

J. J. CAPPELLI, successful building contractor, discovered on the job at Dobbs Ferry, N.Y., erecting home pictured on front cover for Joseph B. Mason, eastern editor.

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# AMERICAN BUILDER

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DECEMBER, 1936

58th Year

Vol. 58—No. 12

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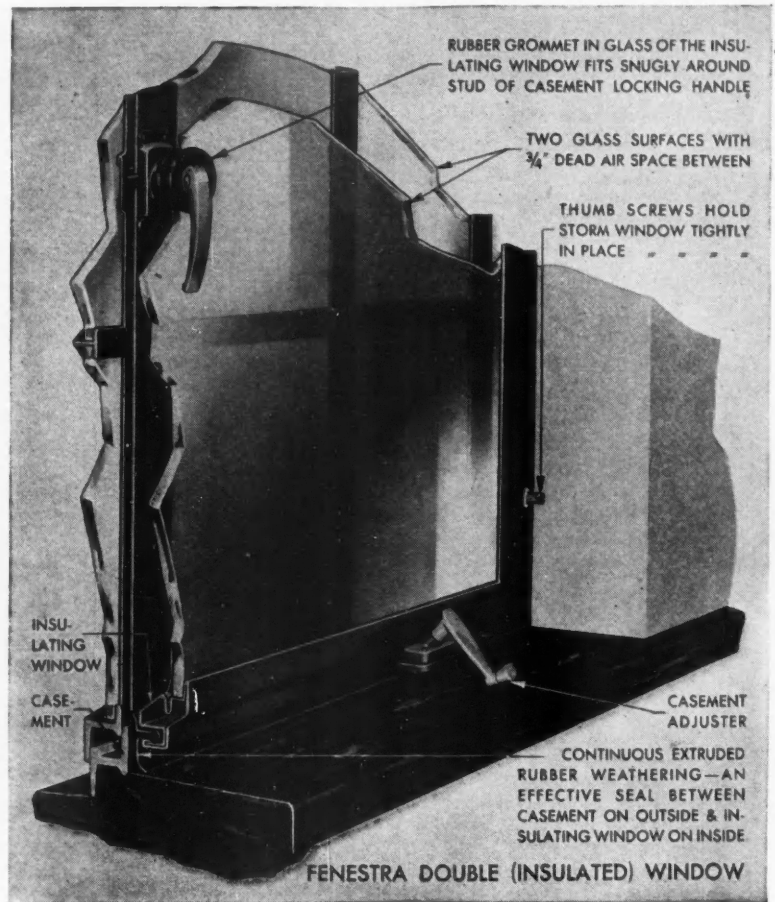
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BETTER WINDOWS THAT COST LESS

# Fenestra

## Can It Happen Here?

**W**HETHER we are heading in this country for the "class struggle" that has been raging in European countries is a most interesting and important question.

It first caused a Communist dictatorship in Russia. It later caused Fascist dictatorships in Italy and Germany that were the outcome of successful middle class uprisings against socialistic policies. It has caused the terrible civil war in Spain. It constantly threatens in France to be carried from the ballot box to the battlefield.

Many say, "It cannot happen here." It has happened in other countries as civilized as ours; and it will not hurt to consider what it is all about.

It is everywhere a struggle over the *distribution* of wealth and income. Those with small or no wealth and with small incomes are urged to use their votes to get *control of government*, and then to use government to carry out policies which will reduce large incomes and thereby—as is assumed—*increase all small incomes*.

**B**UT everywhere human nature is the same. Those with larger than average incomes are everywhere as averse to having them reduced as those with smaller than average incomes are anxious to have them increased. Consequently, *when government begins to be used to regulate incomes there inevitably results sooner or later a bitter struggle for control of government*. While in Germany, Italy and Spain there were democratic governments, in none could the issue be settled by voting, but in each it has been submitted to virtual or actual civil war. The outcome in France probably will be the same.

Can supposedly civilized men find in the twentieth century no way to settle the distribution of income excepting by civil wars leading to dictatorships? They formerly did. They have thus far in England and the United States. *But not through the use of governmental power*. It has been done under governments that interfered little in business; that left industries large freedom in dealing with each other; and that in the main left employers and employees to settle their differences themselves.

And—what is very significant—*under such governments there have occurred the largest increases in the total wealth and income to be divided that have ever occurred anywhere*.

**T**HE "class struggle" for control of government and use of its power to settle our economic differences leads toward disaster. There is *only one way* to assure increased national income and more equitable distribution of it. This is through more able, unselfish, and public-spirited management of business and closer and more intelligent co-operation between employers and employees.

There rests today an unprecedented responsibility on leaders of business and labor in the United States. They have opportunity to show the world that the "class struggle" is the worst and an unnecessary way of settling great economic issues—or that, unhappily, it is the only way.

Samuel O. Drun

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G-4

# Universal Atlas CEMENTS

## AMERICAN BUILDER AND BUILDING AGE

# What About Labor?

**L**ABOR, as one of the principal factors in building, is today one of the most uncertain elements in this field. Contractors and the home buying public face labor uncertainties of three sorts: (1) Are there today enough building trades mechanics to handle an extensive building program? (2) Is their skill up to par? and (3) Is the customary wage structure with its high hourly rates the best that can be devised, bearing in mind the interests of both building labor and property owners? In the residential building field these factors are now especially important and, besides being closely related to one another, will have a direct bearing on the future volume of home building.

In a recent address Allie S. Freed, chairman of The Committee for Economic Recovery, pointed out the obligations of labor and suggested a program which covers certain portions as follows:

"Labor, both organized and unorganized, has definite responsibilities. In the matter of home building it is peculiarly interested, both as consumer and producer. If labor really believes in a more abundant life, and the greatest good for the greatest number, the following are some of their responsibilities which can no longer be dodged or obstructed by strong-arm methods:

"Labor must be eager and willing to encourage the youth of the nation to learn the various home building trades. Our youth must not be barred from any industry, particularly one as important as that of home building. Our boys and girls must never face the closed door of class privilege.

"Labor must provide a structure that will permit efficient operations which are impossible under the jurisdictional squabbles that grew up under the skilled craft system.

"Labor must be ready to exchange for definite guarantee of continuity of employment, a lower hourly rate that will quickly insure a greater annual income per worker."

Such a program, if carried out, would go far toward eliminating certain basic difficulties confronting the industry.

### Labor Shortage Would Be Serious

The effect of a labor shortage on the upward swing is perfectly obvious. Today, with a residential volume about four times that of the depression low but still less than a quarter of what might be considered a normal volume, there are persistent reports of sectional scarcity and

warnings of an impending general labor shortage.

E. M. Craig, executive secretary, National Association of Building Trades Employers, says that one deplorable aftermath of the past period of construction stagnation is that when construction swings back to normal, a shortage of skilled building help cannot be averted. Aside from the lack of trained apprentices, and thinning of the ranks through death, Mr. Craig believes that many mechanics in the upper middle age bracket have abandoned their tools for all time. He points out that in 1929, a million and a half building craftsmen were employed, and estimates that this number is thinned down to less than a million workers available at the present time.

### For the Past Six Years No Apprentices Have Been Trained

Similarly, Oscar A. Reum, president of the Contracting Plasterers' International Association, adds the same thought in these words: "Indications are that there is going to be a great shortage of men in the trade as a result of six years of depression. Hundreds of mechanics, especially in the younger ages, have left the trades, and those who remain are in the higher age brackets. Again, for the past six years practically no apprentices have been trained to replace those who have left the trades."

These, and other statements of this nature, should serve sufficient notice for immediate action.

Closely related to the question of available supply is the matter of craft skill. The sudden demand for tradesmen would again mean filling the ranks with untrained labor recruited from any source, as has happened during past times of rapid expansion; the inevitable result of such an influx is unsound construction. Nothing could bring about prefabrication faster than such a situation.

### Apprentice Training an Industry Problem

The responsibility for providing a continuous supply of skilled workers rests mainly within the field of organized labor. All other factors must concern themselves with this problem, however. The federal government has been increasingly active in promoting apprentice training; other public as well as private organizations should foster such activity and seek to make the opportunity more attractive for young men of craft ability, initiative and a desire to find a place in the building trades. At the same time those whose only objective is to take advan-

tage of the relatively high wages during apprenticeship as compared to what they could earn elsewhere should be discouraged.

Finally, cost based upon hourly wage rates should be considered as the real key to the situation, and one which bears a direct relation to the two preceding subjects. Labor must receive a fair return for its services. However, the manner in which labor is paid will eventually be based upon certain fundamental economic principles—supply and demand will be tempered by what the market will stand in the way of rising costs. In the field of housing which, after all, is a consumer product, abrupt increases in cost can do much to stop the present steady increase of rising volume.

On this subject, Mr. Freed, previously quoted, says: "There is no field of human endeavor in which there is less understanding, either of the economics or of the harm done to their own people, than among the labor leaders in the home building field. Of course, this is not entirely one-sided; home building labor has never had an opportunity to be secure as to its continuity of employment. This has contributed a great deal to the terrible conditions in which hourly rates have been raised to such a high level that annual incomes have suffered because of the lack of employment. The mass workers who are in the greatest need for homes have without their knowledge suffered immeasurably from this condition."

He suggests that labor must realize that it can neither have homes nor employment until, with a guaranteed continuity of employment, hourly rates are reduced.

### Rising Costs Narrow the Market

Near certain urban centers home building activity in this low cost bracket is already feeling the effects of a rapid rise in the cost of labor. Purdue research studies show that, based on income, 75 per cent of the families in this country require houses costing under \$5,100. Substantial progress toward the development of housing for the lower income classes has been made in the past few years, but the application of union scale of wages has already curtailed some of this activity and is placing it beyond the buying power of those for whom it was intended, because labor cost here represents a greater percentage of the total than in higher priced homes with more complete equipment. Thus labor works contrary to its own interests—it reduces the volume of available work by curtailing the market and raises the cost of a commodity which it must buy.

A low cost development near a midwestern city will illustrate this point. Here developers had succeeded in producing low cost suburban homesteads which were being sold to industrial workers from a nearby city. The scale of FHA monthly payments was well within the reach of these people. Local labor was perfectly contented to work at a reasonable hourly rate with the prospect of year 'round employment assured by the ready sale of these properties. More recently this developer has been told that he must pay full scale; this additional

labor cost will add sufficient to the total as to make the monthly payments too high for this class of buyers.

### Need Flexible Wage Scales

The foregoing situation certainly warrants different handling than the straight demand for the prevailing union scale in that jurisdiction. Present problems in labor cost cannot be solved by the application of any broad rule.

For instance, as compared with the above situation, another builder has found that in his experience higher hourly rates have meant more efficient labor and are finally more economical. Here is his somewhat unusual experience: in three different communities within a hundred mile radius where the prevailing wages for stone masons were 50 cents, \$1.00 and \$1.50 an hour, this builder was willing to pay the *highest* rates because, on the specialized construction used in these jobs, the work went ahead more smoothly and at a lower total cost than on the other jobs where less efficiency accompanied lower rates. If efficiency and cost are to have the proper relationship to each other, no system which groups together all degrees of skill can offer any reward for efficiency. Any group or organization standing for greater craft efficiency should be encouraged and paid accordingly; any move to establish uniform wages for the industry throughout the country runs counter to such a policy.

Now that the volume of building is picking up again, another old practice is adding to building costs—the levying of fines in connection with jurisdictional and wage disputes. New products and methods have been introduced during the last few years, and naturally there are some legitimate application questions which must be settled; these should be cleaned up as soon as possible. Where jurisdiction is based on the basic material in a form which the particular trade is obviously unable to apply, there is no excuse for ridiculous claims followed by fines and tie-ups during construction.

### Wage Uncertainties Increase Cost

Likewise, builders who figure labor on jobs at prevailing rates must be protected on wage scales if they are to remain in business as effective competitors. It is the belief of contractors that much of the trouble over wage rates could be largely remedied if the building trades for a definite period of time would agree to a voluntary reduction; this assurance would release a flood of building orders held up by building costs that would result in more days of employment and higher earnings on a yearly average for mechanics when compared to present wages coupled with less working days.

These problems relating to labor are important in the present recovery of the building industry. *American Builder* urges that they be given serious consideration by all those who have a part in shaping the policies under which this branch of building will function during the years immediately ahead.



George J. Fernschild, Architect

Photos by Herbert Pels

## Model Homes Point Ahead

Forecasting 1937 Style Trends, a Double Section of Home Designs Is Offered.

THIS CHARMING ARCHWAY is a feature of a striking model home recently sponsored by the New Rochelle, N. Y., Chamber of Commerce and dedicated to the purpose of "making all homes model homes." Complete plans, details and interior photographs are given on the following 3 pages.

## INDEX TO 1936 HOUSE DESIGNS AND PLANS

ALL HOUSE DESIGNS AND FLOOR PLANS published in the AMERICAN BUILDER during the year 1936, including December, are listed and classified in this index. Date and page number on which each house appears are given opposite name of type, such as Colonial, English, Spanish, etc.

- |                                   |   |   |
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CURVED STAIRS  
 SPACIOUS HALL  
 FINE INTERIORS

THE NEW ROCHELLE Model Home hall is unusually spacious for such a house, and the curved stairway sets a charming note. The arrangement of rooms around the center hall is very well handled.

KITCHEN and bathroom feature modern equipment, including Tracy sink, Murphy cabinets, Electrolux refrigerator, W. A. Case & Son and Standard plumbing, Lightolier fixtures.



Photo by Herbert Pels





7 ROOMS, 3 BATHS  
3 PORCHES, GAS HEAT

**George J. Fernschild, Jr., Architect**  
**Cameron Construction Co., Builders**

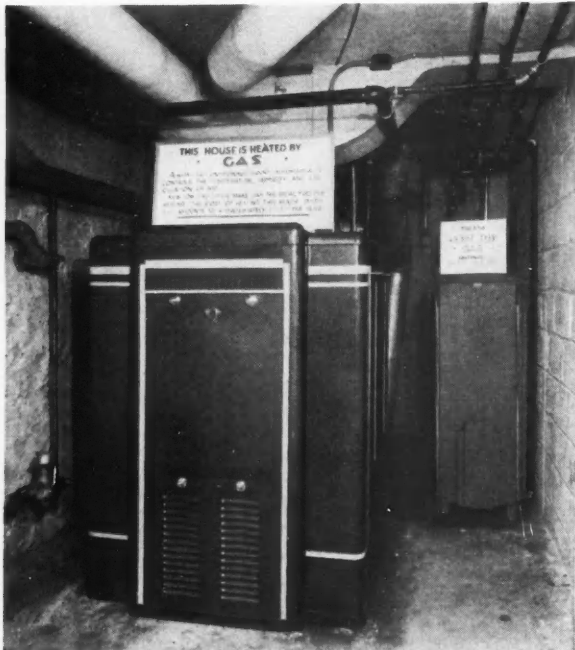
**MODEL FEATURES AND SPECIFICATIONS**

**S** PONSORED by the New Rochelle Chamber of Commerce in co-operation with FHA, this model home has a list of A-1 construction and equipment features that reads like a blue book. It has everything required for a thoroughly comfortable modern home, including automatic gas heat and air conditioning, 4 inches rockwool insulation, 3 bathrooms, maid's room on first floor and unusually fine recreation room. The following abstracted specifications give a good picture of the quality construction used:

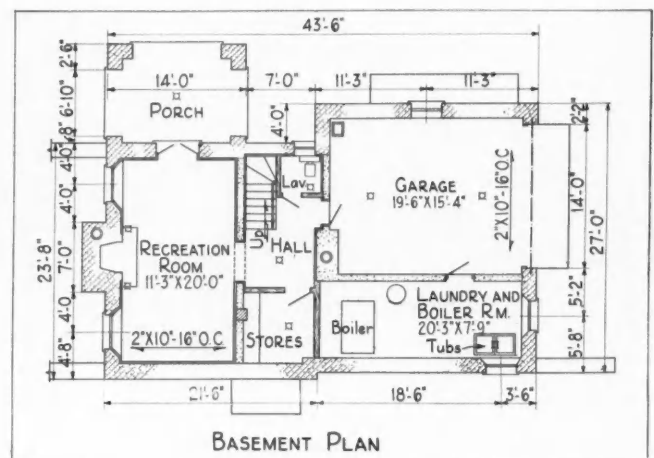
**FOUNDATIONS**—18" stone, pointed both sides, an 8" concrete footings 12" wider than walls. Walls below grade covered with 1/2" 1-3 mix with Anti-Hydro waterproofing compound. Also coated with tar paint to bottom of footings. Drain tile run around footing course and connected to sewer.

**FIREPLACE**—Dampers, arch bars and fireplace unit by Bennett Corp. Mantel by Georgian Mantel Co.

*(Continued on page 84)*



NEW ROCHELLE Home features winter conditioning, with American Gas heater and Sunbeam boiler.

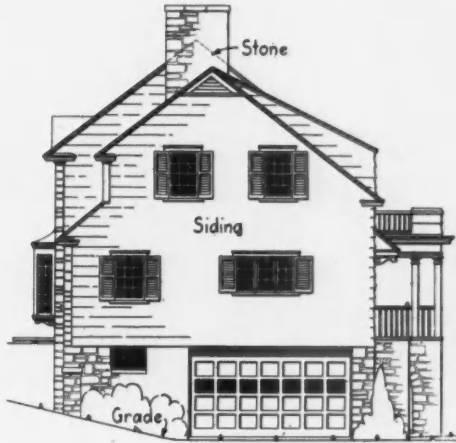


**BASEMENT PLAN**

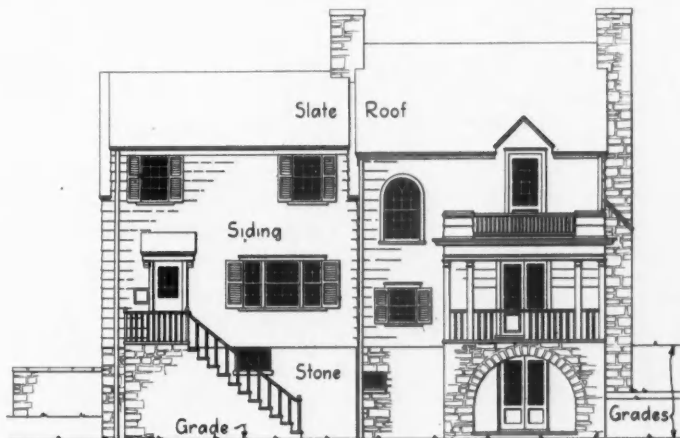
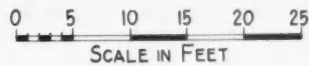
WORKING PLANS OF NEW ROCHELLE CHAMBER OF COMMERCE MODEL HOME—GEORGE J. FERNSCHILD, JR., ARCHITECT



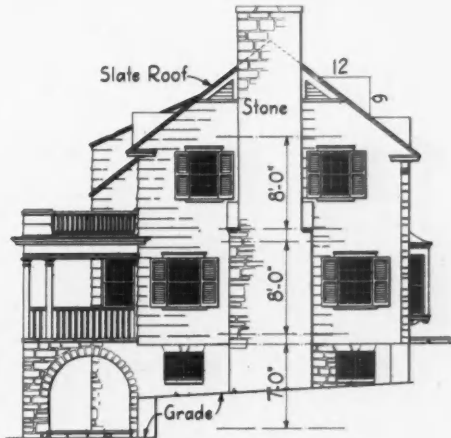
FRONT ELEVATION



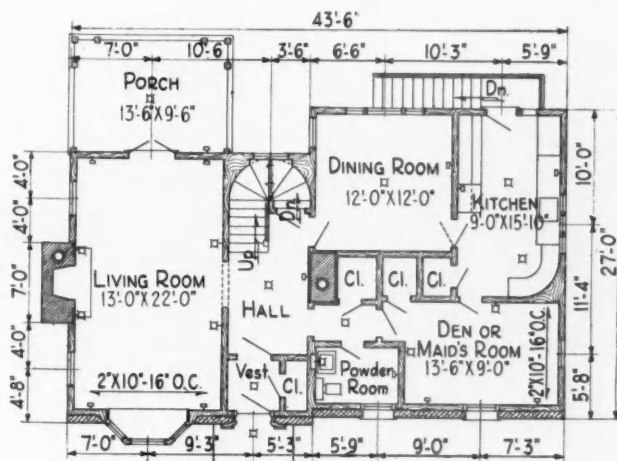
RIGHT ELEVATION



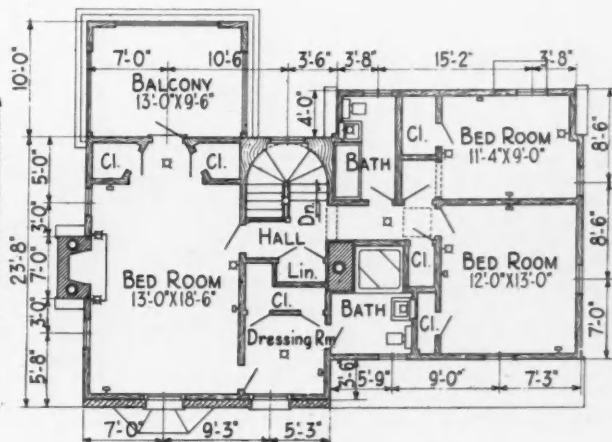
REAR ELEVATION



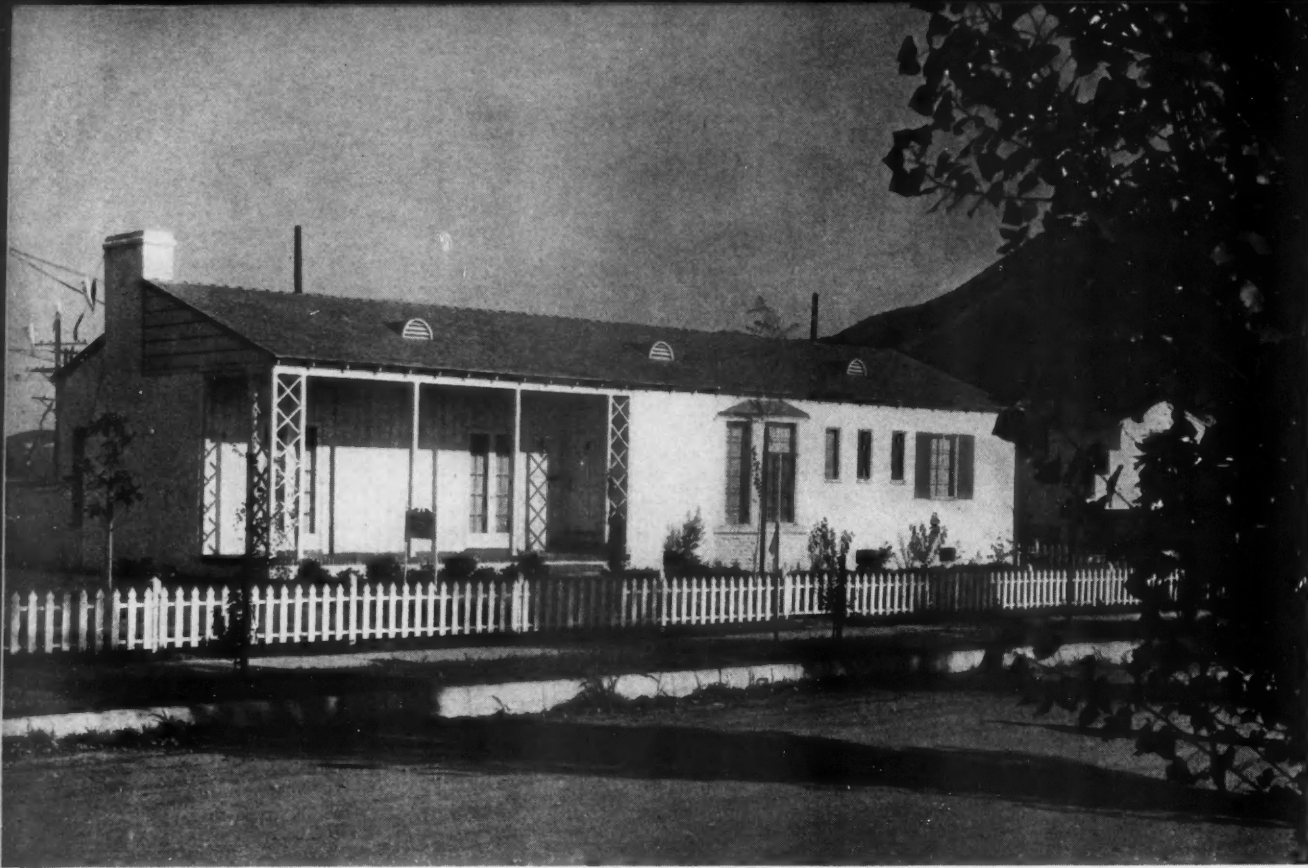
LEFT ELEVATION



FIRST FLOOR PLAN



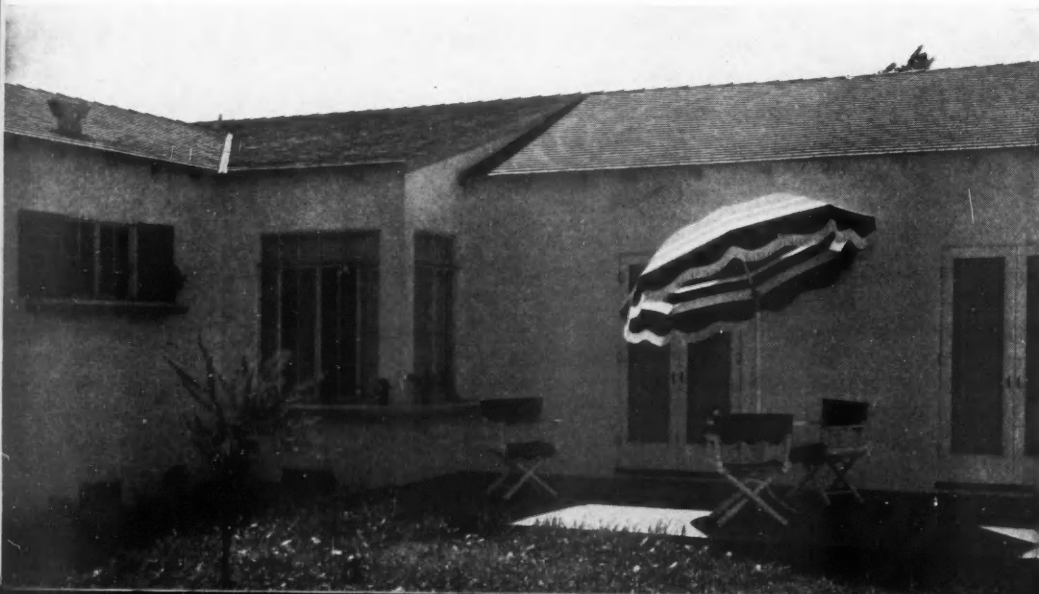
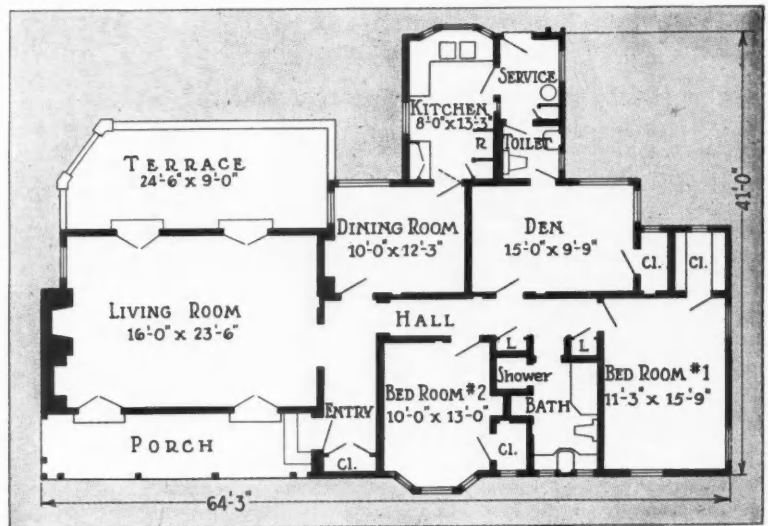
SECOND FLOOR PLAN



## CALIFORNIA-MONTEREY STYLE ELECTRIC HOME

**Architect Homer D. Rice, Los Angeles, Designer and Builder**

THIS six-room all-electric home with detached two-car garage is constructed to comply with FHA 20-year loan requirements. For several months prior to the owners' occupancy it served as a demonstration home, being completely furnished and electrically equipped. In architecture it represents a combination of early California or California-Monterey with modern touches in exterior and interior to make the house adaptable for furnishings of modern type.



LEFT: Rear view of house showing brick terrace off living room with access through double French doors. The corner window is in the dining room.

### CONSTRUCTION FEATURES

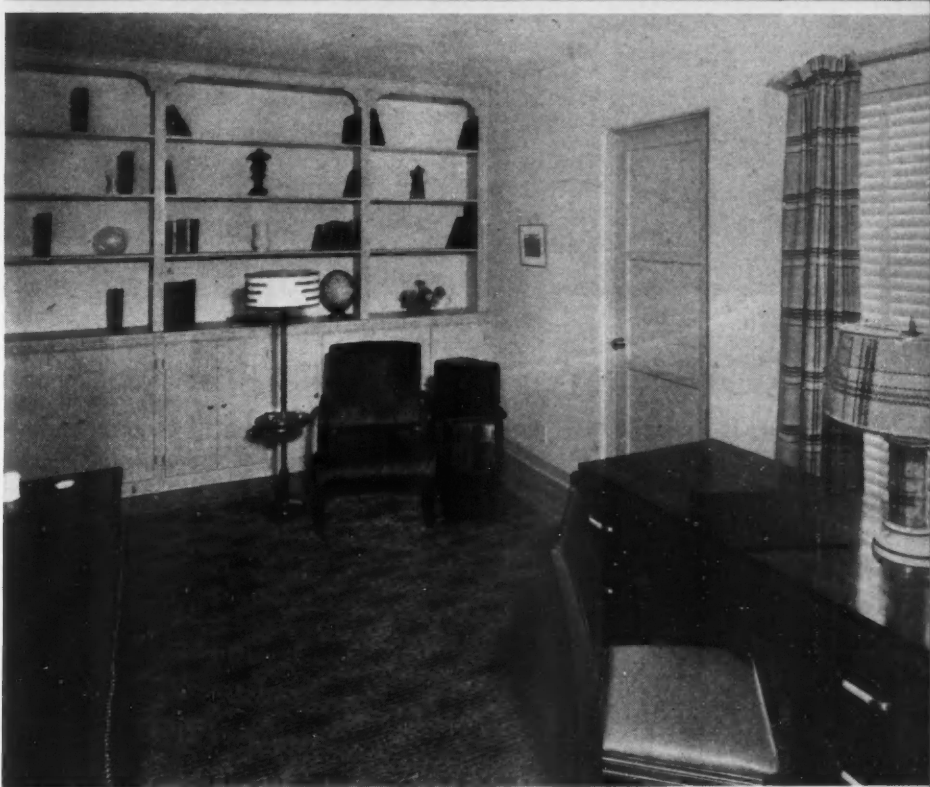
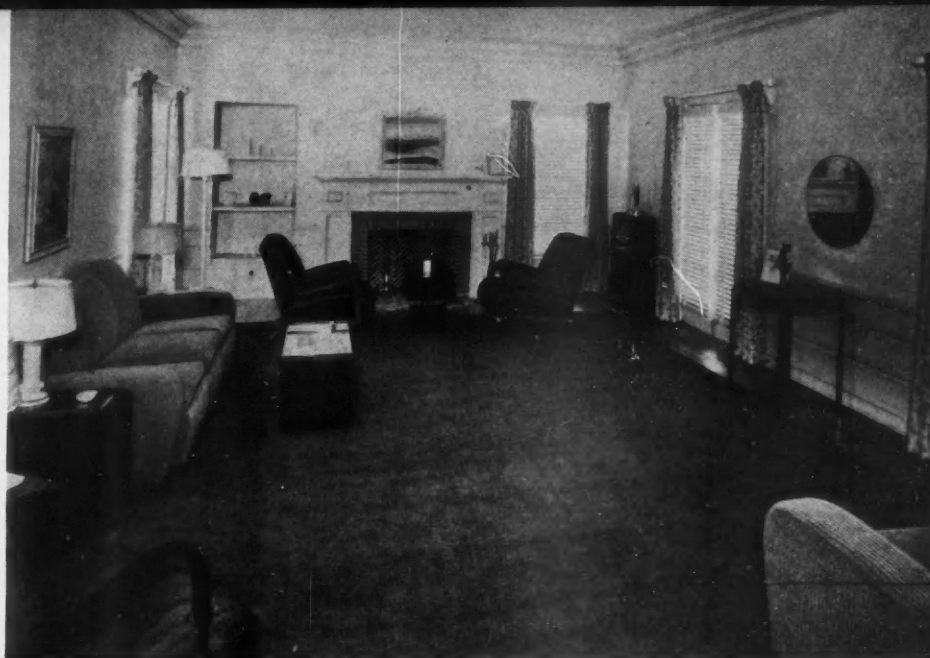
WOOD frame, of grademarked lumber. White portland cement stucco exterior and continuous concrete footings under interior as well as exterior walls. Vertical redwood sheathing around front porch with wooden posts and lattice work detail. Front porch and rear terrace are of red concrete with red brick edging and brick steps. Around the grounds is a low redwood picket fence painted white. The roof is of clear cedar shingles also painted white with 40 gallons of white lead being sprayed on to reduce summer temperature and reflect the rays of the sun, and insulated with Silvercote, a reflective type of insulation as a protection against the heat. The interior is of stucco and plaster finish applied over griplath plaster board. Floors throughout are of oak, planked and pegged. A parquet floor in the dining room eliminates the use of a rug. Ariston steel sash is used throughout with through-screen crank operators and automatic locking device. All windows have weatherstripping and flat metal frame screens with copper bronze mesh. Door hardware is of the Schlage button type.

AMPLE closet space is provided for every room, an interesting built-in feature being a wardrobe guest closet with sliding doors off the entry hall. Closets are cedar lined and equipped with Dura steel flush type shoe racks.

Bathroom tilework and wainscoting are in colors derived from the two bedrooms, dusty pink and powder blue. Hall-mac chromium bathroom accessories are used (towel bars, soap dishes, etc.). The shower has a Modern Metal Arts glass door with chrome frame. Colored Standard plumbing fixtures with brass fittings in an octagon design and a recessed type of pullman lavatory built into a combined dressing table and vanity. There is an all-metal medicine cabinet with plate glass mirror.

Each room with exception of bathroom and kitchen is provided with an individual wall type Thermador electric heating unit of the fan type arranged for circulation of warm or cold air. All wall radiators are finished to match the color scheme of the individual room.

RIGHT, top to bottom: Large living room has cornice detail and 30-inch dado of Douglas fir; fireplace has herringbone lined firebox of shingle brick. The den can serve as a combination library, studio, or extra bedroom. Kitchen is equipped with tile top cupboards, inlaid linoleum and a built-in Roberts ant-proof revolving cooler.





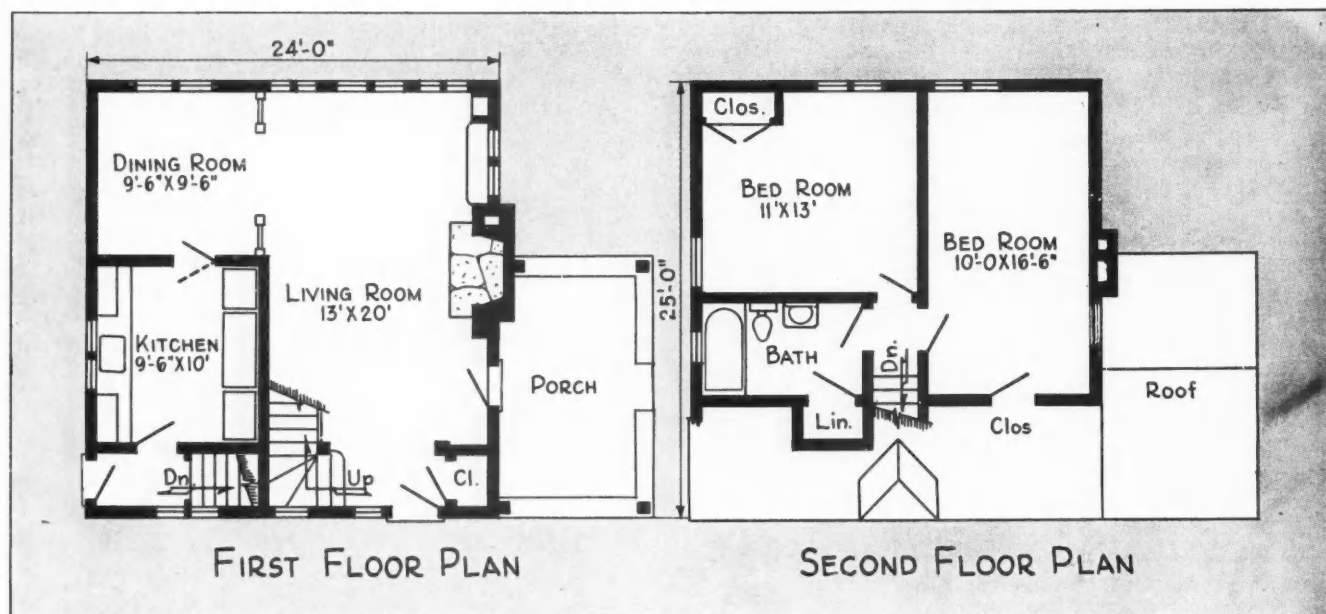
## COUNTRY HOMESTEAD IN PROVINCIAL STYLE

**Built by Smith & Dawson, Chicago,  
near Mt. Prospect, Illinois**

Cost Key is 1.258—96—576—25—25—11

THIS LOW COST house of white painted brick was recently opened for inspection by Smith and Dawson, Chicago builders, as a demonstration home on their 200-acre homestead development near Mt. Prospect, Ill. It has five rooms and bath arranged so as to allow for construction economy.

Walls in the living room are of knotty pine; the large fireplace is equipped with a circulating heat unit. Numerous windows in this room are grouped with the principal outlook to the rear; the bath is located above the kitchen at the front of the house. Oak floors, Celotex insulation and three-coat plaster are featured. A full basement provides for the furnace, fuel storage and electric well pump, as well as space for subsistence crops.



FROM the trim front elevation at the right, one would not judge that there are six rooms, two and a half baths and a two-car garage in this well planned Colonial home; a better idea of its size is shown in the view below. Face brick in autumn tints, ivory trim and good detailing combine in a pleasing exterior.



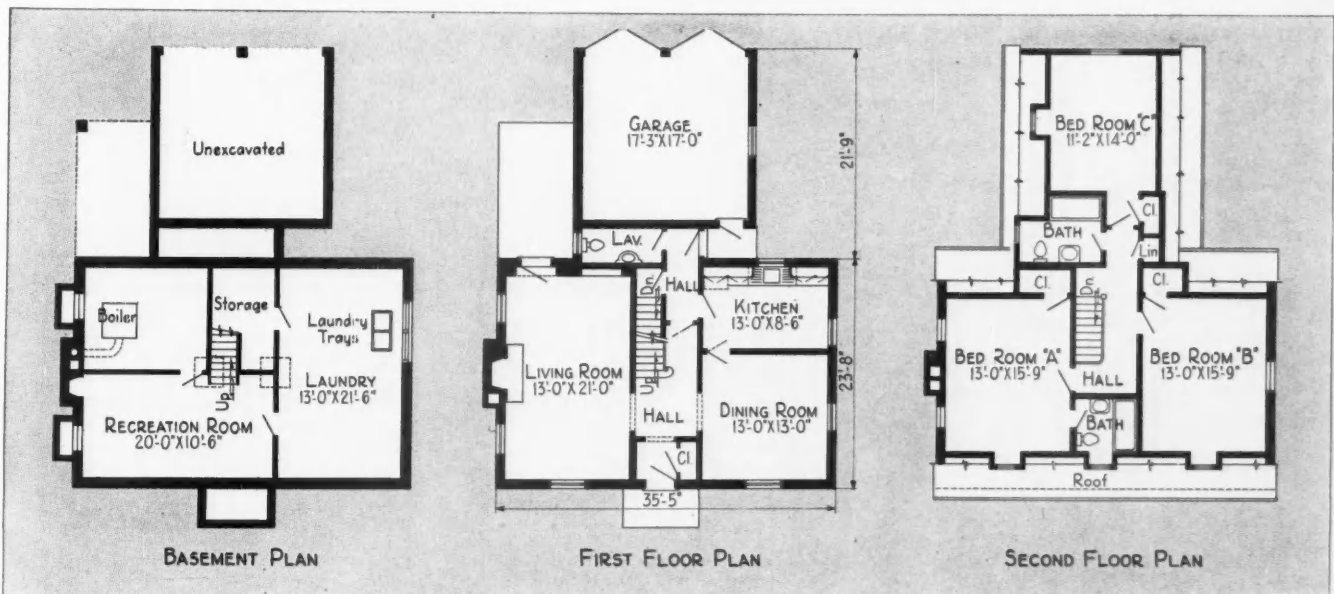
## TRIM FACE-BRICK VIRGINIA COLONIAL

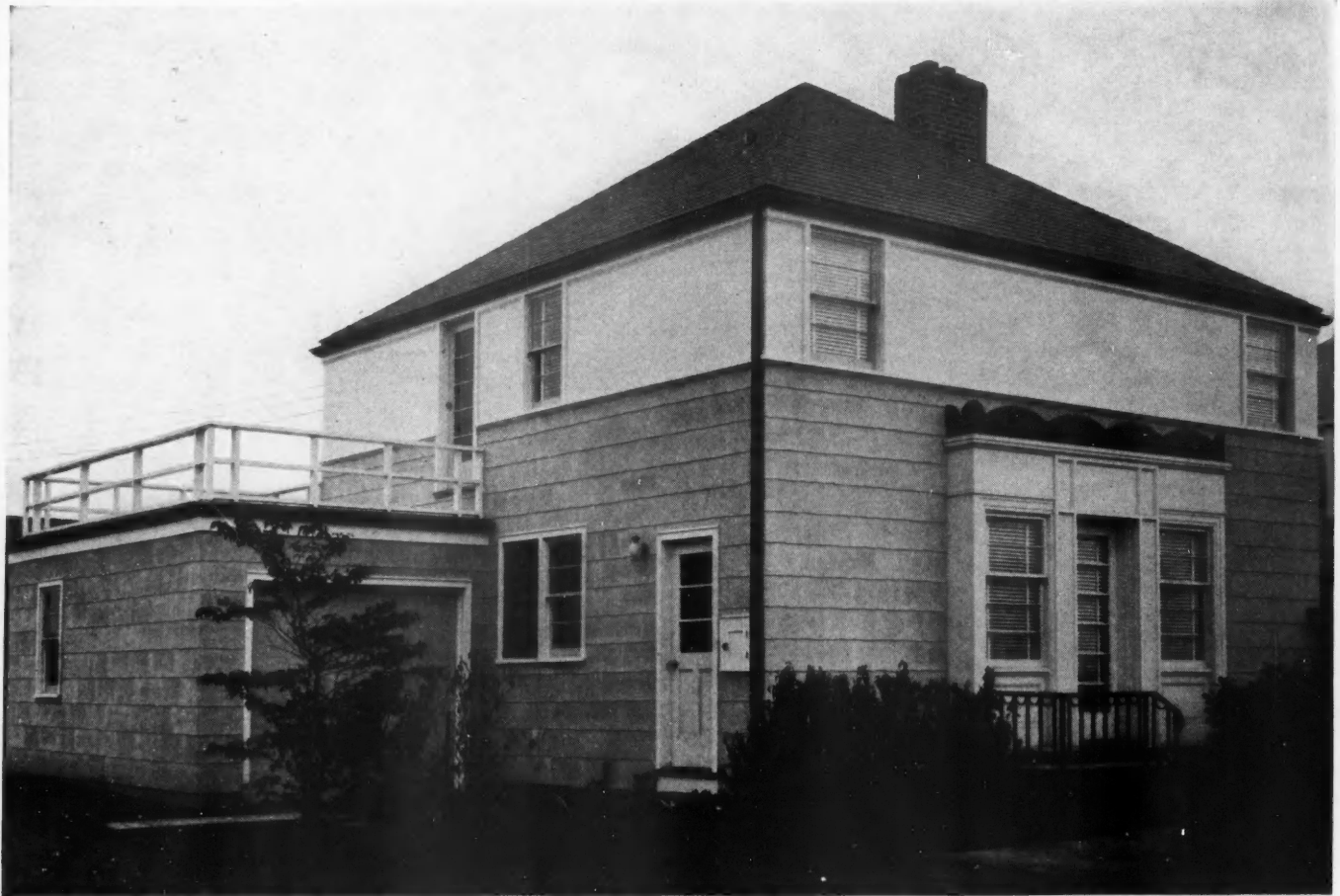
**Hurst Brothers, Chicago,  
Designers and Builders**

Cost Key is 2.124-162-936-40-25-20

THE builders, Hurst Brothers, have given the name "Equi-Temp" home to this design as special consideration was given to heating. Balsam-Wool insulation, double thick in ceilings, was used throughout, American Radiator De Luxe Model gas-fired conditioner provides for temperature control, windows and doors are weather-stripped.

Other quality features include Hess all-metal medicine cabinets, numerous electric outlets, Pacific Breeze two-way kitchen ventilating fan, bronze screens, Cop-R-Loy metal work, wood-burning fireplaces, package and milk receiver and Congoleum inlaid linoleum in kitchen and 3-coat washable paint and enamel wall surfaces.





A MODERN effect is achieved through use of Cedar-Grain asbestos siding shingles with an asbestos Flexboard panel above.

## TRIPLE INSULATED MODERN MODEL HOME

### Unusual Design Featured in Johns-Manville Home in Kenmore, N. Y.; Kitchen Placed at Front

**R. C. Dewey & Co., Builders**

**J. DeForest, Architect**

THE modern model home above is one of some sixty Triple-Insulated demonstration homes built by local contractors and lumber dealers in cooperation with the Johns-Manville Company. A modern effect is given to this house through use of modern materials, but the basic proportions are similar to many traditional type houses.

Floor plan of the Kenmore model home is very unusual in that the living quarters face the rear to obtain quiet

and better exposure. The study or guest room and lavatory off the hall is a good feature and is an unusual addition to so small a house. The dimensions of the main part, exclusive of garage, are only 27 feet 6 by 28 feet.

The Johns-Manville model home program is handled as a local proposition and is carried out by local builders and lumber dealers. The price range of the houses varies from \$5750 to \$25,000. The houses are structurally approved by J-M and feature use of Cedar-Grain siding shingles, asbestos roofing shingles, rock wool home insulation in walls and attic ceiling, and Steeltex plaster base. In addition, many of the homes feature other J-M products, such as asbestos Flexboard and wainscoting, insulation board, tile, bevel plank and decorative materials. The houses are widely scattered geographically and have attracted wide attention from prospective home buyers.





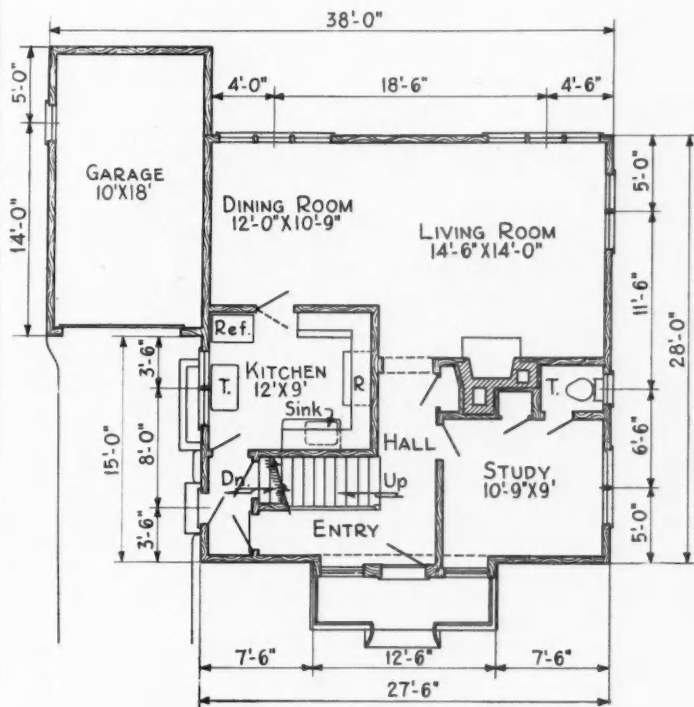
RIGHT ELEVATION

FRONT ELEVATION

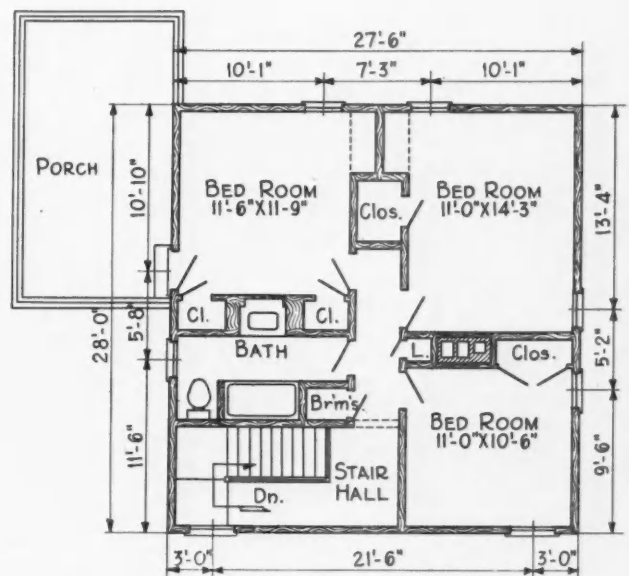


LEFT ELEVATION

REAR ELEVATION



FIRST FLOOR PLAN

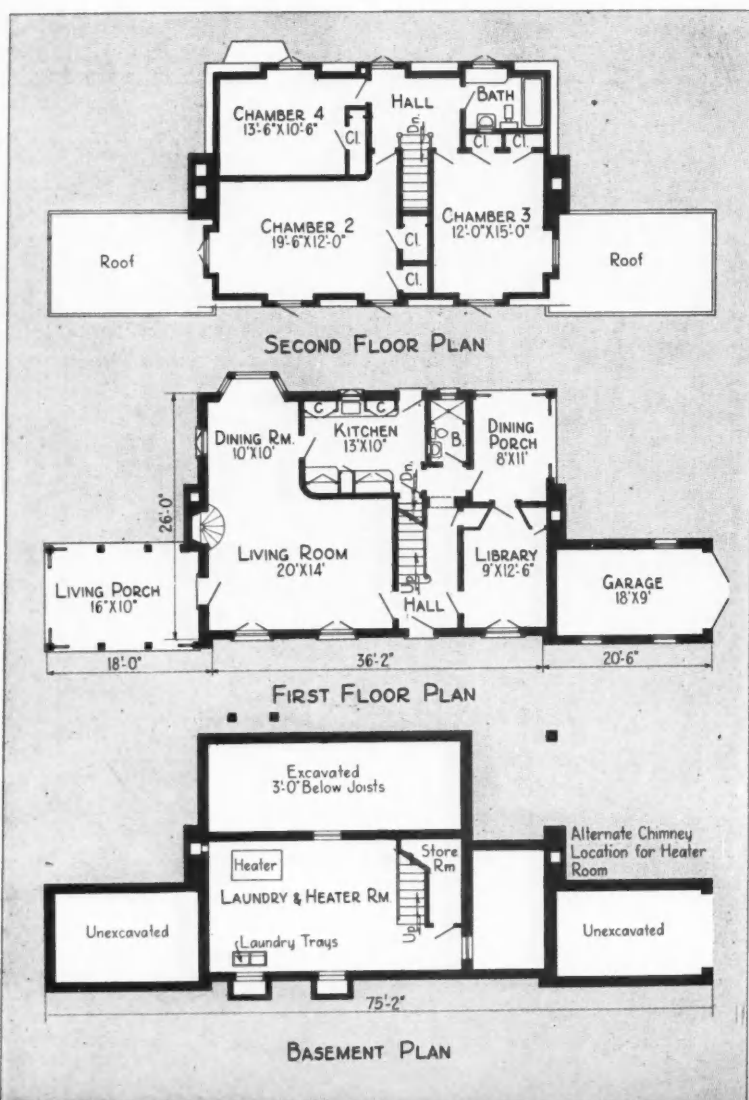


SECOND FLOOR PLAN

DETAILED plans show interesting arrangement of the Kenmore, N. Y., model home. Cost Key is 1.725-144-782-34-23-12



## LARGE APPEARANCE AT MEDIUM PRICE



**Campbell Realty Co., Beverly Hills, Chicago, Builder**  
**Jerome Robert Cerny, Inc., Lake Forest, Ill., Architect**

TRADITIONAL French Provincial exterior design and modern interior arrangement are combined in this house which is one of the first units in the construction program planned by Campbell Realty Company for the Beverly Hills section of Chicago. The architect, J. R. Cerny, has created an appearance of large size, the front being 75 feet wide, and distinctive character so that while in the medium price field, the design is in keeping with the neighborhood. Exterior detailing is particularly well handled.

Interior layout gives a spaciousness to the rooms but is also most efficient. The large combination living-dining room has an interesting bay treatment at one end and a living porch at the side; a screened dining porch for summer use is handy to kitchen and can be reached through the small service hall or library and guest room. The second floor contains three bedrooms, bath and ample closet space; the hall is well lighted and not too small.

Custom-built features include colored slate roof, Celotex and rock wool insulation, Lightolier fixtures and Lennox oil-fired winter conditioning.



INVITING LATTICE  
ENTRANCE AND SEAT

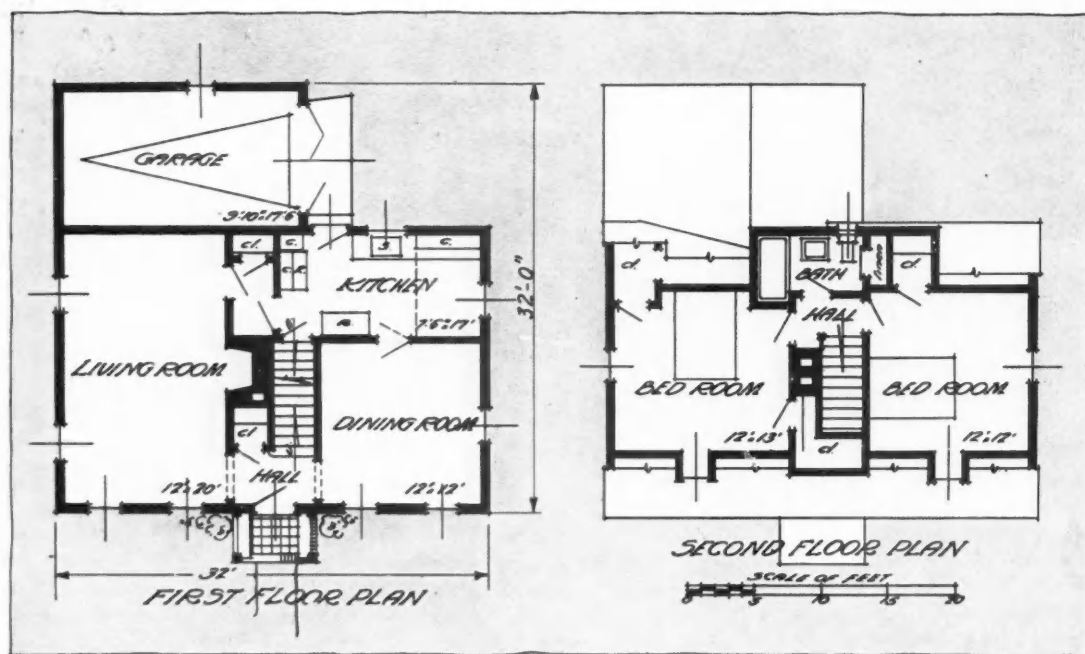
THIS COLONIAL ENTRANCE by Architect R. C. Hunter of New York City has a special appeal for many people, with its simple arched canopy and wooden seats. Another picture of the house, together with floor plans, is shown on the next page.



## FIVE ROOM COLONIAL ATTACHED GARAGE

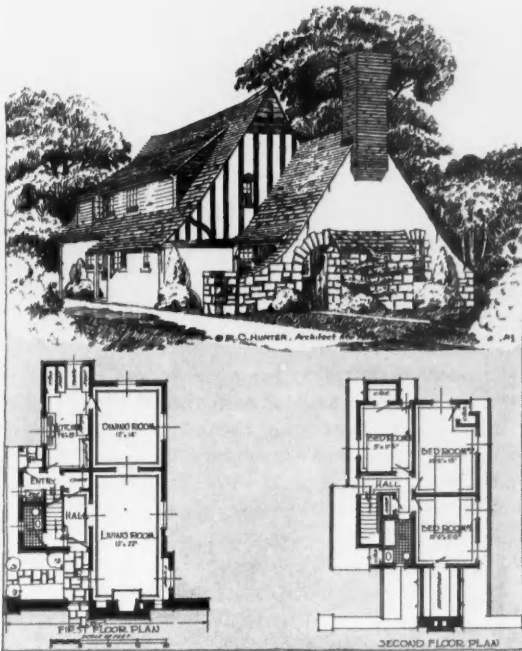
Cost Key is 1.502-128-688-30-18-15

THE standard center-hall Colonial arrangement of this little Rochester house continues to be one of the most popular ways of arranging the interior. It was designed by Architect R. C. Hunter of New York City. The 12 by 20 foot living room is spacious. A lavatory could be inserted between it and the kitchen, without a second soil pipe. This is a design that has much charm and practical convenience.

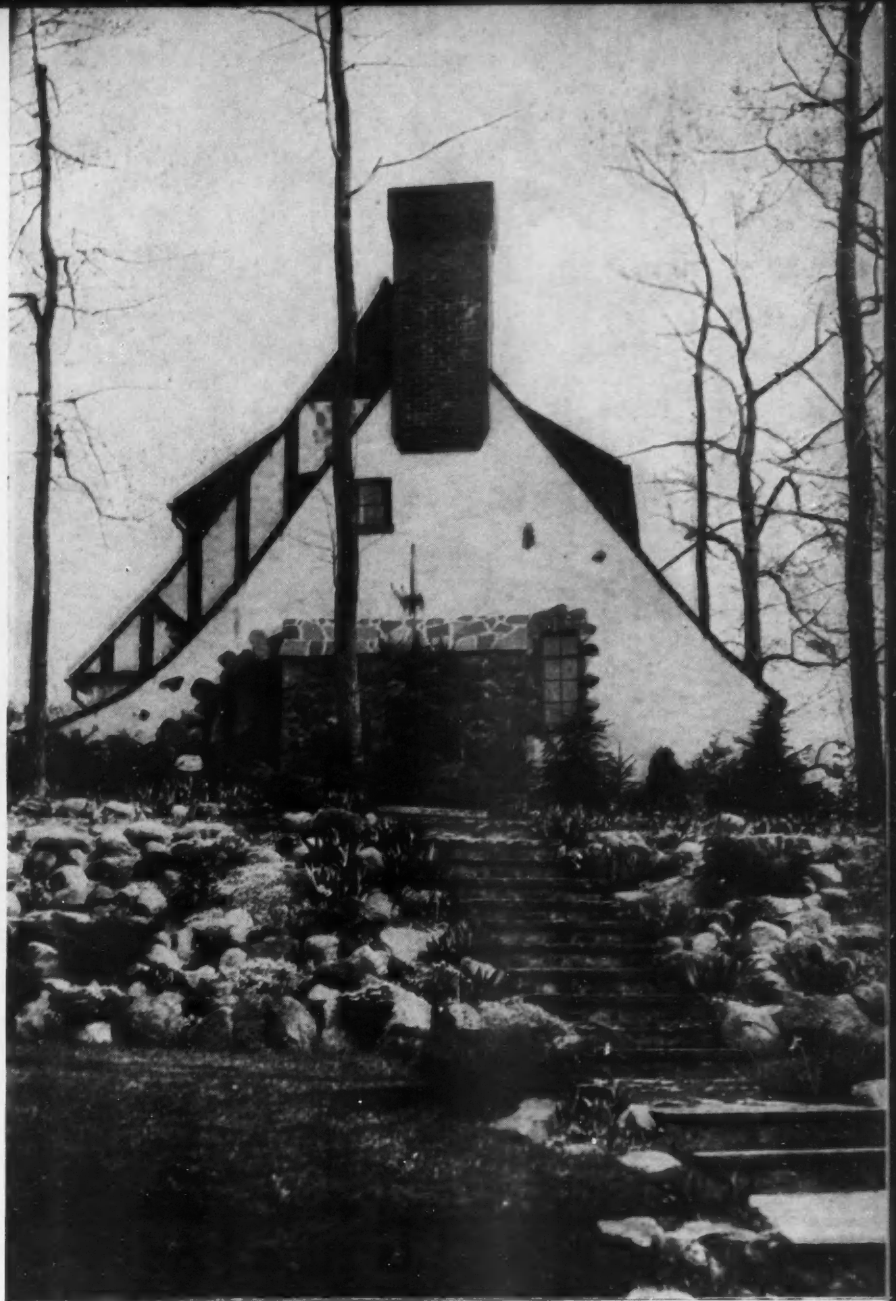


# PICTURESQUE ENGLISH GABLES

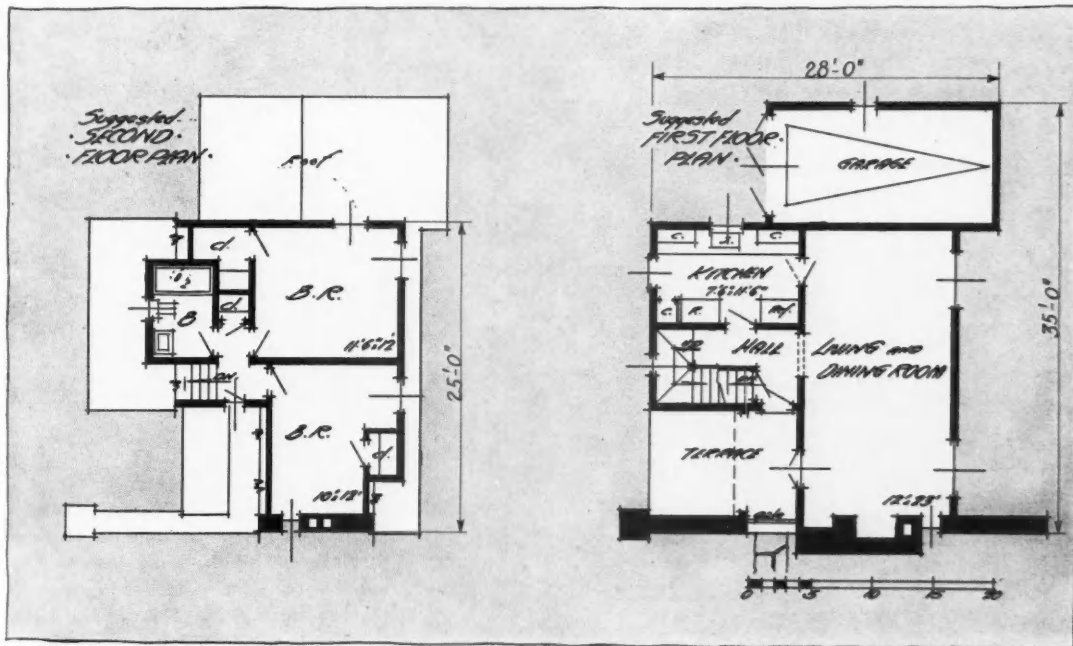
ARCHITECT R. C. Hunter has created a most interesting English gabled house in this design. It was first built as a six-room house, according to the plans directly below. Architect Hunter has since redesigned the plan for a smaller four-room house with attached garage, plans for which are shown at the bottom of this page.



Cost Key as above is 1.640-140-846-37-22-19



Cost Key of 4-Room Arrangement Shown in Photo and in plans below is 1.294-126-496-23-22-13



THIS suggested floor plan for the house above features one large and attractive combination living and dining room with a large fireplace and French doors leading to a terrace. It would make an interesting small home for an artist or a professional person with a small family.



## 5-ROOM COTTAGE FOR SLOPING SITE

**At Mountain View, N. J.**

**Robert Lees, Builder**

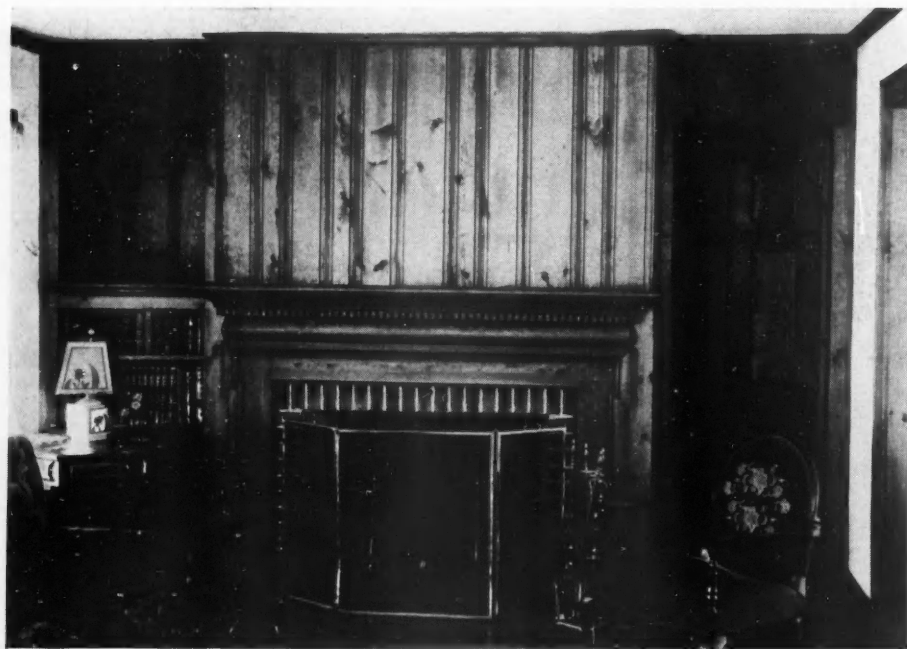
**Carl H. Weckers, Architect**

Cost Key is 1.246—152  
—900—39—17—13

THIS attractive hillside home snugly fits the building site and takes advantage of the open view in its arrangement. Low roof lines, massive stone chimney, wide horizontal siding and detailing are in harmony with the design. Plans and elevations on the opposite page indicate room arrangement and show exterior features.

The attached garage entrance for easy access faces the street; a side door leads into the house through the living room. Good sized living porch off the dining room overlooks the hillside and the heater and recreation room directly below it opens out at grade level through a service door shown in the right elevation. The first floor hall connects kitchen, bath, bedrooms and living room.

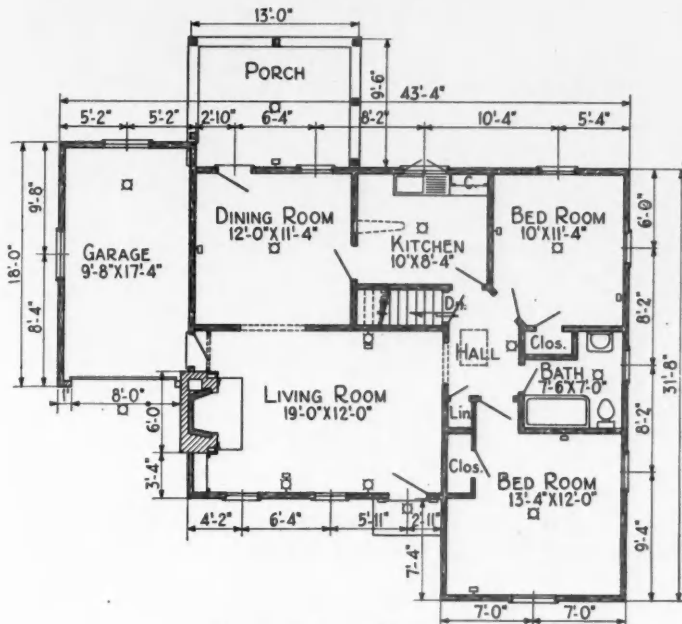
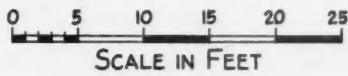
Specifications called for the use of 10-inch concrete foundations, Carey asphalt slate shingles, 10-inch cedar siding, oak floors, tiled bath, Reynolds Metallation, brass piping and steam heating system fired with a Gilbarco oil burner. Cubic contents: 20,500 cubic feet.



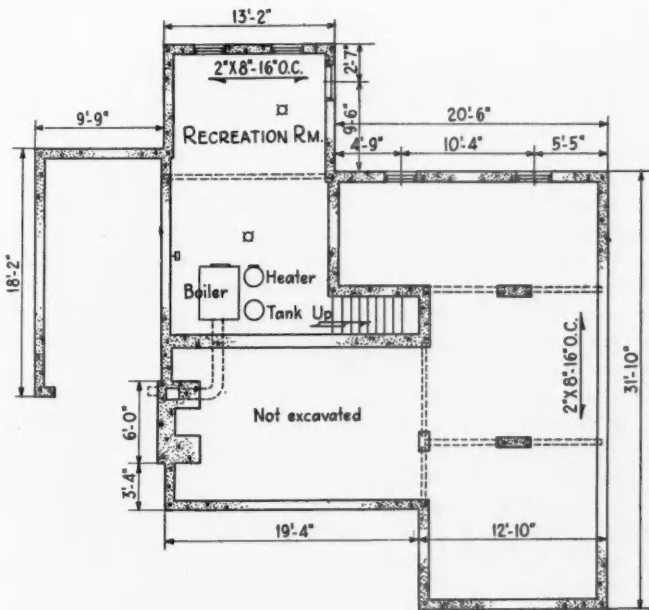
**KNOTTY** pine random width planking, mantel and built-in bookshelves give the fireplace end of the living room a cozy appearance. The attached garage is reached through the door at the right.

### Construction Details of the December House of the Month

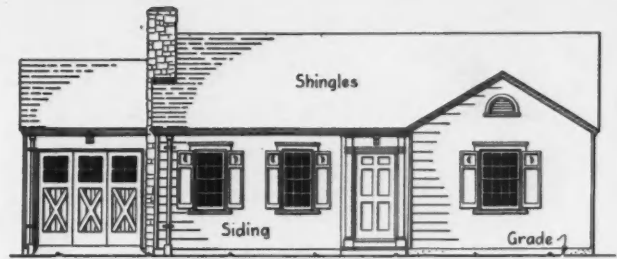
Built at Mountain View, N.J.  
 Carl H. Weckers, Architect  
 Robert Lees, Builder



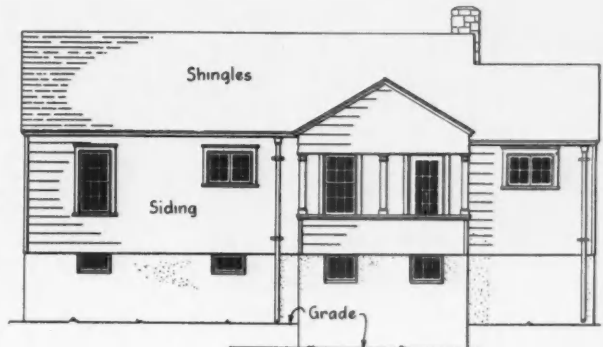
FIRST FLOOR PLAN



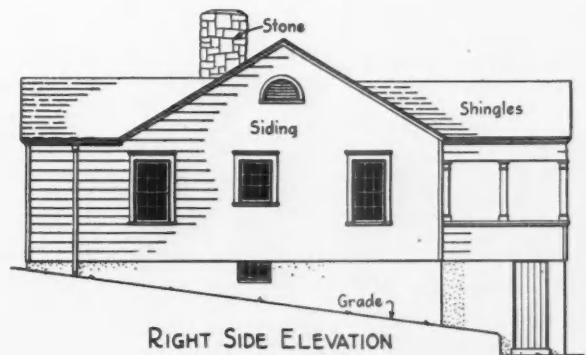
BASEMENT PLAN



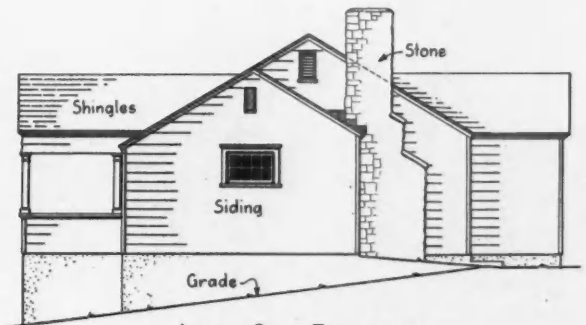
FRONT ELEVATION



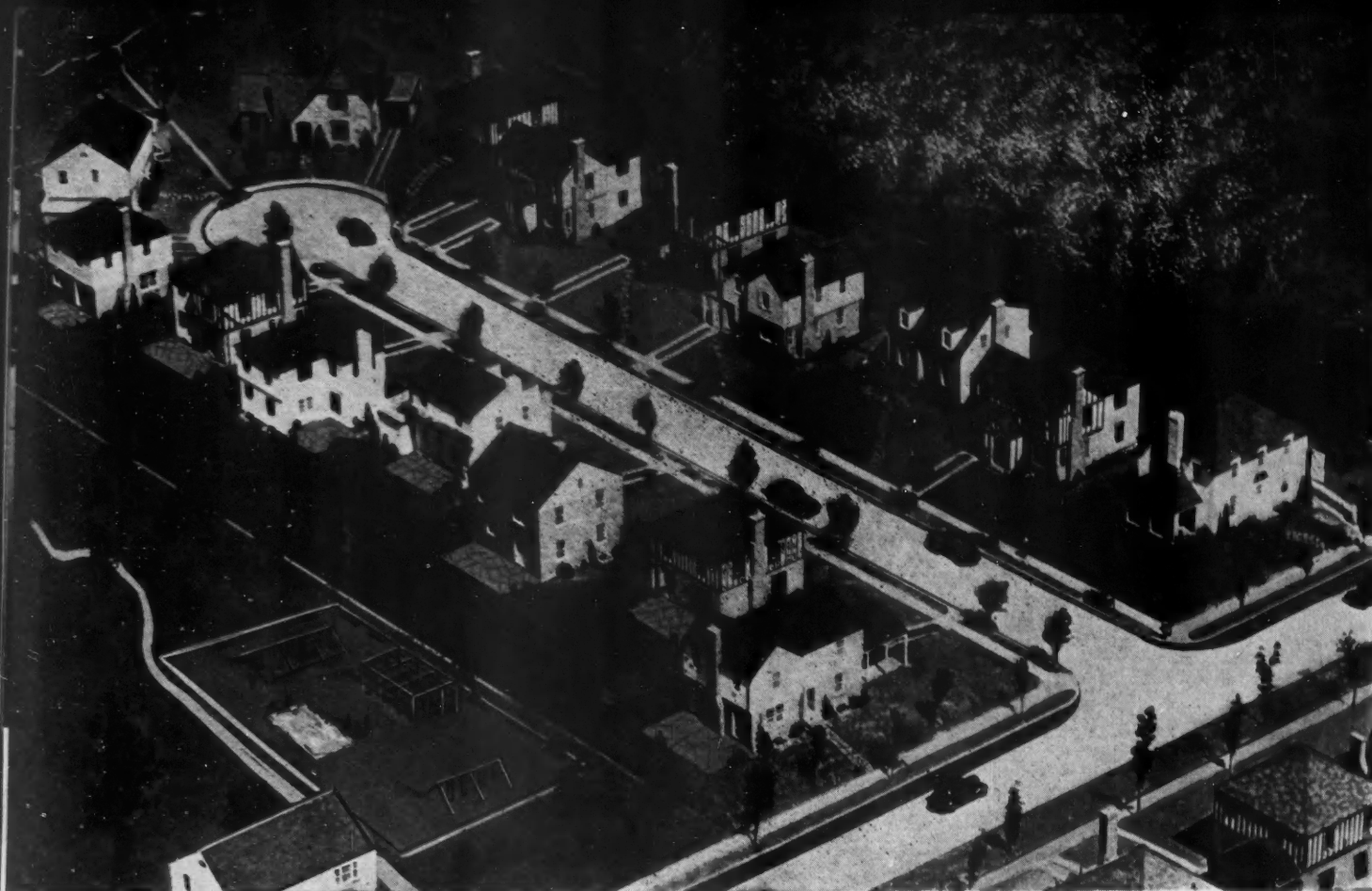
REAR ELEVATION



RIGHT SIDE ELEVATION

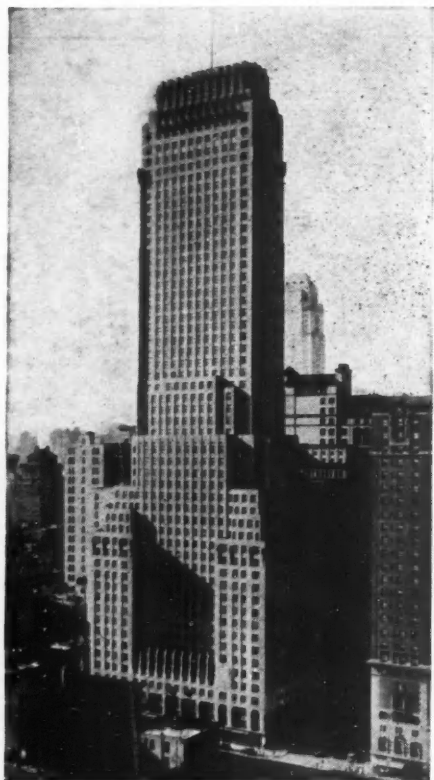


LEFT SIDE ELEVATION



AIRPLANE view of first group of Chanin houses built around dead-end street.

## SKYSCRAPER Builder Brings New



FAMOUS 56-story Chanin Building in Manhattan

**A**SPECTACULAR new entrant into the home-building field on Long Island is Irwin S. Chanin, head of the Chanin Organization and builder of many large New York buildings, including the 56-story Chanin Building, 30-story Century and Majestic Apartments, the original Roxy Theatre, and many legitimate and motion picture theatres.

Builder Chanin has embarked upon an 1800-home development on the Sunrise Highway at Valley Stream, Long Island, described as "Green Acres, the planned residential park community." The first group of 24 houses was completed in September and a second group of 30 houses is now in course of construction.

Chanin is bringing an entirely new note to the housing field. "We are not building houses but homes," he says. "Our conception of a home takes in more than a house and lot. It is our idea that the builder of today must provide a setting for his houses so planned that a higher standard of community life than has been generally known in the past can be provided at the outset and maintained through the years. We are very hopeful that the things we are trying to do will start a trend toward other enterprises of similar ideals. In the short time Green Acres has been open it has attracted a vast amount of attention from housing experts as well as from the lay public.

"In Green Acres we have sought to make available to the family of moderate means as many as possible of the things that heretofore have been available only in \$15,000 to \$25,000 homes. Our price range is \$6490 to \$10,000 for houses with attached garages, oil burners, wood-burning fireplaces, complete insulation, scientific kitchens and landscaping. Of our first 24 sample houses of 5 rooms and 6 rooms the majority are priced below \$8,000. This includes units with air-conditioning as well as all of the other features which I have mentioned.

Atop the 56-story Chanin building in the heart of Manhattan the





IRWIN S. CHANIN, builder of famous skyscrapers, who is developing new-type planned residential community near New York.

HOW THE 330-ACRE Chanin home project is laid out to reduce traffic hazards and provide park-like residential community. Eighty-five percent of houses are on dead-end streets. Parks and playgrounds are reached by foot paths and keep children away from traffic.



## Technique to HOMES

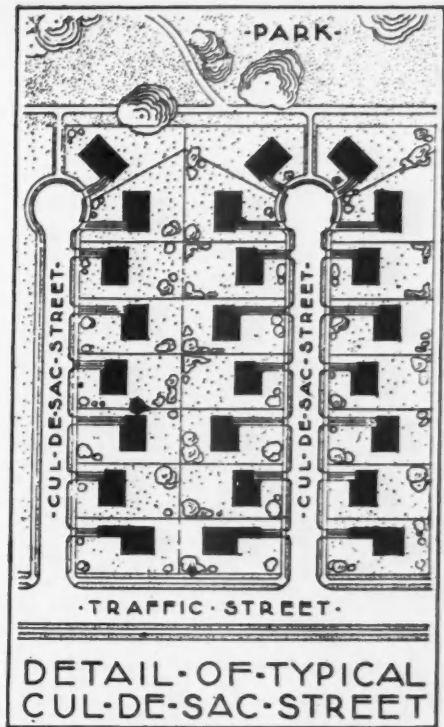
Chanin organization of architects and engineers have a huge colored map of Green Acres. Here one sees for the first time what a residential community planned for this fast-moving motor age may be like. The 330 acres are entirely enclosed by streams and other natural boundaries.

But more striking than this is the street arrangement which keeps out fast-moving traffic and places more than 85 percent of the homes on cul-de-sac or short "dead-end" streets. The result of this arrangement is quiet and safety—and above all, safety for children from motor traffic.

"The community plan which we have worked out for Green Acres has as its aim a complete, well-rounded life for those who will live there," declares Chanin. "There is provision for its own educational, civic and business centres. The most important of these is the educational centre, for which a 10-acre site has been set aside almost in the centre of the property so that it will serve equally all sections of the development. There is also provision for church sites.

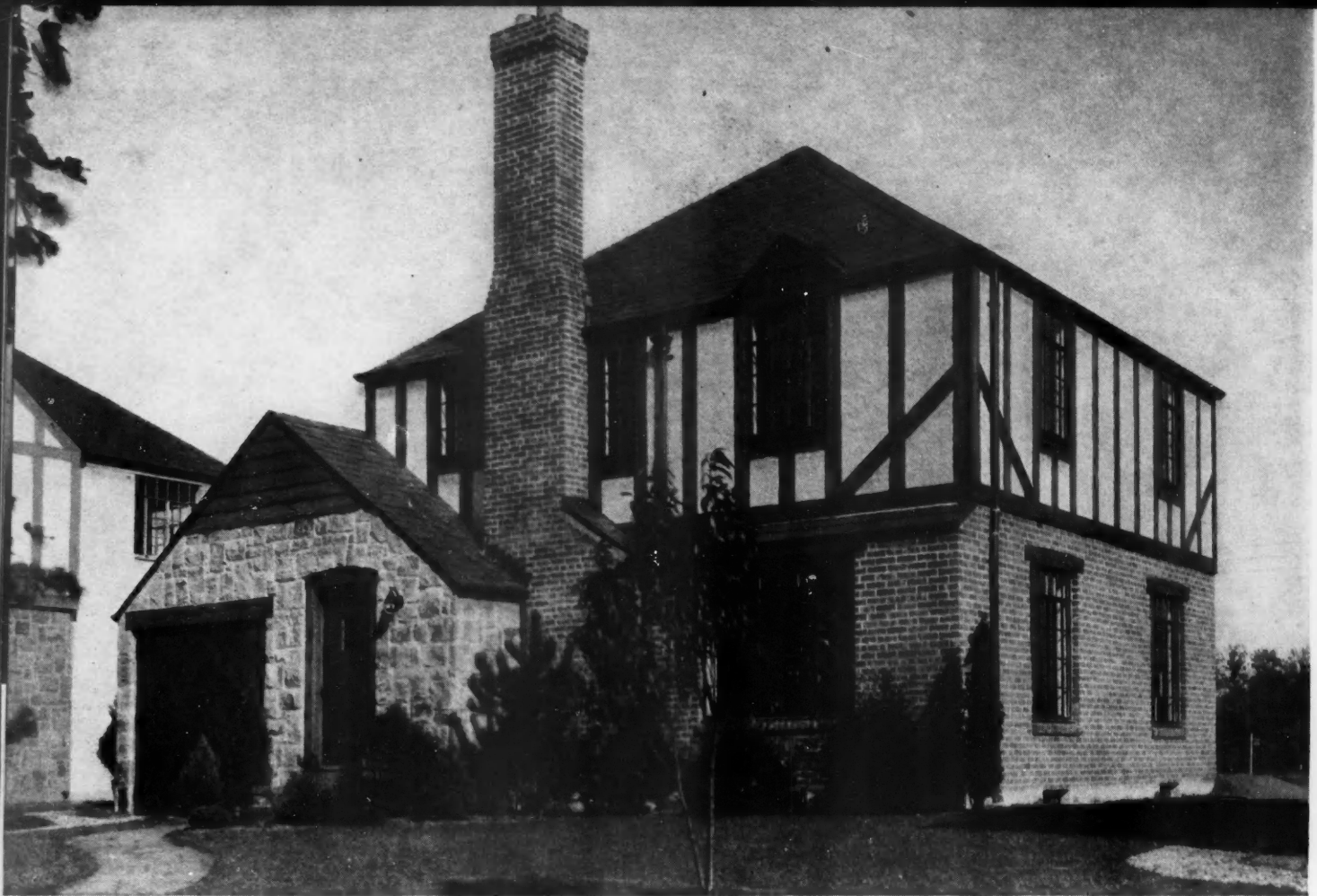
"Our street system is planned with an eye to the safety needs of the Motor Age. About 85 per cent of all houses will be situated on private cul-de-sac lanes of which there will be about 85. From the head of each of these private streets there is an entrance to the park system which will have a total length of about 7 miles. The park system also is designed for safety. It effectually separates foot traffic from automobile traffic and is so laid out that it forms the natural, convenient means of foot travel within the development. It will be possible for a child to travel from about 80 to 90 percent of all houses to the central school site without crossing more than one automobile street. A child can roller skate or ride a bicycle on a concrete walk through the park system for as much as a half mile without coming

(Continued to page 86)



CLOSE-UP detail of a typical cul-de-sac or dead-end street, with 16 houses grouped attractively around it. Staggering placement of houses gives a better exposure to each one. This street is safe from traffic dangers.

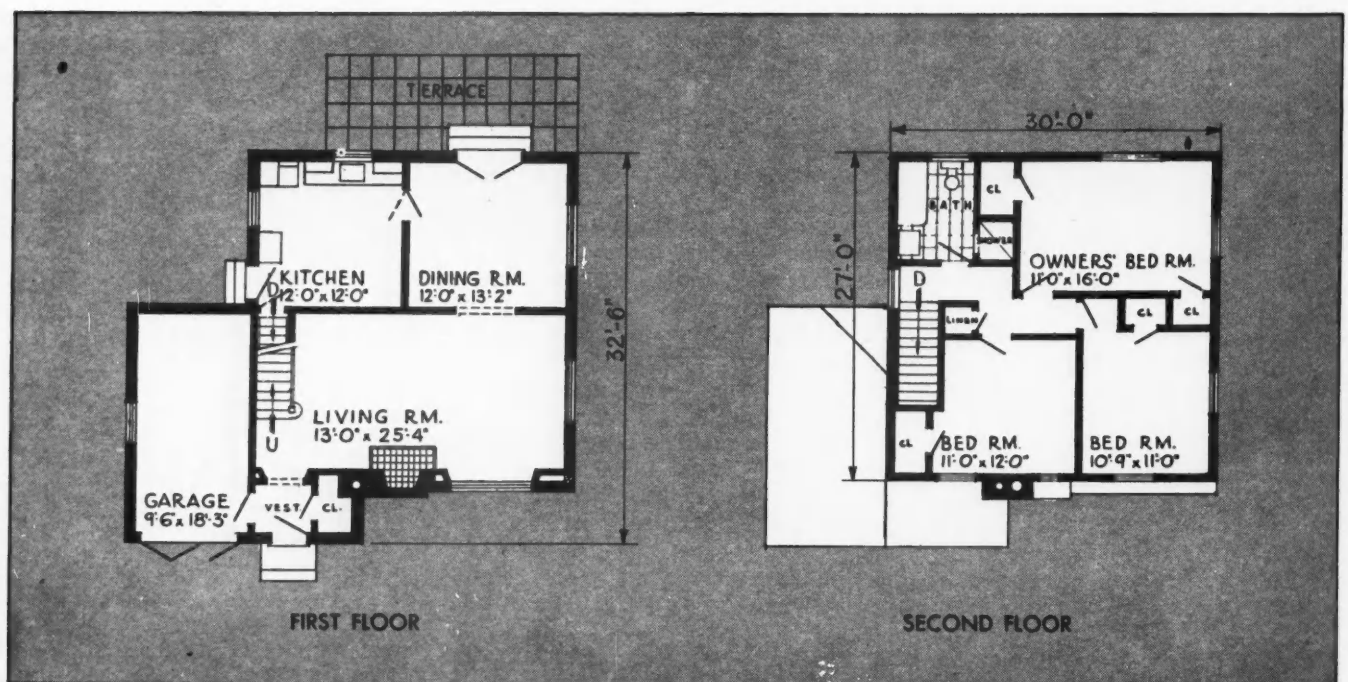
PICTURES AND FLOOR PLANS OF SIX POPULAR CHANIN-BUILT HOUSES ARE SHOWN IN DESIGN SECTION, IMMEDIATELY FOLLOWING



## GOOD TREATMENT OF GARAGE ENTRANCE

THE CHANIN-BUILT HOUSES in Green Acres, Long Island, are designed for the Motor Age. This applies not only to the street arrangement but to the houses themselves. In the "Exeter" design above, the garage entrance has been artistically handled and the arrangement is also practical. The English design is characterized by unusually large expanses of windows, allowing sunshine and good ventilation.

Cost Key is 1.664-145-810-36-23-15

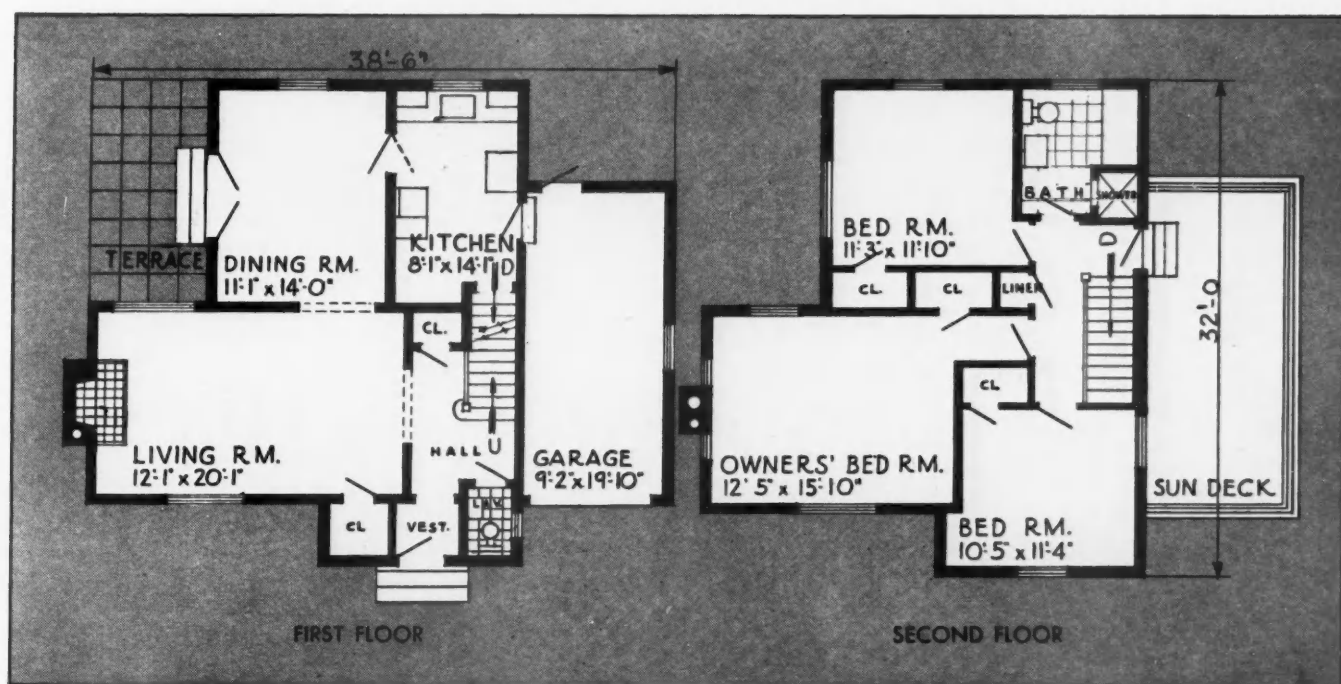




## COLONIAL HOME IN PIONEER STYLE

THE DESIGN OF THIS HOME is unusual, being of a Colonial style adapted to modern living. Bricks laid on edge form a part of the front exterior. The floor plan provides an unusually well lighted interior. Large French doors leading from the dining room upon a terrace which overlooks a park are a popular feature.

Cost Key is 1.568-141-757-33-23-14

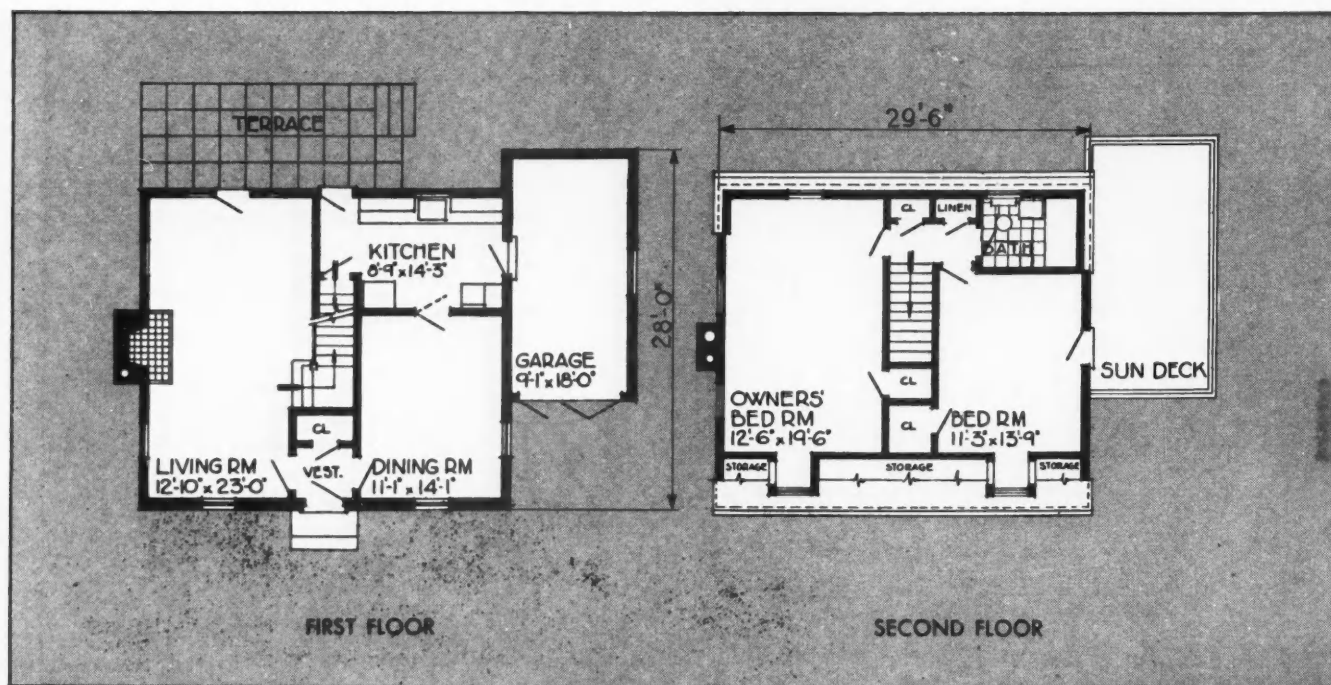




## CAPE COD SEA CAPTAIN'S HOME

THIS HOUSE IS A REPLICA of a sea captain's home on the Cape Cod Peninsula and has a sturdy, attractive appearance. The living room and master bedroom are unusually large for a small house. The manner in which the stairs are placed reduces waste space to a minimum. The top of the garage serves as a sun deck. House was designed and built by the Chanin Company in Green Acres.

Cost Key is 1.458-115-708-31-21-12

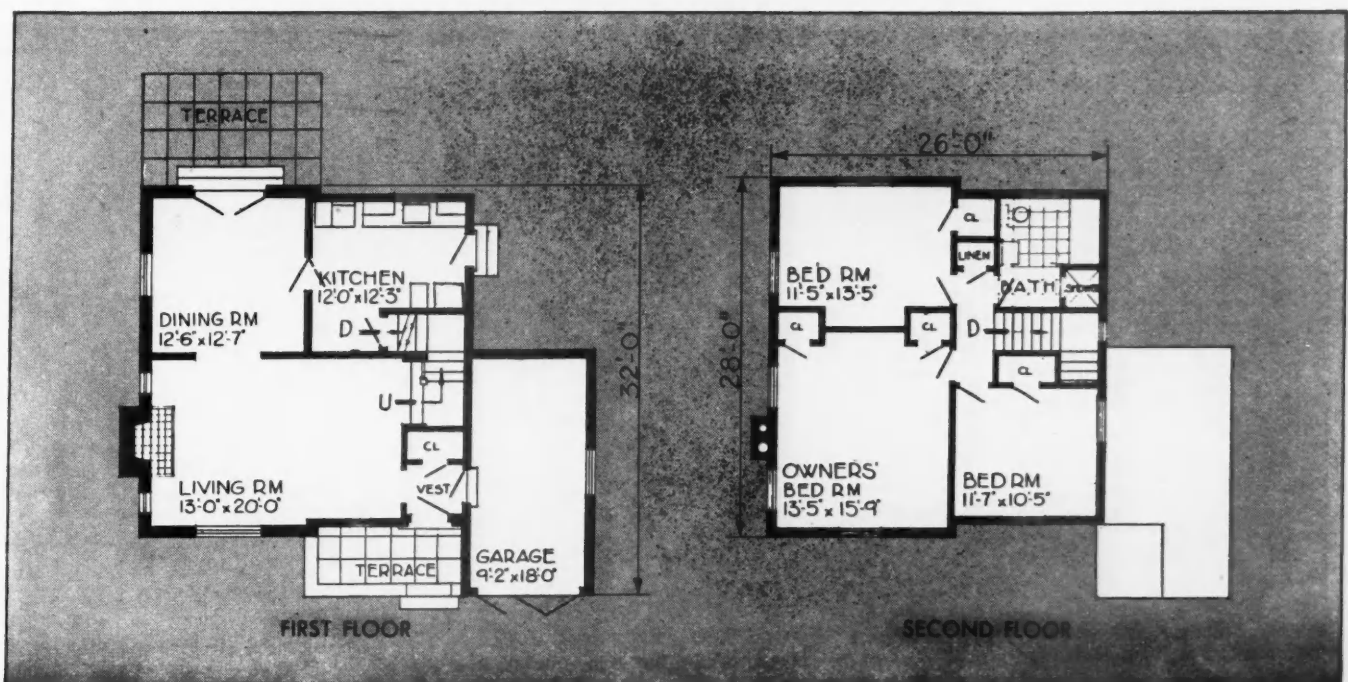




## LIKE AN ENGLISH COUNTRY-SIDE COTTAGE

BRICK, HALF TIMBER, STONE and stucco give an English character to this Green Acres house. There are terraces off both the front and rear, which illustrate the interesting fact that there are no back yards in the Chanin project. The entrance to the garage from the vestibule is well placed. Bathroom is large, fully tiled and features an enclosed shower stall with glass door.

Cost Key is 1.546-136-704-31-23-12

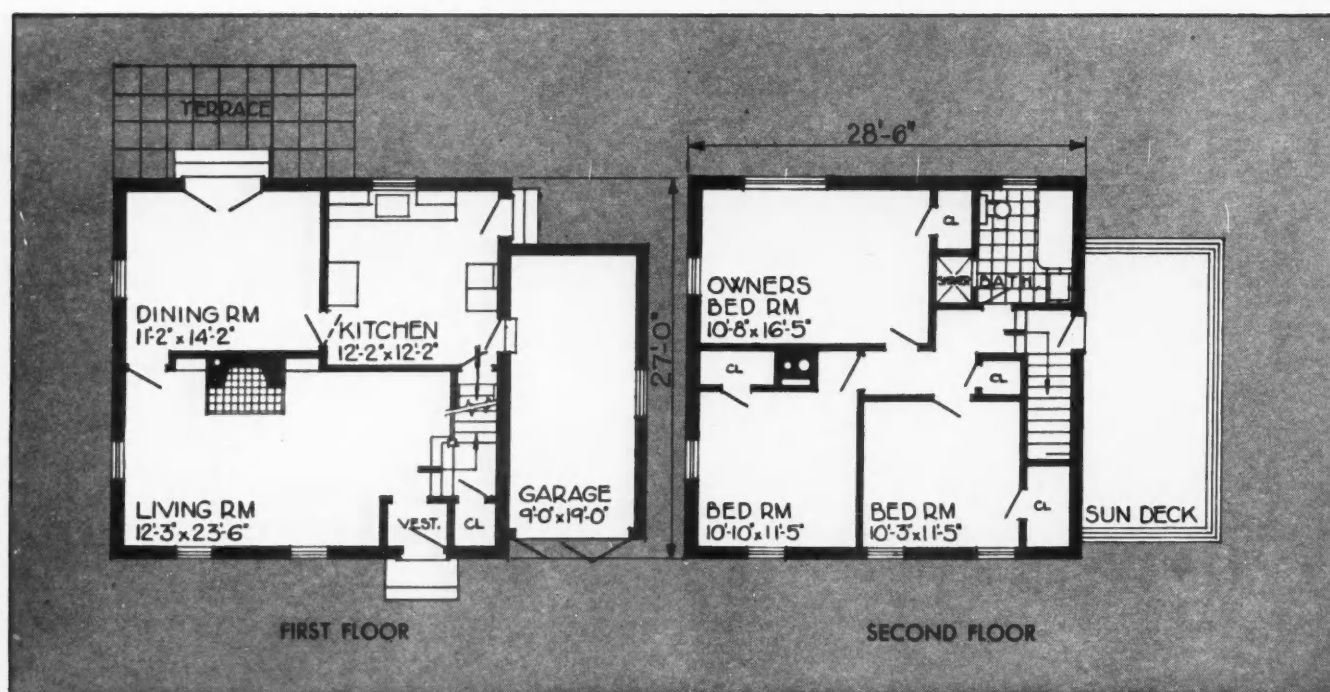




## COMPACT GEORGIAN DESIGN WITH DIGNITY

THERE IS CONSERVATIVE CHARM in this simple brick Georgian, built by the Chanin Organization at Green Acres, and opened as one of their model houses. The steam-heated garage has access to the kitchen. A wood-burning fireplace is provided, with built-in book shelves. Durable construction is featured, including brick walls; slate roof; copper flashing, gutters and leaders; brass plumbing.

Cost Key is 1.598-131-770-33-26-13

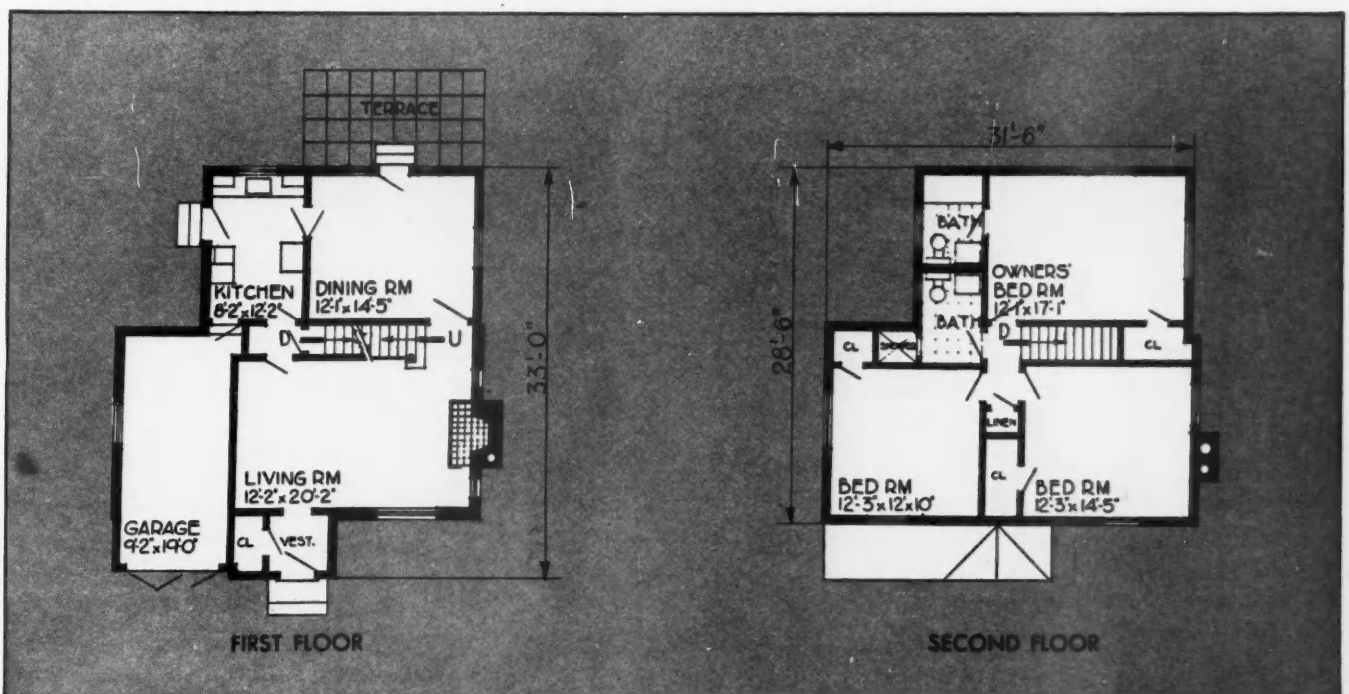




## 6 ROOMS, 2 BATHS—REMINISCENT OF "OLDE ENGLAND"

ONE OF THE NEW Chanin-built houses in Green Acres, Long Island, which has many fine features for a small house. The two baths are cleverly placed for economy. French doors lead to an attractive terrace off the dining room. The attached garage is a feature of all houses in Green Acres.

Cost Key is 1.693—129—684—30—24—14





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## 6-ROOM COLONIAL FOR THE COUNTRY—2 CAR GARAGE

**Arthur T. Remick, Architect**



SKILLFULLY designed for a country environment, this little Colonial house hugs the ground and establishes a most attractive note. It is located on an acre of land near Chappaqua, N. Y. Cubic contents are approximately 30,000 feet. The living room and dining room face a rambling brook.

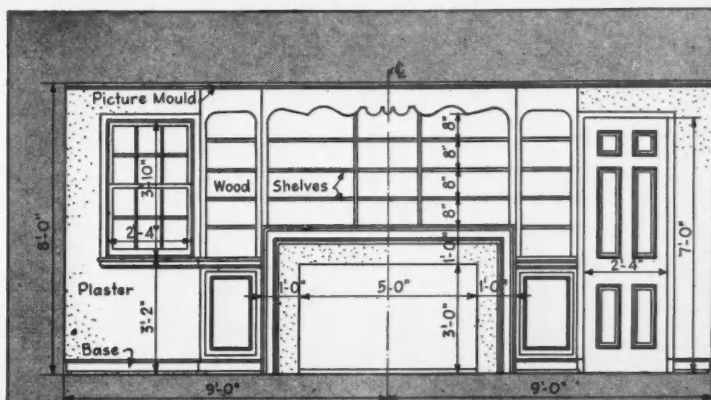
PROPORTIONS and details have been handled with great skill by Architect Remick. The specifications include metal lath, oak floors, Curtis woodwork, copper metal work, rock-wool insulation, brass pipe, Fitzgibbons steel boiler with ABC burner and Arco concealed radiation, Standard plumbing fixtures, Kitchen Maid cabinets.





## BOOKCASES OVER THE FIREPLACE

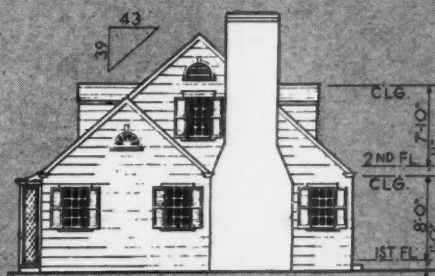
THE HUGE fireplace with bookcases above it, which is detailed at right, dominates the entire living room. Details below illustrate how expertly Architect Remick fitted this house into its country surroundings.



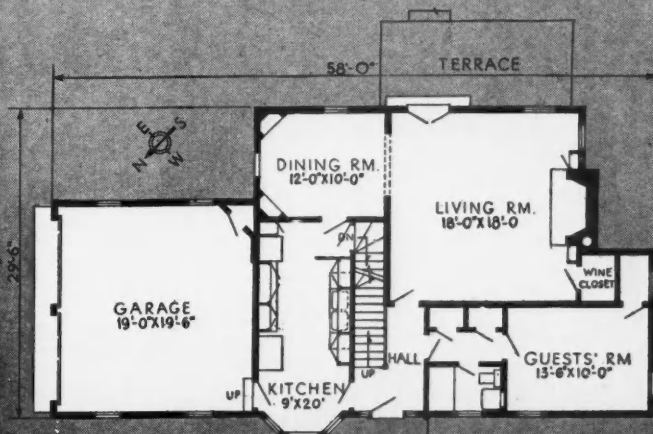
ELEVATION OF FIREPLACE



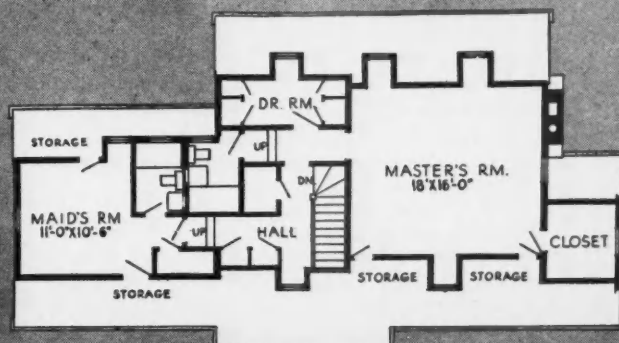
FRONT ELEVATION



SIDE ELEVATION



FIRST FLOOR PLAN



SECOND FLOOR PLAN



56

## SOUTHWEST CAPE COD COTTAGE

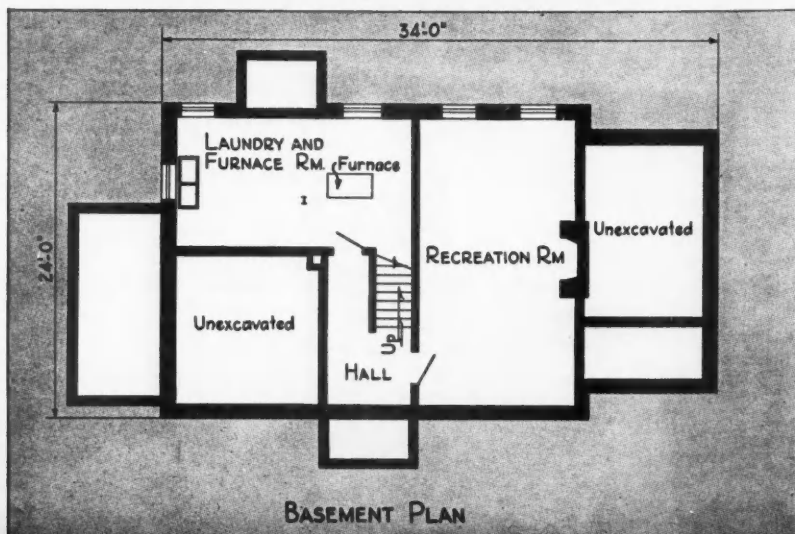
**Built at  
Oklahoma City  
Med Cashion,  
Designer and Builder**

Cost Key is 1.937-146-858-37-22-15



**ABOVE:** The exterior design of this Oklahoma house shows the influence of far away Cape Cod; an interesting feature is the use of a new type hard, white face brick instead of painted common. Plenty of light and air have been provided for the living room; the well detailed mantel was made on the job; hearth and facing are of Italian marble. A guest room and bath beyond the living room offer privacy from the rest of the house.

**PLANS** at the right indicate a compact and efficient layout. Southern exposure, important in Oklahoma, has been provided for main rooms except the dining room.



MASTER bedroom shown at the right has windows arranged for cross ventilation, as do the other rooms; the large closet with window is unusual. Wood-burning fireplace adds to the attractiveness of the room.



WAINSCOTING of horizontal logs extending around three sides (seen behind chair), native stone fireplace, knotty pine paneling and Tile-tex floor over concrete are features of the good sized club room at the right.

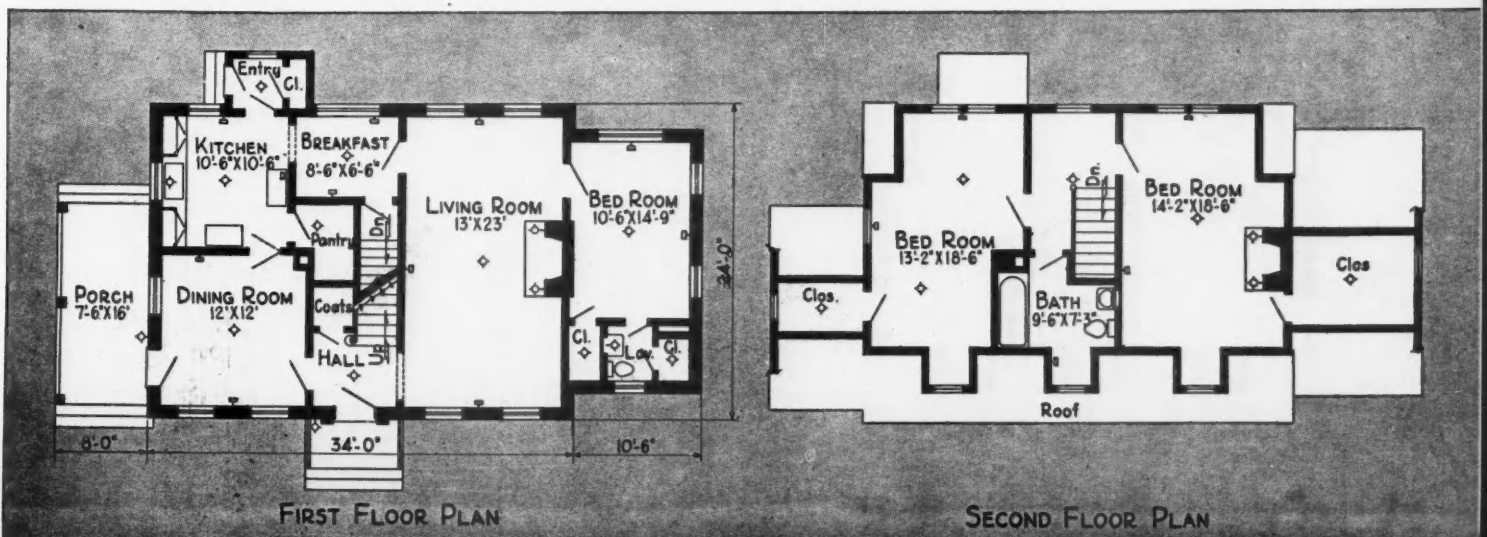


THE BUILDER and designer of this Oklahoma house, Med Cashion, has labeled it "Golden Rule House No. 3," it being the third he has built in which material, construction and workmanship have been measured by this principle.

Although it does not appear large from the outside and was built in the popular price range, there are six rooms, two and one-half baths, club room, ample storage space

and three wood-burning fireplaces. Extras featured such accessories as radio and telephone outlets in club room, on first floor and in upstairs hall; built-in dressing table, bookcases, desk, kitchen and pantry cupboards.

Other materials and equipment used include copper plumbing, Mueller heating, rock wool insulation, Colonial fixtures and hardware, and upward-acting garage door.





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## FOR OFFICE OR MOTHER-IN-LAW

THIS YONKERS, N. Y., house has an attractive wing with separate porch entrance and bath that is adaptable for use as an office or as quarters for the "in-laws." It is only one feature of a very attractive house. The living room, below, in paneled pine is well done. The architect is A. E. Klueppelberg of New York.



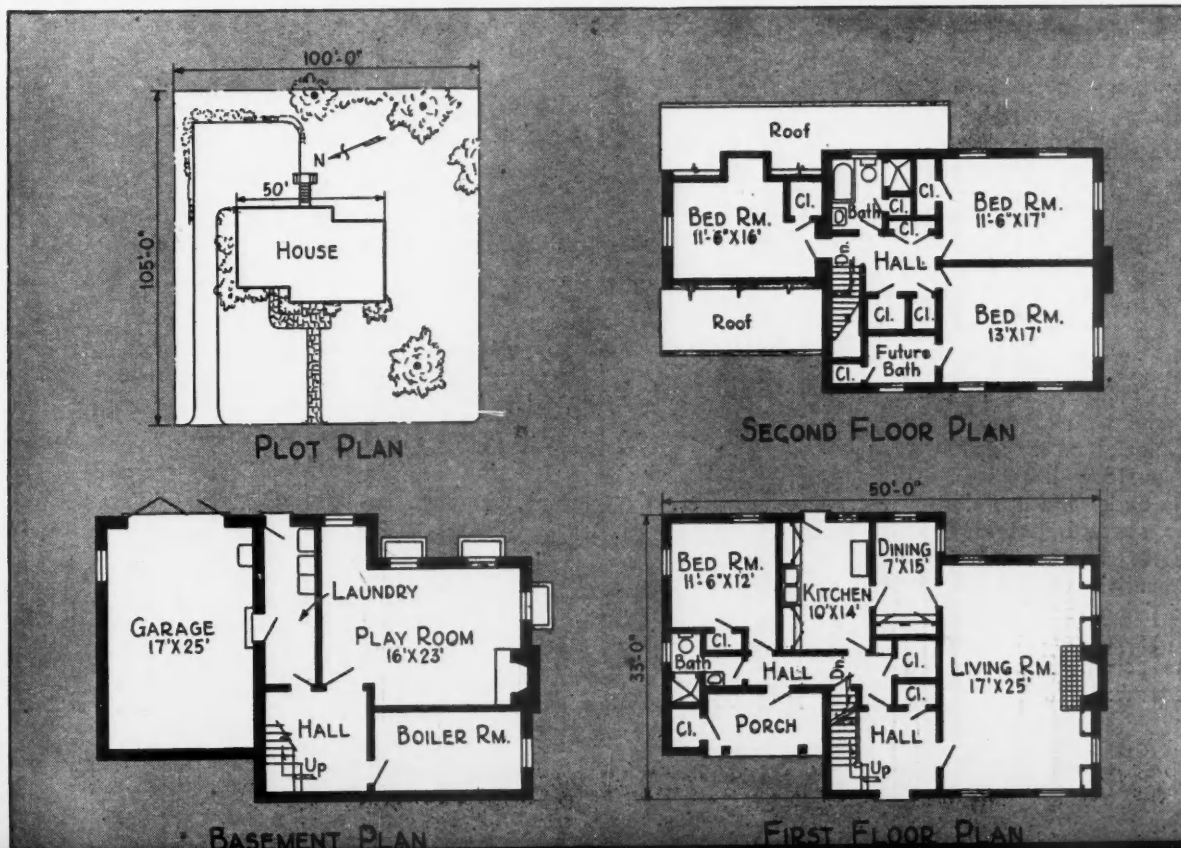
## DIGNIFIED ENTRANCE

SIMPLE, DIGNIFIED and impressive are the words that describe the entrance to this Yonkers home, designed by architect A. E. Klueppelberg. Exterior walls are of Hamden Colonial brick on Steeltex lath, with 1 inch cement mortar between. There is no sheathing. Windows are Curtis Silentite; doors and trim stock Morgan Colonial; metal lath used throughout; paneling is Ponderosa pine; Murphy kitchen cabinets and Balsam wool insulation are used.

FLOOR PLAN is efficient, well planned. Heating by General Electric; water pipe Seamless drawn brass; Standard plumbing fixtures; Corbin hardware; roof is gray Pennsylvania slate.



Photos by Charles E. Knell



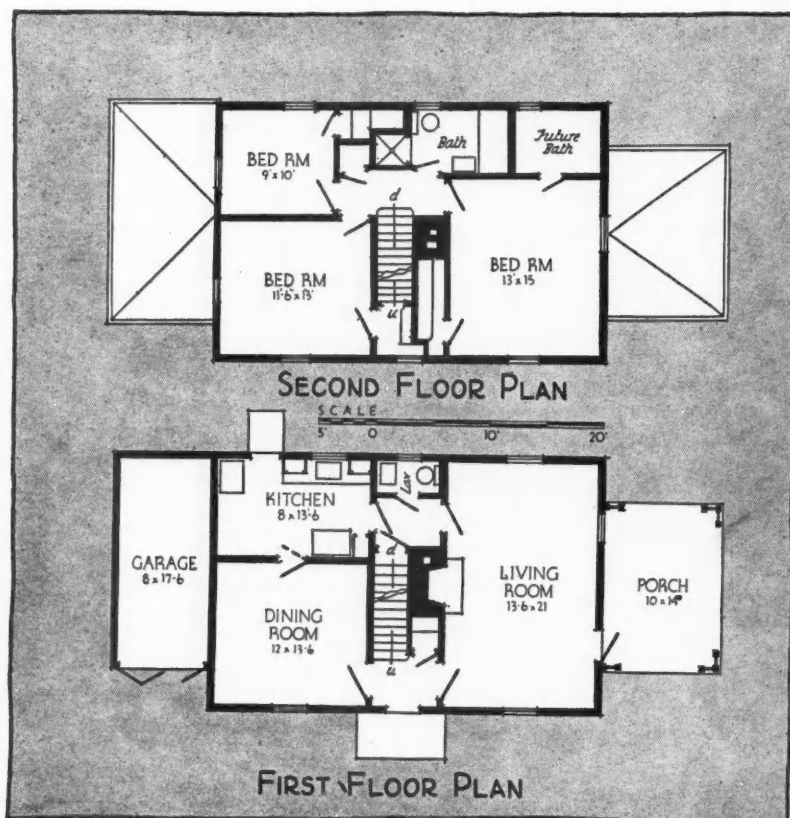


## SIX ROOM AND GARAGE STUCCO HOME WITH MODERN FEELING

Cost Key is 1.664—129—748—32—23—16

THE white stucco house above might be described as being of neo-classic style. Its simple lines and good proportions give it a modern feeling which appeals to many people. It was built this year by the Harmon Company of New York, from plans by Randolph Evans. The roof lines and the general proportions are unusually good, and although the house is of only moderate size it has an impressive formal appearance that is highly desirable.

FLOOR plans of the neo-classic house are somewhat similar to the stone front Colonial on opposite page. The lavatory has been placed directly under the upstairs bathroom, and space is provided for a future bath. The center-hall stair arrangement is very good, and the large living room is well lighted and has a French door leading to the porch. This is an excellent, economical plan.



# Winter Heating Economies

## New Light on Latent Heat-Humidity

**T**HIS department is directly concerned with equipment for the home. This being the case it is concerned with the use of the equipment and with the possible abuse of such equipment. No abuse is ever intentional, but an appreciation of conditions to be met by the equipment goes a long way in preventing abuse.

It is the intention of all sound manufacturers to market equipment which will solve in an improved way the problems met by the home owner. If the manufacturer could he would be glad to follow up every sale with a fair investigation of results. This would not only give him the most complete information upon which to work in the future, but it would also allow him the opportunities of checking against misinformation and thoughtless abuse. It is greatly to the credit of the manufacturers and the sales and the buyers and users of equipment that the American home has so far led in improvement along mechanical lines that we have to contrast rather than compare our own conditions with those anywhere abroad.

But it shows even more to the credit of the American home owner when it is remembered that what we provide for our average homes, and use as accepted equipment bought at reasonable cost is far from average equipment outside of this country. The American home owner wants to improve chances for living comfort. He is unwilling to go along with previously accepted methods if he sees a better way.

The main reason then for the lowering of prices as various newer pieces of equipment come on the market is the rapid growth of the market. If oil burners were sold by the tens or hundreds instead of by the thousands they would be beyond our pocketbook, not so well made, and not nearly so far improved. As a recent instance let me say that an officer of a very large company was pointing out some new literature on their equipment. One booklet described an addition to their field, and I remarked that I supposed they were not at all interested in oilburners. "Well, we've put a lot of money and a lot of work on these oil-burners because we know we've got the market." In American manufacture it is the market of American buyers and intelligent users that makes for lower costs and improved equipment. That is the first and most important point of all in winter heating economies.

We have taken oil-burners as only one of the very many newer methods of equipping for comfort. And as the subject in general is the economies of winter heating we can start from the point of the automatic heater. Any heater which is controlled in its heat giving rate can be termed an automatic burner. At first glance this feature of automatic control might be thought an added expense to the buyer. But there are several reasons why it is not. And there are other reasons why it is an economy.

Taking the general run of families, with the average number of different people stoking a furnace in their different ways, does it not seem quite possible that the furnace suffers more under their varying ministrations than it would if operated automatically? It is very easy to burn excessive amounts of coal merely to be comfortable. Since it is only human nature to hedge a little there is always the tendency to shut down on ventilation

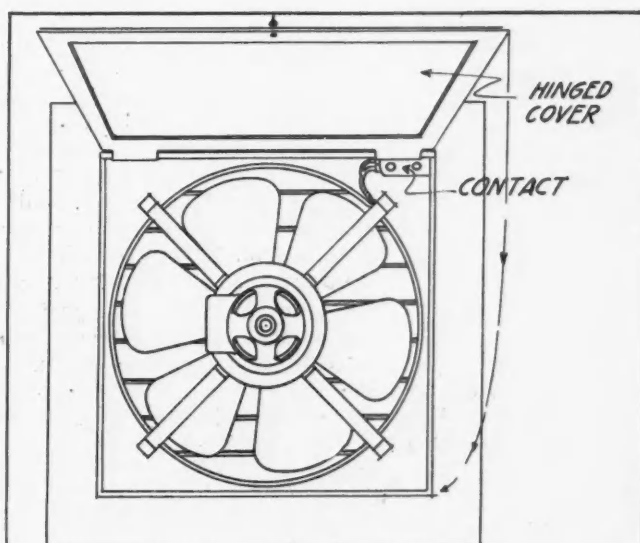
By **V. L. SHERMAN**

Department of Mechanical Engineering  
Lewis Institute of Technology, Chicago

in order to slack off on attention to the furnace. We are not quite in agreement with our friend the real estate editor who insists that the average American does not appreciate fresh air, but we do know of cases where the lady of the house would block open the fire place damper through all of the cold weather in order to secure ventilation.

At all temperatures well ventilated rooms are more comfortable than stuffy ones. And a well ventilated room is not a drafty room, it is never a drafty room. It is, then, only possible to ventilate properly by controlling the admission of fresh air to the house and seeing to it that the fresh air replaces exhausted air. It is poor policy to exhaust air from the house in a way that is haphazard. The air should come into the house and leave it under control.

Under the rules of air conditioning which have grown up with the industry there are those which say that while air should be recirculated in certain amounts for the best results no air should be recirculated from kitchens, bathrooms, or smoking rooms. So far as smoking rooms go in the average home it seems to me that most of the "dens" have fire-places. They should have. So far as the bath room is concerned anyone knows that if air is kept moving out of the bathroom to the outside it is warmer and fresher. Years ago we came onto a finely built new house wherein the bathroom had no outside window. Some controversy with local building ordinances brought us into the inquiry and we went up



**FIG. 1 VENTILATING FAN WITH LIFT COVER OPERATES ON OPENING. TELESCOPIC CASE FOR ANY WALL THICKNESS FROM 7" TO 13½".**

## MECHANICAL EQUIPMENT FOR 20-YEAR FINANCED HOUSES

to investigate. The owner insisted he wanted a warm, well ventilated bathroom, so he put it in the middle of the floor plan on the first floor. From the ceiling he took an ample stack to a point well above the roof ridge. The stack was well insulated all of the way up to prevent the rising air from chilling. He got his ventilation, and we are sure he got his warmth.

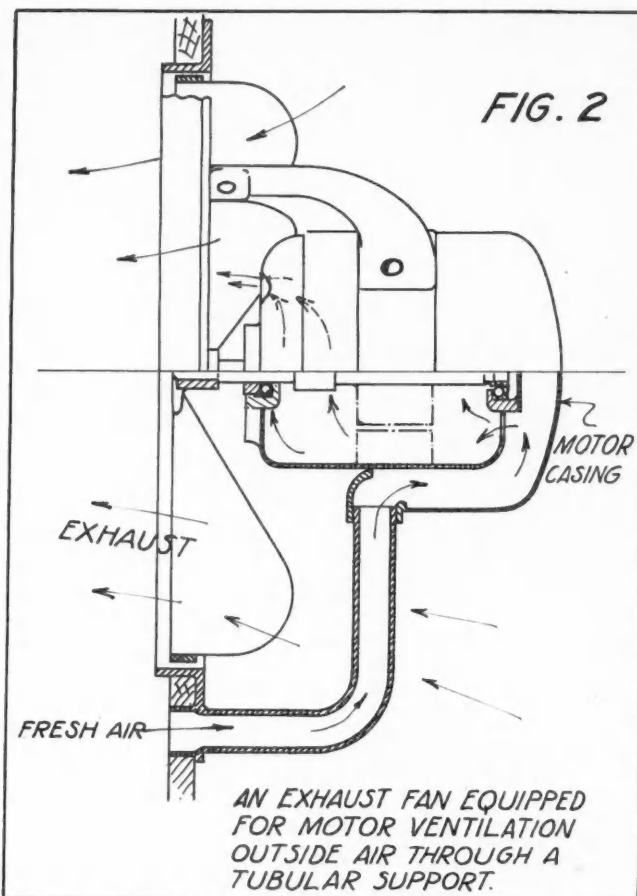
Now so far as the kitchen is concerned. Almost all of us recall the delightful smell of the farm kitchen on baking days. To be delightful there must be just enough and not too much. Also to be delightful the air must be fresh. The farm kitchen is seldom small. And the average farm kitchen boasts a range and oven that really means business. If this range is put to work for a farm "baking" enough air must be supplied to the fire to keep the oven under the control of the baker. What air goes into the range goes up the chimney and must be replaced by air drawn from other parts of the house or directly from outside. Under ordinary circumstances a booming range ensures all ventilation requirements for a house and more than enough heat to compensate if the heat were to be properly disposed.

But in the average house we do not have the coal or wood fired range. Some get around this question of ventilating the kitchen by drawing the air off from a hood over the range to a flue in the chimney. Others draw from a hood through a stack to the roof ridge, often forgetting that a chilled stack will not draw air. Others fail to do anything, hoping that in the general mix-up of house air the kitchen air will be forgotten. But there is a sure way of exhausting kitchen air and knowing that house air in replacing it must be itself replaced.

Figure 1 shows a transom or wall fan which can be installed in any wall or frame depth between 7 inches and 13½. The fan is a propellor type of 10 inches diameter, capable of securing ample ventilation and from a correctly located ventilating point. Since it opens to the weather the fan and motor are properly protected by louvres and casing, and the inner side is open or closed when desired by means of a door on hinges. Merely opening the door will start the fan.

It is a fact, curious enough, that the large electric generators are sometimes air conditioned. In fact the air conditioning of electric generators has something to do with lowering of current rates. Machines as well as people improve with air conditioning. But this is to point out that in Figure 2 we have a ventilating fan in which the motor is supplied with entirely fresh air in order to improve its operation. This fan has a tubular support from the supporting ring to the motor base. The fan suction of the air from within the house induces a current of air through the motor casing which has its air supply only from the outside. Such design goes to show that the manufacturers are concerned beyond the point of obviousness in the design of their products.

It is reasonable to carry this matter of kitchen ventilation a little farther. Because the kitchen is used for cooking it is plain that the air of the kitchen is not likely to be the same in character with the rest of the air in the house. Besides being probably warmer it is more moist and likely to have traces of what might be called "impurities" although we hardly like to think of kitchen air in that way. But it is not the same sort of air as the rest. If this air from the kitchen gets into the rest of the house some things are noticeable sooner or later. The grease particles settle most noticeably upon the windows and actually on any surface. Since the air of the best of ventilated houses is never absolutely clean



so long as humans occupy it a surface coating develops. This in turn is so generally present that a degree of extra ventilation is required to keep the trace of mustiness from becoming apparent.

We hope that the case for kitchen ventilation has been proved, and that it has been shown that kitchen ventilation is help in economizing on winter heat.

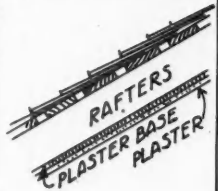

The title of this article also includes "humidity and latent heat." The speaker at a recent engineering meeting in his talk on economies of house construction as regards heating brought up the point of humidifying the air throughout the winter. He sought, we believe, to point out that in certain modes of cheap advertising it was implied that by humidifying the air through the winter that great reductions could be made in fuel costs. This implication takes advantage of the quite general use of the term "humidity" and its publicity in terms of comfort, health, and state of the house and furniture, without a general understanding of how we get "humidity."

We cannot entirely agree with the findings of the speaker as to the comparative fuel costs because we cannot agree with the dry-bulb temperatures he used in his findings, and we still believe that proper humidification in a well constructed house will reduce fuel costs below those without humidification. But not to the extent quoted by cheap advertising. When a person goes from a home where the air is comfortably warm and moist to any house or apartment where there is no real means for humidifying he experiences a most uncomfortable reaction, and if he has the nerve to enquire of the thermometer on the wall he will probably find it reading just above or below the 80's. The colder



## HEATING-AIR CONDITIONING-PLUMBING AND WIRING

COEFFICIENTS OF HEAT TRANSMISSION OR HEAT LOSS THROUGH PITCHED ROOFS. EXPRESSED IN BRITISH THERMAL UNITS, B.T.U., PER SQ. FT. PER HOUR PER DEGREE TEMPERATURE DIFFERENCE INSIDE AND OUT (WIND 15 M.P.H.)

TYPICAL CONSTRUCTION	TYPE OF ROOFING AND ROOF SHEATHING	INSULATION BETWEEN RAFTERS	NO.	TYPE OF CEILING - APPLIED DIRECTLY TO RAFTERS									
				NO CEILING RAFTERS EXPOSED	METAL LATH & PLASTER (1/2")	PLASTER BOARD (3/8") & PLASTER (1/2")	WOOD LATH & PLASTER	RIGID (1/2") INSULATION	RIGID INSULATION (1/2") & PLASTER (1/2")	RIGID INSULATION (1") & PLASTER (1/2")	CORK BOARD (1/2") & PLASTER (1/2")	CORK BOARD (2") & PLASTER (1/2")	
				A	B	C	D	E	F	G	H	I	
 RAFTERS PLASTER BASE PLASTER	WOOD SHINGLES BASKET ROOF	NONE	1	.46	.30	.29	.29	.22	.21	.16	.12	.10	
		1/2" FLEXIBLE	2	—	.17	.16	.16	.14	.13	.11	.091	.079	
		1" FLEXIBLE	3	—	.13	.12	.12	.11	.11	.092	.078	.069	
		ALUMINUM FOIL BRIGHT	4	—	.22	.21	.21	.17	.17	.13	.10	.085	
		3 5/8" ROCK WOOL	5	—	.063	.062	.062	.058	.058	.053	.048	.044	
 RAFTERS PLASTER BASE PLASTER	ASPHALT SHINGLES, RIGID ASBESTOS SHINGLES, COMPOSITION ROOFING, OR SLATE OR TILE ROOFING ON WOOD SHEATHING.	NONE	6	.56	.34	.32	.32	.24	.23	.17	.13	.11	
		1/2" FLEXIBLE	7	—	.18	.17	.17	.14	.14	.12	.094	.089	
		1" FLEXIBLE	8	—	.13	.13	.13	.11	.11	.095	.080	.071	
		ALUMINUM FOIL BRIGHT	9	—	.24	.23	.23	.18	.18	.14	.11	.093	
		3 5/8" ROCK WOOL	10	—	.065	.064	.064	.060	.059	.054	.049	.045	

**FIG. 3.** A TABLE INDICATING PROBABLE RATE OF HEAT LOSS THROUGH ROOFS VARIOUSLY INSULATED AS COMPARED WITH UNINSULATED ROOFS. TAKEN FROM FIGURES PUBLISHED BY THE AMER. SOC. HEATING & VENT. ENGRS. "GUIDE" 1935

and drier the day the drier and hotter will be the house or apartment. And yet the occupants have come to feel any reduction in the temperature would mean discomfort for them.

And yet it is probably true that with a means to humidify a much more comfortable balance could be maintained at a temperature of 68 degrees, and that if the temperature of the walls were brought fairly close to the room temperature a reading of 65 degrees or lower could be maintained.

With proper humidity we must pay for the latent heat which does not register on the thermometer but goes to sustain the necessary moisture. Like any other heat, it requires fuel and fuel costs money. But there is an economy which this use of latent heat brings about, and an inquiry into the costs can be made with accuracy. But to use humidification as a mere costs reducer is to overlook its real economies.

Whenever we concern ourselves with humidity there are other things which must be considered, and just as positive ventilation is sometimes first looked upon as added expense so is humidifying unless it is understood that when the job is properly done there is really a saving in money and health as well.

To begin at the other side, we all are aware that some basements, especially the deep and poorly ventilated, develop a bad case of dampness in ordinary summer weather. It is just as true that when the house air contains moisture in the winter and the walls are so cold that dampness settles on them we have a bad state of affairs. Or we may have drafty spots around the windows and doors which ordinarily we would suffer

in silence and with more coal. Now these drafty spots show a bit of frost. Or we have always gotten along with single glazing and a heat loss of more than twice that of double glazing. Then this additional moisture shows up as frost which is moisture lost from the air with the latent heat gone. Of course when the sun comes out strong we have latent heat of ice fusion, which is a good deal less, and mop up the consequences from the sills. But when these losses become so apparent to the individual he is bound to look into them and his home and himself properly. And when he does this he may find that while there is an initial expense he is putting his heating costs where he can economize. And of course he does economize.

Another question has arisen lately now that we have grown to talk familiarly of humidifying. But it is an old problem. The question is, shall we insulate the attic floor or the attic ceiling. The attic ceiling may be nothing beyond bare rafters. Years ago an inquiry came from a farmer in one of the northern states. He described how after completing a winter in their new home the wall paper and the plaster on the second floor ceiling was a total loss, and how on going up one day into the attic through the trap he had found the rafters and under side of the roof sheathing covered with frost, which melted and dripped off as the sun came out strong. Usually a full-fledged farm house does not need extra means for humidifying, and as there was no sure way of keeping the warm moisture out of the attic the house had to suffer. We had seen the same thing happen years before getting his inquiry.

(Continued to page 88)

### Steel Interests Launch Joint Advertising

A TREND in house construction was strikingly brought out by the appearance of an advertisement in the October 25 issue of the "Detroit News," sponsored by four manufacturers of steel building materials. The cooperating companies are the Stran-Steel Corporation, manufacturers of steel framing, the Briggs Manufacturing Company, making sheet steel plumbing fixtures, the Detroit Steel Products Company, well known steel sash makers, and the Elgin Stove & Oven Company, suppliers of steel kitchen cabinets.

These four concerns have taken a leading position in the manufacture of steel building materials, and their cooperation in advertising their products as used in definite house projects indicates that Detroit builders have reached a new high in the amount of steel used in homes. For years more and more steel materials have been used in house construction.

The "Detroit News" comments editorially that "the use of steel, one of the most durable of all building materials, is in itself a guarantee that these houses, priced within the income of the average industrial worker, are soundly constructed, with a minimum of upkeep expense. They enjoy a high degree of fire resistance, are practically termite-proof, and there is little danger of depreciation from deterioration of the materials used in them."

The houses which are mentioned in this newspaper ad are being built in the Allen Park section of Detroit, and are designed to be sold for \$4500 to \$5500 including the lot to workers in Detroit's west-side industries. The Century Homes Corporation, developers of the project, plans to build approximately 300 houses in this section during the next twelve months. Most of the first group of ten houses, now about complete, have been sold.

An interesting sidelight on the cooperating steel material companies whose products are being used in these homes is that three of them have been intimately associated with the manufacture of automobiles. It is felt that the amazing developments in mass production in order to lower costs which have been such a factor in auto making, will now begin to be felt in the building industry.

The Stran-Steel Corporation is a subsidiary of the Kelsey-Hayes Wheel Company, one of the world's largest makers of automobile wheels. The Briggs Manufacturing Company is likewise one of the world's largest in its line, the making of automobile bodies. The Detroit Steel Products Company was one of the pioneers in making automobile springs.

SEE THESE **LIFETIME HOMES**—  
WITH THE PERMANENCE OF STEEL . . .  
only **\$36<sup>64</sup>** monthly!

**STEEL FRAMEWORKS**  
Formed Metal PLUMBING FIXTURES



**STEEL WINDOWS and KITCHEN CABINETS**

In Allen Park . . . See ten new homes . . . first of a great development of 300 homes to be built within a year . . . A convincing demonstration of the fact that steel products for the home, once considered a luxury, have actually been made available for homes in the \$5,000 price class. Steel is rigid! Permanent! Non-shrinking! Fire-safe! . . . It is the most durable of all building materials . . . protects the beauty of the home for generations. Drive out today to these Lifetime Homes on Markez, Thomas and Regina Avenues—in Allen Park. Drive west on Fort to Southfield, north on Southfield to intersection of Southfield and Allen Roads. Signs at that point direct you to these homes, three blocks west.



**STRAN-STEEL FRAMEWORKS**

Each of these homes has a "backbone" of Stran-Steel . . . that safeguards against plaster cracks, sticking doors, sagging floors and countless defects resulting from shrinking and warping of wood framework . . . Volume production and use of standardized steel panels, fabricated and welded at the factory, has revolutionized small home construction . . . New \$4,000 to \$6,000 homes can have the durability of a steel framework!



**FENESTRA WINDOWS**

Today . . . see for yourself how much of heavy Briggs Beautyware plumbing fixtures will add to the joy of living in one of these fine homes. New methods of manufacture, new and better materials, new design—incorporating beauty as well as utility . . . color, acid-resistance. These fixtures, for which there is usually an extra charge, are included in the Briggs Beautyware line. In fact, they are included in all Allen Park homes.



**BRIGGS BEAUTYWARE**

Fenestra Steel Casement Windows, being steel, can't shrink, warp or rot . . . In these Allen Park Homes . . . and in half the new homes being built in Detroit . . . Fenestra gives permanent protection against the appearance of sticking windows . . . Steel casements by Fenestra provide beauty of design, more daylight, better control of ventilation . . . For these better windows add nothing to the cost of the home!



**ELGIN CABINETS**

New perfection in Kitchen Cabinets! . . . Elgin Steel cabinets are rigid, light weight and non-warping . . . Welded construction prevents cracks from opening up as time goes on . . . Doors swing easily, close softly without rattling sound and stay securely closed. Soft cool color tones make Elgin Steel cabinets a real addition to attractiveness of modern kitchens!

**STRAN-STEEL CORPORATION** ★  
6100 MICHIGAN • TY 5-2370

**BRIGGS MFG. CO., Plumbing Ware Div.** ★  
DETROIT • MA 7030

**DETROIT STEEL PRODUCTS CO.**  
2320 S. GR. BLVD. • MA 7420

**ELGIN STOVE & OVEN CO.**  
ELGIN • ELGIN 5

Insist on **STEEL** for BEAUTY  
for SAFETY  
for DURABILITY

## STEEL

Symbol of Strength, Safety,  
Comfort, Beauty and Lasting Value

**NOW IN THE LOW PRICE HOME FIELD**

EVER SINCE steel was successfully and profitably used in the construction of towering office buildings, huge hotels, industrial plants, and, more recently, in costly residences, efforts have been concentrated to offer its proven advantages in the lower price home field.

It is a matter of almost importance that this has now been accomplished.

The first low cost homes, incorporating steel frames, steel casements, steel kitchen cabinets and drawn metal plumbing are now being built in the downriver district where men who make steel realize its lasting value.

But all products made of steel, regardless of size, shape or style, offer one thing in common—LASTING VALUE—which is the reason for its constantly increasing use in almost every field of human activity.

In congratulating the responsible, far-seeing firms which have pioneered, developed and perfected their products to the point where their proven advantages can be offered in the low price home field, we wish to express our gratification that the first of these homes are being offered in Detroit. We believe that these firms are meeting a very definite need.

They have opened the way to a great national market, the center of which can and should be Detroit, with resultant increases in employment and payrolls here, but whose greatest contribution will be to small home owners, whose importance to the social and economic well-being of the country can not be overestimated.

**GREAT LAKES STEEL CORPORATION**  
Division of National Steel Corporation  
Tucumseh Road • General Office and Works • Ecorse, Mich

5-Column Advertisement (Reduced 1/2) as it appeared in "Detroit Sunday News."

This steel Adv. in same issue measured 6 by 9 inches.

# Garage Doors Camouflaged

**Modern California homes going back to the ancient portcullis!**

**I**N southern California, nearly every man's castle now has its "secret, sliding panel."

The medieval convenience which once enabled a besieged householder to flee from a superior attacking force or raiding party is now applied in principle to let him as speedily enter—awheel.

The family's automobile approaches the house, as though to drive straight through a bedroom window or ingle nook, when lo—the outer wall section swings up over the car and promptly drops back into place when the car has disappeared. House swallows car as effortlessly as a hawk downs a beetle.

The counterbalanced panels which California architects and builders are specifying for over 95 per cent of all residences now being built, are actuated of course by "cell," by manual electric control, or by a simple twist of the wrist on the handle attached to the lower rail.

They are not "doors." You will have to coin your own name for that portion of the front elevation of a house which is framed to revolve on a 90° arc. Except for the concrete drive leading to a point in the wall, there is no clue or evidence that the designer has even provided a garage for his client.

The pioneers of the trend point out many good reasons for the deceit. Builders are still influenced by horse-and-buggy traditions and the convention of spotting the garage to the rear of the lot is one of these. Time was when old dobbin's manger took up a lot of space, what with the carriage house, granary, mow and harness room. Whilst in days gone by it was unquestionably preferable to locate the pungent dunghheap remote from the kitchen and dining room.

Upon the motorcar's advent, the garage was still left out back though there was every reason for not doing so. It suited the convenience of the contractor for one thing, who liked to have a storehouse for tools and materials. The garage was often built weeks before work on the house began; its barnlike lines usually overshadowed the home when completed. It was probably the long back out, with engine in reverse—so perilous to flower beds and crawling babies—and the many stick-ups occurring to householders as they ran their cars in for

the night that fathered the garage-next-the-parlor era.

With the auto entrance adjoining and often communicating direct with the front hall, a demand arose for noiseless hardware. Early track rollers set up a rumble-like gun fire throughout small homes so equipped, while the old type of accordion or hinged door swayed in the wind. These sagging doors were always in danger of collision with the car by their very nature. Did you ever see one that wasn't scratched and covered with scuff marks where the paint was rubbed off?

Nowadays, owners on the west coast are demanding a neat door which will add to rather than detract from the appearance of the property. The company which pioneered and sponsored this "above and out of the way" architecturally treated swivel-type portal, the Wread Co. of Los Angeles, has worked up about ten stock camouflages for garage entrances. The line covers every well known period architecture, from Aztec to modernist. A good example, an installation which V. C. Henderson, well known North Hollywood contractor used on his personal home, is shown in the accompanying photos. The long shutters and cretonne draped sash are the principal details. That the attractive combination lends punch to any Colonial or Monterey style dwelling is obvious.

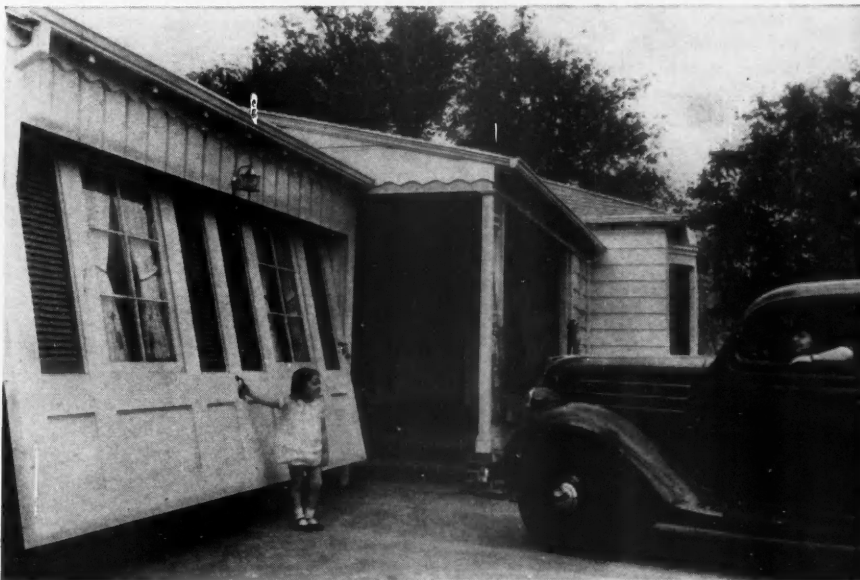
Several hundred doors per month are now being put in by the above-mentioned firm. In their case, they work seven crews. Builders can order from catalog and the company's force will install the job if required. Alternatively, the firm will sell hardware only. In either case they extend a five-year guarantee of mechanical perfection.

Contractor Henderson has half a city block full of houses under construction at the moment, and every garage door in the long row is fitted with false whiskers.

As he says: "The added decoration costs so little and adds so much to the pretentiousness of an otherwise small home that often it is the turning point of many a sale.

"If everyone incorporated the idea in his designs I believe that homebuilding would be tremendously stimulated."

—A. B. LAING, Hollywood, Calif.



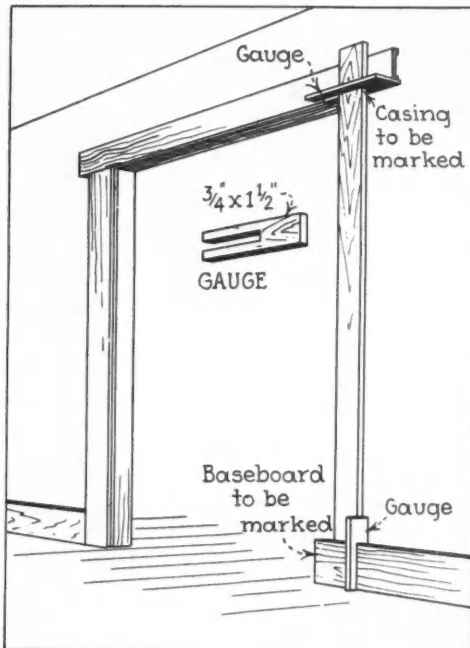
# PRACTICAL JOB POINTERS

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

## Handy Marking Gauge

**M**AYBE most of the carpenters have seen or used the hand-made wooden gauge shown below. But I think few know that it can be used as a superior substitute for a square when marking the top of window and door casings; that is when the ends butt square against the head casing. Of course, if all the lumber were straight, the square would be O.K. In order to find the exact place for the head casing take a piece of the side casing and hold the same on its place, allowing for margin if any. On the wall make marks at top of opening on the outside of the casing. After that drive at least two nails far enough to hold the head piece in its place. Now hold the side casing in its place, parallel with the side, and slip the gauge over the casing against the lower edge of head casing. Mark on top of gauge as shown and a perfect cut is obtained.

The same kind of gauge can also be used for finding the sidelines when mitering baseboards around square columns and square projecting corners.



**LEFT:** Wooden gauge used in place of a square for marking casing and baseboard; handy method assures a perfect cut even with warped trim.

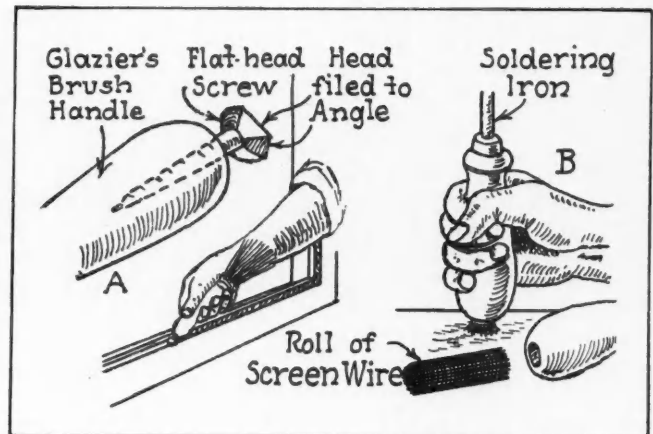
Any carpenter or builder who doesn't read the "Practical Job Pointers" each month misses much valuable and practical information. However, in the *American Builder* of July, 1936, Joseph Allgeier, Fort Wayne, Ind., shows "A timesaver on stair stringers, rafters, etc." In old carpenter books that device was called a "fence" when applied to the steel square. But his fence, together with the three wing or clampscrews, takes up too much room in the tool box, and any humps on the edge of the stringer cause the "fence" to rock and the marks vary accordingly.

About 15 years ago I bought in a hardware store two small clamp screws made in place of a "fence." They are easier to fasten on the square, more accurate and small enough to put into a one cent match box.—NILS O. FAGERSTROM, San Francisco, Calif.

## Double-Purpose Tools

**B**Y very simple means the handles of tools used by carpenters and other workers are easily improved, and in this manner the tools are converted into double-purpose units. In the drawing, A shows a glazier's brush having a large flat-headed screw in the handle. This screw projects about 1/8-inch and has a sharp angle filed on it for removing old putty; by pushing it along the sash groove, it will chip away the old, hard, dry putty without cutting into the wood.

A soldering scraper is shown at B. A hole is drilled into the end of the soldering iron handle and a piece of screen wire is rolled into a small, compact bundle and slipped into this hole, so that about 1/4-inch projects. The wire roll expands sufficiently to hold but may be removed readily with a pair of pliers. When soldering, the screen wire ends are used to scrape clean surfaces or parts to be soldered or tinned.—MORRIS A. HALL, White Plains, N.Y.



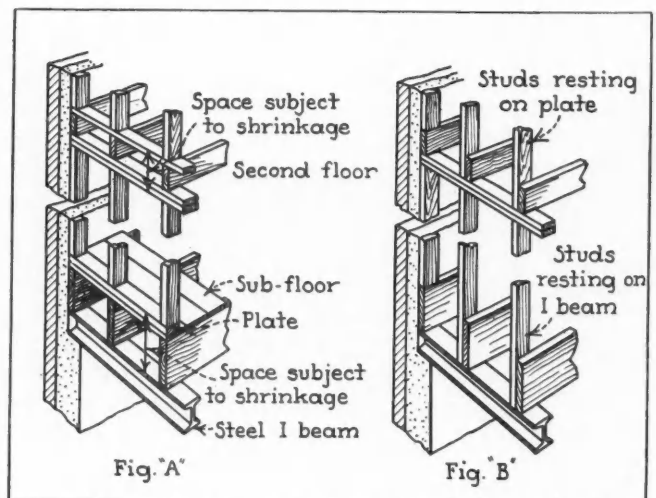
**P**UTTY remover and soldering scraper give tools added utility

## Framing to Reduce Shrinkage

**W**HEN building a house by the method shown at the left in the diagram below, in other words, on the top of joists instead of on the top of the I beam, shrinkage occurs which cracks the plaster and makes doors sag. In the other method shown at the right in the diagram, the shrinkage is negligible.

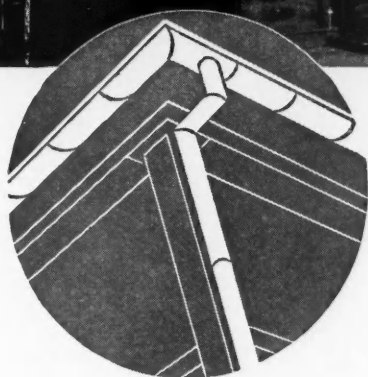
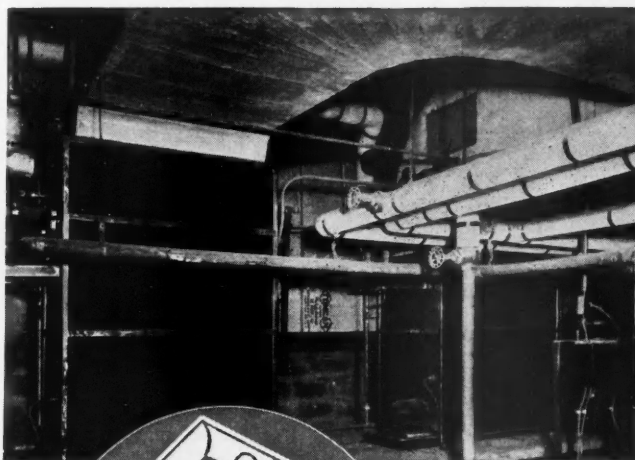
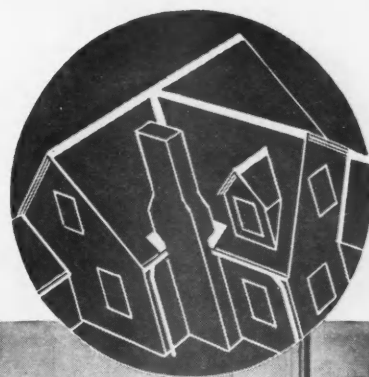
I feel very strongly about that because I have remodeled many houses in Chevy Chase and Washington, and have been in many houses where good timber has been used but in such a way that the houses are wrecks.

It costs a little more to run the studs down onto the I beam and it is a little more trouble. Although very few do it, I believe this method is worth while for any builder who values a good reputation.—GEORGE E. FERRIS, Builder, Washington, D.C.



**T**ROUBLE from shrinkage less in Fig. A framing than Fig. B.

Buyers want quality . . .  
Landlords want profits



# TONCAN IRON

will provide both . . . . .

● The prospective buyer of real estate usually knows what he wants. He appreciates design. He is influenced by modern home conveniences. Yet, during his inspection of the house, from roof to basement, his eyes are looking for the fundamentals in building—quality and sound construction. He knows that these features will retard depreciation and save him money in maintenance during future years.

If he expects to be a landlord—proposes buying the property as an investment—he knows that quality construction will insure against excessive repair costs and also against reduction in the profit he hopes to make.

In the interest of selling either type of prospect—or if you build for yourself—you can make no wiser choice of material for the sheet metal parts than Toncan Iron. This alloy of refined open-hearth iron, copper and molybdenum resists rust better than any ferrous material in its price class. It lasts longer—eliminates repair bills for many years to come. It spells quality in every sense of the word—provides an ideal sales argument for your prospect and for you to consider, too. Let us send you a copy of "The Path to Permanence"—the book that has opened the eyes of many buyers and users of sheet metal.

Republic produces plain carbon steel, copper-bearing steel, copper-bearing iron, Toncan Copper Molybdenum Iron and Enduro Stainless Steel sheets. Also plain carbon steel, copper-bearing steel and Toncan Copper Molybdenum Iron Pipe.

# Republic Steel

## C O R P O R A T I O N

GENERAL OFFICES . . . CLEVELAND, OHIO

When writing Republic Steel Corporation for further information, please address Department AB



## NEW PRODUCTS

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

### Prefinished Floor Sections

**F**LEXIBLE, prefinished, hardwood floor sections installed and used the same day are being marketed by the Wood-Mosaic Company, Louisville, Ky. Parkay by name, they are laid on any sub-floor, old or new, with neither nails nor noise, and are kept down permanently by a special adhesive, time tested in laboratories and in actual use.

The laying operation requires first a layer of adhesive, then a layer of felt, another layer of adhesive, and then the finished floor sections are fitted to every wall projection or indentation. The in-between felt makes for greater quietness and slight suggestion of resilience. A floor can be installed in the average size room within the period of four or five hours.

Parkay floors consist of individual 4 by 2 and 2 by 2 inch hardwood blocks of standard 5/16 inch thickness, assembled in basketweave pattern and held securely together in a semi-pliable grill. For convenience in delivery and laying, it comes in neat, easily disposed of cartons, each containing eight 2 by 6 foot sections.

Woods available are light and dark oak and walnut, and the more unusual East Indian teakwood. Once restricted to more costly homes and office buildings, genuine hardwood floors cost no more than most good floor coverings.



LEFT: Workman holding Parkay floor section shows flexibility of material. Right: Finished floor quickly laid in mastic is ready for use.



### Wood Veneer Interior Finish

**T**HE Celotex Corporation, Chicago, has announced C-X Texbord, a new interior finish of genuine wood veneer with a Celotex backing. This new attractive interior finish is available in mahogany, avodire and walnut, rare woods, which because of price have long been used only in expensive homes; Texbord brings these finishes within the range of the average family budget.

It is 1/4 inch thick, and comes in units 6, 9, 12 inches wide, and 8 and 10 feet long; it is easily applied to the wall without showing nails or any need for special moulding. This application is made possible by a special patented joint treatment.

Because this new wood finish is only 1/4 inch thick, it can be used for both old and new construction. It has the flexibility necessary to conform to the average variations in wall surfaces. For old construction or modernization it permits economical ap-

plication because it can be applied directly over plastered walls and because it does not make necessary the removal of baseboards, mouldings and casings at doors and windows.

RIGHT: Nailing Tex-board along "V" shiplap joint which is covered by next board.



LEFT: Adhesive is applied to both lap joints as well as back and bonded by pressure of hammer blows.

### Pressure Oil Burner

**T**IMKEN Silent Automatic Division of the Timken-Detroit Axle Company has announced a new and larger Timken Silent Automatic pressure burner in its line of oil heating equipment.

The new model, which will be known as the Model GH, is designed along conventional lines. It has an oil burning capacity of from 5.50 to 10 gallons per hour and is capable of handling approximately 3,600 square feet of equivalent direct steam radiation.

The burner consists of a 1/6 h.p. split-phase motor, directly connected to the blower and oil pump by means of a flexible coupling. The oil pump is equipped with dual strainers and the transformer with an interference eliminator. Combustion efficiency is improved by a propeller-like, four-bladed turbulator located in the air tube just back of the oil nozzle. The burner is finished in black or green.

### Light Weight Floor Sander

**T**HE American Floor Surfacing Machine Company, Toledo, Ohio, is marketing a new floor sander known as the "Little American" model. It is a light weight, portable, compact machine incorporating all the accepted features that are used in the large American drum sanders, and no sacrifice of quality has been made in making a smaller, lighter weight machine.

It is exceptionally attractive in appearance with very modernistic lines and all parts are designed in the frame of the machine, including the dependable, long life, powerful electric motor. The main body of the machine, including the sanding drum, is made of aluminum alloy which makes possible this type of light weight portable machine. The new and more efficient type of powerful speedy motor which has been built into the Little American operates without the usual carbon brushes, eliminating brush trouble.

Specifications: drum width, 8"; drum diameter, 6 1/4"; drum speed, 1300 RPM; motor rating, 1 H.P.; weight of machine, 130 lbs.; overall dimensions—width of machine, 10 1/2"; height to top of handle, 33"; length of machine, including handle, 31 1/2".

NEW "Little American" model light weight floor sander.



# INTERNATIONAL TRUCKS

## THE COMPLETE LINE

31 Models . . . 91 Wheelbases

### HALF-TON to SIX-WHEELER



**INTERNATIONAL TRUCKS!** There are 31 models in 91 wheelbases—all hauling needs are completely met with these trucks of six distinct types:

Conventional 4-wheel trucks in 14 models and 41 wheelbases.

Two-speed rear-axle trucks in 4 models and 14 wheelbases.

Dual-drive 6-wheelers in 4 models and 12 wheelbases.

Trailing-axle 6-wheelers in 5 models and 14 wheelbases.

Trailing-axle 6-wheelers with 2-speed driving axle—3 models and 8 wheelbases.

Cab-over-engine truck in 1 model and 2 wheelbases.

Quality trucks with a 35-year reputation, backed by dealers and Company-owned branches everywhere—a *matchless* service organization. Is it any wonder that men with every kind of trucking job come to *International* for trucks to meet their needs completely? All models available on easy time-payment terms at low rates. Ask for a demonstration.

Chassis Prices **\$415** and up, f.o.b. factory

When you come to International Harvester you can buy *just as much truck as you need*. Our representatives will not ask you to buy *more*. Your own judgment will tell you not to buy *less*.

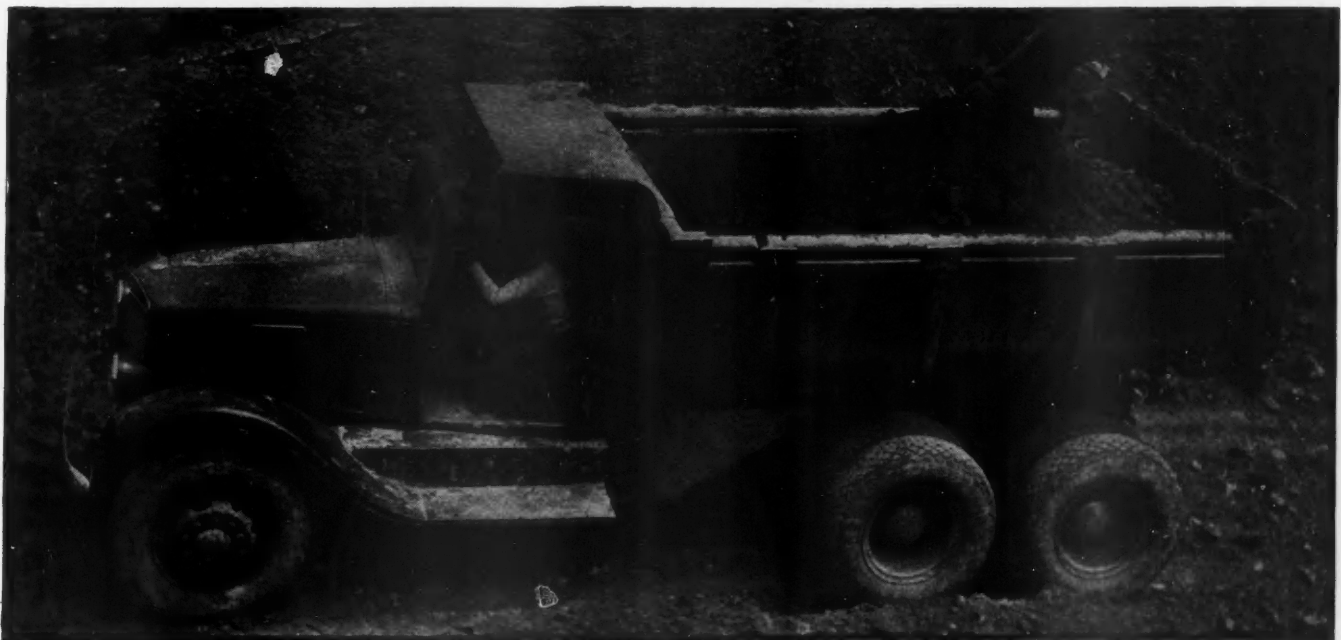
*Hydraulic brakes on all models except three heavy-duty units equipped with air brakes.*

**INTERNATIONAL HARVESTER COMPANY**

606 So. Michigan Ave.

(INCORPORATED)

Chicago, Illinois



## When You Need Waterproofing....



## You Need It ***Bad***

—and Sisalkraft is THE really waterproof building paper. Protects against rain, sleet, snow—any kind of moisture. Use it to cover delivered materials on the job for protection against the weather—use it wherever good building paper is needed, under floors and roofs, around doors and windows, over sheathing, and for curing concrete walks, drives and basements.

It's not only waterproof, but it's tough. YES, TOUGH. It's reenforced with millions of inlaid sisal fibers that won't stretch. That's why it won't tear or rip. Still, it's easy to trim and fit around corners—easy to work with on the job.

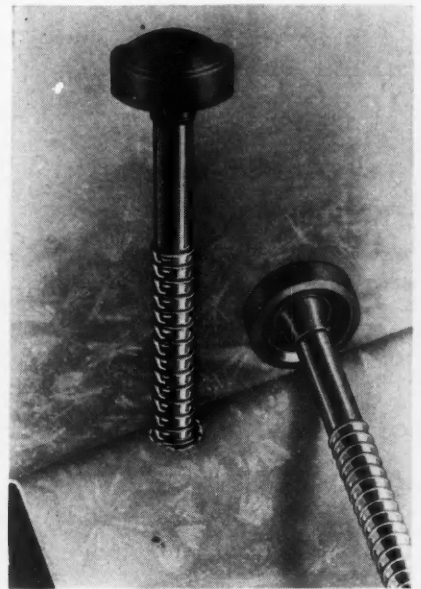
Sisalkraft is widely known as a quality building paper. Its use indicates the use of quality materials throughout the job. And yet it is inexpensive—and a good advertisement for the builder who uses it. Ask your lumber dealer, or write us for a big sample (try to tear it) and prices.

### THE SISALKRAFT CO.

205 West Wacker Drive, Chicago  
New York San Francisco

### Lead Head Anchor Nail

A NEW Anchor lead headed nail was recently introduced by the W. H. Maze Company of Peru, Ill. To gain holding power and prevent working loose or drawing out, this nail employs anchors arranged in rings about the shank as shown in the illustration. Since it is driven into place, the head is not twisted loose nor can the nail twist out backwards.



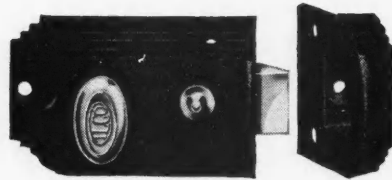
LEAD headed nail showing rings of anchors.

### Improved Night Latch

THE Ilco night latch No. 222 has been added to the line of the Independent Lock Company of Fitchburg, Mass. Definitely modern in appearance, it is extra strong and offers greater security.

This night latch has an improved type strike designed for easy mounting without cutting into the door jamb. It is furnished with 5 pin tumbler cylinder, including 3 milled nickel silver keys.

Its graceful design should appeal to the discerning customer.



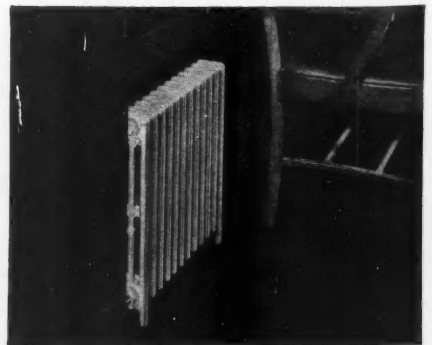
NIGHT latch is modern in appearance and offers greater security.

### Newly Styled Radiators

A NEW, small tube-type radiator has been added to the line of the National Radiator Corporation, Johnstown, Pa. Known as the National Art line of radiation, the design is not an adaptation from other types of radiation, but represents entirely new styling having modern vertical lines and set-back planes.

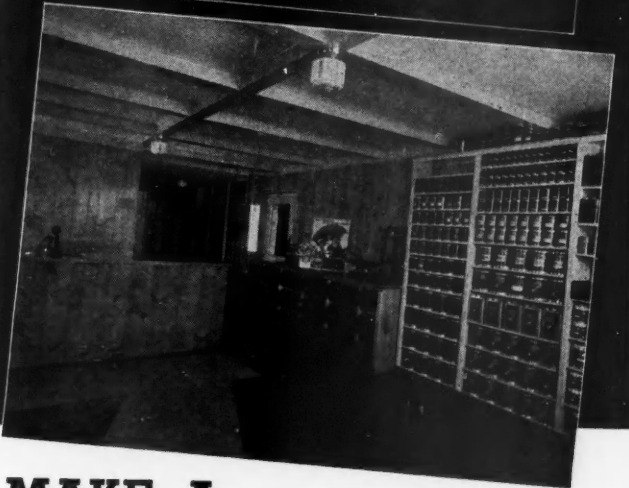
The new type of radiation can be used either exposed, or recessed, and is particularly desirable for modernization work, as the units occupy less floor space while giving as much heat as the older tube-type radiators; it is found desirable in cases where concealed heating units are desired on first floors and exposed or recessed types of units on the upper floors.

The units are made in three widths: 3, 4 and 5-tube, and in heights ranging from 19 to 26 inches; they are of cast iron construction and are assembled in any length in multiples of 1½ inches; push nipple construction is used and units can be furnished legless.



A SMALL tube-type radiator of new modern National Art line.





**MAKE A  
Showroom OF YOUR OFFICE  
WITH WESTERN PINES**

There's sales force in every piece of Knotty Pine. They are selling in these modern offices. Given a chance, they'll sell in your office, too. A postcard request for information on Knotty Pine to Western Pine Association, Yeon Bldg., Portland, Oregon, will have immediate attention.

**WESTERN PINES**

Red White Pine •ponderosa Pine • Sugar Pine

*Another*  
**MODEL HOME**  
*Chooses*  
**BONDEX**



C. A. Hemphill & Associates, Builders • Raymond F. Houlihan, Architect

**Evanston, Ill. Model Home  
Weatherproofed and Beautified**

The builders of this Evanston model home determined from the beginning to demonstrate the art of better living. To show that the home of today and tomorrow should banish drudgery — be beautiful with color and light. So, for their model home they chose the model waterproof cement paint—Bondex. With Bondex—"The Paint Eternal" they weatherproofed and beautified the exterior of the home and garage.

**Basement Waterproofed**

The walls of the laundry and furnace room were waterproofed with Bondex to seal out dampness and permanently prevent leaks.

Send now for New Illustrated Folder.

**THE REARDON CO.**

Chicago • ST. LOUIS • Los Angeles



**Reardon's BONDEX**  
**WATERPROOF CEMENT PAINT**

# Demand

THESE FEATURES  
WHEN YOU BUY INSULATION!

## NON-CONDUCTIVITY

As an insulating material, MASONITE INSULATION recognizes no superior in its field. Possessing an unusually high percentage of dead air-cells, these boards always keep heat and cold on the right side of the wall.

## LIFETIME SERVICE

Millions of feet of MASONITE INSULATION, used by thousands of satisfied customers over many years, prove that you can depend on MASONITE to last as long as the building in which it is installed.

## ECONOMY

MASONITE INSULATION offers an ease of application that definitely reduces time and labor charges.

## STRENGTH

The exceptionally high tensile strength of MASONITE INSULATION adds to the structural rigidity of the building . . . when used as sheathing.

## BEAUTY

The natural warm-brown finish of MASONITE INSULATION makes it ideal for interior wall and ceiling surfaces without further treatment. It can also be painted, enameled or papered where desirable.



# MASONITE

THE WONDER WOOD OF A THOUSAND USES  
SOLD BY LUMBER DEALERS EVERYWHERE

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MASONITE CORPORATION, Dept. AB-12  
111 W. Washington Street, Chicago, Illinois  
Please send FREE sample and more information about  
MASONITE INSULATION.

Name \_\_\_\_\_

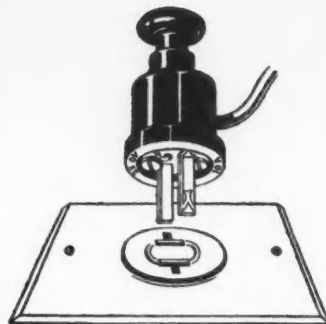
Address \_\_\_\_\_

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

## Electric Plug with Bayonet Lock

AN electrical plug designed with prongs that wedge and lock to the socket is being manufactured by Hy-Duty Products Company, 1803 South Hope Street, Los Angeles. Even if the socket receptacle is worn and loose, the plug will grip tightly, but can be instantly released when desired. The plug has a novel rubber ram that is pushed inward by hand and causes an auxiliary bayonet wedge to slide along each of the two contact prongs into the receiving socket. The product is called the wedgelock

electric plug and is especially desirable for keeping a tight connection on electrical cords used in the home with irons, radios, vacuum cleaners, refrigerators, polishers; also for portable shop and home-craft equipment and with office appliances where cords are liable to be pulled at the socket.



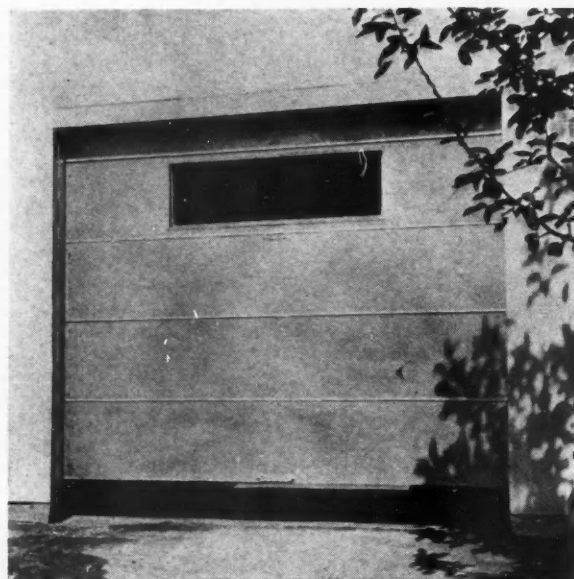
PRONGS are locked into the socket when the rubber knob of this plug is pushed inward.

## Improved Acid-Proof Cement

THE Atlas Mineral Products Company, Mertztown, Pa., has announced an improved sulphur base acid-proof cement valuable for the protection of industrial and municipal sewers against disintegration by acid industrial wastes and acids formed by the decomposition of organic matter in sewage. This sulphur base cement has solved many problems in industry, including the construction of tanks for the pickling of steel, acid storage tanks, neutralizing pits, leaching tanks, electrolytic cells and acid-proof floors and trenches. The utility of the cement extends both to the protection of existing concrete sewers against corrosion and to the construction of new sewers.

## Float-Over Steel Door

THE Cornell Iron Works, Inc., Long Island City, N.Y., is featuring a new design of Float-Over upward acting garage doors of patented tubular all-steel construction, flush on the outside but accenting the horizontal lines of the house in joints and window. The interior surface of the door is paneled. Operation is accomplished by electric motor, which stops automatically if meeting any obstruction. Control is by outside key switch reached from the car and by inside push button. A driveway treadle switch is also available as well as electric eye, radio control from the car or through a buried switch in the ground and small magnet on the car.



FLOAT-OVER garage door of all-steel construction.

# AGAIN THE "OVERHEAD DOOR" FOR

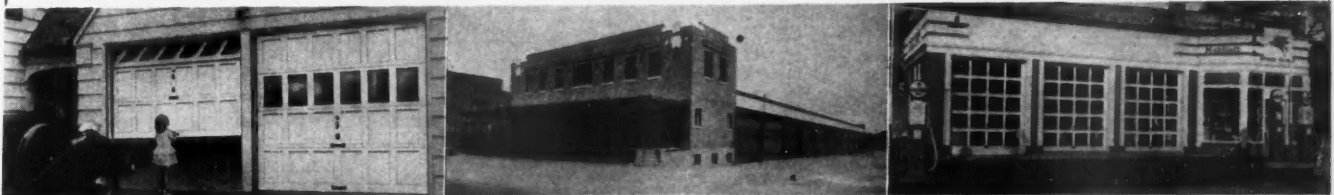
## GARAGE - FACTORY - WAREHOUSE

*From the Home Garage to the Largest Airplane Hangar*

**OVERHEAD DOOR CORPORATION  
AND OUR ENTIRE  
NATION-WIDE SALES-INSTALLATION SERVICE ORGANIZATION**

**EXTEND TO THE BUILDING PROFESSION**

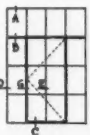
*A Merry Christmas and a Happy New Year*



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

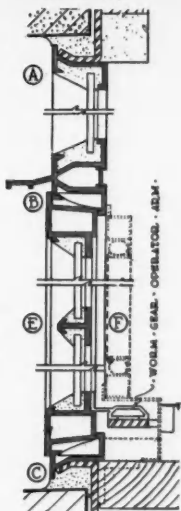
### Eliminate DRAUGHTS!

• CASEMENT •



- A - HEAD
- B - TRANSOM - BAR
- C - SILL
- D - JAMB
- E - MUNTIN
- F - SCREENS (optional)
- G - MULLION

• SECTION •

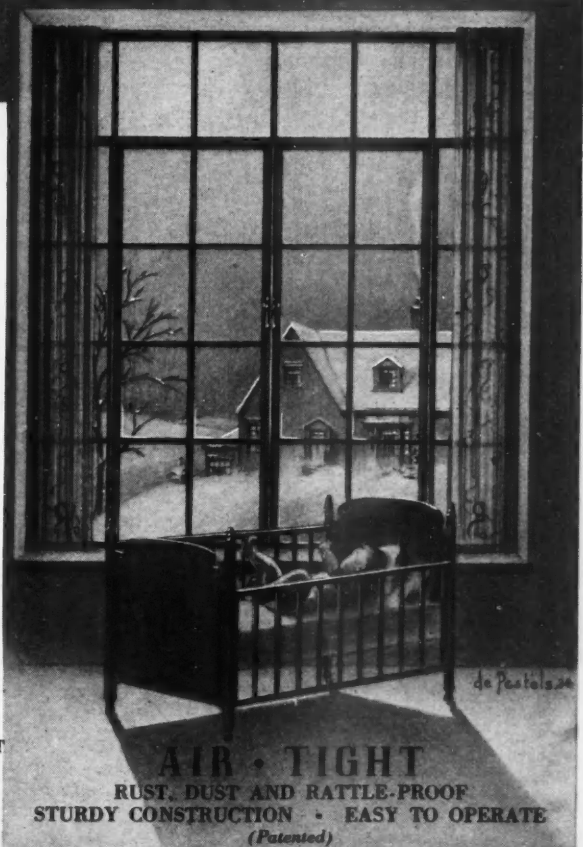


• JAMB-SECTION •  
- IN ALUMINUM -



• NOTE • TUBULAR SECTION GIVING  
MAXIMUM STRENGTH AND RESILIENT  
NON-CORROSIVE WEATHER-  
STRIPPING POSITIVELY SEALING  
CONTACT BETWEEN SASH AND  
FRAME IN ONE CONTINUOUS LINE.

Send for Catalog  
or see Sweet's  
1937 File



de Pastalada

**AIR • TIGHT**  
RUST, DUST AND RATTLE-PROOF  
STURDY CONSTRUCTION • EASY TO OPERATE  
(Patented)

DOUBLE HUNG **PERMATITE'S** CASEMENT  
BRONZE AND ALUMINUM



**GENERAL BRONZE CORPORATION**

34-19 TENTH STREET • LONG ISLAND CITY, N. Y.



**CONCRETE NEEDS**  
**SOLVAY**  
TRADE MARK REG. U. S. PAT. OFF.  
**Calcium Chloride**  
**TO PROTECT IT FROM**  
**"FROST-BITE"**



50° F or below—that's the danger line when it becomes essential to provide the extra protection of Solvay Calcium Chloride to help prevent losses in winter concreting operations.

Architects,\* engineers\* and contractors\* know that when Solvay Calcium Chloride is in the concrete mix, they can expect an accelerated set and increased early strength—enabling their jobs to be finished before the nightfall effects of temperature drops and "frost-bite" can do damage.

And when Solvay Calcium Chloride is in the mix it also provides increased workability and permits a lower water-cement ratio which means tougher, denser, more water proof concrete.

**SAVES MONEY**—The quick set means that you can release forms earlier to be used on the other sections of the job. Over time is eliminated because finishing work can be done sooner. Less coke for salamanders, less canvas is required during the curing period. Solvay Calcium Chloride is definitely a low cost, money saving item that is a necessity to every concreting job whether large or small. Mail the coupon today for complete information on quantities required, and how easy Solvay Calcium Chloride is to use on the job!

**BUILDING  
MATERIALS  
DEALERS!**

Samples of a complete line of Solvay sales promotion material and folders will be sent to you on request. Please check coupon.

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TODAY**

**SOLVAY SALES CORPORATION**

*Alkalies and Chemical Products Manufactured by  
The Solvay Process Company*

**40 RECTOR STREET NEW YORK**

Gentlemen: Please send me complete information on Solvay Calcium Chloride for use in Cold Weather Structural Concreting

Architect  Engineer  Contractor  Building Supplies

Name \_\_\_\_\_

Address \_\_\_\_\_

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

*\*Solvay Calcium Chloride has the backing of more than 20 years use in the field. It bears the endorsement of the F.H.A., P. C. A. and the Investigating Committee of Arch. and Eng.*

## News of the Month

### Building Activities and Meetings

#### October Residential Volume Nearly Up To September; 45 Per Cent Ahead of 1935

ACCORDING to F. W. Dodge Corporation, the October residential building total was \$79,664,200 for the 37 eastern states as compared with \$55,100,300 for October of last year, an increase of 45 per cent, and \$80,670,800 for September of this year. For the ten months of 1936 ended Oct. 31, residential building amounted to \$667,767,800 as against only \$394,007,800 for the corresponding ten months of last year, making a gain of 70 per cent between the two years.

The volume of non-residential building started in October in the 37 eastern states amounted to \$79,071,300 as compared with only \$59,180,400 for this class of work in October 1935 and \$69,098,700 for September of this year. Non-residential building in the initial ten months of 1936 in the area east of the Rocky Mountains amounted to \$814,408,400 for a gain of 70 per cent over the total of only \$482,902,300 shown for the comparable period of 1935.

Heavy engineering, i.e., public works and public utilities, accounted for an additional construction volume in October of \$67,032,400. Chiefly because of declines in public construction, heavy engineering jobs in October fell below their respective totals for either the previous month or October 1935.

For all classes of construction, the October 1936 figures for the 37 eastern states totaled \$225,767,900 and compares with \$200,595,700 for October 1935 and \$234,271,500 for September of this year. The total volume of construction of all types undertaken in the area east of the Rockies during the ten-month period ended Oct. 31 amounted to \$2,267,468,100 and represents an increase of 63 per cent over the comparable figure of \$1,392,293,400 for the corresponding ten months of 1935.

Figures for the first half of November indicate some seasonal decline from October but maintain the general increase recorded over last year. This volume is shown in the following table:

37 Eastern States	Nov. 1-15, '36	Nov. 1-15, '35	Nov. 1935
Residential .....	\$34,038,200	\$19,478,000	\$ 39,695,200
Non-Residential ....	32,109,600	29,446,700	68,115,300
Public Works & Utilities .....	27,195,200	37,543,900	80,339,500
Total .....	\$93,343,000	\$86,468,600	\$188,150,000

#### Oil Burner Institute Exposition

FORMAL announcement has been made of the National Oil Burner and Air Conditioning Exposition which will be held at the Commercial Museum, Philadelphia, during the week March 15 to 19, 1937. These annual shows have been sponsored by Oil Burner Institute and its predecessor, American Oil Burner Association, since the year 1923.

The membership of Oil Burner Institute, 30 Rockefeller Plaza, New York City, comprises a manufacturer division of domestic burner, distillate burner and industrial burner manufacturers, from which the board of directors is selected; an associate division of accessory equipment and air conditioning manufacturers, heating industries, oil burner and dealer associations, affiliated trade press and affiliated associations.

The Exposition organization is chiefly in the hands of Lionel Jacobs, chairman, Exposition Committee, G. Harvey Porter, managing director, and C. F. Curtin, Exposition manager.

#### Heating, Conditioning Meeting Arranged

THE program has been arranged for the 23rd Annual Convention of the National Warm Air Heating and Air Conditioning Association to be held Dec. 15, 16 and 17 at the Stevens Hotel, Chicago. The Association was established in 1914 with the purpose of the constant advancement and protection of the industry. Research, engineering, merchandising, education and publicity are a few of the society's activities. Manufacturers, jobbers, heating contractors and engineers are eligible to membership.

# CONSTRUCTION COSTS REDUCED $\frac{1}{3}$ *With* UNITS MADE ON THIS MACHINE

When modern buildings are being erected with  $\frac{1}{3}$  savings in material costs,  $\frac{1}{2}$  in mortar and  $\frac{1}{3}$  in labor, it again furnishes definite proof that **DUNBRIK** and **DUNSTONE** Build Better Buildings Cheaper. In addition multiple sizes offer wide flexibility, permitting solid—veneer—ashlar and hollow wall construction,—all in full range of color, shade and texture.

### Manufacturing Opportunity

The manufacture of **DUNSTONE** offers big money-making possibilities for the man equipped to supply the building trade in his territory with this exclusive product. We equip you with new and revolutionary line production machinery, permitting large production with only one or two men. Equipment costs but a fraction of what would be required for other processes of equal capacity, and production costs are far lower.

### INVESTIGATE

Write today. Ask for "4 Keys to Manufacturing Success," and let us show you how present **DUNBRIK** Manufacturers are making outstanding progress in a business that offers unlimited opportunity for growth, expansion and profit.

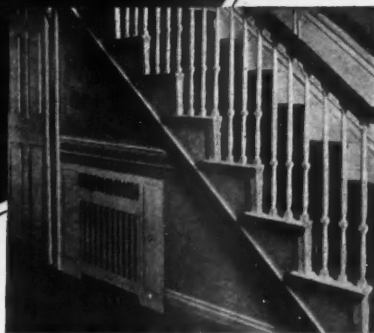
**W. E. DUNN MFG. CO.**  
 450 West 24th St., Holland, Michigan



Old stick-out-in-room type radiator.



40% smaller Burnham Slenderized Radiator, recessed.



Slenderized Radiator with Radiant Front Panel.

## A Radiator *Before and After*

**T**HE photographs tell the story. The stick-out-in-the-way old type radiator. The substituting of the Burnham Slenderized Radiator—recessed. The same radiator with our Panel Front, giving both radiant and convected heat.

So shallow are these Slenderized Radiators

that they can be recessed between the studs and still be flush with wall. They heat 40% quicker, even though they are 40% smaller than the old style tube type. Made in 3, 4, 5 and 6 tubes. Cost no more than other radiators. Send for Catalog. Get the full facts. See for yourself.

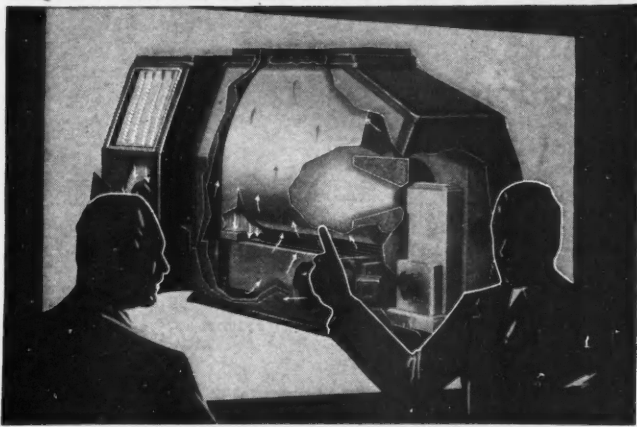
IRVINGTON  
 NEW YORK

*Burnham Boiler Corporation*

ZANESVILLE  
 OHIO

Representatives in All Principal Cities of the United States and Canada

# Gar Wood TEMPERED-AIRE



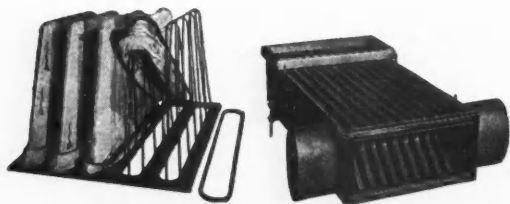
## TAKES THE GUESSWORK OUT OF *Air Conditioning*

● Experience has proved to architects and builders who specify Gar Wood Tempered-Aire that they can forecast results with comforting certainty.

They know that the coordination of all parts of the system is scientifically correct. They know that installation has been reduced to a simple formula. And they know that Tempered-Aire leads the entire oil-burning field in fuel economy.

There is no guesswork in installing such a system. It pleases the home owner with its dependable, economical performance. It pleases architects and builders because it saves them time and worry and owner complaint.

Full Tempered-Aire details should be in the office of every architect and builder. We will be glad to send them on request.



Gar Wood filters have great filtering area. Made of special woven fabric, they can be washed in any washing machine.

Only Gar Wood has this Economizer, which gives Tempered-Aire three times the heating surface of a conventional type of furnace.

AIR CONDITIONING DIVISION  
**GAR WOOD INDUSTRIES, INC.**  
DETROIT ★ MICHIGAN

### Labor Costs Up 10 Per Cent in 1936; Expect Further Increase Next Year

THE 1936 national wage chart of hourly wages paid to all types of building mechanics in 120 cities of the United States and which has been issued annually since 1902 by the Builders Association of Chicago shows numerous increases over 1935. It is quite a contrast in relation to 1934 and 1935 comparisons where a division of raises and declines occurred. Among the major cities, Los Angeles is the only city where an unchanged building wage status was in vogue in 1936 as compared to 1935.

Elizabeth, N.J., structural iron workers are the top paid building craft working 8 hours a day. Their hourly wage is \$1.75, although a reduction when compared to the \$2.00 hourly rate of last year. Chicago glaziers are the highest paid building craft working 7 hours a day. Their hourly rate is \$1.80. New York electrical workers are the best paid building trade working 6 hours a day. Their rate is \$1.70 an hour.

Asheville, N.C., pays the lowest rate of 25 cents an hour to laborers. Knoxville, Tenn., follows with a 30 cent hourly rate to the same craft.

1936 labor costs are approximately 10 per cent ahead of 1935.

The building work week ranges from 30 to 48 hours and 6, 7 and 8 hours is the work day. The established custom of most cities is 8 hours a day and the 40-hour week.

Several cities anticipate wage increases on and after Jan. 1, 1937. A 10 per cent increase for all building crafts of Rochester, N.Y., goes into effect after the first of the year.

Comparing present day building wages with 1902 when this annual national chart was first published, an increase of 200 per cent is chalked up in the last 34 years. In 1902, Chicago craftsmen ranged between 45 and 55 cents an hour. Today their hourly wages are \$1.50. Detroit in 1902 ranged between 25 and 50 cents an hour. Detroit wages now range between \$1.00 and \$1.25 an hour.

Hourly wage comparisons of the years 1935 and 1936 among several major cities follow:

Trade	1935	1936	Trade	1935	1936
<b>BALTIMORE:</b>					
Asbestos Workers	\$1.00	\$1.10	Lathers	1.37½	1.50
Composition Roofers	.75	1.00	Painters	1.20	1.25
Slate Roofers	.75	1.00	Plasterers	1.37½	1.50
Stone Cutters	1.10	1.25	Plumbers	1.25	1.37½
			Steamfitters	1.25	1.37½
<b>BOSTON:</b>					
Bricklayers	1.30	1.50	<b>DETROIT:</b>		
Carpenters	1.17½	1.25	Asbestos Workers	1.25	1.37½
Cement Finishers	1.25	1.35	Elevator Constructors	1.25	1.27½
Electricians	1.25	1.37½	Iron Workers	1.00	1.25
Elevator Constructors	1.33	1.52½	<b>MILWAUKEE:</b>		
Hoisting Engineers	1.17½	1.37½	Asbestos Workers	1.10	1.20
Iron Workers	1.20	1.37½	Bricklayers	1.12½	1.20
Laborers	.70	.77	Iron Workers	1.17½	1.27½
Marble Setters	1.30	1.50	Laborers	.65	.75
Plasterers	1.37½	1.50	<b>NEW YORK:</b>		
Plumbers	1.25	1.37½	Electrical Workers	1.60	1.70
Steamfitters	1.25	1.37½	Mosaic Workers	1.43¾	1.50
<b>BUFFALO:</b>					
Carpenters	1.00	1.20	<b>PHILADELPHIA:</b>		
Lathers	1.25	1.33	Asbestos Workers	1.00	1.12½
Composition Roofers	.60	1.00	Painters	.90	1.00
<b>CHICAGO:</b>					
Carpenters	1.31¼	1.50	<b>SAN FRANCISCO:</b>		
Cement Finishers	1.31¼	1.50	Asbestos Workers	.80	1.12½
Glaziers	1.70	1.80	Bricklayers	1.12½	1.50
Hoisting Engineers	1.31¼	1.50	Carpenters	.90	1.12½
Laborers	.82½	.95	Cement Finishers	.90	1.12½
Ornamental Iron Workers	1.31¼	1.50	Electricians	1.00	1.25
Painters	1.33¼	1.50	Hoisting Engineers	1.00	1.12½
Structural Iron Workers	1.42½	1.50	Iron Workers	1.20	1.37½
<b>CLEVELAND:</b>					
Asbestos Workers	1.17½	1.30	Lathers	1.00	1.12½
Cement Finishers	1.12½	1.25	Plumbers	1.00	1.25
Iron Workers	1.25	1.37½	Steamfitters	1.00	1.25
			<b>ST. LOUIS:</b>		
			Composition Roofers	1.17½	1.25
			Marble Setters	1.17½	1.37½
			Slate Roofers	1.25	1.50

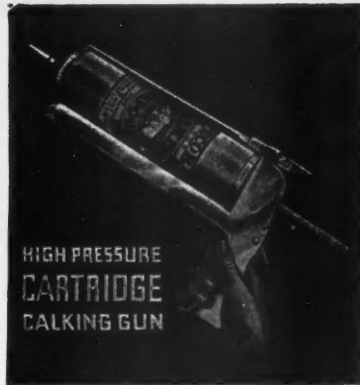
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Thousands of Heatilator Fireplaces are now in successful use throughout the country. Owners are enthusiastic about them. Builders find them a real selling feature. Heatilators are sold by leading building-supply and lumber dealers. Send coupon for complete details, including fireplace suggestions and installation data.

**Heatilator Fireplace**

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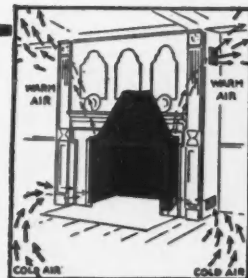
Heatilator Company  
750 E. Brighton Ave.  
Syracuse, N. Y.

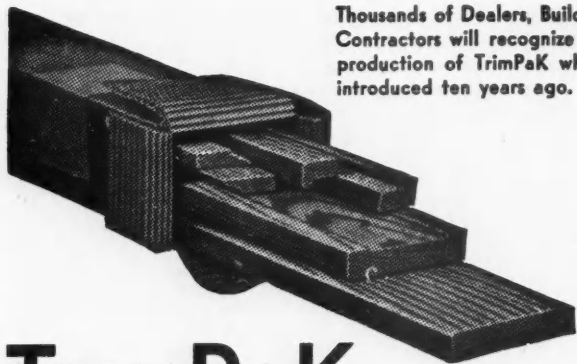
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## Will Increase your Profits and Sales

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**NET PROFITS**

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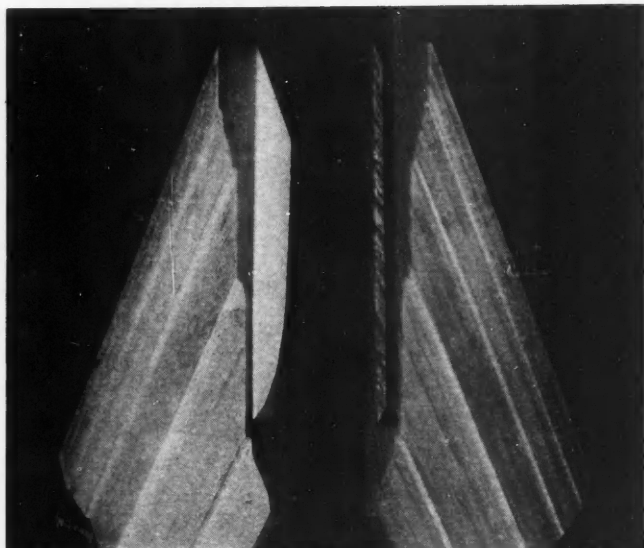
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Full mitred corners accurately cut with patented solid wood spline on vertical casings, with groove to receive splines in head casing. Easily put together. The spline is an integral part of the vertical casing.

### NLMA December Meetings in Madison

THE fall meetings of the Executive and Trade Promotion Committees of the National Lumber Manufacturers Association will be held Dec. 7, 8 and 9, at the Hotel Loraine, Madison, Wis. Part of the meetings of both the Trade Promotion and Executive Committees will be held in the building of the U. S. Forest Products Laboratory.

Preliminary to these meetings, a meeting separately will be held of the Advisory Committee composed of regional association secretary-managers. A meeting also will be held of the board of directors of the Timber Engineering Company.

### Better Paint Campaign Changes Name

THE Forest Products-Better Paint Campaign will have a new name after Jan. 1, 1937. It will be known as the Lumber Products-Better Paint Campaign.

It is felt that the new title will be an improvement over the original designation because it specifically mentions the one product which the Campaign is designed to help, namely, lumber in all its forms, as opposed to the broad classification "Forest Products" which might imply trees and all kinds of tree derivatives. Moreover, it has been found that there has been some confusion between the designation of the Campaign and the name of the U.S. Forest Products Laboratory at Madison, Wis., a confusion which the Campaign is anxious to avoid. The adoption of the new title does not contemplate any change in the objective of the Campaign, which is to stop paint failures and thus increase the use of lumber through educational work which shows how easy it is to obtain the utmost satisfaction in building construction from lumber and good paint.

The nineteen associations now co-operating with the Lumber Products-Better Paint Campaign represent all the producers and distributors of Lumber Products, and the International Society of Master Painters and Decorators. These are: American Forest Products Industries, Inc., Washington, D.C.; Arkansas Soft Pine Bureau, Little Rock, Ark.; California Redwood Assn., San Francisco, Calif.; Douglas Fir Plywood Assn., Tacoma, Wash.; International Society of Master Painters & Decorators, Inc., Peoria, Ill.; National-American Wholesale Lumber Assn., Inc., New York City and Seattle, Wash.; National Assn. of Commission Lumber Salesmen, Cleveland Heights, O.; National Assn. of Woodwork Jobbers, Chicago; National Door Manufacturers Assn., Chicago; National Lumber Dealers Assn., Washington, D.C.; National Lumber Manufacturers Assn., Washington, D.C.; Northeastern Lumber Manufacturers Assn., Inc., New York City; Northern Pine Manufacturers' Assn., Minneapolis, Minn.; Red Cedar Shingle Bureau, Seattle, Wash.; Southern Cypress Manufacturers' Assn., Jacksonville, Fla.; Southern Pine Assn., New Orleans, La.; West Coast Lumbermen's Assn., Seattle, Wash.; Western Pine Assn., Portland, Ore.; Western Red Cedar Lumber, Seattle, Wash.

### Briggs Opens New Showrooms

A PERMANENT display of Beautyware fixtures, made by the Briggs Manufacturing Company, Detroit, was opened recently at 177 North Michigan Ave., Chicago. As well as a complete line of fixtures, there is a handsome exhibit of miniature bathrooms in full color.

On the same day the New York showroom in the Architects Samples Corporation Building, 101 Park Avenue, was formally announced. A third showroom is to be opened on Dec. 10 at 657 Lincoln Road, Miami Beach, Fla.

### Celotex Plans English Plant

B ROR G. DAHLBERG, president of The Celotex Corporation, Chicago, and C. G. Muench, vice president in charge of production, sailed on the Normandie in November for London, England, to complete arrangements for the construction of a new plant there to manufacture various Celotex products. This proposed addition to the manufacturing facilities of the corporation is another step in the Celotex expansion program.

Mr. Muench spent some time in England last summer making a complete survey of manufacturing conditions, and the residential construction situation, to determine the advisability of building a plant there. It is expected that ground will be broken soon in England for a completely modern structural insulation board plant. This new plant should be in operation early the coming summer, and will help considerably to relieve the Marrero, La., plant.





Contractors Say

## WILLIS SKYLIGHTS

because of their long-standing reputation for dependability. They're made only of the best materials by workmen of long experience, and are **guaranteed not to leak.** Condensation bars on all sides and at eaves. Made in all styles and sizes, with or without ventilation.

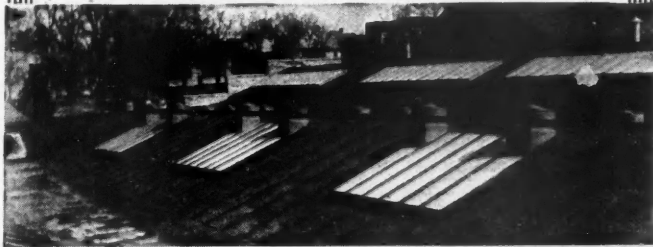
Show your clients how they can save money and improve working conditions by **more daylight, more fresh air . . .** either in new building or in remodelling operations.

WRITE for Skylight Catalog

The WILLIS MANUFACTURING CO.

Galesburg, Illinois

"Standard for almost Half a Century"



## Estimating Building Costs

By WILLIAM ARTHUR

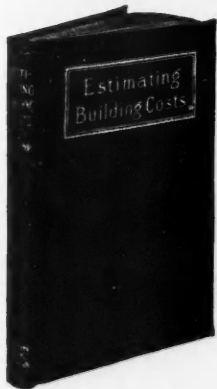
THIRD EDITION  
Revised and Enlarged

This concise and handy volume has been specially prepared for the use of building tradesmen, contractors, material men, technical students, instructors and all others interested in the construction of dwellings, barns, stores, and industrial buildings of moderate cost.

It contains a collection of material data covering all classes of building construction and arranged for quick reference. There are ninety-one tables showing the actual number of hours of labor and quantities of material on work done. These examples are all worked out on the basis of \$1.00 per hour for mechanics, and 60 cents per hour for laborers. The quantities are given and any change of rates can easily be adjusted by simple proportion.

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A brand new machine — designed like the Smith BOULDER DAM Mixers.

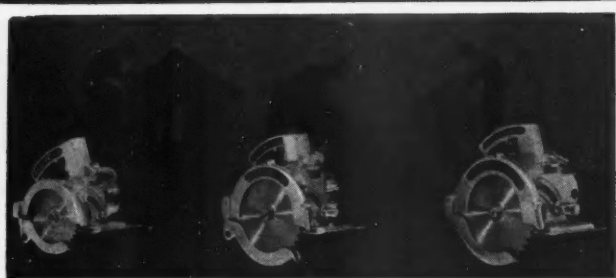
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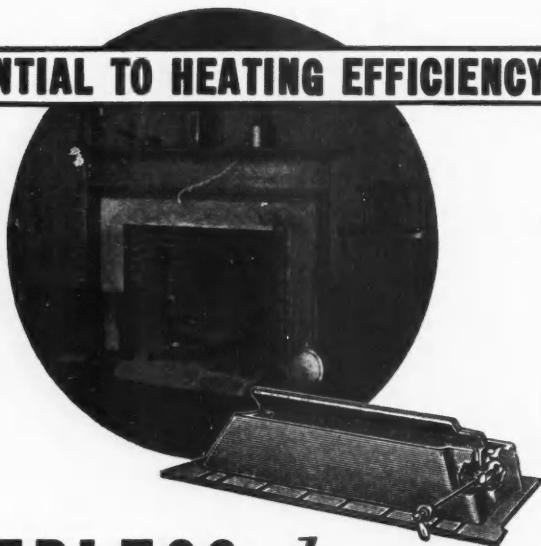
The last word in efficient and dependable design. Powerful . . . high speed . . . easily portable . . . 22 exclusive features. Try one . . . plug it into nearest outlet . . . you judge the results.



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because it seals the chimney flue when the fireplace is not in use, preventing unhealthful drafts and heat loss.

**PEERLESS DOME DAMPERS** are built of heavy stove plate cast-iron in all standard sizes and come in three models—Rotary, Poker or chain control.

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Fireplace fixtures—ash dumps—coal windows—ash pit doors—garbage receivers, radiant gas heaters, Gas Conversion Burners and Stokers. Details and prices on request.

**PEERLESS MANUFACTURING CORP.**  
1480 W. Ormsby Ave. Louisville, Ky.

## LETTERS from Readers on All Subjects

Facts, opinions and advice  
welcomed here

### Enthusiastic for FHA

Paterson, N. J.

To the Editor:

IN answer to your inquiry in the November issue, "Shall FHA Be Continued?", my answer is absolutely, "Yes, It Shall." It is today the very life of our building industry. If we were to return to the old method of 50 per cent mortgages by banks, without the government guarantee, the industry would completely stop operations, as the money would not be available. As it is, the buyer can purchase with 20 per cent down payment, and the builder can borrow money on his construction. In my 30 years as a builder, the FHA method is the best and easiest way for anyone to own his own home, and it releases the builder from all future obligations concerning the bond. And in my opinion every good builder should demand the continuance of this very important administration.

SIGFRED BECH, Builder.

### Greedy Mortgage Bankers

Harlingen, Tex.

To the Editor:

Having read your report of action taken by Mortgage Bankers Association of America in condemning FHA, we would like to voice our approval of FHA. We can readily understand why this group would like to do away with FHA when we think of the twelve to eighteen per cent loans they have been making in years past. If they had not been so greedy for this high rate of interest, the past fifteen years, so many top-heavy loans would not have been made with a resulting repossession of thousands of homes. It appears that there are sufficient lending agencies willing to take these loans now at a low rate of interest, and we sincerely hope FHA is a permanent institution.

They attempt to camouflage their motive for such action by crying about the high costs of material and labor; they are about as sincere in this statement as in the other charges made against FHA.

TAYLOR LUMBER COMPANY,  
By J. C. Atchison.

### Export Trade to Newfoundland

St. Johns, Newfoundland.

To the Editor:

Being a subscriber for the last two years and another to go I wish to say that your American Builder is all that can be desired and I personally find it very useful in demonstrating and helpful in completing contracts, etc., as I might say I sell practically 50 per cent of the total imports of roofing in Newfoundland.

Therefore, in view of the above facts I would appreciate it exceedingly if you will please have the enclosed list of catalogs forwarded to my address, as I am very interested in same.

H. B. CHAFE, Commission Merchant.

### Wants Samples for Class Work

Denver, Colo.

To the Editor:

I am writing you in regard to materials and booklets that you have listed in your magazine, "The American Builder."

I am connected with the Adult Education Trade and Industrial Division, with offices in Denver. This program consists of instruction in architectural drafting, blueprint reading and building construction. I have men from the WPA who have had experience in some form or other in this line, but

(Continued to page 82)

## LOOKING TO 1937!

The Certigrade policy will continue as in 1936!

Standard grades maintained and rigid inspection rules enforced . . . Every bundle plainly marked with the familiar Certigrade Red Cedar Shingle label . . . Certigrade Shingles sold through established dealers . . . Strong sales support for builders by an efficient force of field men—millions of pieces of literature and strong national advertising reaching prospective builders and all factors in the trade.

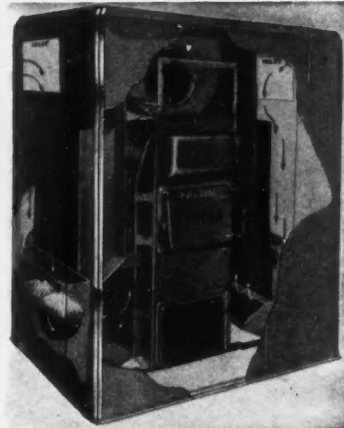
**RED CEDAR SHINGLE BUREAU**  
Seattle, Wash.; Canadian office, Vancouver, B. C.

**Certigrade**  
RED CEDAR SHINGLES



## For Every Home You Build There is a Dailaire System to Meet Your Needs

MR. BUILDER your customers are demanding air conditioning and automatic heat, and you cannot afford to give them anything but a tried and proven product that will operate at the best possible efficiency.



Complete Dailaire system showing all phases of air conditioning inside one casing.

Dailaire system of heating, cooling and air conditioning is field tested and time proven through six seasons in 27 states and every climate. That fact is your assurance that Dailaire is all that we claim for it, because, every claim has been proven by home owners as well as by our engineers. We suggest you write for catalog explaining Dailaire's 12 points of superiority.

**DAIL STEEL PRODUCTS COMPANY**  
1500 Main St., Lansing, Mich.

## The Old Builder's Estimator

By E. L. Gilbert



This new pocket-size booklet contains complete estimating forms for figuring one complete new house or other residential contracting job of any size, including repair work. There is also a helpful check list with more than 300 items, seven pages of helpful Estimating Data and special memo sheets for use on-the-job. Included in the Estimating Data section is a table for figuring monthly payments over periods of

one to ten years, how to figure steam and hot water radiation, and many other features of value to the active contractor, builder or carpenter. A handy table of multiplications allows checking calculations from two-times-two to 28x50 and may be used to figure simple interest, percentage, proportion, division and other arithmetical problems. A practical man's way to prepare estimates systematically, with accuracy, in a form which may be filed away permanently for later reference if desired.

### Buy Them by the Dozen

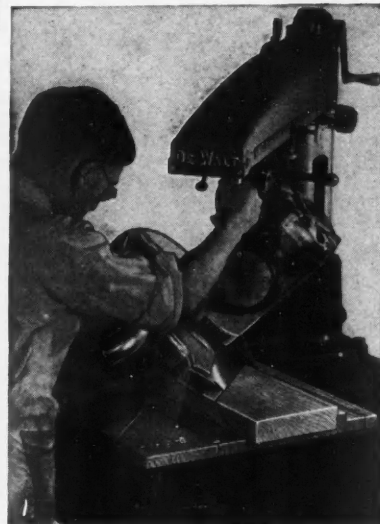
1936. 48 pages and stiff-paper cover, 4x7 1/2 inches, \$.25. A Dozen for \$2.50.

Book Service Department

**American Builder and Building Age**  
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*we can  
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"It is surprising how quickly we can set up for making special bevels, cuts, mouldings, etc.," writes a DeWalt user from Chicago. "We have not as yet found a job which could stump this machine, in spite of the fact that many new problems come up every day."

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SKILSAW has been the choice of builders for sixteen years because, model for model, it has more power, more construction refinements, more sawing applications. It is safe, accurate and durable. Operates on any A. C. or D. C. light socket. Cuts wood, metal, stone and compositions. 7 powerful sizes.

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312 Omar Street, Los Angeles  
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## Letters Dept.

(Continued from page 80)

find that they are unaware of present day construction and the materials used. I also have a large group of N.Y.A. students. We are using your magazine as a textbook in our classes.

Our purpose is to take the boys, have them draw up these plans with their own specifications and do the actual building themselves of a Youth Center in every community in the state. I would like them to study and be able to decide the different materials they would use in their buildings.

I am wondering if your firm would be kind enough to forward us literature and samples of products advertised in your magazine, that these men and boys may gain a better and lasting impression.

Thank you for any co-operation and assistance given us in this matter.

WORKS PROGRESS ADMINISTRATION OF COLORADO,  
J. R. McEvoy, Instructor.

## Pioneer Financing Service for Building Material Dealers

Michigan City, Ind.

To the Editor:

In a recent issue of your journal I noticed an article regarding "Installment Selling."

I was particularly interested to read your statement that dealer-controlled financing services are absolutely essential for the future success of the lumber dealer. In this connection, I wondered if you were familiar with the service rendered by the National Homes Finance Corporation, whose offices are in the Wrigley Building, Chicago.

Having been one of the early investors in this corporation, our installment selling experience with it dates back to early 1931 and 1932, when they made arrangements with C.I.T. to handle installment notes on much the same basis that automobile paper was then being handled. Naturally, with our experience in that field, both as retailers and with the finance corporation, from our standpoint the FHA fitted perfectly into the picture. They completed arrangements whereby Title II deals could be handled and we have found their service entirely satisfactory in this respect.

I would suggest that, for the benefit of many dealers who are without adequate financing service, you get in touch with the N.H.F.C., and get details of their plan from Mr. Potter, who I know will be more than glad to work out any details about which you may be in doubt.

We have found it to be a very great advantage to have control of the financing situation and have avoided many instances similar to the one mentioned in your article, and I feel sure that many other dealers have no doubt experienced the same thing.

We feel that your magazine is doing a good job for the contractor and dealer and look forward each month to receiving our copy of it.

FREY BROS. LUMBER COMPANY.

By Harry W. Frey.

## Wants Farm Building Features

University City, Mo.

To the Editor:

The letter of Wm. Hulsmeyer and Sons of Sidney, Ohio, contained in your issue of November 1936 under the caption, "Letters from Readers," voices a thought (for designs and ideas for small estates and farm buildings) which I have been intending to mention for some time. Something along the line suggested by your correspondent would be welcomed occasionally.

The establishment of small country estates in suburban areas adjoining our large cities is becoming popular. These almost always include attractive out buildings of one sort or another, e.g., pump houses, tool and implement sheds, small dairy and stock barns, poultry houses, etc., also fences embodying both utility and attractiveness. Available ideas on these subjects are rather scarce. Your contributions should help.

F. ROSSI.

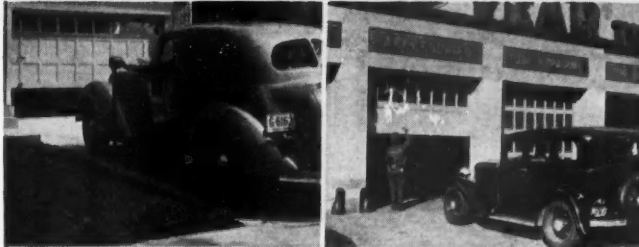
## RoL-TOP DOOR

*The Only Door That  
Seals Like A Keystone*  
**WEATHERTIGHT**

Weather-tightness is essential to a satisfactory door. And RoL-TOP insures it! Accomplished in a simple, easy-to-install, manner . . . no complicated mechanism to get out of order. Tapered on the sides RoL-TOP seats itself between sloping steel weatherstrips on the jamb . . . just like a KEYSTONE. Absolutely sealed when closed but free moving the instant it is started up. Be sure to have the details on RoL-TOP . . . embodying this and many other exclusive features that mean more for your "Door Dollar." Write TODAY.

*RoL-TOP is built in any size for manual or motor operation in wood or steel for commercial, industrial or residential use.*

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1560-80 Fields Avenue Columbus, Ohio



## Good from the Blue Print Up

LONG ago my father and his father before him practiced the policy of starting at the drafting board to build good furnaces and boilers. And I have made it a point to follow the pattern which they so wisely cut. H. P. MUELLER, PRES.  
L. J. MUELLER FURNACE CO.  
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**MAKE BIG MONEY  
EARN GREATER PROFITS  
WITH A  
SPEED-O-LITE**

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If you are looking for Extra profits—use the SPEED-O-LITE. A sensationally new and improved light weight sander, that cuts faster, works easier, and quickly pays for itself out of savings on sandpaper, labor, time and current. No experience required—sands right up to the quarter round—picks up all dirt and dust—leaves a ballroom finish on any floor. Plugs into every light socket. Weighs only 80 lbs. Get those extra profits TODAY—5-DAY FREE TRIAL OFFER.

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No Dirt  
No Dust  
No Mess

- GUARANTEED FOR 1-YEAR
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- SANDS UP TO QUARTER-ROUND

## EDWARDS METAL SPANISH TILE



**This  
Roof  
Will Make a "Show House"  
of the  
Moderate Priced Home**



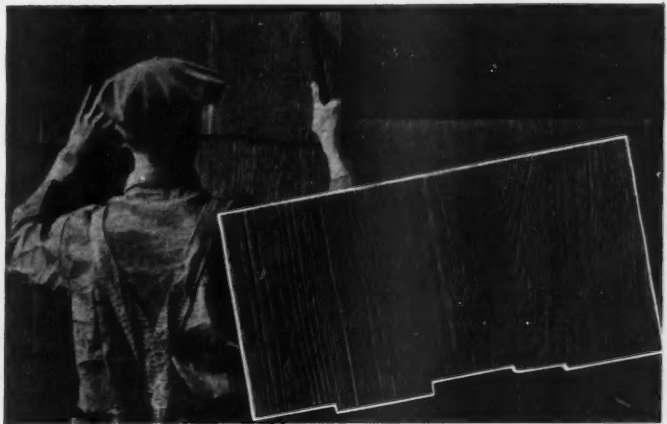
HOME BUYERS flock to the home that is roofed with Edwards Metal Spanish Tile. Their massive appearance, deep shadow lines, color harmonies and distinctive fittings produce an effect of dignity and charm that make any residence stand out as the gem of any neighborhood.

Edwards Spanish Metal Tile protect from fire and lightning. Water can't get through their interlocking joints and wind can't blow them loose. They require no special roof reinforcement and they last as long as the building itself.

Write for Spanish Tile Book. Send roof measurements for estimate.

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

## EVERYBODY PROFITS...When You Sell Timbertex Sidings—



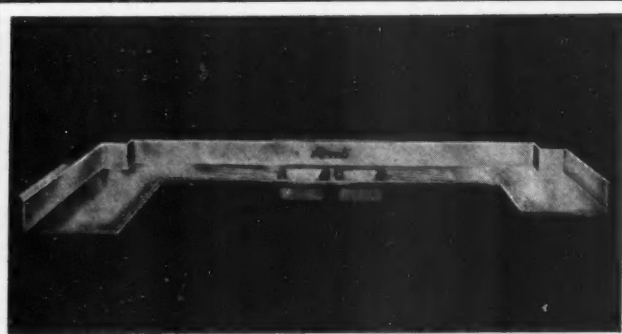
WHEN you sell Eternit Timbertex Asbestos-Cement Sidings, everybody profits. Property owners secure colorful wood-textured sidewalls that are rot-proof, fire-proof, termite-defying, and never require paint or stain to prolong their life.

Contractors have sidewall shingles with pre-punched nail holes—easy-to-apply shingles that flatter their workmanship. They also have the Ruberoid Easy Payment Plan and consistent Ruberoid advertising to help clinch sales. One job sells another, so start several! Write Dept. A.B.-12 for full facts.

## RU-BER-OID

ROOFING AND BUILDING PRODUCTS

The RUBEROID Co., EXECUTIVE OFFICES: 500 FIFTH AVE., NEW YORK CITY



Silvi Sheen Enduro Stainless Steel U-shaped Sink Top with Two Stainless Steel Bowls, Drainingrooves, and Integral Back Splasher All Around.

## Increase Your Profits with the Fast-Selling Tracy Sink

The modern Tracy cabinet sink top offers alert builders attractive profits and increased sales. Two unusual designs are shown here.

Hundreds are writing for our literature and other data. The information in our folders will help you sell more cabinets—and will assist you in suggesting the most appropriate units for your customer.

*"Famous for Cabinet Sinks and Tops"*

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3125 Proble Avenue, N. S.

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An Unusual Design—Perma Sheen Imperial (linoleum) with Acid-resisting Porcelain Bowl.

## A HANDY PRECISION TOOL for JOB or FACTORY



Miter Sawing



Bevel Cross-Cutting



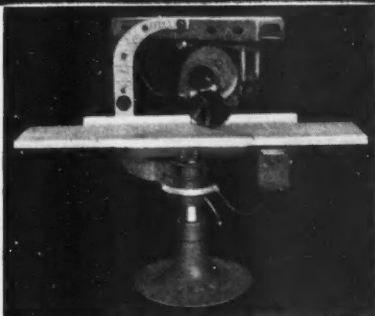
Compound Miter Sawing



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PATENT APPLIED FOR

### SAVES TIME and LABOR

"Center-Pivoting," with dial indicator, eliminates setup delay; permits accurate production immediately.

### ECONOMICAL TO OPERATE

★ ★ ★  
DOES "A HUNDRED AND ONE" OPERATIONS ACCURATELY

We have here illustrated but ten of the many jobs that can be done on this new Stetson-Ross TX24A radial hand saw.

WRITE for DETAILED INFORMATION  
**Stetson-Ross Machine Co.**  
Seattle, Wash., U. S. A.      Manufacturers

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Gaining Timber



Cross-Cutting Timber



Mortising Timber



Miter Tenoning Timber



Disk Sanding

★ ★ STANDS UP FOR HIGH PRODUCTION ★ ★

## Model Features and Specifications of New Rochelle (N. Y.) Model Home

(Continued from page 32)

**BASEMENT FLOOR**—6" stone well rammed down covered with 4" rough cinder concrete and 1" portland cement finishing, over which is laid Johns-Manville 12" x 3/16" asphalt tiles in colors.

**CONCRETE PORCHES**—6" gravel concrete slab reinforced with 3/8" steel rods, 12" centers. Slab covered with Toch Bros. No. 110 waterproofing.

**PLASTERING**—3 coats Granitex by American Building Products Corp., laid over ribbed wire lath, carried over heads and sides of windows and doors.

**FRAMING**—Best quality die squared well seasoned and free from sap or other imperfections. Sills, posts and girts 4" x 6" fir; plates 4" x 4" fir; braces 4" x 4" fir; framing studs 2" x 4" fir, 16" on centers; first floor beams 2" x 10" fir, 16" on centers; second floor beams 2" x 10" fir, 16" on centers; attic floor beams 2" x 8" fir, 16" on centers; rafters 2" x 8" fir, 18" on centers; door and window studs doubled; plates to partitions 3" x 4". All headers and trimmers doubled. Floor beams bridged with 1 1/4" x 3" spruce. Iron stirrups for trimmers and headers. Where partitions on second floor do not rest on partitions below, floor beams under same tripled and spiked together. Where partitions come on top of one another, studs set on top of plate of partition below.

**WALLS**—3/8" N.C. pine sheathing, covered with Sisalkraft paper thoroughly lapped. Exterior shingles tapered asbestos, wavy butts by Flintkote Co.

**ROOF**—Bangor No. 1 clear black slate, 18" random widths over 30-lb. felt. Copper nails. Clason snow guards.

**FLOORS**—7/8" tongue and groove pine boards, laid diagonally, with heavy building paper. Finish floor 13/16" x 2 1/4" clear plain red oak.

**STAIR**—7/8" oak risers with 1 1/4" oak treads. String pieces 1 1/4". Curtis Colonial design "Lexington."

**WINDOWS**—Andersen Narro-Line, fully weatherstripped, complete with screens, best quality double thick American glass.

**CABINETS**—Flush door wood cabinets, 5-ply with hardwood core, by Murphy Door Bed Co., Tracy sink. Columbia medicine cabinets with copper-back mirrors and chromium frame.

**INSULATION**—Exterior walls and rafters insulated with 4" Mineral Wool bats.

**CANVAS DECK**—12-oz canvas double filled, under side painted before laid and nailed with copper nails.

**SHEET METAL**—Gutters, leaders and flashings 16 oz. H.R. Anaconda copper. Leaders supplied with copper wire cages.

**PAINTING**—Exterior trim 3 coats Atlantic white lead, pure linseed oil, turpentine and dry colors. Interior woodwork 3 coats best Atlantic white lead paint, final coat enamel. Floors and stairs, stain and filler rubbed with steel wool and 2 coats Minwax. Laundry floor, Sonneborn & Co. cement floor paint.

Plastered walls, bathroom, kitchen and lavatory 1 coat pigment primer, 1 coat flat paint stippled, top coat dull enamel. Other ceilings 1 coat glue sized shellac and 1 coat of Muresco. Walls of all other rooms not papered 2 coats paint and 1 coat Marb-o-lite, stippled. Wallpaper by W. H. S. Lloyd Co.

**WIRING**—Approved BX cable to permit lighting power increase of at least 33%. Each pole of branch of all mains and feeders protected by cutouts in iron boxes. Pressed steel connecting boxes, tumbler switches, duplex base outlets.

**TELEPHONE CONDUIT**—Telephone conduits to first floor, hall and bedroom with recessed boxes. Conduits installed according to Telephone Co. recommendations.

**BELL WORK**—Gamewell Vitalarm fire alarm signal. No. 18 rubber insulated and braided wire, transformer, 3" bells for front door, side door and dining room floor push buzzer.

**LIGHTING FIXTURES**—Modern and Georgian Colonial fixtures by Lightolier Co. and Chase Brass & Copper Co.

**KITCHEN VENTILATOR**—Ilg ventilating unit, stainless steel with automatic shutter and extension sleeve.

**RADIO OUTLETS**—Outlets placed in living room, recreation room and bedroom No. 1 for antenna and ground.

**PIPING**—4" extra heavy pipe with 4" cast iron trap, double

(Continued to page 86)

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MURAL-TONE is the amazing, perfected casein paint. Lithopone and real pigments in a casein vehicle give it revolutionary advantages. One gallon thinned with water yields one and two-thirds gallons of paint. Covers as much as 1,000 sq. feet. Preferred for walls and ceilings. 10 colors—and a white that cannot yellow.

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- DRIES IN FORTY MINUTES
- ADHERES TO UNSEASONED PLASTER
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Saves Space, Saves Money

## SELLS HOMES

Hundreds of new and old homes are prospects for this modern stairway. Guaranteed construction—Highest grade material and workmanship. Strong—Safe—Rigid. Easily installed, easily operated.

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EXTRA PROFIT

Let us give you complete information. See your dealer or write us today. A.B. 1236

**Farley & Loetscher Mfg. Co.**  
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## EVERY WOMAN WANTS A VENTILATED KITCHEN



• Women, everywhere, appreciate the blessing of fresh, pure air in the kitchen—freedom from smoke, greasy fumes and food odors that always find their way into the other rooms. That's why, when it comes to buying a home, they pick the one with a Victor In-Bilt—every time. And, they don't overlook its "prestige" value, either! Whether you build to sell or on contract—always include a Victor In-Bilt in your plans. Your homes will sell faster and you'll develop more prospects.

## VICTOR IN-BILT VENTILATORS

### DEALERS

The demand for ventilation in the home is creating a profitable market for you. Take advantage of it, now! Get your share of the business in your locality. Identify yourself with Victor—the outstanding ventilator in the field. Write today for full information.

**FREE!** Write today for descriptive bulletin which gives full information on Victor Ventilators—installation etc.  
VICTOR ELECTRIC PRODUCTS, Inc.  
717 Reading Road, Cincinnati, Ohio

## Kitchens SELL Homes - Ventilators SELL Kitchens

Here's Your Chance to Get a

## FREE DEMONSTRATION

Yes Sir, Fellows! Here's your chance to try out the "Little American," one of the finest floor sanders ever made for the contractor or the floorman. The machine is light enough that the operator may easily take it from job to job yet heavy enough for real professional floor sanding.

A free demonstration can very easily be arranged without cost or obligation to you. There are absolutely no strings tied to our offer—all you have to do is to sign and mail the coupon printed below or drop us a post card. We'll see that one of these machines is in your hands. The sooner you run one of these machines and find out how superior it is in quality and performance, the quicker you will set it to work making you more profits.

If you are not quite ready for a demonstration, send in the coupon anyhow and we'll be glad to send you complete details, prices and catalogs.

**AMERICAN**  
Floor Surfacing Machine Co.  
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### Return - COUPON - NOW

- I want a demonstration about (date) \_\_\_\_\_
- Send complete details and prices.

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Wise builders use the same degree of care in selecting lighting equipment as they do in choosing plumbing or heating. To insure the biggest dollar's worth in quality and service, install Lightoliers in every room. They add style and salability to the home you build.

• • •

Write for free booklet, "The Charm of a Well Lighted Home," to help you plan beautiful and economical lighting. Address Dept. MJ

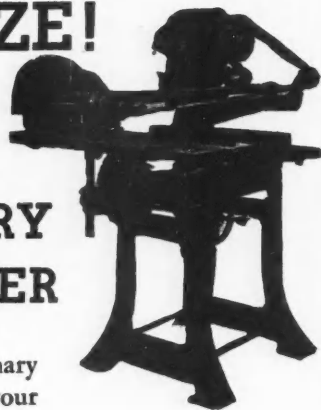


# LIGHTOLIER

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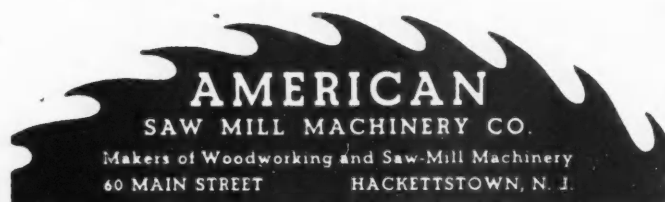
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Does the work of *five* ordinary machines—more than 18 of your everyday operations—economically; efficiently; accurately; quickly. Can be taken to the job with you—through a 24" opening, by the simple removal of five bolts. Send for details.

And let us send you our NEW Catalog and NEW LOW PRICES on our complete line of MONARCH Woodworking machinery, including band saws, bench saws, jointers, lathes, shapers, sanders, mortisers. Also portable saw mills in eight different sizes.



## New Rochelle (N. Y.) Model Home

(Continued from page 84)

manhole, screw cleanouts. Flashing around soil pipes heavy copper. Connections between iron and lead pipes of brass ferrules and wiped soldered joints.

DEADENING—Where soil pipes pass from first floor to second floor wrap with hair felt and pack space around thoroughly with mineral wool.

WATER PIPES—Water piping and fittings Anaconda copper tube, type L, wrought copper fittings. Hose connections with globe valves.

TRAPS—Traps for all fixtures except water closets and wash basins heavy lead with brass cleanout screw. Branch vent always above top of trap. Exposed traps chromium.

FIXTURES—Colored acid-resisting enameled Standard Neo-Angle bath. Case & Co. closets.

HEATING—Sunbeam air conditioning unit by Fox Furnace, with American Gas Co. gas heater.

GARAGE DOORS—Garage doors Overhead Door Corp.

GAS RANGE—Magic Chef.

HOT WATER HEATER—Everdur water heater by International Nickel Co.

REFRIGERATOR—Electrolux.

VENETIAN BLINDS—Central Shade Co.

HARDWARE—Russell & Erwin Mfg. Co.

## Sky Scraper Builder Brings New Technique to Homes

(Continued from page 47)

in contact with any traffic street."

"On the structural side, we have sought to bring the same quality and efficiency of construction to the small-house field that now prevails in skyscraper work. Here again the difference between the moderate-priced house and the custom-built house costing \$25,000 and more has a tendency to disappear.

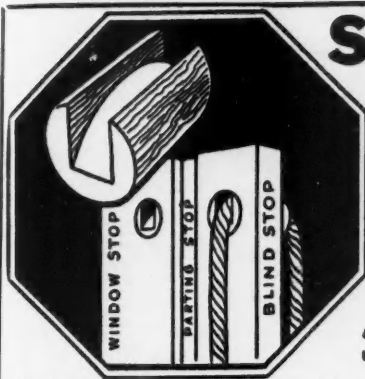
"Our houses all have poured concrete foundations, slate roofs with copper flashings, gutters and leaders, full insulation, the latest type of automatic oil burners, brass plumbing and the best quality fixtures—the identical materials and equipment used in more expensive houses. The minimum lot is 50x95 feet and we have made extensive studies in spacing and orientation. By varying the location of houses with reference to lot lines, we have sought to give each house the maximum amount of sunlight and the least amount of shadow from nearby houses. The stagger system also gives each house a minimum view of about 150 feet. We have eliminated entirely the unsightly detached garages, clothes lines and backyards of old-fashioned Suburbia. We have further eliminated monotony by creating a total of about 90 designs. A typical cul-de-sac group-  
ing consists of 16 houses."

Residential planners everywhere agree that the "dead-end" street arrangement is one of the most practical and most sensible ever devised—either for a large project such as this or for small home projects. The remarkable thing about this arrangement is that the actual amount of land required is less than in the monotonous, standard grid-iron arrangement usually followed.

Houses in Green Acres are being financed under the FHA single mortgage system with 20 per cent down payments and amortization payments running over 20 years. The spectacular thing about the financing, most

(Continued to page 88)





**SAVE 25c to 35c**  
Per frame—with

**HONEYCUTT SASH CORD SADDLE**  
40% less weight. Saves labor—merely bore 1" hole and drive Saddle in. Requires less stock of window weights.

Kiln dried, chemically treated, full 1" birch or beech. Tested—tried and accepted in years of actual usage.

Cannot rust or stick window. Noiseless. Will never jump pulley, fray nor wear out sash cord. Positive balance for window.

**FREE**—Write today for **FREE** Sample and illustrated literature. Honeycutt Mfg. Co., 2715 Oak St., Kansas City, Mo.

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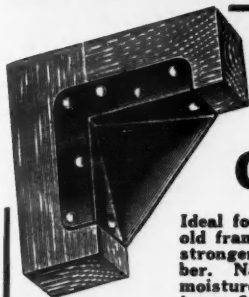
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with Gasoline Engine or Electric Motor Installed.



Write for Catalog on  
Saw Rigs - Pumps  
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Ideal for screens and other light frames. Make old frames firm and strong as new—new frames stronger and better. Fit any thickness of lumber. Nailed from 3 sides. Seal corner against moisture, dust. Made of pressed steel—black japan finish. One set (4 braces with nails) in box. Order now!

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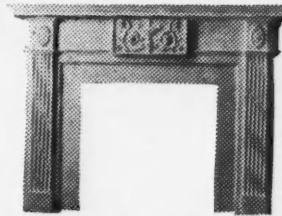
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Iron Fence, Gates, Iron and Wire Window guards, Chain Link Wire Fence, etc.  
Send measurements showing your requirements and we will forward illustrations suitable for your enclosure.

**CINCINNATI IRON FENCE CO., INC.**

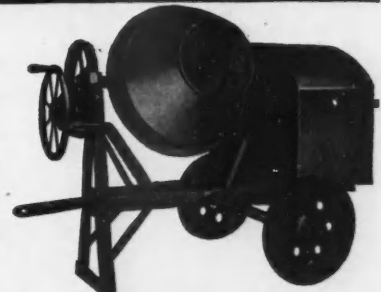
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Full anti-friction bearing. Light weight. Skip shaker. Automatic water tank. Spring mounting. Sizes: 3 1/2-S, 5-S, 7-S, 10-S.



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● No smoke, soot, fumes or gas ● Red-hot fire in less than 5 minutes ● Gives more heat than THREE coke-burners ● Portable, compact—all parts pack inside salamander casing ● Requires little storage space ● Average fuel consumption 1 to 1½ gal. per hour ● Low price ● Write for Bulletin No. 144C.

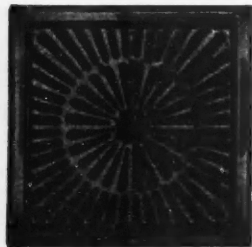
### AEROIL BURNER COMPANY, INC.

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The Electrovent! The favorite with builders from coast to coast because of its beauty, mechanical excellence and moderate price. Shutters open and close automatically as motor is turned on and off. All-metal construction, completely rustproof.

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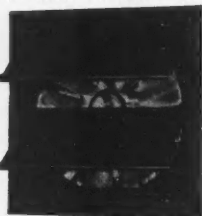
Aluminum blades. Beautiful chrome-plated grille. One and two speed motors. No radio interference. Exceptionally easy to install.

Write for Builders' Prices

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Wallace Universal Saw

## HERE IS THE MACHINE

that is cutting costs and increasing profits in thousands of lumber yards, carpenter shops, mills, factories, and cabinet shops,—the new Wallace No. 8 Universal Saw with its special gear drive. Cutting a full 2½" thick with an 8" blade, this machine can be furnished with drive units rated up to 2 h.p.—power plus to do the heaviest jobs.

The Wallace No. 8 Universal Saw is a modern machine, built to compete with modern production methods, to turn out work quickly, safely, economically. And it's made to last a lifetime.

Write to us today for complete information about the No. 8 Saw,—no obligation. Also our complete line of Jointers, Bandsaws, Shapers, Mortisers, Grinders.

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**COLORCRETE INDUSTRIES, INC.**  
500 Ottawa Ave., Holland, Michigan

## Sky Scraper Builder Brings New Technique to Homes

(Continued from page 86)

of which is being handled by the South Shore Bank & Trust Company, of Rockville Centre is that only 4½ per cent interest is being charged. To this must be added the usual FHA mortgage insurance and service charges.

The houses being built in Green Acres are of varied styles and types, from five to eight rooms. The floor plans are compact and efficient and feature outdoor terraces to take advantage of the park view. Each floor plan is specifically designed to give the best exposure to sun and view. Practically all living rooms face south and west. The stagger arrangement of spacing houses prevents one house throwing a shadow on the other and increases the amount of sunlight in each house.

Most of the houses have a flagstone terrace that can be reached from either the living room or dining room or both. The purchase price always includes a steam-heated attached garage, landscaping, full cellar with concrete floor. In addition, a brief outline of specifications which are featured by Chanin are as follows:

**FOUNDATIONS**—12-inch poured concrete.

**ROOF**—Slate with copper flashings, gutters and leaders.

**INSULATION**—Reynolds Metallated Ecod.

**HEATING**—Enameled steel jacketed Kohler De Luxe steam boiler with Petro automatic oil burner, Stahot water heater with copper storage tank, Pressurtrol, aquastat, room thermostat and stack stabilizer.

**FLOORS**—Double floors of ¾ inch tongue and groove oak.

**ELECTRIC FIXTURES**—Shapiro and Aronson Period designs; wall switches and ample base and utility outlets.

**KITCHEN EQUIPMENT**—Tracy PermaSheen sink; Boro Wood Products cabinets with Duco glazed finish; fully insulated colored Calaric table-top gas range with heat control; heavy Armstrong linoleum on floor.

**BATHROOM EQUIPMENT**—Fixtures by Kohler, colors as selected; United Metal Box Co. steel medicine cabinet with chromium-framed mirror; stall shower with needle sprays and chromium and glass door by G. M. Ketcham Mfg. Co.; chromium leg-type basin; tiled walls and floor, colors as selected; porcelain accessories built into walls.

**PLUMBING**—Brass throughout; all faucets and trimmings in kitchen and bathrooms are chromium.

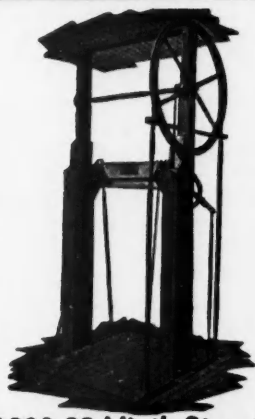
**WINDOWS**—Truscon steel casement windows.

**HARDWARE**—Sargent Period designs.

## Winter Heating Economies

(Continued from page 63)

There is this to be said about it. If the attic floor is insulated the attic itself is colder, and the rate of heat loss through the insulated ceiling has to be computed on a "degrees difference" basis, which rate increases with the increasing difference. If moist air gets through to any cold enough surface it will form frost. And it will not wait for the second or third surface to dispose of its moisture. If the attic is ventilated the surfaces are still colder and the frosting more pronounced. It would seem logical to us then that in the case of a house in a colder section of the country to insulate between the rafters. In such case the attic, even if unused, would keep a temperature sufficiently within bounds, and the temperature difference between the underside of the ceiling and the attic space would be so reduced as to cut the rate of heat loss to a proper portion. The table, Figure 3, gives some ideas, on examination, as to what can be done in roof insulation.



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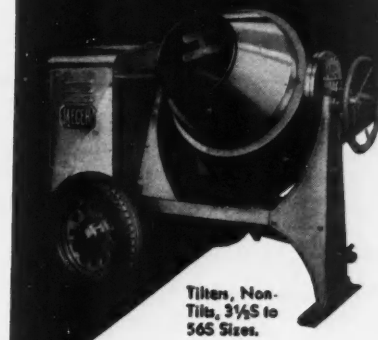
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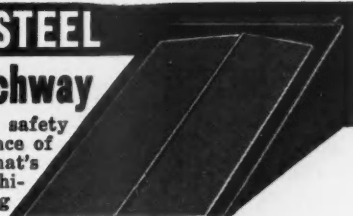
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## CONTRACTORS' EQUIPMENT

**230—Wallace Woodworkers**—"Bulk vs. Power," a short story for which it is claimed, "Time saved by reading, 80 hours." It tells in a convincing way how a foreman carpenter at Peoria, Ill., used a Wallace power saw with astonishing results. Detailed information regarding this equipment also available.—J. D. WALLACE & CO., 136 S. California Ave., Chicago.

**231—How to Sharpen Tools**—A very helpful 48-page booklet for building mechanics, apprentices and home craftsmen describing the various types of abrasives and sharpening stones and illustrating clearly the technique of sharpening chisels, knives, scissors, auger bits, lawn mowers, razor blades, etc. Many special types of oil stones, strops and hones are covered.—BEHR-MANNING CORP., Troy, N. Y.

**232—Electric Hand Tools**—Black and Decker catalog of portable electric tools; 54-page, well illustrated portfolio giving complete mechanical specifications and prices on Black and Decker electric drills ranging from ¼ inch to 1 inch; also drill stands, hole saws and accessories; also information regarding portable electric hammers, electric saws, grinders, sanders, polishers, etc.—THE BLACK & DECKER MFG. CO., Towson, Md.

**233—Electric Carpenter Woodworking Machine**—New illustrated catalog on this ingenious 7 machines in 1, which is offered as a complete planing mill operating from any electric light socket.—CARPENTERS MACHINERY CO., 250 N. Eleventh St., Philadelphia, Pa.

**234—Pipe Thawing**—"Hobart Pipe Thawing Manual"; valuable information on thawing frozen water pipes; covers actual cases of pipe thawing, the nature of the job, time required, length of pipe to be opened up, size and kind of pipe, cost, etc. A non-technical book compiled for the average man to read. Contains complete drawings and diagrams, explaining the methods used. Various hook-ups for thawing pipes and many other pages of worth-while information on the subject.—HOBART BROTHERS CO., Troy, Ohio.

**235—Sidewall Staging Brackets**—"Flint Sidewall Staging Brackets," a 4-page illustrated circular for builders and roofers illustrating this well known, money-saving safety equipment, directions on how to erect the Flint sidewall staging and scaffolding.—A. W. FLINT CO., New Haven, Conn.

## BUILDING MATERIALS

**236—Thermax and Absorbex**—"Specifications and Technical Data, 1936 Edition" as contained in "Thermax News" gives full information concerning this incombustible structural insulation for homes and other buildings; also regarding Absorbex, acoustical corrective for interiors. A quantity of extremely interesting information here for those alive to new developments in the building field.—THERMAX DIVISION, Northwest Magnesite Co., Pittsburgh, Pa.

**237—Schundler Insulating Plaster**—"8 Unusual New Features" presents Vermiculite and gives a brief description of the product and summary of its advantages for insulated plaster walls. Information also available on Zonolite Dual-Control home insulation in booklet entitled, "You Can Depend on Results from Zonolite Insulation Installed by Approved Schundler Trained Applicators."—F. E. SCHUNDLER & CO., Inc., 45-15 Vernon Blvd., Long Island City, N. Y.

**238—Beautiful Shingled Homes**—"A Portfolio of Certigrade Homes," a 16-page portfolio of photographs and floor plans of charming homes with shingled exteriors erected from coast to coast. Many homes of popular size and type illustrated.—RED CEDAR SHINGLE BUREAU, Seattle, Wash.

**239—Grade-Marked Southern Pine**—"Questions Before the House," a 16-page booklet containing 12 detailed illustrations and thoroughly acquainting the potential home builder with vital facts that should be known before actual construction is begun.—SOUTHERN PINE ASSN., New Orleans, La.

**240—Teco Connectors**—"Manual of Timber Connector Construction" giving technical details covering improved system; timber framing which makes more economical and stronger timber structures.—TIMBER ENGINEERING CO. (Div. of National Lumber Mfrs. Assn.), Washington, D. C.

**241—Mahogany**—"The Mahogany Book," Second Edition, increased in size to 80 pages and many new illustrations added. The introduction states, "This handbook has been prepared for the architect, the designer, the maker of cabinetwork and furniture and for those who sell and for those who buy. The story of mahogany is romantically old, yet alluringly mod-

ern. It is a story that will thrill every lover of fine cabinet woods."—MAHOGANY ASSN., Inc., 75 E. Wacker Drive, Chicago.

**242—Plywood Walls**—"Art-Ply, the In-laid Plywood for Walls and Ceilings," a pictorial broadside illustrating this latest idea in dry wall construction and interior wall finish. How to apply the plywood and finish it for best results.—VANCOVER PLYWOOD & VENEER CO., Vancouver, Wash.

**243—Fir Plywood Test Data**—"Deflection Charts for Douglas Fir Plywood," a new technical folder presenting three charts showing strength tests on ½-inch, ¾-inch and ¾-inch Douglas Fir Plywood under loadings of from 100 to 800 pounds per square foot and spans from 12 inches to 24 inches. An attractive little 8-page booklet with photographic illustrations features the manufacture and use of "Douglas Fir Plywood, the Engineered Wood Product."—DOUGLAS FIR PLYWOOD ASSN., Tacoma Bldg., Tacoma, Wash.

**244—Copper Pipe**—"17 Years of Copper Pipe Manufacture," presenting the streamline copper pipe and streamline fitting which have become so popular in present day home building. A little consumer booklet, "The Story of the Home That Had Hardening of the Arteries!" presents the popular side of this story.—STREAMLINE PIPE AND FITTINGS DIV., Mueller Brass Co., Port Huron, Mich.

**245—Brass and Copper Building Products**—"What to Do About Remodeling," a 30-page book of helpful information on remodeling, repairs and replacements for inside and outside the building, including flashings, sheet metal work, eave troughs, downspouts, piping, heating fixtures, plumbing fixtures, etc.—CHASE BRASS & COPPER CO., Waterbury, Conn.

**246—Concrete Design and Construction**—"Concrete in Schools," a 36-page illustrated design book giving structural layouts and details in line with prevailing requirements in school construction. The designs illustrated include one and two room rural schools, as well as the larger city structures.—PORTLAND CEMENT ASSN., 33 W. Grand Ave., Chicago, Ill.

**247—Ruberoid Building Products**—"Shelter," an illustrated pamphlet of 24 pages

dealing with the historical development of safety and convenience in the home, issued on the occasion of the company's fiftieth birthday.—THE RUBEROID CO., 500 Fifth Ave., New York City.

**248—Superior Steel Sheets**—"Serving Modern Industry in a Superior Way," 12 pages containing process of manufacture, advantages, recommendations and photographs of products and installations, including highway markers and signs, and sheet metal work in home kitchens, restaurants, etc.—THE SUPERIOR SHEET STEEL CO., Canton, Ohio.

**249—Eagle Home Insulation**—"Comfort," an impressive brochure in the modern style presenting a complete story of Eagle home insulation, preceded by a general discussion of the importance of insulation.—THE EAGLE-PICHER SALES CO., Cincinnati, Ohio.

**250—No Sash Weights**—"N.S.W. Better Windows," a new series of data sheets on this non-stick double-hung window, its advantages and economies.—THE N.S.W. CO., 2137 Gratiot Ave., Detroit, Mich.

**251—Tracy Sinks**—New 16-page architects' folder gives details of the molded linoleum and stainless steel sinks and cabinet tops developed to complete the modern wood case kitchen assembly. How these improved sinks and case tops are ordered and installed.—TRACY MANUFACTURING CO., 3125 Preble Ave., N.S., Pittsburgh, Pa.

**252—Helyx Floor Screw Nails**—Full information regarding these screw nails in 2-inch, 2¼ and 2½ inch sizes for laying maple or oak hardwood flooring. Introductory jobbers' price list in 100 lb. lots, with length, gauge, price and count.—HILLWOOD MFG. CO., 21710 St. Clair Ave., Cleveland, Ohio.

**HOME EQUIPMENT**

**253—Fireplace Dampers**—"Attractive Fireplaces and How to Build Them," an interesting design booklet of 16 pages showing many attractive designs with complete directions for securing a perfect non-smoking fireplace.—H. W. COVERT CO., 229 E. 37th St., New York City.

**254—Electric Outlets**—"Planned Electrical Wiring for More Convenient Living," a new 12-page portfolio illustrating the newest ideas in electrical outlets for all the rooms in the house. Also information on Alabax lighting fixtures.—PASS & SEYMOUR, Inc., Syracuse, N.Y.

**255—The Holland Oil Burner**—Complete information on the Holland Vaporspra, the perfected oil burner put out by the manufacturer of Holland furnaces which "make warm friends." Also information

regarding the newly developed Holland automatic coal burners, modern coal stoker equipment.—HOLLAND FURNACE CO., Holland, Mich.

**256—Link-Belt Stokers**—"Link-Belt Stoker Used Where Performance Counts Most," a spirally bound 28-page handbook on coal stokers for domestic and industrial uses. A long record of performance is included.—LINK-BELT CO., 307 N. Michigan Ave., Chicago.

**257—Shower Stalls**—"Specify and Install Mills Metal Unit Showers," a circular showing the construction and installation features of the Mills metal unit showers.—THE MILLS CO., 965 Wayside Road, Cleveland, Ohio.

**258—The Lavashower**—Details of the Lavashower tub and shower receptacle with combined lavatory. A de luxe space-saving plumbing fixture for the modern bathroom.—LAVASHOWER CORP., 112 S. 16th St., Philadelphia, Pa.

**259—Veribrite One-Piece Porcelain Enameled Sink**—"The Modern Sink for the Modern Kitchen," a 10-page booklet with color chart, specification forms and price lists. Also information regarding porcelain enamel store fronts and small buildings.—GENERAL PORCELAIN ENAMELING AND MFG. CO., 4137 Parker Ave., Chicago.

**260—Mayfair Shades**—"Mayfair Shades—Acclaimed the Last Word in Window Decorations," a booklet giving full description of Mayfair shades and their use.—MAYFAIR SHADE CORP., New York City.

**261—Kelvinator Automatic Heat**—An attractive 12-page illustrated brochure on this subject; also new information on the Kelvinator cooling equipment for homes and commercial buildings; also specifications for the new Kelvinator refrigerator, electric range and kitchen control panel for all-season, air-conditioned homes.—KELVINATOR CORP., Detroit, Mich.

**262—Dailaire System of Heating, Cooling and Air Conditioning**—A 16-page handbook giving mechanical specifications, rating tables and dimensions of this system of air conditioning for either oil or gas.—DAIL STEEL PRODUCTS CO., Lansing, Mich.

**263—Air Conditioning by York**—A ring-bound, 36-page illustrated brochure presenting York air conditioners for commercial buildings with many examples of actual installation.—YORK ICE MACHINERY CORP., York, Pa.

**264—Carrier Air Conditioning, Refrigeration, Space Heating**—A new 16-page bulletin presenting complete equipment for industry, business and the home, with capacities, ratings and diagrams, a reprint of the Carrier catalog in this year's Sweet's.—CARRIER CORP., Newark, N.J.

**265—Scott-Newcomb Air Conditioner**—A 4-page folder presenting gas and oil burner equipment that is completely automatic.—SCOTT-NEWCOMB, Inc., St. Louis, Mo.

**266—Birdwing Fans**—"Bring Sea Breezes to Your Home This Summer" features the service of a new type fan for attic ventilation.—HARTZELL PROPELLER FAN CO., Piqua, Ohio.

**267—Thatcher Oilmaster Boilers**—New folders give description of boiler, together with dimensions, capacities, etc. How to heat or cool a home with Thatcher Airmaster air conditioning unit is also described.—THE TRATCHER CO., 39 St. Francis St., Newark, N.J.

**268—Spencer Steel Oil Burning Boilers**—Complete information regarding this equipment presented in a professional manner; also an interesting consumer catalog, "When Heating Your Home." This gives the principal sales appeal of the well known Spencer heater for burning coal.—SPENCER HEATER CO., Williamsport, Pa.

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(December, 1936)

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