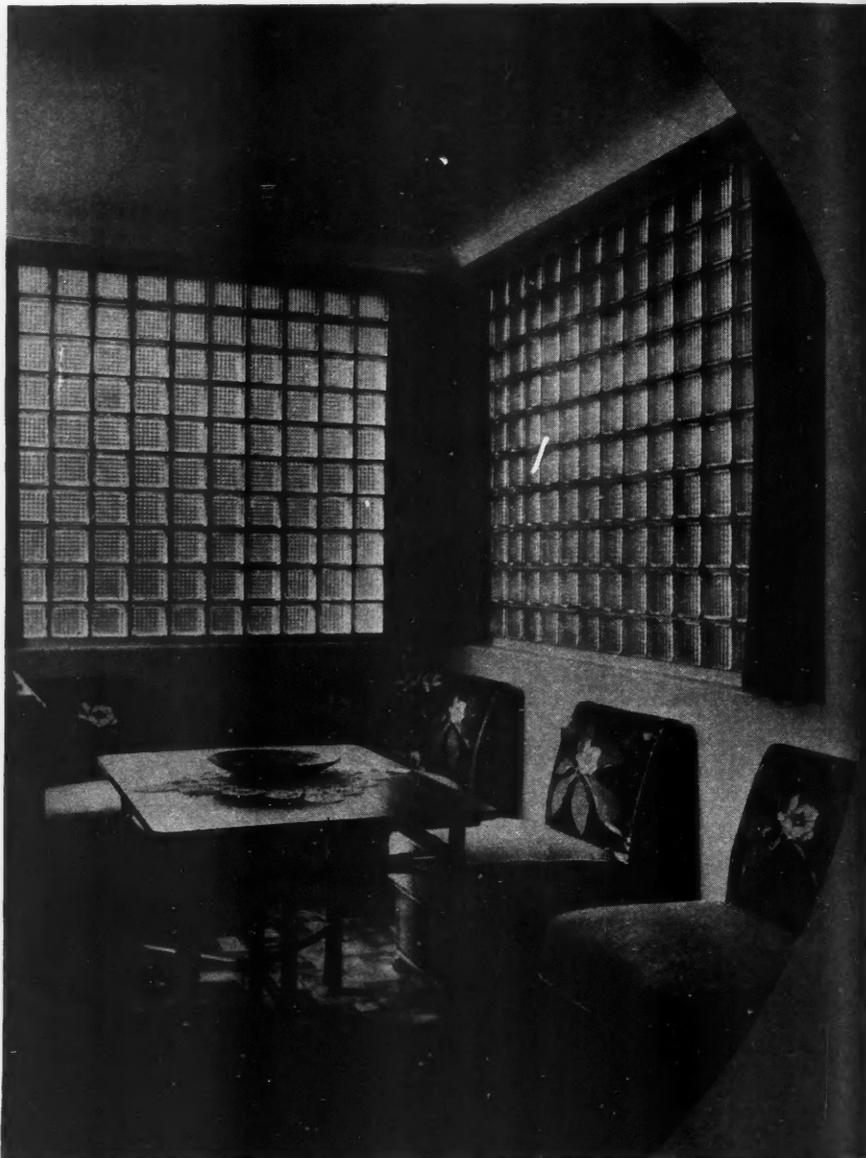
# NEW LIGHT *on home building*

## ... through PC GLASS BLOCKS!

**I**N PC Glass Blocks, builders have found a material which throws new light on residential building . . . both literally and figuratively. PC Glass Block panels, with their splendid light-transmitting qualities, flood a home with cheerful daylight, brighten it up, make it more attractive and more appealing to clients and prospective buyers.

But PC Glass Blocks also contribute many other advantages to house construction which result in better, more practical and more modern homes. These blocks preserve privacy, while admitting light generously. They insulate against sound, making homes quieter, pleasanter, more restful. They are non-absorbent and easy to clean. They have excellent heat-insulating properties, reducing heating costs. And they may be used with perfect fitness in homes of either traditional or modern design.

You need the latest and most complete information about PC Glass Blocks to take full advantage of the trend toward glass block construction which is sweeping the country. Send the coupon . . . today . . . for our free book of facts. It is yours for the asking. PC Glass Blocks are manufactured by Pittsburgh Corning Corporation.



*IT IS OBVIOUS at first glance why a home with a room like this in it would appeal irresistibly to clients or prospective buyers. The PC Glass Block panels make the room cheerful, well lighted, and as modern as today's news.*



Distributed by

**PITTSBURGH PLATE GLASS COMPANY**

and by W. P. Fuller & Co. on the Pacific Coast

Pittsburgh Corning Corporation,  
2121X Grant Bldg., Pittsburgh, Pa.

Please send me, without obligation, your new book of facts about PC Glass Blocks entitled "The Glass Age Arrives."

Name.....

Street.....

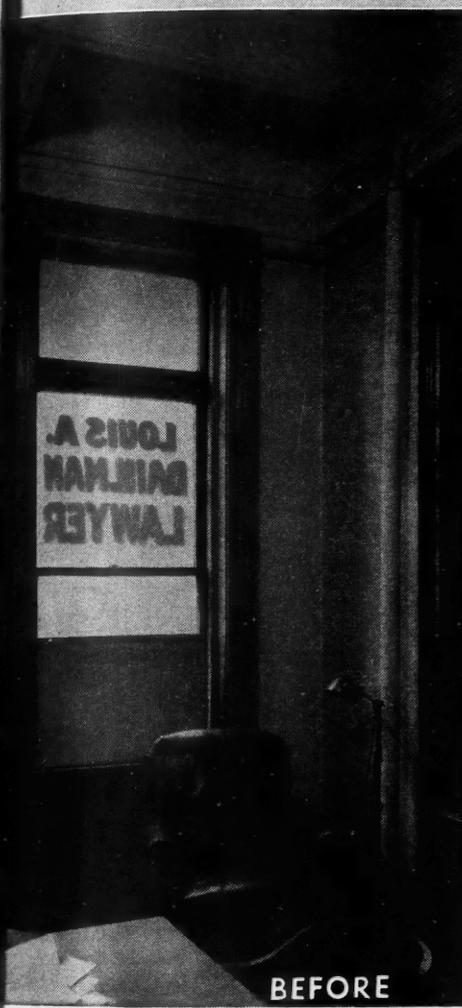
City..... State.....

1938.

19

# Keep busy all winter building walls of SHEETROCK

THE FIREPROOF WALLBOARD  
(with Recessed Edge and Perf-A-Tape)

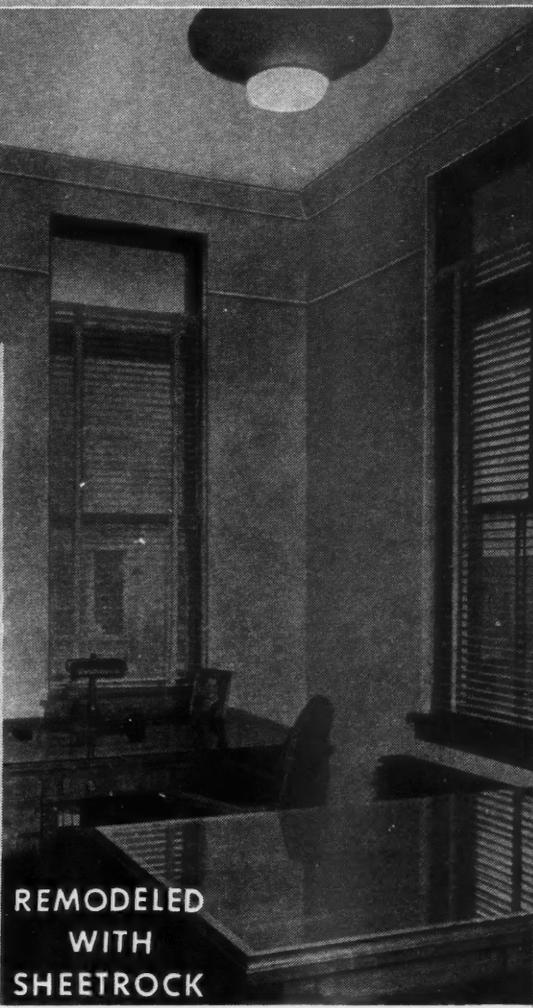


BEFORE

### Joints DISAPPEAR

**HERE'S HOW IT'S DONE:**

- 1 The recessed edge forms a channel at joints—
- 2 —which is filled with a special cement
- 3 Perf-A-Tape—strong, perforated fiber tape—is then embedded in the cement, and—
- 4 —more cement is applied over it, leveled and sanded, completely concealing the joint.



REMODELED WITH SHEETROCK

WITH these products, created for the remodeling and repair market, it's easy to have a year 'round income—and inside work during the winter.

When outside work slows down, you can still find plenty of inside jobs applying Recessed Edge Sheetrock\* and Perf-A-Tape\*. With these two materials, you can build strong, smooth, good-looking walls and ceilings on which any kind of decoration—paint, wallpaper, texturing can be applied.

And USG is going to help you get these jobs. **FIRST**—it has just made available through your USG dealer a **NEW MONTHLY PAYMENT PLAN**. Using this plan your remodeling customers can pay for their work by the month—but you get your money in cash, as soon as the job is finished.

**MODELING BOOK** that not only suggests dozens of remodeling jobs, but tells you exactly **WHERE TO FIND THEM** and **HOW TO SELL THEM**. You'll find its pages full of practical information that will help keep you busy this winter applying Sheetrock.

Get your copy of the "Inside Jobs" book today from your USG dealer. And ask him to explain the New USG Monthly Payment Plan to you and give you one of the books covering it in detail. Or write USG using the coupon below.



## United States Gypsum Company

300 WEST ADAMS ST.

CHICAGO, ILLINOIS

Sales Offices at:  
 Atlanta, Ga. • Baltimore, Md. • Birmingham, Ala.  
 Boston, Mass. • Buffalo, N. Y. • Cincinnati, Ohio  
 Cleveland, Ohio • Dallas, Tex. • Denver, Colo.  
 Detroit, Mich. • Houston, Tex. • Indianapolis, Ind.  
 Kansas City, Mo. • Los Angeles, Cal. • Milwaukee, Wis.  
 Minneapolis, Minn. • New York, N. Y. • Omaha, Neb.  
 Philadelphia, Pa. • Pittsburgh, Pa. • Portland, Ore.  
 St. Louis, Mo. • Washington, D. C.  
 San Francisco, Cal.



United States Gypsum Company  
 300 W. Adams Street, Chicago, Ill. **AH11**  
 Please send me the big, new Sheetrock Book that shows where to find jobs and how to sell them — also the New Monthly Payment Plan book.

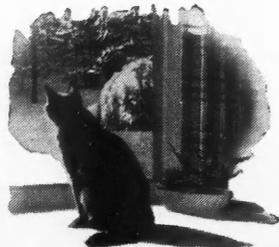
Name .....  
 Address .....  
 City ..... State .....

SECOND book is BIG NEW RE...

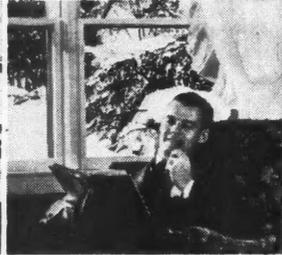
Everybody's happier....

IN A "WINDOW CONDITIONED" HOME

—Can this be winter?—Tabby's left her corner by the fire, blinks at the snow and purrs her approval. Baby, Mother and Dad join in the chorus—Yes, winter's just so many months of June to them.



BATHE IN WARMTH—right close to those big bright windows. That's the place for baby's bath. How about dad's? None—this home is "Window Conditioned."



BASK IN COMFORT—Let the winds blow—Dad's outted down for a long winter of warmth. His home is "Window Conditioned."



SMILE, BUDGET, SMILE.—And why not? Fuel bills are not up to 30%. Cleaner's bills and doctor's bills are shrinking, too. That's something to be happy about.

This winter, thousands of families will rejoice in better health, snug, warm comfort and new fuel economy—because they live in "Window Conditioned" homes—insulated by storm windows or double-glazed sash. Between the two pieces of glass, a wall of captive air is formed. This air space is proved to be the only way to reduce heat loss through the glass. As a result, homes are warm and cozy, free from chilly drafts. Healthful humidity is maintained without condensation which fogs up windows, soils draperies and even damages woodwork where windows are unprotected. And "Window Conditioning" is an investment that can pay for itself in less than two winters by cutting fuel bills up to 30%, saving cleaner's bills and doctor's bills, too. Reliable tests prove that "Window

Conditioning" saves more in fuel costs than any other single form of house insulation. How do you get it? Call your nearest lumber dealer today. Let him explain how he can arrange financing under F.H.A. with no down payment. Quality Glass Is Important—With double glazing, the quality of the glass is doubly important since you are looking through two pieces of glass instead of one. Because of an exclusive manufacturing process, L·O·F Window Glass is noted for its greater freedom from waviness and distortion, making it especially suited to "Window Conditioning." These advantages cost you no more. When you buy winter windows or double-glazed sash, make sure that each light bears the L·O·F label. It is your guarantee of quality in window glass.

with WINDOW CONDITIONING (DOUBLE-GLASS INSULATION)

You insulate your windows by applying double-glazed sash or modern storm windows of L·O·F Quality Glass. Here's what "Window Conditioning" does for you—

1. Gives you greater comfort—better health.
2. Can reduce fuel bills up to 30%.
3. Saves you more per dollar spent than any other form of house insulation.
4. Makes uniform temperatures easier to maintain throughout the house.
5. Lessens drafty danger zones near windows and floors.
6. Makes healthful humidity possible without foggy windows, soiled draperies and moisture on window sills.
7. Reduces cleaner's bills and even doctor's bills.
8. Fuel savings help pay for a modern heating plant.
9. "Window Conditioning" is a sound investment—fuel savings alone can pay for it in less than two winters. Dividends continue year after year. Financed under F.H.A.—no down payment.

\* Send coupon for free L·O·F booklet completely describing "Window Conditioning" and containing interesting information on treatment of windows.

LIBBEY·OWENS·FORD GLASS COMPANY, TOLEDO, OHIO

Please send me your free booklet which shows typical examples of windows offered with "Window Conditioning" and interesting window treatments.

Name: \_\_\_\_\_ My Home Has:  Wood Sash  Metal Sash (Give make.)

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

FREE

LIBBEY·OWENS·FORD QUALITY GLASS

LOOK FOR THE LABEL



Here is another of a series of advertisements that appealingly present the comforts and economies of "Window Conditioning" to MILLIONS. Home owners everywhere, will have the URGE to own something that YOU sell.

CONVERT THAT URGE INTO ORDERS BEFORE WINTER COMES

Now..

● People want added comfort, greater economy and better health in their homes. "Window Conditioning" provides all three and brings an ever-widening market for your sales of storm sash, storm doors and double-glazed sash. Today, over FORTY-SIX HUNDRED lumber dealers are participating profitably in this movement—making effective use of the sales kits that L·O·F provides. Their efforts are backed by forceful

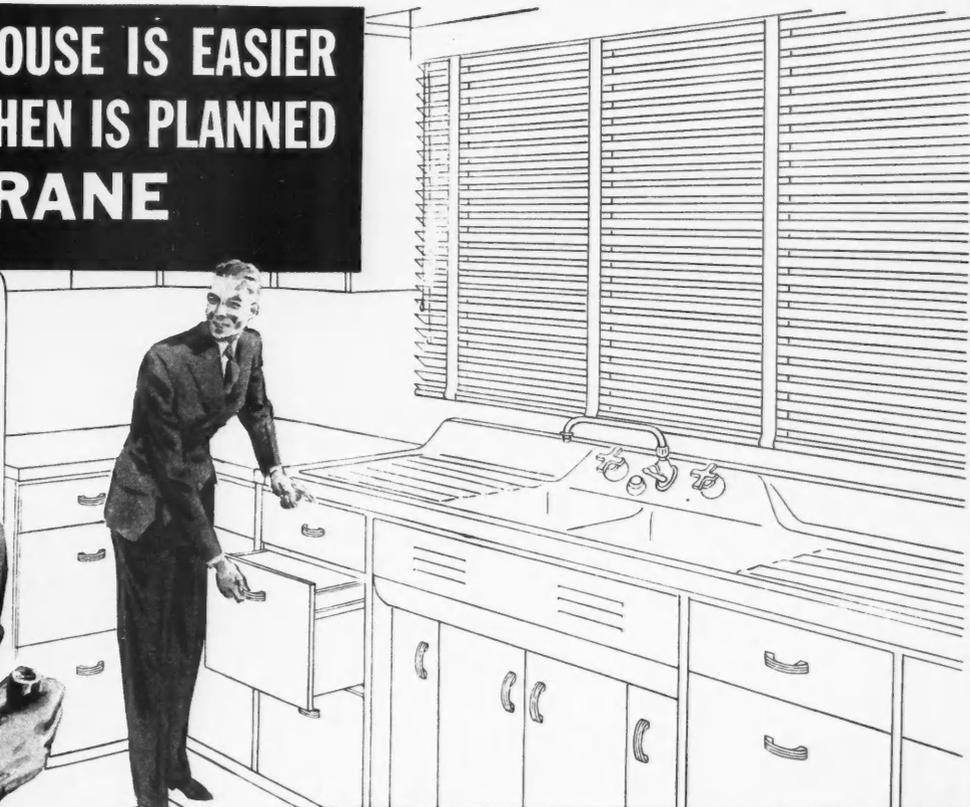
L·O·F advertising in EIGHT leading national publications and widespread publicity. Take advantage of the exceptional opportunity for increased sales NOW. Write TODAY for the details of the L·O·F tested selling plan and the many promotional and merchandising aids that are available for your use.

Libbey-Owens-Ford Glass Company, Toledo, Ohio.

LIBBEY·OWENS·FORD QUALITY GLASS



# SELLING THE HOUSE IS EASIER WHEN THE KITCHEN IS PLANNED BY CRANE

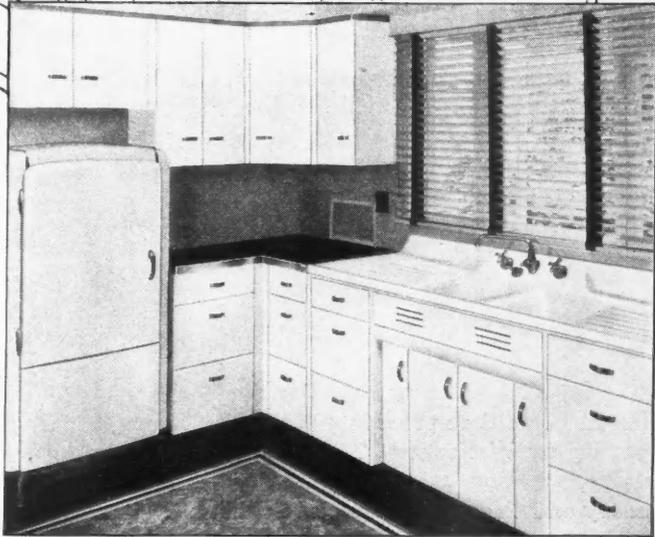


HERE'S a service that costs you nothing—one that will mean quicker—easier sales for you—let Crane plan the kitchen in the homes you build. Mrs. Housewife is quick to appreciate the modern advantages of a humanized kitchen—beautiful in appearance, efficient, planned to save her steps to reduce her work.

Many builders recognize the kitchen as the most important room in selling the home; for this room, being nearly complete, immediately arouses enthusiasm. It requires less effort of the imagination to picture it as being lived in.

A Crane kitchen is also an index to a well-built home—it suggests quality throughout, and the wide variety of Crane sinks designed for houses of every size in every price range assures economy coupled with quality.

Mail the coupon today for a copy of the Crane Book on Family Planned Kitchens containing full information on the Crane Kitchen Planning Service.



The unusual charm of Crane-Equipped kitchens—the more leisurely life they offer Mrs. Housewife—are quickly sensed by every prospect. Give your homes this powerful, added sales appeal with a Crane Kitchen Queen, America's most beautiful sink with every practical convenience, in a Crane family-planned kitchen.



# CRANE

VALVES • FITTINGS • PIPE • PLUMBING • HEATING • PUMPS  
CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO  
NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS,  
PLUMBING AND HEATING CONTRACTORS

Crane Co., 836 S. Michigan Ave., Chicago, Ill.

Please send me a copy of "Family Planned Kitchens" without obligation and a copy of the work sheet to use in kitchen layout.

Name .....

Address .....

Town ..... State .....

# Can YOU name the 5 reasons why today the demand is for Johns-Manville Insulating Board?

## 1 THE J-M NAME?

**YES!** When you use J-M Insulating Board, you don't have to spend time selling the manufacturer's name. People accept it without hesitation just as they do any J-M product. Reasons? Continuous national advertising for over 2 generations and the experience of millions of satisfied users with hundreds of J-M products.

## 2 GLAZE-COAT FINISH?

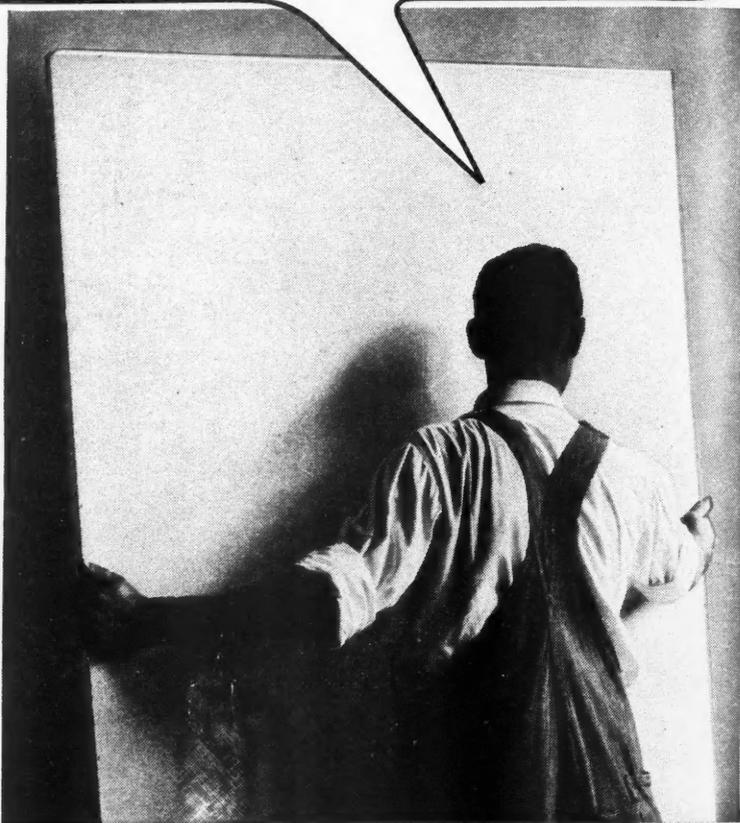
**YES!** This smooth, hard finish obtained by an exclusive Johns-Manville process is attractive to the eye and pleasant to touch. Unpainted, it provides wall and ceiling surfaces with a lustrous sheen. When painting is desired, there is a distinct economy as no priming coat is needed!

## 3 QUALITY PRODUCT?

**YES!** J-M Insulating Board is made of selected fibers that provide structurally strong, rigid yet lightweight sheets. They have high insulating value, uniform thickness, are sawed or beveled easily and cleanly, are moisture-resistant.

## 4 COMPLETE LINE?

**YES!** Standard Sheets in Glaze Coat, or natural finish, up to 4' x 12' (larger sizes on special order). Weathertite Sheathing 25/32" thick and coated on both sides and all edges with high-grade black asphalt for added moisture resistance. Insulating Lath with "gridded" surface to which plaster bonds with far greater strength than the "key" on ordinary lath. And a complete line of pre-fabricated, decorative units including variegated, wicker, fabric and Glaze-Coat finishes that permit of unlimited wall and ceiling decorative treatments at low cost.



## 5 ALL THESE ADVANTAGES YET NO INCREASE IN COST?

**YES!** J-M Insulating Board costs no more than ordinary insulating boards. It provides good-looking, crack-free wall and ceiling surfaces at a price within easy reach of every buyer.

*And here are plus values for you, Mr. Builder!*

The entire J-M Insulating Board line is stocked by building material dealers everywhere—that means quick deliveries, faster service right down the line! In addition, J-M furnishes attractive literature, sample assortments . . . does steady national advertising to locate prospects. Get the facts! Write for samples and details. Address Johns-Manville, 22 East 40th Street, New York, N. Y.

# JOHNS-MANVILLE INSULATING BOARD



"Cer  
Roof  
perm  
wear  
plus

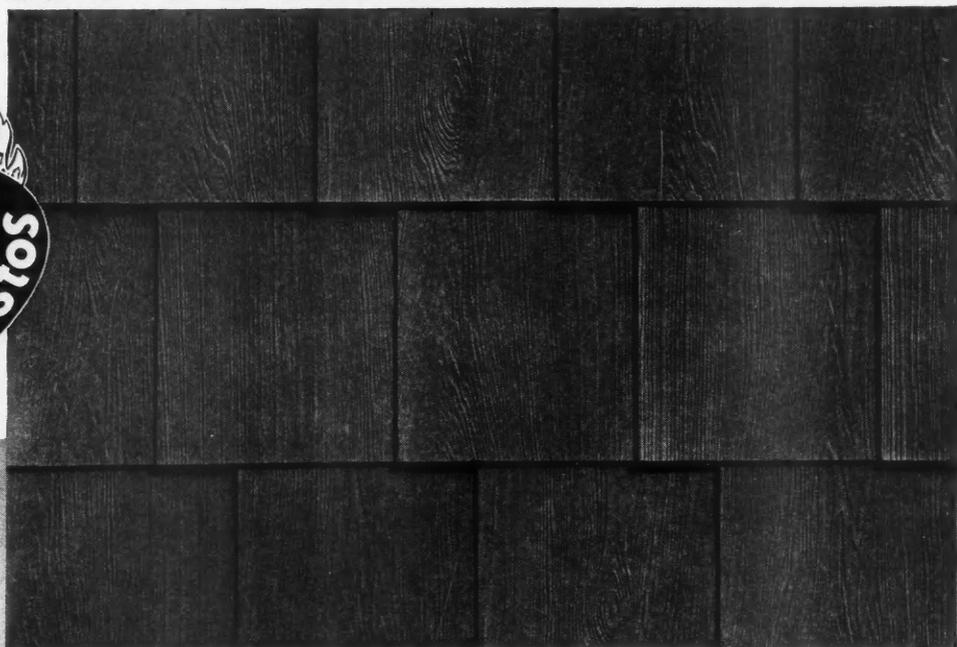
SEND

Asbe  
Asbe  
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(Li  
Asbe  
K & A

# ROOFING SHINGLES



COPYRIGHT 1938 BY KEASBEY & MATTISON CO.



**Y**OUR homes look like the good investment they are when you roof them with "Century" Asbestos-Cement Roofing Shingles. It's a sure way to get quick attention from serious prospective buyers—helps you clinch the sale at a selling price that means a substantial return.

**KEASBEY & MATTISON COMPANY**  
 AMBLER, PENNA.

"Century" Asbestos-Cement No. 30 Side Lap Roofing Shingles add an important note of permanent beauty to this home. Fire-resisting, weather-resisting, termite-proof—these are plus features that help you sell.

**SEND FOR DATA ON K & M BUILDING PRODUCTS**

- Asbestos Roofing and Siding Shingles
- Asbestos Flexible Wallboard (Sheetflextos)
- Asbestos-Cement Structural Board and Sheathing (Linabestos)
- Asbestos Decorative Walltile
- K & M Mineral Wool Insulations for the home

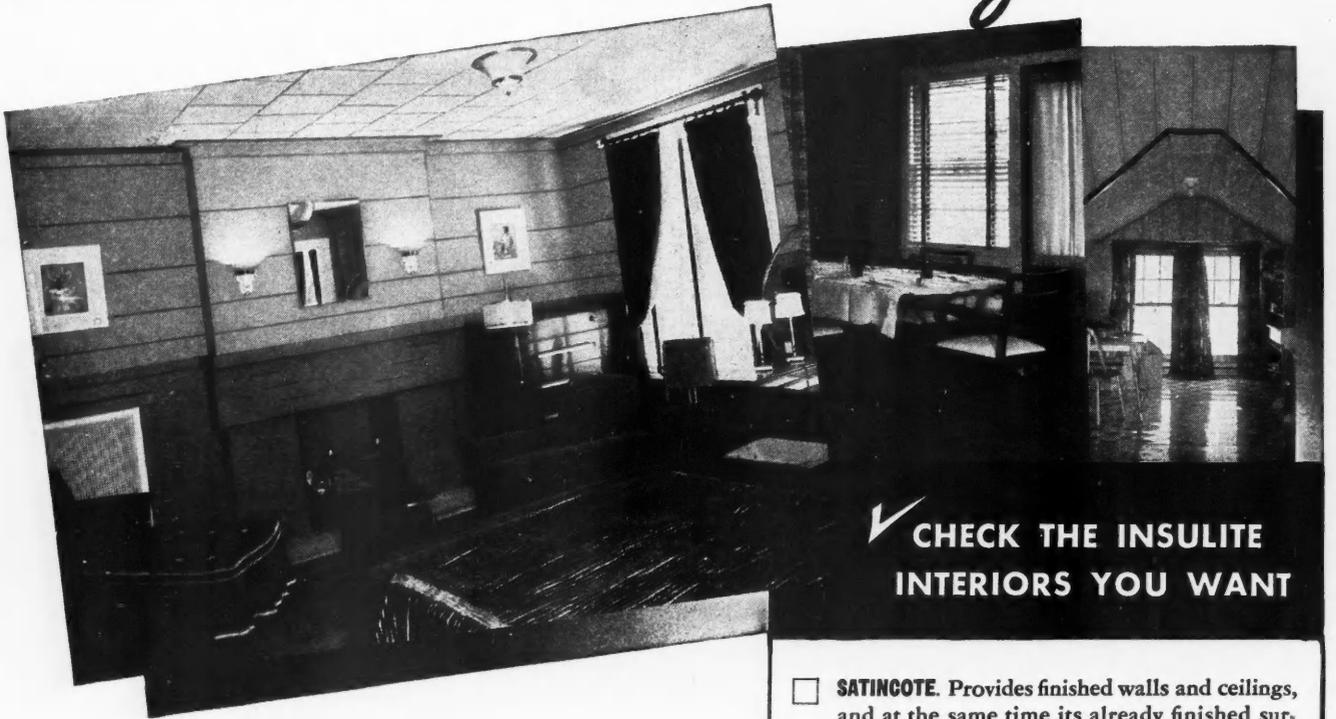
Underline the products listed at left on which you want data and mail this coupon today.

NAME \_\_\_\_\_

NAME OF FIRM \_\_\_\_\_

ADDRESS \_\_\_\_\_

# Rooms I can make my own!



## ✓ CHECK THE INSULITE INTERIORS YOU WANT

"I want rooms I can make my own." That's the first thing millions say when they think of building a home.

They want their rooms to be friendly and inviting—in harmony with modern design and color schemes. With walls and ceilings in tune, providing a restful background.

They must be adaptable to refinishing and decoration at whim.

Individual personality can always be expressed in interiors through the new and modern interior walls and ceilings created with Insulite materials.

With all their range of decorative possibilities, they offer labor saving sizes, protection against heat and cold, sound deadening — these are the materials you can do things with.

FOR FURTHER INFORMATION ABOUT INSULITE INTERIORS WRITE DEPT. AB1181

- SATINCOTE.** Provides finished walls and ceilings, and at the same time its already finished surface is in itself primed and sealed for future individual decorative treatments or color schemes. Its smooth surface is satisfying, highly light reflective — and Satincote *insulates!*
- SMOOTHCOTE.** The sunshine that is wanted in every room can be reflected in these walls and ceilings. Has a firm, smooth surface. Readily cleanable. Light cream color—*and it insulates!*
- IVORYLITE.** Natural wood finish — light ivory color in linen or burlap textures. Adaptable to individual decorating schemes. Absorbs and retards sounds — *and it insulates!*
- GRAYLITE.** Provides the dignity and warmth of rugged gray brown walls. In linen and burlap textures, adaptable to many decorative and finishing treatments. Absorbs and retards sound — *and it insulates!*
- LOK-JOINT LATH.** Designed especially to provide a safe base for plaster and minimize plaster cracks. Has a special patented lok to reinforce joints—holds plaster with a bulldog grip! *and it insulates!*
- BRONZELITE PRODUCTS.** For paneling, wainscoting, ornamental decoration and trim, and in rooms where smooth, hard textures or tile effects are desired. Flat or glazed surfaces.

# The INSULITE COMPANY

MINNEAPOLIS, MINNESOTA

©1. CO. 1938

In eastern Canada, King Street West and Sudbury Street, Toronto, Ontario. In western Canada, Kenora, Ontario.

938.

# "NO NEED LONGER TO FEAR WINTER CONCRETE WORK"

"We'll use Marquette **HIGH EARLY STRENGTH** Portland Cement. It will harden in 1/7th the time—will minimize cost of protection against freezing—eliminate costly cold weather delays—and ENABLE US TO WORK ALONG NORMALLY."



So by using Marquette **HIGH EARLY STRENGTH** Portland this winter, all seasons will be concrete seasons . . . for this contractor and his organization. Jobs can be sold, and work done 12 months of the year. This means savings, because overhead covers more jobs. And the contractor can maintain a permanent and efficient organization throughout the entire year.

*High Test!*

**Marquette CEMENT**

IN THE MISSISSIPPI VALLEY IT'S MARQUETTE CEMENT

A helpful USER'S MANUAL on Marquette **HIGH EARLY STRENGTH** Portland Cement is now ready. There is an entire chapter devoted to the value of this high speed cement in Winter concrete work. Send for your copy today. The coupon is for your convenience.



**MARQUETTE**

**HIGH EARLY STRENGTH**

**PORTLAND CEMENT**

MEMBER  
PORTLAND CEMENT  
ASSOCIATION

**MARQUETTE CEMENT MANUFACTURING CO.**  
CHICAGO

MEMPHIS

**MARQUETTE CEMENT MANUFACTURING CO.**  
Marquette Building, Chicago, Illinois

Please send me, without cost or obligation, a copy of your 72-page User's Manual on Marquette High Early Strength Portland Cement.

Name .....

Company .....

Address .....

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

A.B.11-38

You can build in fire protection with

# Perforated Rocklath

THE FIREPROOF LATH

The lath to which plaster takes a  
**WELDED** and **RIVETED** grip

After all, the best and most economical fire protection is protection that is *built into* the structure itself. That's exactly what Perforated Rocklath\*, made of fireproof gypsum, will help you do. For USG tests, made at the Bureau of Standards, qualify partitions of Perforated Rocklath, plastered with one-half inch of gypsum plaster, for a one-hour fire rating. With it you can build this added safety factor into every one of your new homes.



And, because Perforated Rocklath takes a two-way grip on plaster, you get a hard, even, lasting surface—that will take any sort

of decoration. First, it takes a **WELDED** grip as the gypsum plaster bonds to the surface of the lath;



second, a **RIVETED** grip, formed as plaster is forced through its regularly spaced perforations to expand and form "mechanical rivets" on the back. That gives you walls that keep fresh looking, too, because they



This added fire and crack protection that Perforated Rocklath will give you over more combustible materials is *decidedly inexpensive*. For Perforated Rocklath, with all its advantages, sells for little, if any, more than the cheapest kind of old-fashioned lath.

On your next job, build in fire

protection, blemish protection—decoration protection—with Perforated Rocklath.

Now available to help you increase remodeling and repair sales

**THE USG MONTHLY-PAYMENT PLAN** can be used to finance all types of remodeling—regardless of the USG materials used on an individual job. Write for complete details.

For more facts about Perforated Rocklath, send in the coupon below.

**United States Gypsum Company**  
300 WEST ADAMS ST. CHICAGO, ILLINOIS

Sales Offices at:  
Atlanta, Ga. • Baltimore, Md. • Birmingham, Ala.  
Boston, Mass. • Buffalo, N. Y. • Cincinnati, Ohio  
Cleveland, Ohio • Dallas, Tex. • Denver, Colo.  
Detroit, Mich. • Houston, Tex. • Indianapolis, Ind.  
Kansas City, Mo. • Los Angeles, Cal. • Milwaukee, Wis.  
Minneapolis, Minn. • New York, N. Y. • Omaha, Neb.  
Philadelphia, Pa. • Pittsburgh, Pa. • Portland, Ore.  
St. Louis, Mo. • San Francisco, Cal.



United States Gypsum Company  
300 West Adams Street, Chicago, Illinois  
Please send information on Perforated Rocklath.  
Name.....  
Address.....

AB-11

# TELL Store Front Prospects why Pittco Store Fronts mean More Business for them...WE DO!



"A Pittco Front can make even an out-of-date store modern and inviting. Shoppers from all over town will notice it and patronize your store."



"Customers you have long since given up as lost will be back in your store when they see your new Pittco Front."



"Sure, you can finance a Pittco remodeling job. The Pittsburgh Plate Glass Company has a plan that permits you to pay monthly if you desire. It's easy to arrange."

**LIANCES SEELUX HARDWARE**

**HERE'S another PITTCO STORE FRONT**  
*...make it with the old*

HERE'S fine hardware store in Columbus, Ohio. A modern, attractive Pittco Front was done up your hardware store. You give it four "some better" look that means more business and larger profits.

**BUSINESS SLIPPING?**  
**MAYBE YOU NEED A NEW STORE FRONT**

Some will put new life into your business. Hard work and money all day long have found that the just naturally clean and best profits. If you are not getting your business in your neighborhood, a Pittco Front. It's almost invariably works wonders for you. When re-modeling, consult an architect to assure a well planned, economical job. Our staff of experts will cooperate with him in planning a Pittco Front to suit your needs. Send the coupon now for our free book. It contains many photographs of actual Pittco jobs. Tells what re-faces you two cents to pay down, the balance out of income.

**PITTSBURGH PLATE GLASS COMPANY**

And don't fail to see the Pittco Store Front Catalog when it comes your way. Your local hardware store will tell you the specific time and place.

Pittsburgh Plate Glass Company  
2115X Grant Bldg., Pittsburgh, Pa.  
Check and mail, without obligation, your coupon for our free book "Producing Bigger Profits with Pittco Store Fronts."

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

**T**HERE are good, sound reasons why your clients should modernize with Pittco Store Fronts . . . and each Pittco advertisement points them out.

Merchants, property owners, architects, and building managers regularly see Pittco advertising in their favorite trade publications. And these people are your prospec-

tive store front clients. Use these tested and proved selling ideas on your prospects. And specify Pittco Products in your work to bring more store front jobs your way. Mail the coupon now for our free book of store front information. It's packed with interesting facts, figures and photographs of outstanding Pittco installations throughout the country.

## PITTCO STORE FRONTS

*glass...metal...paint*

Pittsburgh Plate Glass Company  
2115X Grant Bldg., Pittsburgh, Pa.

Please send me, without obligation, your new book entitled "Producing Bigger Profits with Pittco Store Fronts."

Name.....

Street.....

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

**PITTSBURGH PLATE GLASS COMPANY**

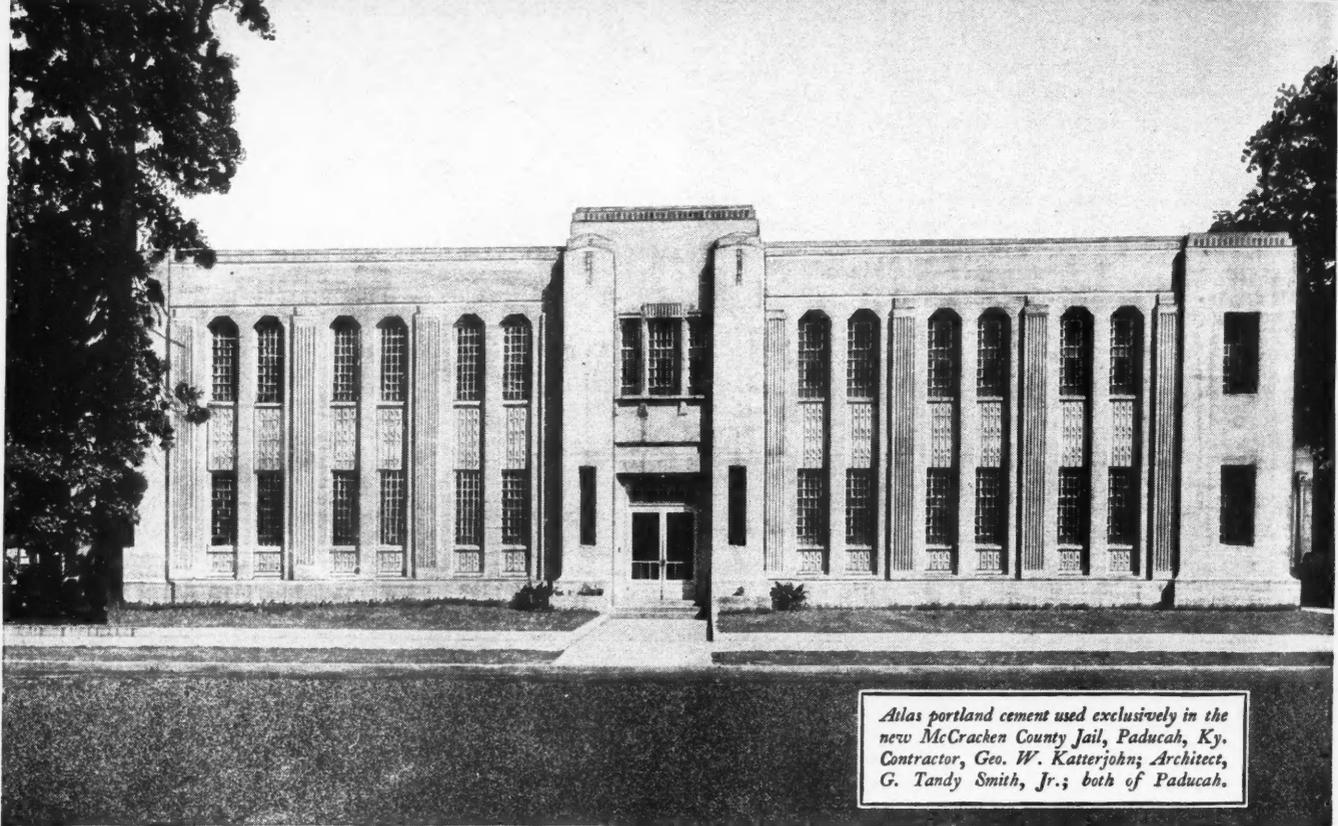
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N  
of  
SG  
ob.

AB-11  
Rocklath.

*Even the Guests are proud of this jail*



*Atlas portland cement used exclusively in the new McCracken County Jail, Paducah, Ky. Contractor, Geo. W. Katterjohn; Architect, G. Tandy Smith, Jr.; both of Paducah.*

*Architectural concrete strikes a new note in beauty  
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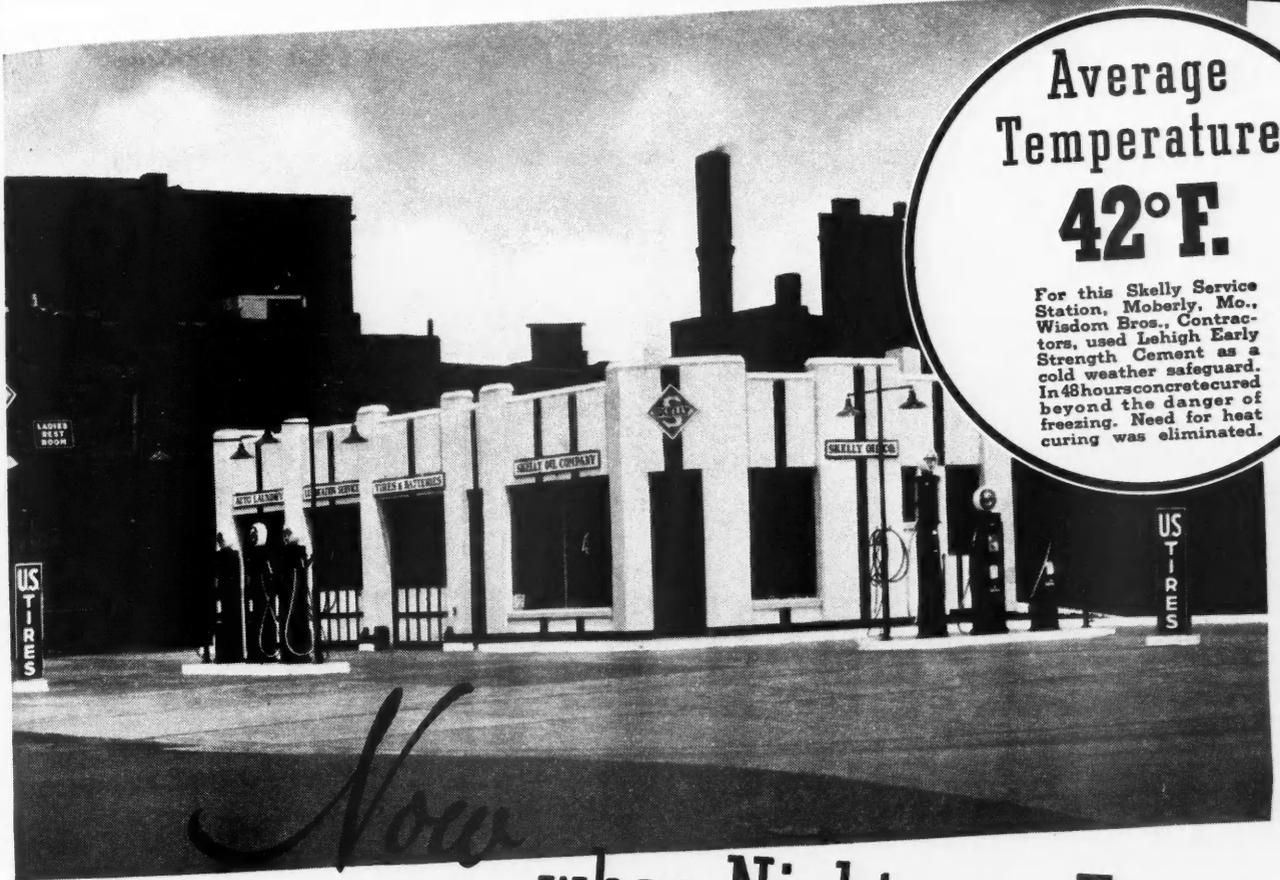
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