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# AMERICAN BUILDER

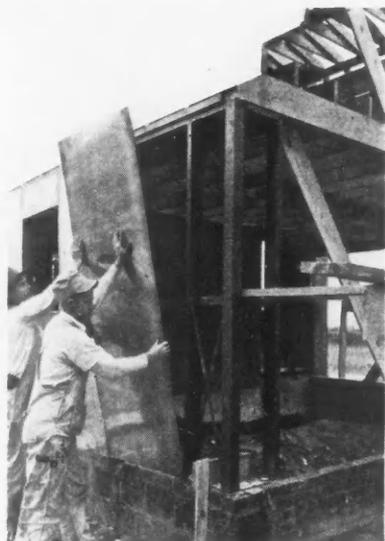
and Building Age

NAME REGISTERED U. S. PATENT OFFICE AND CANADIAN REGISTRAR OF TRADE MARKS

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NOVEL building methods tested as workmen erect metal wall panels on the "Copper House," Washington, D.C.

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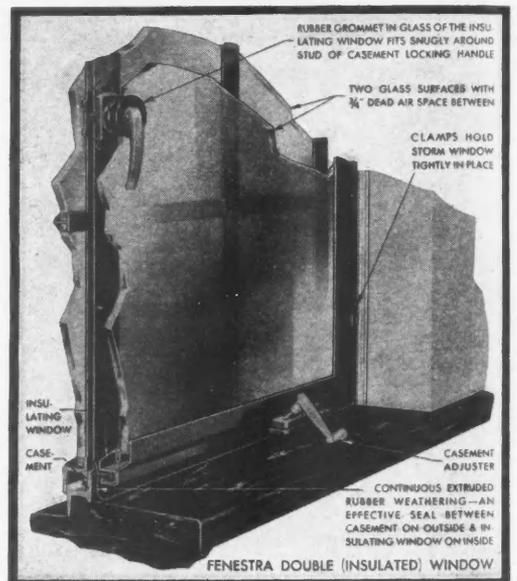


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# PUBLISHER'S PAGE

## Building and Business

THE Federal Reserve Board reports "industrial production" as large as in 1929, while the American Federation of Labor estimates 8,000,000 are still unemployed, and our governments are still spending hundreds of millions on relief.

The key to this paradox of "recovery" is that *building is not included in "industrial production,"* and that although building has trebled since 1933, there is still 60 per cent less of it being done than before the depression.

Expenditures on residential and non-residential building in the three years 1927-1929 averaged five and one-half billion dollars annually. It is now occurring at a rate of two and one-quarter billion dollars annually. Expenditures on residences averaged more than one and one-third billion dollars in the first halves of 1927-1929. They were about five hundred and seventy million dollars in the first half of 1937—nine times as large as in the first half of 1933, but still 60 per cent less than before the depression.

THEY have a remedy for this in Washington. It is the Wagner Housing bill to have the federal government spend about three-quarters of a billion dollars on housing *within the next three years.*

That full recovery of building is the prime essential to full recovery of business there can be no question. That building will continue to increase for some years, if not hindered by unwise policies, there can be no doubt. But is government spending the way to stimulate it?

The proposed annual government spending on housing would be *less than*

*one-third as great as the difference between the annual private expenditure upon housing being made a decade ago and the annual private expenditure upon housing being made now. Undoubtedly, however, government invasion of the field in competition with private enterprise would increase the cost of all building. What effect would this have on the amount of private building?*

VIRTUALLY all private building is done as an *investment for profit.* Whether there will be a profit will depend on the ratio between (1) what a building costs and (2) what it is, or could be, rented for. How then cause a complete revival of building? The only possible answer is: *Make building profitable in all communities by in future increasing building costs less than building rentals.* Building has been increasing for four years because building rentals have been gaining on building costs. It has not increased enough because rentals have not yet gained enough on costs.

Obviously, therefore, if the government enters the field with the taxpayers' money and pushes up building costs it will *retard* the increase of *private building* and almost certainly prevent as rapid and large an increase in *total building* as otherwise would occur.

The best ways government can stimulate building are by (1) staying out of building and (2) ceasing to increase its costs—*especially taxes.*

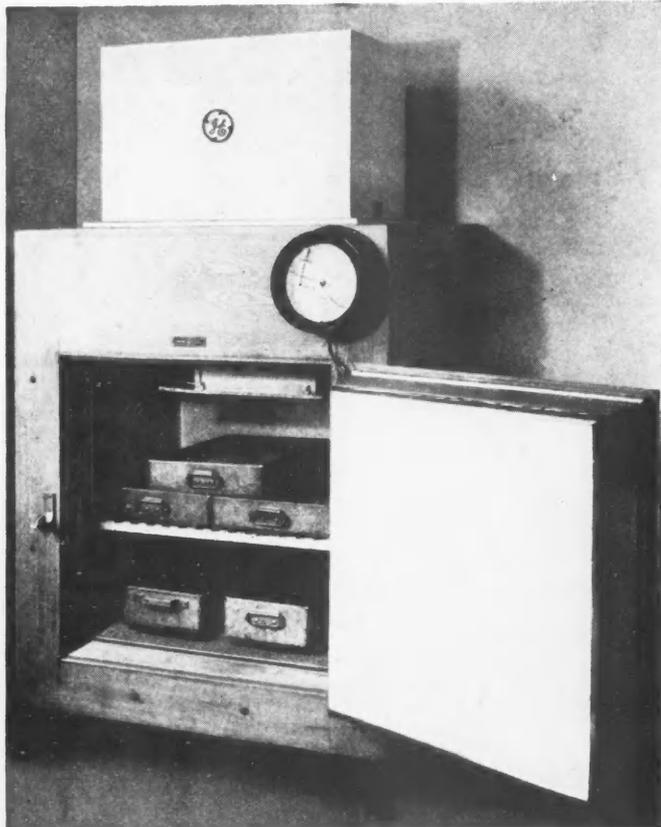
*Samuel O. Dunn*

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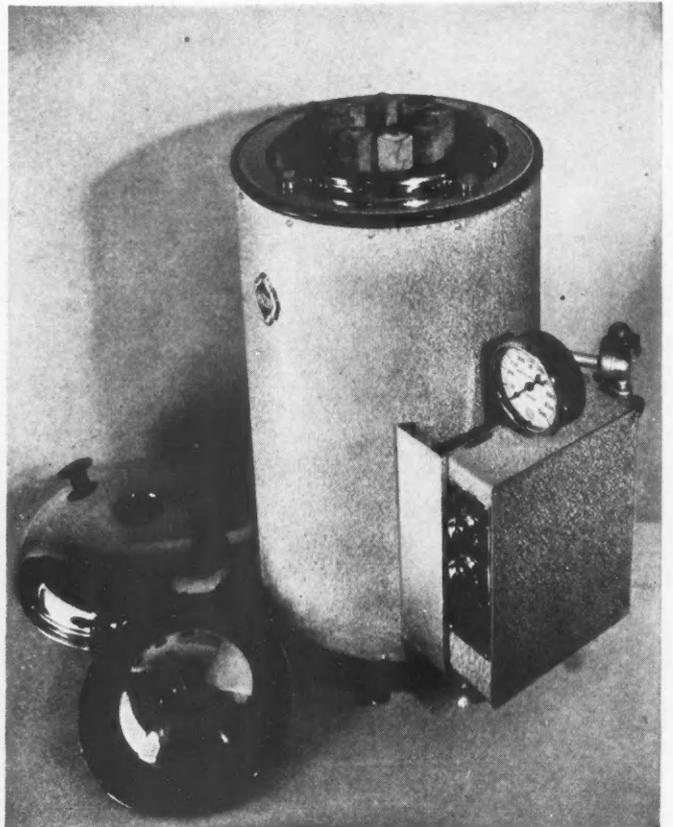


# Hot?... *pooh*

*It's 420° in the autoclave!*



FREEZING MACHINE



AUTOCLAVE MACHINE

**T**HESSE dog days seem *cool* when you consider the terrific heat of the autoclave.

The autoclave is the machine shown above, at the right, in which accelerated soundness tests of cement are made. Cement bars are steamed at 420°F in order to detect potential expansion, if any, years before it would ordinarily occur.

In the freezing machine, tests at the other extreme are made. In this machine, concrete specimens are alternately frozen at a temperature of 15° below zero, and

thawed. The purpose is to determine in advance how the concrete will perform on the job under outdoor exposure.

This work is under the supervision of O. L. Moore, director of tests and research. Working with modern equipment, Mr. Moore directs literally millions of tests each year to insure a quality product.

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## CEMENTS

# AMERICAN BUILDER

## AND BUILDING AGE

### Turn the Tide of Price-Thinking

**N**OW is unquestionably the time to build. More house for the money is being delivered today by the building industry than in 1926 or 1929. Home buying and owning costs have not increased in the present recovery as much as have general commodity prices. Under current economic policies based on theories of scarcity and inflation all prices will undoubtedly go higher. So again we say—*NOW is the time to build*; and we urge every building industry man, firm, and organization to lose no time in carrying this message to the home seeking and property owning public.

This is important right now because so many seem to have a distorted idea of home building costs, and so much that is only partly true is being circulated in the press to the effect that rising costs are stifling building.

Building industry men can turn the tide of price-thinking with reference to home building, buying and owning costs by challenging all misleading propaganda and by informing the public of the whole story.

Certain items of building materials may be up and hourly wage rates for building mechanics may be up,

but the fact remains that due to better design and more efficiency on the job the total product, the completed home, is delivered at a lower cost today than back in 1928-29 and is a much better habitation. Furthermore, because of improved home financing under the single long-term mortgage instead of the old expensive short-term first and second mortgage system, the new home is bought today for enough less to much more than make up for any increase in construction costs. Bear in mind that a reduction of one per cent in interest rate on an 18½ per cent saving in the first cost of the building; then consider the present low interest rates and you and your customers and clients will get a truer picture of the present opportunities for home building and buying at a real saving in final cost.

Of course, our standards of home equipment and for the style and comfort features in modern housing are very much higher than even ten years ago. More automatic mechanical devices and accessories are now demanded, and are considered standard, even for the more

THIS house was designed by a well known eastern architect and built by a prominent New York suburban real estate development organization for the 1928-29 market. It was built on a concrete block cellar, has 6 rooms, and the plot is 20' by 100'. This house sold at from \$6650 to \$7200 including land. This was considered one of the "better looking" homes of those days. Compare this with today's offering by the same builder (illustrated on next page).



modest homes. These, however, are furnished in today's output of the building industry at mass production prices and on exceedingly attractive terms. Electric refrigerators, oil burners, coal stokers, air conditioners, are just a few of the major items of modern home equipment that today cost from a third to a half of what they did only a few years ago, due to the savings that have resulted from quantity production and improved design.

The prices of staple plumbing materials today are from 14 to 33 $\frac{1}{3}$  per cent below the base price for 1926, according to a current summary by the president of the Plumbing and Heating Industries Bureau. He finds that the index number for plumbing goods declined from 100 in 1926 to an all-time low of 59.4 in 1933. The general commodity index covering 57 basic commodities as compiled by the U. S. Department of Labor Statistics declined from 100 in 1926 to 71.2 in 1933. Notice that this typical group of building materials declined in price much farther than commodities in general. The upward trend in plumbing prices began in May, 1933, and continued until March, 1937, with no increase since; 1937 prices as compared with 1936 show an increase of 5 per cent. When applied to a plumbing installation costing \$250, this means that the price of the basic materials is only \$12.50 more today than during 1936.

"There has been some comment in uninformed quarters," this plumbing authority states, "about construction being retarded by a too rapid rise of prices. It is evident from the official Department of Labor figures that this comment may apply to commodity prices in general but certainly is not applicable to plumbing prices. Plumbing prices have consistently lagged behind a rising market. Measured by every standard, monetary as well

as standards of beauty, color, design, efficiency, and engineering performance, plumbing is a better buy today than it has ever been.

The Federal Home Loan Bank Board at Washington publishes figures each month on house building costs in representative cities. These costs are for a typical 6-room house of 24,000 cubic feet. It is found that this house figured \$5,290 in Wilmington, Del., in May, 1936, and \$5,737 in May, 1937, an increase of 8 per cent. In Harrisburg, Pa., the gain was 13 per cent; in Columbus, O., 15 per cent; in Memphis, 11 per cent; in Little Rock, 13 per cent; in Houston, 8 per cent; and in San Francisco, 6 per cent. At the same time rents were working higher and, at present, no more vacant houses are to be found in 92 per cent of the 256 cities reporting to the National Association of Real Estate Boards for its current semi-annual survey. A definite housing shortage has developed and a building boom of far reaching extent is certain for the near future.

Higher building costs are to be expected. Those who put off building now, hoping for more favorable conditions later, are bound to be disappointed. Well informed building industry men will turn the present tide of price-thinking by pointing out that home financing costs are drastically reduced, that building material prices are still out of line below general commodities and will probably go higher, that building labor is more efficient and is not overpaid, and that the home owner is now at considerable advantage over the renter, which advantage is sure to increase as rents go up and the shortage of good rental homes and apartments multiplies.

Now, decidedly, is the time to build or buy—and for building industry men to so advise the public.



TODAY'S value at \$6650. Compare this with 1929 house on preceding page by the same builder, Realty Associates, Inc., and designed by Benj. Driesler, Jr. It is built on a 60' by 100' plot in a New York suburb, and contains 7 rooms, poured concrete foundation, wood-burning fireplace, scientific kitchen, Venetian blinds, and a wealth of modern detail. The rooms are large. There are two tile baths in the house. The price: \$6650 including land.

# Building Log Cabins

**JIM EMMETT, Log Cabin  
Builder, of Annapolis, Md.,  
Tells how to make money  
building good Log Cabins**

**L**OG CABINS are becoming increasingly popular for vacation and even year 'round use perhaps because they offer such a decided contrast to modern houses and today's way of living.

Construction follows one of two methods; the newer way of building prefitted cabins to stock designs and the older to individual plans. There is a good deal of interest in prefitted cabins because of their low cost. Typical prices range from \$850 for a one room 12 by 20 cabin, complete with porch and fireplace, up to \$3,000 for a two story model with five bedrooms, large living room, sizeable porch and a fireplace.

Quite a few country sawmill owners, lumber companies and small contractors in upper New York state especially find their building a profitable venture. These men cut suitable logs to predetermined lengths which will work in with their stock designs, from local white pine and spruce areas, flatten two sides at their mill and truck them to the customer's location usually beside some inland mountain lake in New York, New Jersey or New England states. List prices usually cover erection within one hundred miles of the mill with an extra charge for longer distances.

Experienced workmen in the contractor's employ build the stone or concrete foundation and complete the cabin. They lay the first rows of long logs then notch door frames made up of planks into these, also roughly frame the fireplace opening. The walls grow. Proper length logs are simply butted against and nailed through the frames and corner joists cut and spiked. When window height is reached frames are set in and short logs used to fill in about these. Tops of door and window frames come flush and are tied in by a tier of full length logs. If the cabin is a single story model gables go atop these. Otherwise long logs are carried up to the upper windows then shorter logs used. Each set of logs is marked, for instance, lower logs below door frames "A," those between front door and corners but below windows "B,"



**GOOD** example of saddle and notch corner construction. Also note how second wall ties in behind first one avoiding use of too long logs.

those between windows and door "C," and so on. One has only to contrast this method with the older way of putting up solid walls and afterwards cutting out the door and window openings to realize why these builders can give such good value for the prices quoted.

Floors, doors, partition stuff and furniture are all made by the contractor at his country mill; much of it is cut from top stuff and crooked logs unfit for building.

One can borrow part of this method for building to individual plans as I have done for several cabins. After the customer has agreed to the general rough plan and room layout the cabin walls are drawn out at a scale of an inch to the foot. Knowing local conditions I have found it a safe rule to figure on trees barking to an average of six inches in diameter so logs are drawn in the profile plans accordingly. From these I count the number of logs required and obtain their exact lengths allowing foot corner overhangs. While this list of logs is lengthy it is composed mostly of short lengths. I try to encourage the placing of a door in the back outside wall

as well as one in the front, the fireplace is usually in one end and the customer often agrees a door in the other side wall will be useful later when an addition is considered. All this makes for fewer long hard-to-find and handle logs.

Armed with the log list I either look after getting the lot out, paying for trees cut at so much a stump, or contract with a farmer to lay them at the road for trucking in. Because the majority of logs are comparatively short, handling both in the woods and on the highway is simplified and costs less. All logs are barked and numbered in the woods with cutting done in winter if at all possible.

One seldom finds trees suitable for building on the location. Tree prices vary but the cost of logs is a minor part of the total cabin value. For instance, trees here, thirty miles from Washington and Baltimore, may be bought from fifty cents each, up, standing. A fair tree will cut up to forty feet of usable stuff averaging the six inches peeled mentioned. The short lengths also enable one to work up crooked sections of trees otherwise unusable. For instance, an otherwise desirable tree may be straight for ten feet up then bend and continue straight for another fifteen feet. I cut a short length from the butt, throw away the crook and use the next straight section for a different length. The best trees are saved for below and above door tiers, ridgepoles and other long lengths.

#### Low Priced Labor on Log Work

As for labor costs, the average 18 by 25 foot week-end cabin to afford a living room, bedroom and kitchen will take, I find, roughly a hundred trees. Two men can fell, cut up and bark twenty trees a day making eighty man hours for the job. Low priced labor can be used for the work but must be supervised to see best trees are used, cuts square and barking clean. Handling between woods and cabin site varies; but usually costs as much as the logs. The many short lengths can be handled on one's own truck but a hired trailer outfit will be needed for the longer ones.

If it is possible to stop off at a sawmill to have all logs flattened slightly both sides the cost will be more than offset by subsequent easier building. Such flattening

must be considered, though, in making out the log list and cutting the trees. Trees, nine inches or more in diameter halfway up will peel and flatten slightly to a uniform six inches.

Either saddle and notch corners or butted log construction can be used; the latter is the easier and quite practical when logs have been flattened. With the former method corner legs are halved or notched into one another either by axing notches or by sawing two cuts, then splitting out. With the butted method the log of one wall projects but the connected wall log is only butted against it. The next tier the log above the butted one projects and the one above the lower projecting one butts; in other words butts alternate and there are only half the projections as compared with saddle and notch construction. Both look equally well although the butted method requires very long spikes or lengths of rod or wooden pegs driven through logs to hold them in place whereas saddle and notch only needs six inch spikes at corners. Spikes are always driven through frames into touching log butts.

Chinking so often causes trouble in log cabins that every effort should be made to provide good joints as you go along. It is first assumed your logs have been winter cut and barked and have been in the sun until at least midsummer, by which time they should have dried out sufficiently for building. It is but natural they should check. The only way to get around this is to leave the bark on the logs and take to the mill for flattening. Checks always appear along the exposed flattened surfaces never under the bark. They are then out of sight in the completed cabin but the bark comes off so hard as to offset any possible benefit of a check-free wall.

Flattened logs with uniform touching surfaces may be laid in concrete chinking mixture with a strip of wire or metallic lath tacked down the center of each log as walls go up or they may be later filled with oakum driven home and finished off with chinking. When using logs as is, I am a firm believer in tacking two inch wide strips of metallic lath or heavy wire netting atop each layer then leaving chinking until later.

Larger logs should be used low down and sizes graduated upwards. Make every effort to keep layers uniform



THIS cabin nestles into hillside; concrete retaining wall outside uphill wall logs holds dirt back.

so all will come out right at door and window tops where they will be tied in by upper long tiers. Door and window frames must be securely braced so they will not get out of line or change shape as logs are placed against them.

Gable logs are best shaped at ends then spiked to preceding layers. Spike uprights to walls to keep gables erect until they are tied in by rafters and ridgepole.

Pole rafters add to the appearance of a cabin's interior when the ceiling is exposed, as is usually the case. Even if you get them out in the woods have them flattened one side at a mill rather than do the work on the job. They should be heavy in proportion to the size of the building because thicker than usual sheathing should be used so shingle or roofing nails will not break through.

Roofing material depends on the specifications agreed on with the customer. Heavier than usual cedar shingles look well and cedar or oak shakes are still obtainable back in the mountains at low prices. In northern locations the latter may stand up but I have found a hot sun causes them to check and curl in a way which, while it may add a realistic touch to the cabin, certainly requires a sub roof of composition material to insure against leaks. Where the value of the cabin warrants mill-made shakes would seem most satisfactory.

**Best to Leave Chinking Till Last**

Leaving chinking to the last has its compensations; the logs will have dried out and shrunk sufficiently to hold it well. Corners and around door and window frames should be caulked with oakum then chinked. After some painful experiences I have adopted a mix to the proportion of five bags of cement, sixteen cubic feet of sand and one bag (50 pounds) hydrated lime. The sand must be clean and sharp and small batches mixed. The outside is chinked first then the inside; one treatment bonds in the other and the whole is held by the wire mesh. One should wet the seam to be caulked first, then trowel the mixture in and finally smooth the seam off and take away excess material with a rounded curved stick dipped in water from time to time. Cement dribblings should be wiped off the logs before it has had a chance to dry. Chinking is a sizeable job; the average size cabin men-

tioned will take two men a week and a half to complete properly.

Inside work sets the price of the completed job. Log partitions cost more to put in than dimension lumber ones and built-in furniture runs the price up. So-called rustic furniture made of pieces of tree trunk and lengths of branches should be avoided. Anything used should have the appearance of nature, yet still the finish of pioneer hand work. For instance, built-in fireside seats should be of poles, adzed roughly four square with just a rounded corner left here and there to tell what they originally were.

Outside and inside wall logs should be scraped after all chinking is in place if the cost of the cabin warrants it. This does not take as long as one would think and cleans off that darkened skin which remains after barking, also building and chinking stains. If the full beauty of the wood is to be retained the linseed oil treatment is best; heat linseed oil until so hot one can just put a finger in it then add twenty percent turpentine and brush well in. In a week's time put on another coat only thinned with ten percent turpentine and in another week a final coat of clear oil. This gives a varnish like finish which will stand up to rain and weather; the commonest pine so treated lasts well as long as lower logs are not in direct contact with the earth.

Walls can be stained with shingle stains, if wished, although logs should be allowed to weather first so stain will soak in. Generally speaking well-built cabins made of good logs should be finished bright, poorer ones stained.

Most of the evergreens yield good building logs; hardwoods are too difficult to work to be used. Northern white pine is still plentiful in certain localities; it is light in weight, straight grained, dries quickly, is easily worked and does not swell or shrink to throw chinking out. Norway pine has many of white pine's good points and can be secured in longer lengths for large cabins. Western red cedar is ideal but costly in most localities because of long freight haul. Northern white cedar is good but hard to find in uniform diameter trees while eastern red cedar is very knotty making for hard working. The spruces, white, red or black, yield good building logs



CABIN ready for roof and fireplace. Note how logs are graduated from the bottom up to top.



END rafters, ridgepole and purlins tie in gables and end walls in log cabins built by Jim Emmett of Annapolis.

for small cabins. Hemlock and tamarack are not at all suitable. In between these are those evergreens natural to each locality, usually plentiful and easily obtained. Barked, oiled and kept off the ground the majority of these last surprisingly well.

Avoid using dead or even dying trees when getting out logs and under no circumstances leave the bark on. Borers seldom, if ever, work in peeled logs but they do destroy dead trees and those with bark on literally overnight, there seems no stopping them.

Good looking cabins are being built of down chestnut in certain areas. These are blighted trees but perfectly sound wherever they have been held up off the ground by their upper branches. They usually yield perfectly straight logs in long lengths, light to handle, easy to chink and already weathered a beautiful gray.

Cabins of native stone and chestnut logs look well and are not costly to build. Both end walls are of stone, the fireplace being built in one of these. Front and back walls are long and low and are of large diameter logs.

Partitions and interior work may be in knotty pine. There are no corner joints to fit, logs are simply let in the stone ends.

Week end cabins should have a different layout than those intended for year 'round living. The living room should be large and bedrooms either small or dispensed with altogether and shift made with built-in fire-side seats, spring cushion fitted, living room bunks or porch sleeping quarters. A single room and built-on kitchen cabin can often be heated with a fireplace alone and is best for week end use. Even the largest fireplace is an indifferent heater for the amount of wood consumed unless some sort of heating cone interior is installed. If the cabin is to be lived in for any length of time it should have a regular heating system; small cabins need wood or fuel oil burning stoves and larger ones hot water systems with concealed radiators.

It must be admitted that many log cabins are monstrosities both as to design and workmanship. Good design is as necessary in connection with a cabin as in a house, even more so. It should suit the customer's lot, nestling close to the ground as though it were a part of the location and it should be skillfully put together by competent workmen who realize the fine points of its construction.

Many substitutes for logs have been developed but nothing quite equals, so far as appearance is concerned, a real log cabin.



## Hospitality Welcomes Here

Big living room of home pictured on our front cover (plans on page 54) introduces a 16-page selection of designs of good small homes

House at Chappaqua, N. Y.  
Emil J. Szendy, architect  
and O. Berg & Co., builder.  
Floor is concrete covered  
with random width red oak.



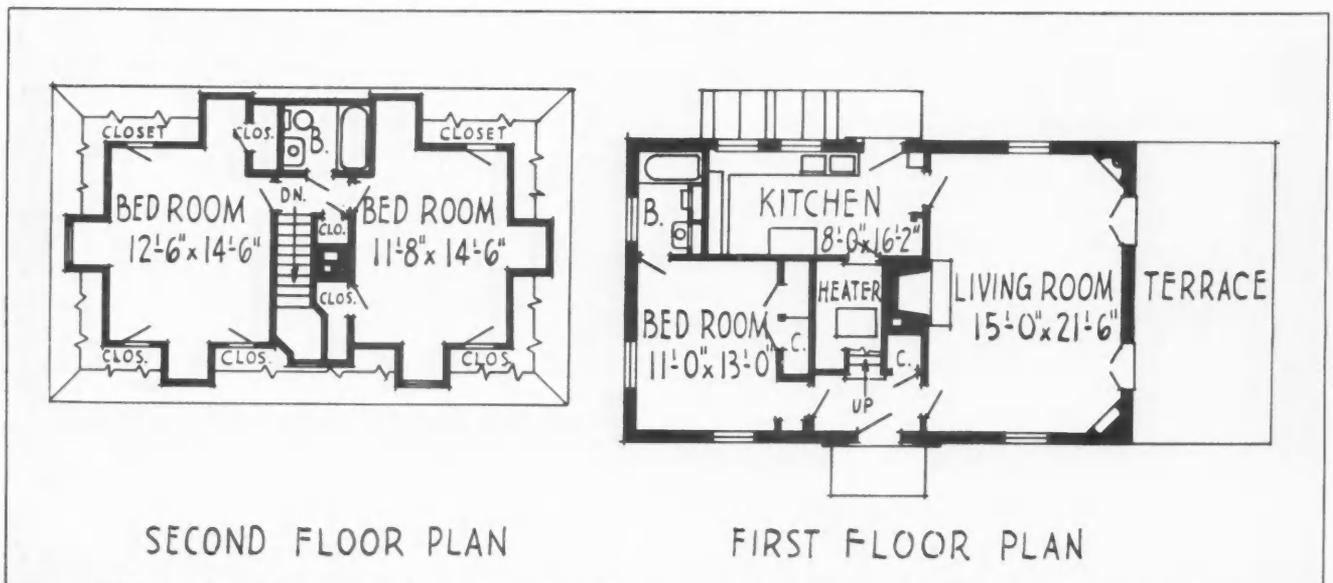
## FRONT COVER HOME

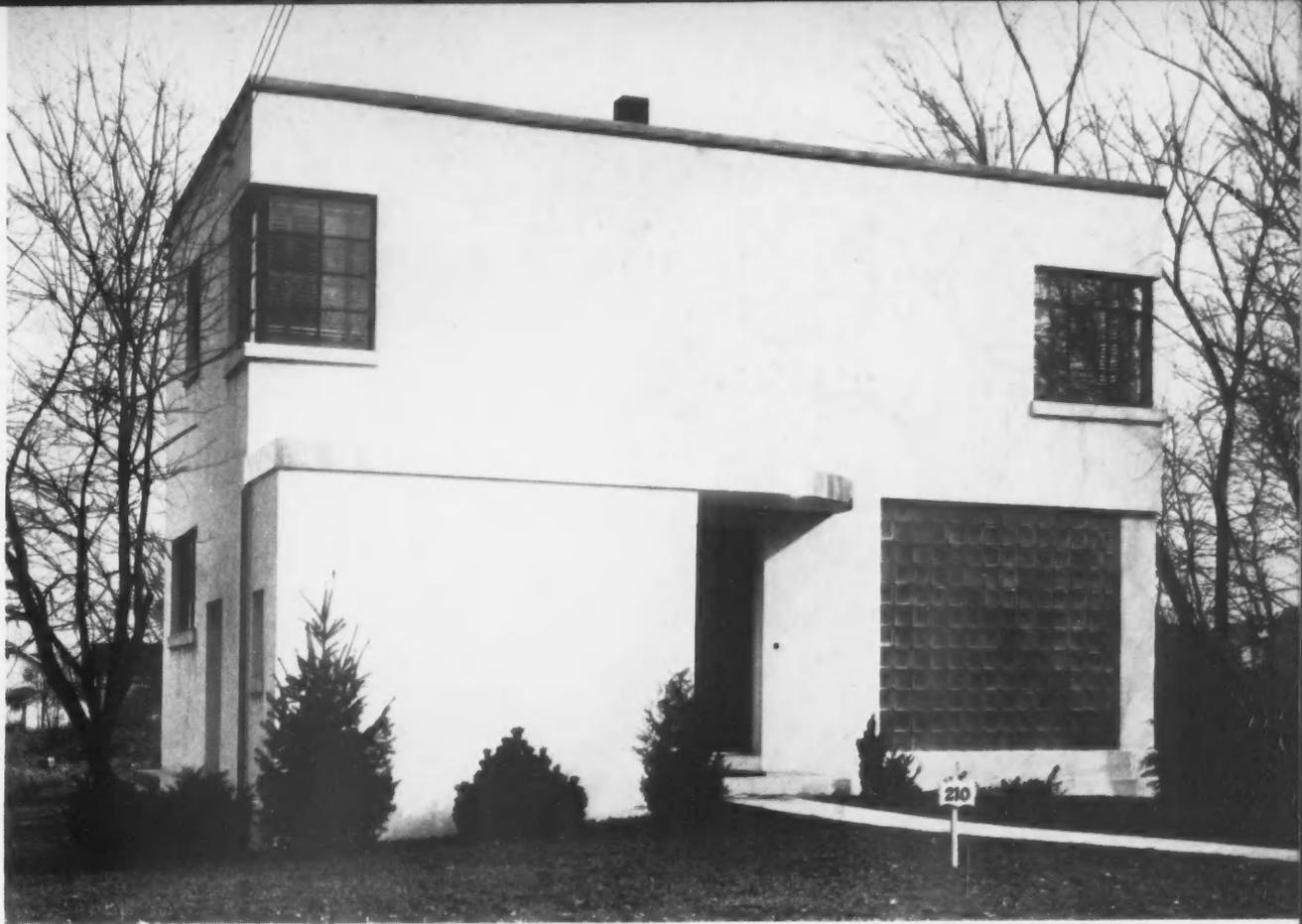
**Concrete Masonry house of  
delightful French style at Chappaqua, N. Y.**

**Emil J. Szendy of N. Y. City, Architect**

**O. Berg & Co. of Howard Beach, L. I., Builder**

Cost Key is 1.520—120—(836)—(35)—14—16





55

## NEW STYLE HOME AT NEWARK, OHIO

**Robert R. Cutler, Architect, Newark**

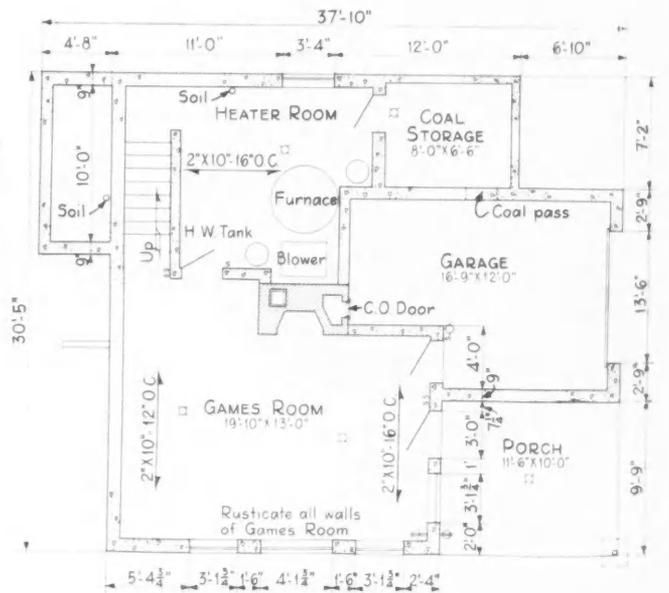
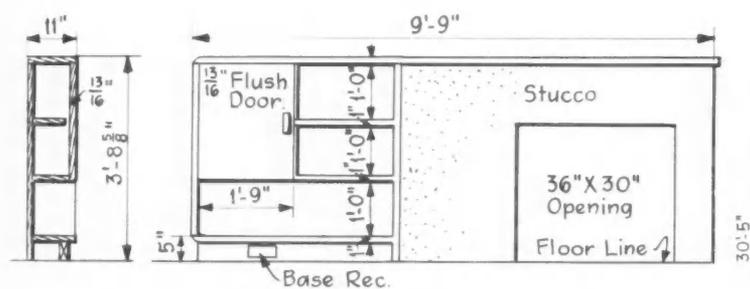
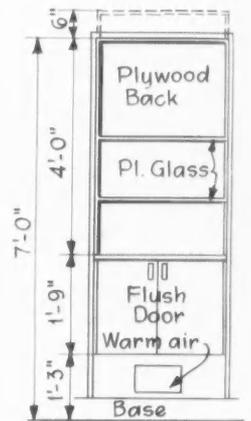
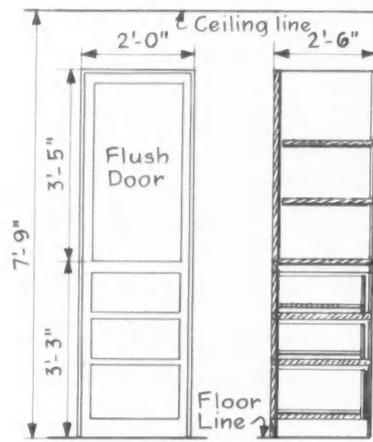
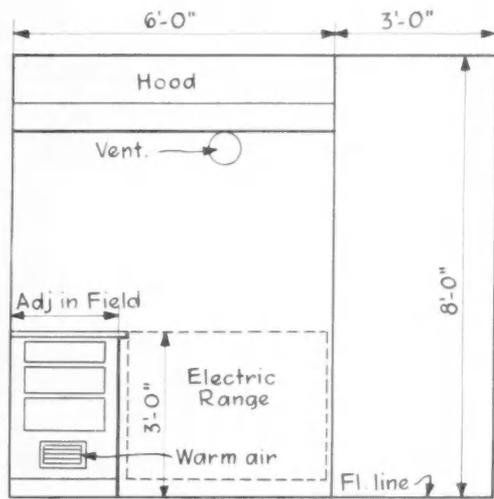
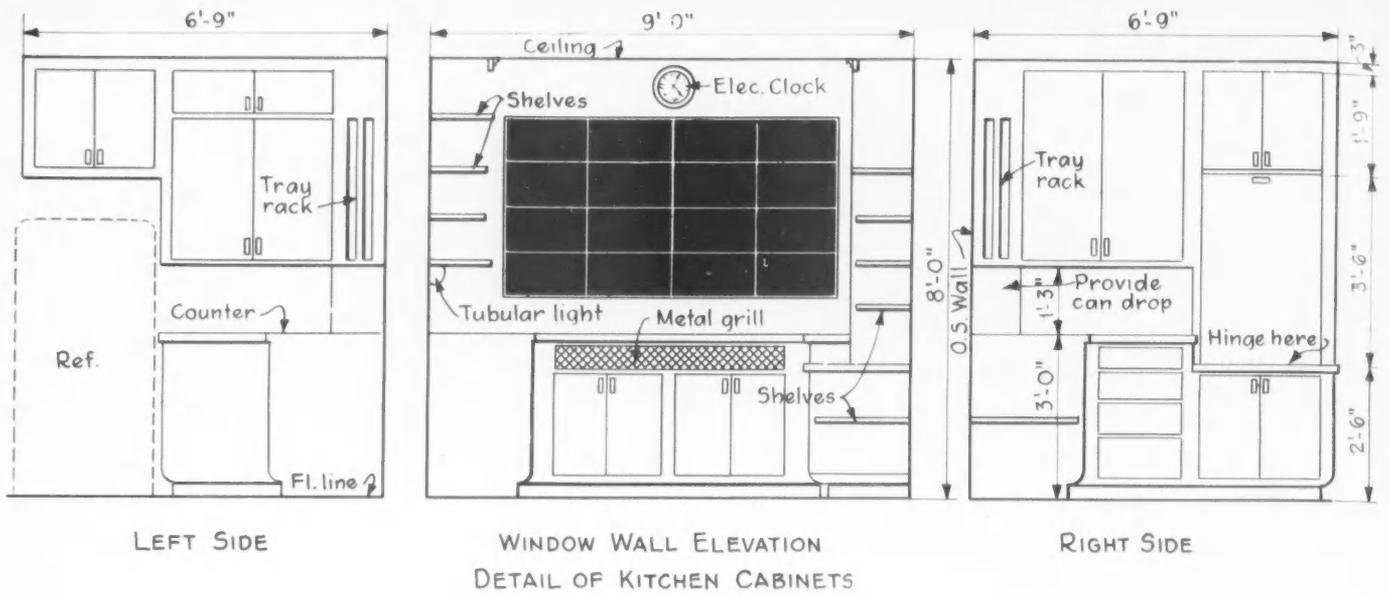
**Martin Moyer & Son, Contractor, Massillon**

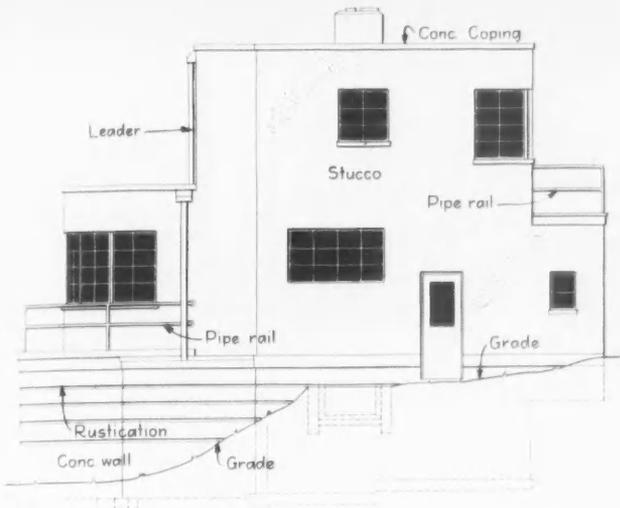
**Franklin Southard, Owner**

Plans and Details  
on pages 56 and 57

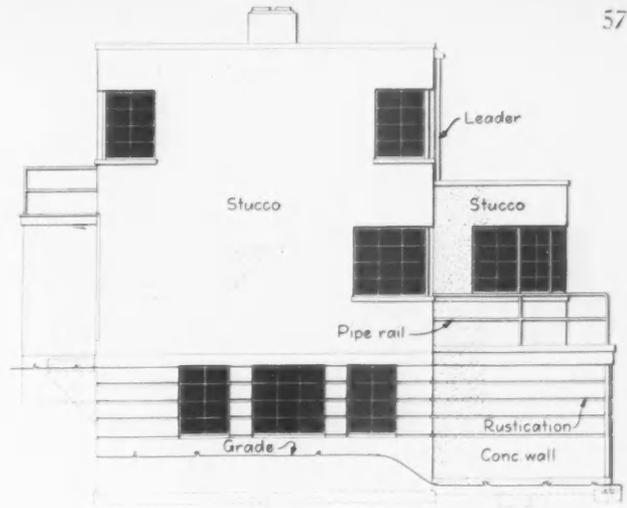


View of the  
Living Room

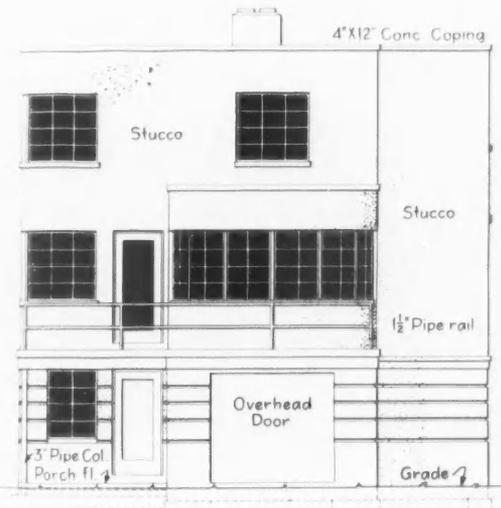




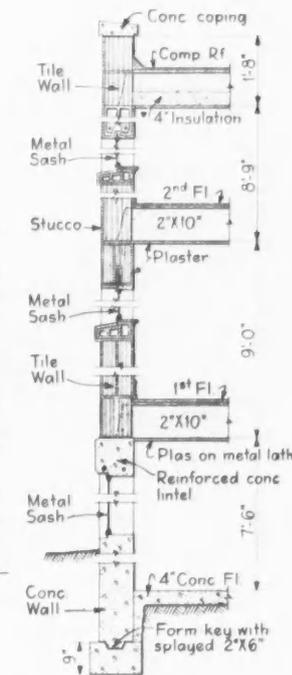
REAR ELEVATION



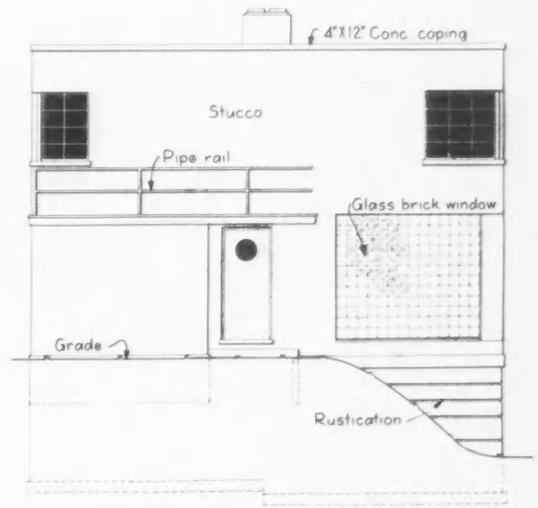
FRONT ELEVATION



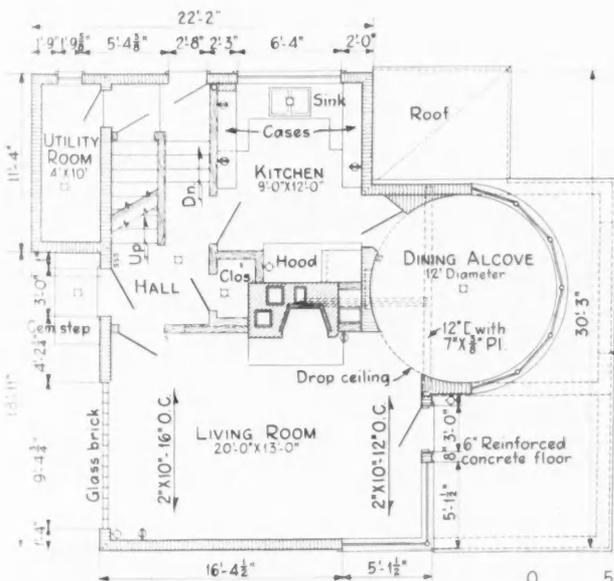
RIGHT ELEVATION



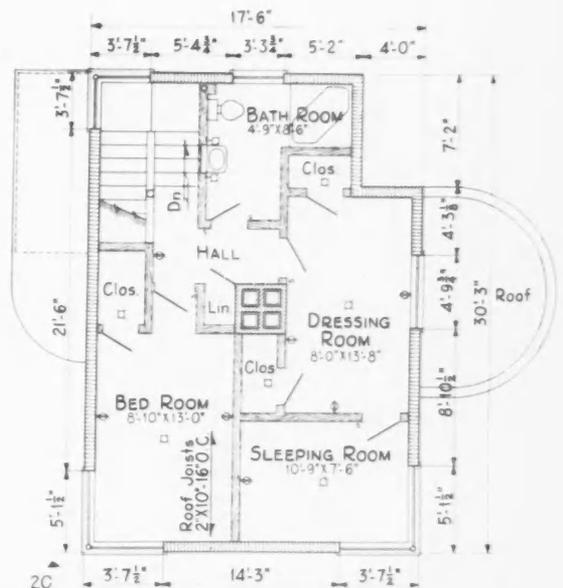
TYPICAL WALL SECTION



LEFT ELEVATION



FIRST FLOOR PLAN



SECOND FLOOR PLAN



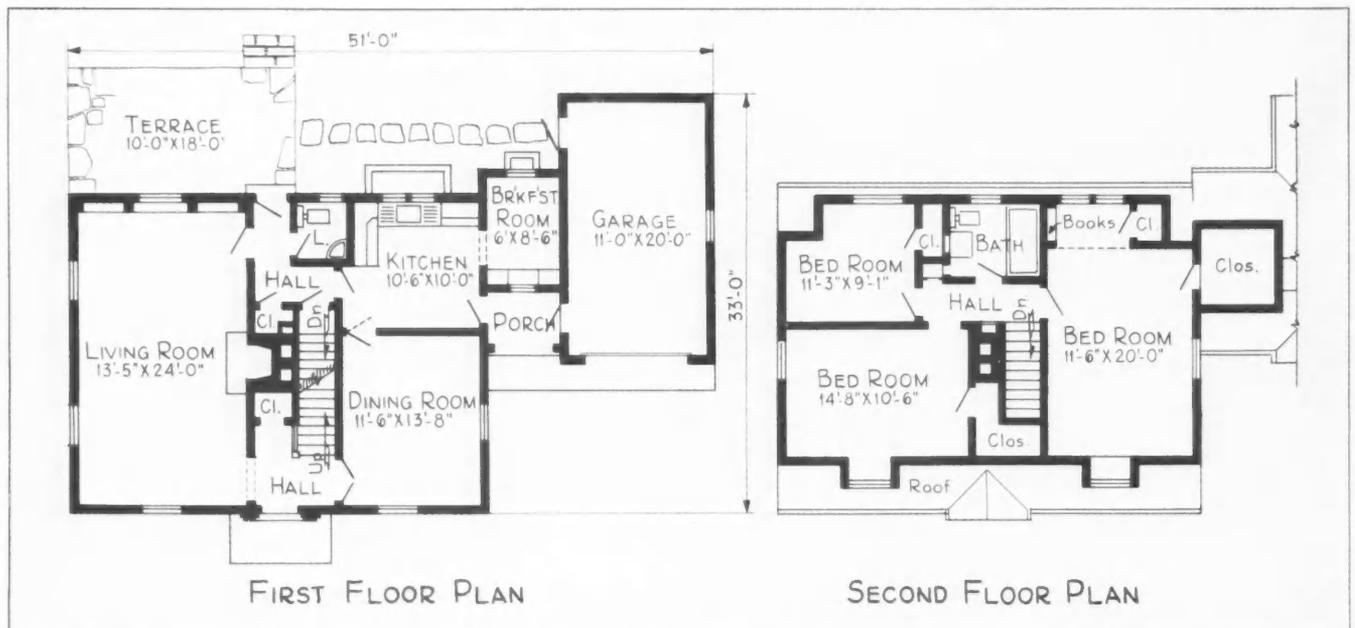


## CAPE COD WITH GOOD PLAN, FINE DETAILING

Located in Glen Ellyn, Illinois  
**Paul L. Sather, Chicago, Builder**  
**Ralph H. Heth, Chicago, Architect**

Cost Key is 1.864-168-825-34-23-16

THIS CHARMING COTTAGE has been planned for both effective use of a natural setting, as shown above, and also for maximum interior convenience, as shown in the plan. There is easy accessibility, a small rear hall connecting basement, kitchen, terrace, lavatory and living room. The breakfast alcove with windows in opposite walls is an especially well planned feature. The three bedrooms have good ventilation and ample closets.





THE GARAGE of this Glen Elyn cottage is conveniently attached to the house as seen at the left; this wing provides space for the breakfast alcove. Garage door is the Richards-Wilcox folding type.

TO THE LEFT of the front entrance a weatherproof electric outlet is conveniently located for outdoor lighting. Flush lighting panel in head and built-in mail box are included in equipment.

EXTERIOR VIEWS show fine proportions and careful detailing. The front entrance at the right is typically Cape Cod with six panel door and narrow transom; pilasters, cornice, brick steps and flagstones add to the charm of this detail. Service entrance above is very practical as well as attractive. The small covered passageway gives sheltered access to the garage.

WHITE PAINTED wide bevel siding, white shutters and red cedar shingle roof have been used as exterior treatment. The entrance hall has wide plank flooring and the fireplace side of living room is finished in knotty pine. Built-in equipment and cupboards make an attractive and efficient kitchen. The house is heated with a gas-fired winter conditioning unit; basement space is also used for a large recreation room. Concealed lighting in the glass walled bath is unusual. Walls are insulated with U.S.G. Rock Wool and finished on interior with plaster on Rocklath.





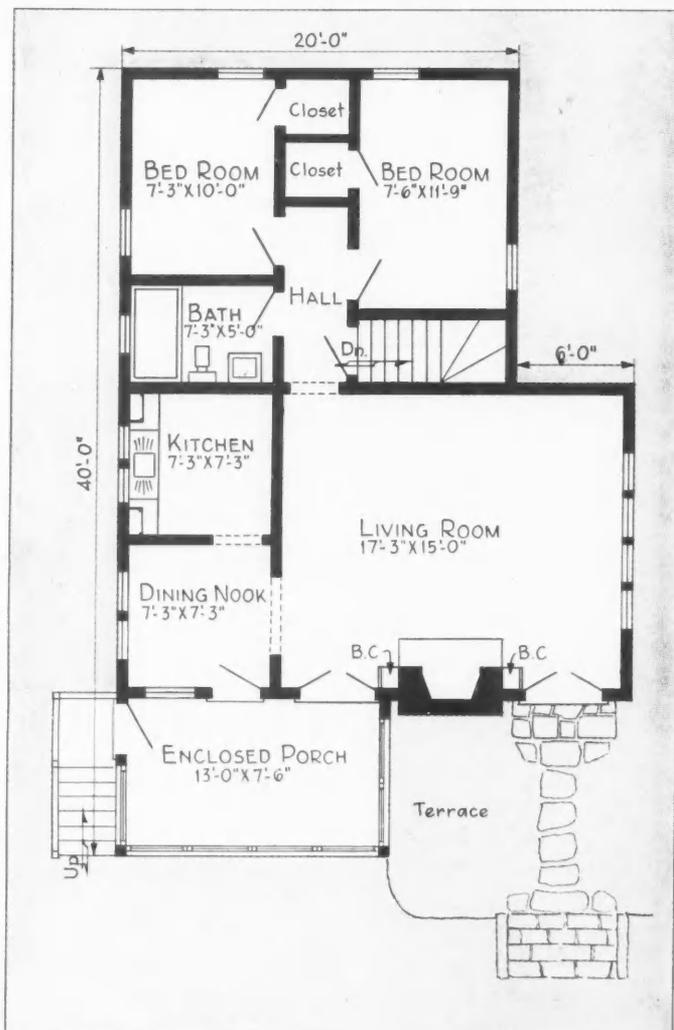
## LAKESIDE COTTAGE

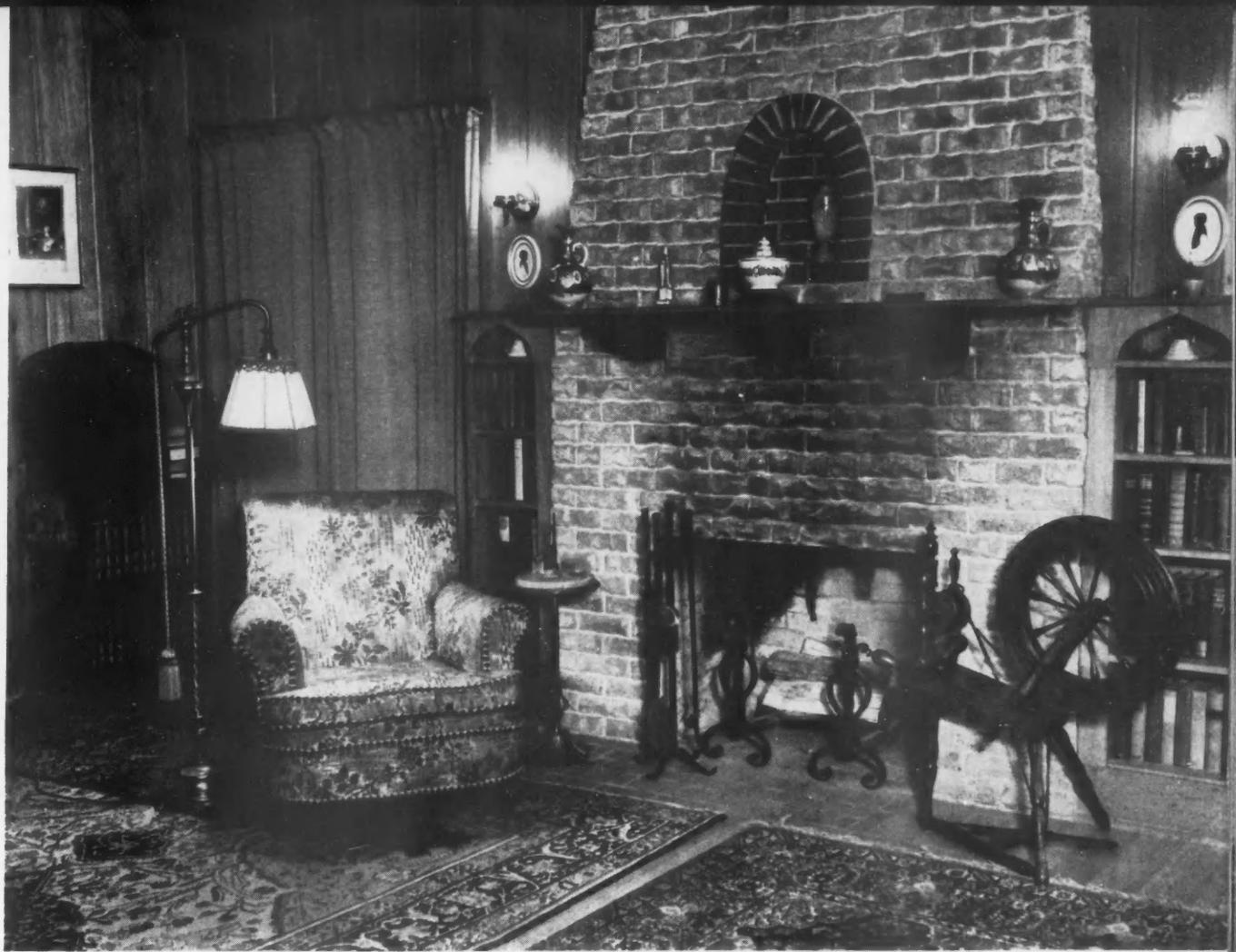
Ivor Fredrickson, Builder

Cost Key is .986—116—736—31—14—14

IN LINE with the trend of building farther out from urban centers, many people are finding it advantageous to build homes for year around living near lakes within commuting distance of cities. The house pictured above is located in W. A. Wood's Wonder Lake development near Chicago and offers the pleasures of a summer retreat combined with the conveniences of a city home. It is designed to harmonize with the picturesque site and has been attractively landscaped. The plan at the right provides the type of layout which such a home should have. The studio living room has an air of rustic spaciousness and the enclosed porch adjoining it makes a pleasant spot in which to enjoy the view, eat meals or accommodate extra guests. Bedrooms, bath and stairs are compactly arranged off the rear hall.

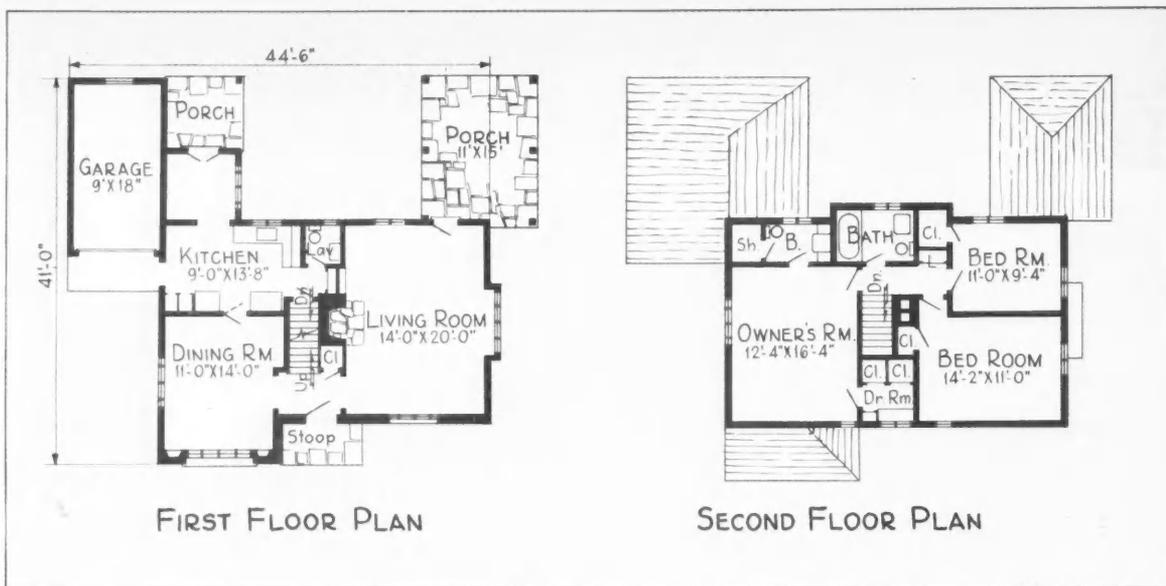
NOVELTY SIDING of yellow fir and cedar shingles were used on exterior side walls and J-M asphalt shingles on the roof. The house was entirely insulated with Johns-Manville Ful-Thik Rock Wool batts. Floors in the living room and dinette were 2 1/4" oak flooring; other floors were 1"x4" fir. Living room and hall were finished with 1x10 V-joint cypress on the side walls and 1x6 of the same material for the ceiling; dinette, V-joint knotty pine; bedrooms, 1/4" fir plywood with half-round strips to cover joints, forming uniform panel designs; bathroom, J-M asbestos wainscoting.





THESE two living room views of the lakeside cottage on opposite page show, above, the attractive cypress V-joint finish and rustic fireplace of common brick; below, a portion of the large end window made up of eight casement sash.





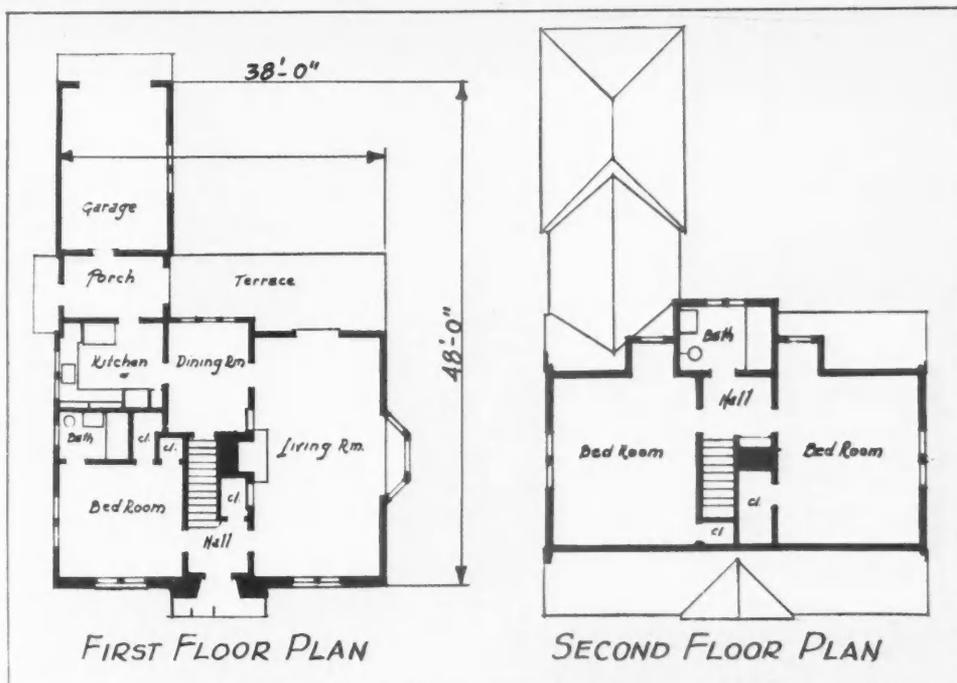
## CHEELCROFT COTTAGE

ONE of the popular homes of the Cheel Construction Company at Ho-Ho-Kus, N. J., designed by Architect Clarence H. Tabor. It has a livable arrangement, with 14 x 20 ft. living room, downstairs lavatory, breakfast room and a dining porch. The screened porch opening off the living room is another attractive feature.

**Cheel Construction Co., Builder  
Clarence H. Tabor, Architect**

Cost Key is 2.018-171-865-32-28-19

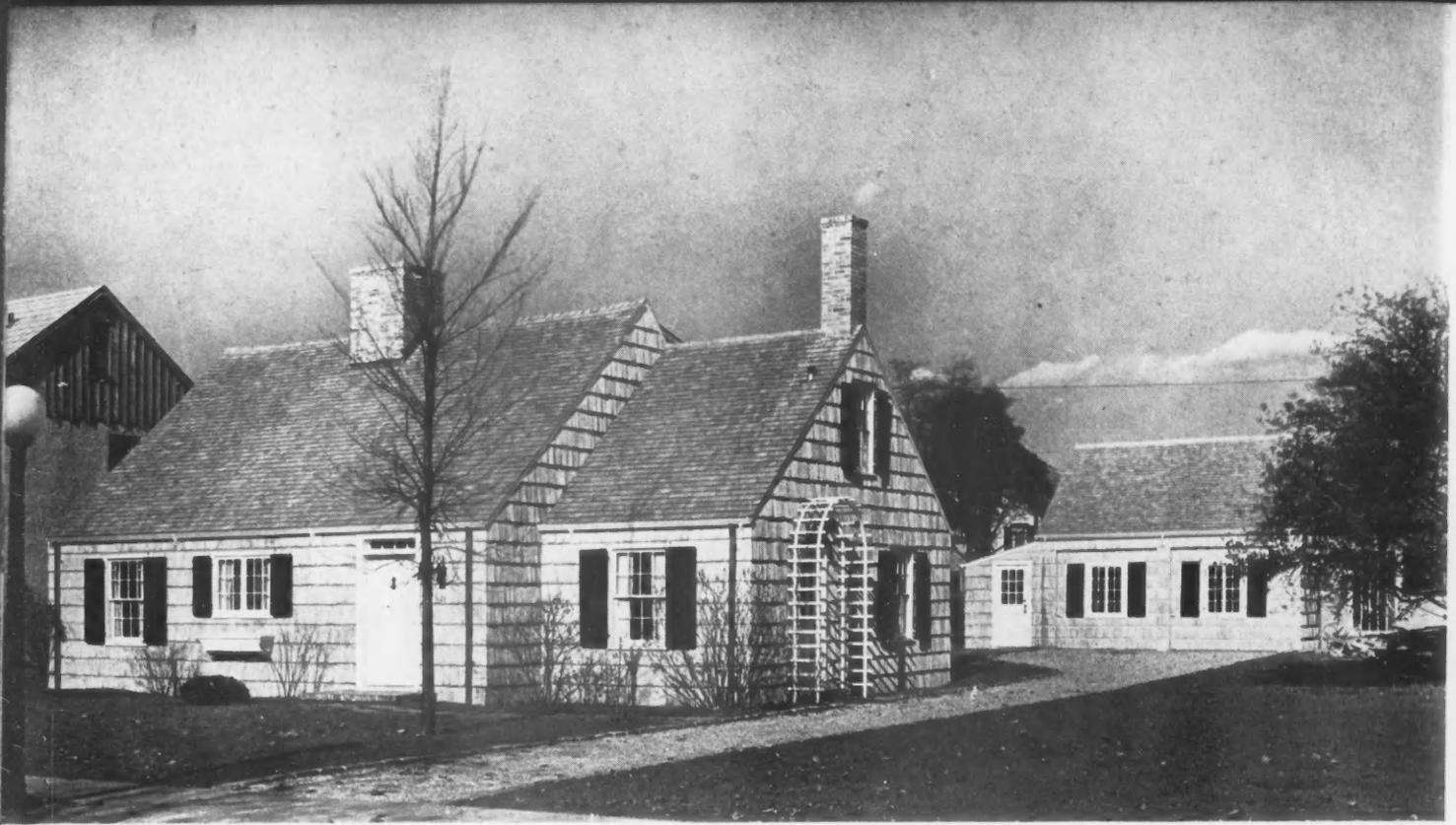
The upstairs arrangement with 2 bathrooms, large dressing room and ample closets is good. Specifications include Truscon metal lath and steel sash, Rockwool insulation, U. S. G. plaster, Gar Wood air conditioning, Thibaut wallpaper, Sayre & Fischer brick.



1ST FLOOR  
BEDROOM  
AND BATH

Mayfair Gardens, Inc.  
Builders  
Clarence H. Tabor,  
Architect

MODEL HOUSE located in Mayfair Gardens, new subdivision at Demarest, N. J., features a downstairs bedroom and bath and an attractive rear terrace with screened back porch. The front door is deeply recessed, giving life to the white brick facade. Specifications include Arco hot water heating with Anaconda copper tubing, brass pipe, Magic Chef range, Weyerhaeuser lumber.

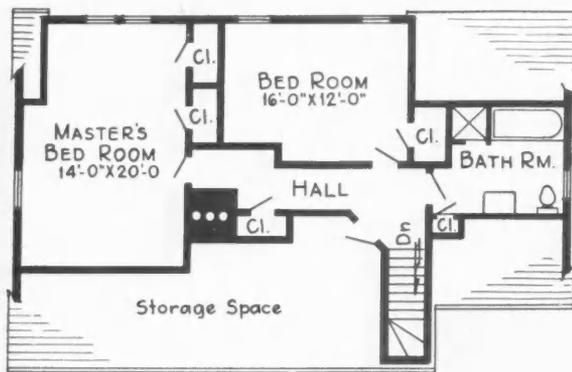


## SIX-ROOM CAPE COD—KITCHEN AT FRONT

Cost Key is 1.871—152—1060—45—21—18

**Cy Williams, Builder**

**Arthur H. Esbig, Architect**



SECOND FLOOR PLAN



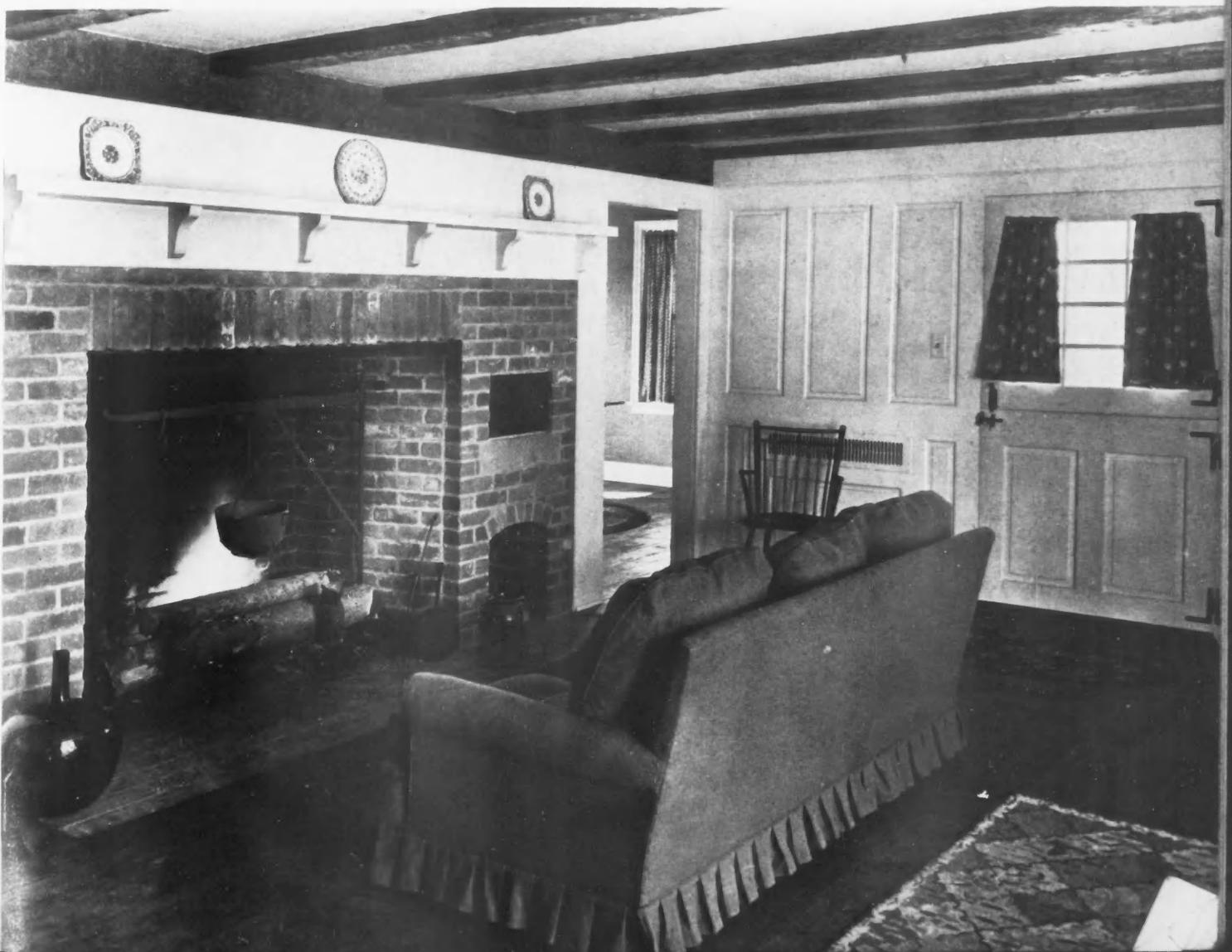
FIRST FLOOR PLAN

THE EXTERIOR of this Westbury, L. I., home has real Cape Cod charm, but at the same time the house has a modern arrangement of the interior that is unusual and interesting. The kitchen and dining room are placed at the front, and the large living room, porch and library face away from the street overlooking a quiet garden. There are good and bad features to this arrangement. One of the bad is the difficulty of disposing of kitchen waste. The kitchen itself is beautifully finished and very attractive.

THE INTERIORS of the house reflect Colonial charm, with a huge brick fireplace and a low-beamed ceiling in the living room. Concealed radiators supplied by a hot-water system are used. Exterior walls are of hand-split shingles, and a 2-car garage built to resemble a Colonial barn or woodshed is covered with the same product. A novel feature of this garage is the 1-piece overhead doors, with large shuttered windows built in to maintain the Colonial atmosphere of the structure.



A MODERN, well equipped kitchen, flagstone floored hall and beautiful beamed-ceiling living room are attractive features of the Westbury, L. I., Cape Cod designed by Arthur H. Esbig.



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**NUMBER 3 OF AN AMERICAN BUILDER BETTER DETAIL SERIES  
FEATURING STAIRWAY AND HALL OF A COLONIAL HOME, PARK RIDGE, ILL.**

**Designed by Morris Henry Hobbs and Lester A. Abel, Chicago Architects**

TWO PREVIOUS ISSUES have presented exterior details of this well designed Colonial home. The interior has been equally well handled, as shown below in the view of the entrance hall and stairway. The balusters and handrail are well proportioned and terminate with a graceful newel post. Natural finish on newel, rail and treads is effectively combined with trim in cream enamel. The simple treatment is in keeping with good Colonial design, which is further

carried out in the lighting fixtures and fireplace end of the living room as seen through the cased opening.

Details are indicated in the drawings on the opposite page. The larger sections of picture mould, handrail and trim are shown at almost full scale. Plan and elevation give the dimensions which are important in laying out a good stairway that will combine a graceful appearance with steps of proper rise and run.

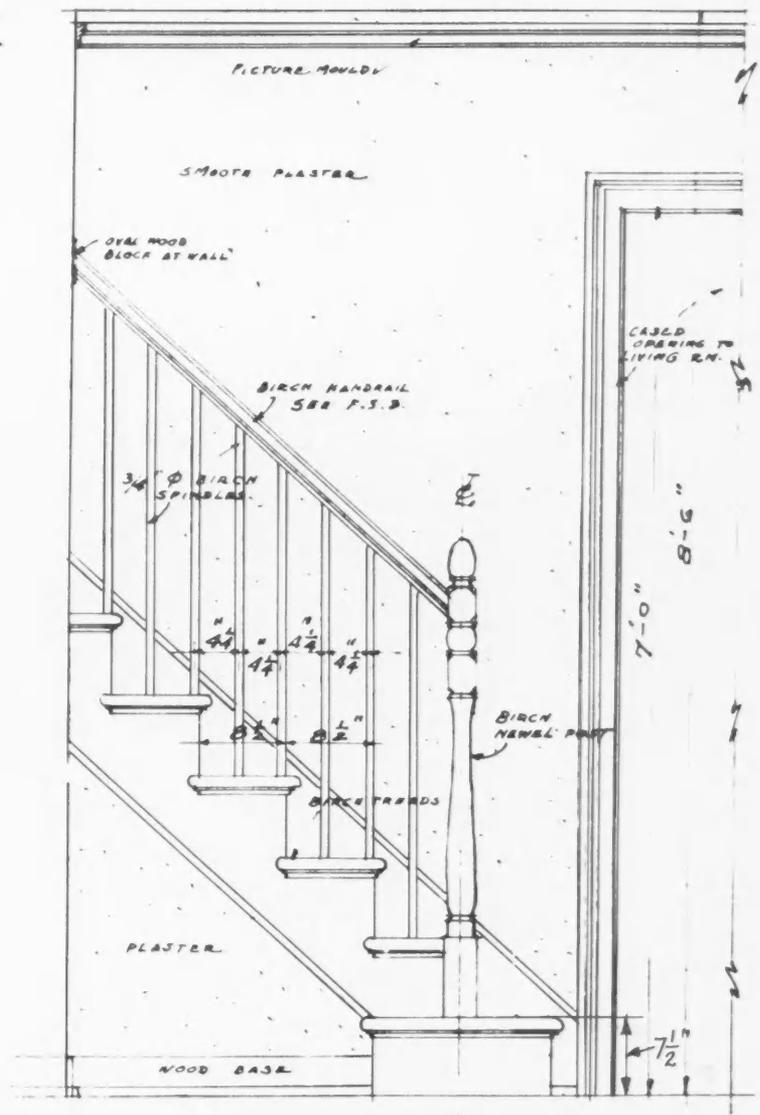
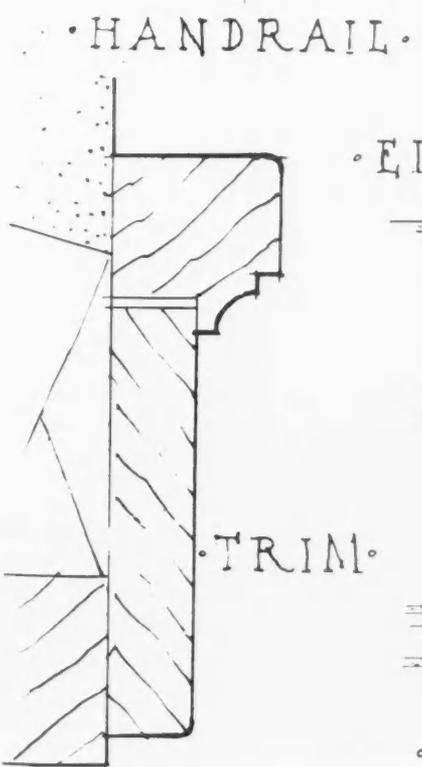
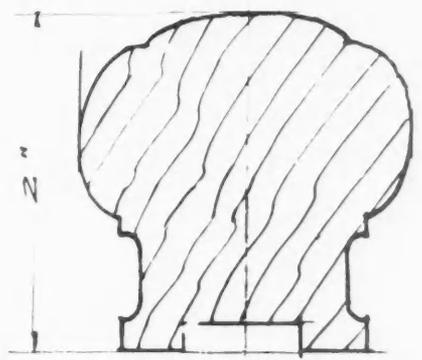
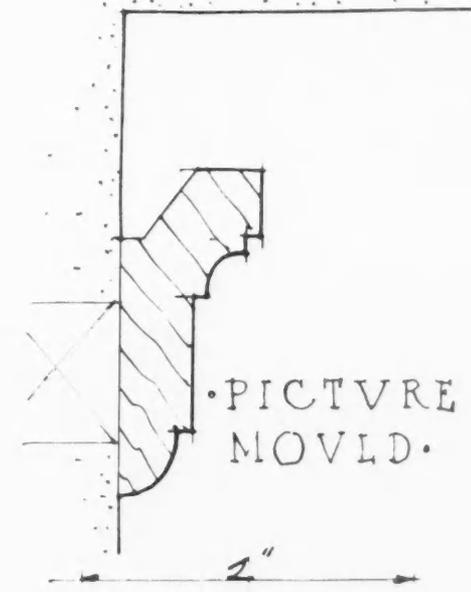


LEFT: Stairway and hall treatment of a well designed Colonial home in Park Ridge, Ill.

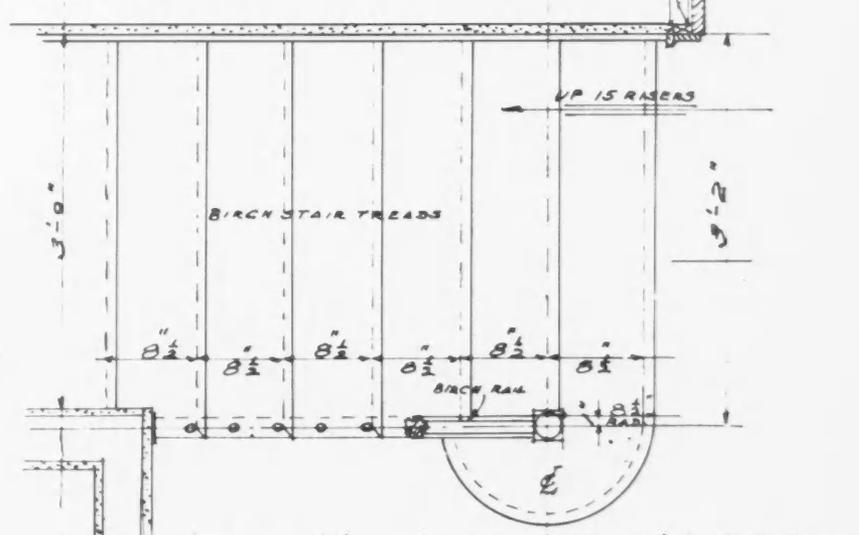
RIGHT: Construction details as drawn by Morris Henry Hobbs and Lester A. Abel, architects, Chicago.

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•ELEVATION OF STAIRWAY.



•PLAN AT FIRST FLOOR.



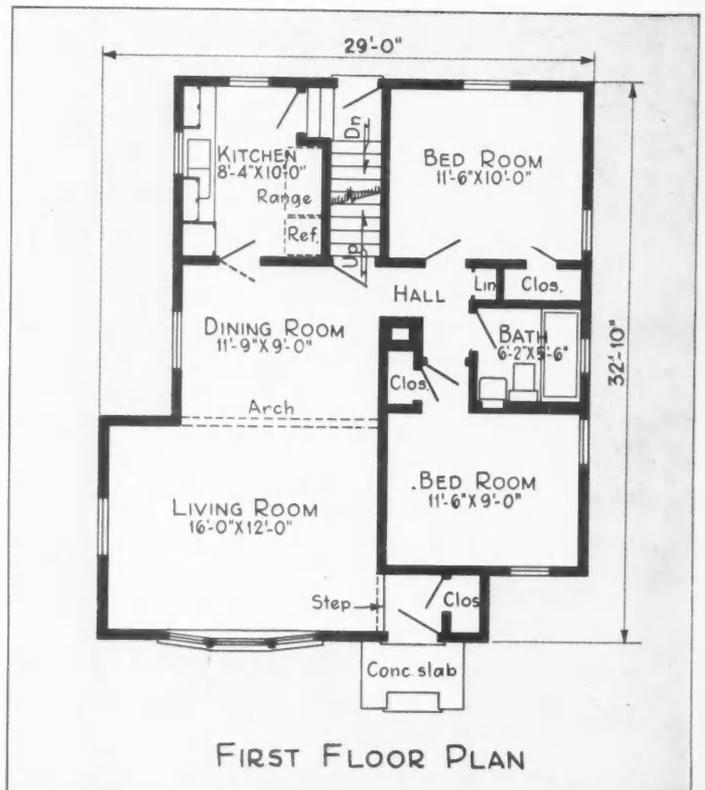
## "MASTER BUILT" PLYWOOD HOUSE

Designed and Built by Harry J. Durbin, Detroit

Cost Key is 1.055—124—853—36—15—14

CAREFUL PLANNING, pleasing appearance and good construction are found in this recently completed Detroit house in which plywood has been economically used for sheathing, interior wall finish and subflooring. The framing methods including the use of shop fabricated panels in this moderately priced house are described in the article on the opposite page. As shown above the exterior appearance is similar to that of any well designed small house of conventional construction. However, the window trim except on the bay is quite narrow; this is due to a special framing procedure where the studs serve as jambs and head.

THE FLOOR PLAN has been carefully worked out for economy of space with adequate facilities for modern living. An open type floor layout and sufficient windows assure good light and ventilation. Combination living and dining room 21 feet long increases the apparent size of the interior as the width of the house is only 29 feet. The kitchen has a built-in cabinet and sink unit. Two bedrooms and bath are placed on one side with a small connecting hall; on the second floor there is unfinished space for two additional bedrooms.



# Durbin Pioneers Plywood Houses

## Detroit Builder Develops Cost Cutting Methods on Small Homes through Use of Shop-Fabricated Plywood Wall Sections

By R. E. SANGSTER

**O**F SEVERAL building methods pioneered in Detroit by Builder Harry J. Durbin, one of the most outstanding is his recent development in the use of plywood for subfloors, sheathing and interior walls on houses built to sell complete in the \$5,000 market. Mr. Durbin is well known in and around this Michigan city, and ordinarily builds in the higher priced field; recently he has felt that there is a big market in the lower brackets and consequently has been developing his "Master Built" plywood houses as a means toward reducing construction costs.

Builder Durbin has been experimenting with and planning these houses for some time. There have been many changes in the procedure, and further improvements will be made as construction progresses. Since the first of the year five of these houses have been completed, and fourteen are now under construction. The fact that they carry FHA guaranteed mortgages attests to the soundness of the method. A group of over 200 plywood houses has been planned for construction, but have not yet materialized due to unsettled labor conditions.

Of the houses already finished, procedure has generally



**HARRY J. DURBIN**, well-known Detroit builder, whose experiences with plywood houses are described in this article.

been to use plywood in place of the usual shiplap, rough flooring or wall finish which has been applied on the job. The method as finally worked out will employ shop-fabricated story-high panels, similar to those shown below, for all sections of the house where openings occur, both in exterior walls and interior partitions. Some of these panels have already been used in exterior walls with marked success. The advantages not only include the saving of handling larger units, but there is a further saving of work by the use of power equipment in the shop where labor costs can be reduced.

These "Master Built" houses allow all the advantages of standard construction. The departure from usual practice is found in the assembly, this being similar in some ways to the Forest Products Laboratory experimental house which supplied the original idea (see story August, 1936, *American Builder*).

A short summary will cover the principal points of the methods as worked out.

1. The house is designed by the Durbin architectural staff either to be built for an owner or for sale.
2. Excavating and foundation work is done in usual manner; sills, joists and rough floor of plywood are then laid (standard shop fabricated floor sections will eventually be used where no cutting or special framing are required).
3. Where door and window openings are indicated on plans, panel units are set up, held in place and then remaining studding is filled in between these sections.
4. A 2 x 4 is run around the top to give a double plate and tie the wall together.
5. For two-story houses the second floor is set in place and framing repeated, otherwise rafters are located and roof is laid in standard manner.
6. Sheets of plywood are applied to the framing to complete the sheathing and interior finish on sections where panel units do not occur.
7. Sash, doors and trim are installed and the house is



**SHOP-FABRICATED** plywood wall units; the one in foreground shows the exterior surface, the other displays the inside of a unit.



LEFT: View of framing around opening which has a lining of weatherstrip and serves as jamb and head. Note sash balances and narrow mullion; "Furstix" glue strips have been applied to joists and the stud at far left.

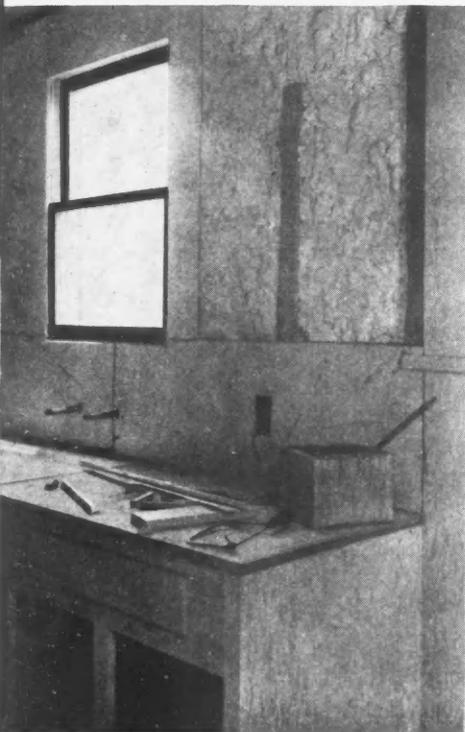
ready for equipment; exterior finish can be shingle, veneer, siding, etc.; paint or paper is applied directly to interior plywood surfaces.

It will be seen from this outline that nothing has been sacrificed in the way of flexibility—it is entirely a matter of substituting larger building material units where the bulk of labor is involved in framing openings. Besides this, there is no waiting and moisture problem; a crew can be kept on the job continuously. As a result, Builder Durbin expects to cut down completion time from start to occupancy by one-third and so gain a saving in capital turnover which is an especially important item in large scale operations.

The construction of the panel units and method of applying the interior wall finish are most interesting features. Panels are made either 4 x 8 feet for single windows and doors, or 8 x 8 feet for double windows. The work is done by part of the crew in a shop where during the slack season units can be made up ahead of time.

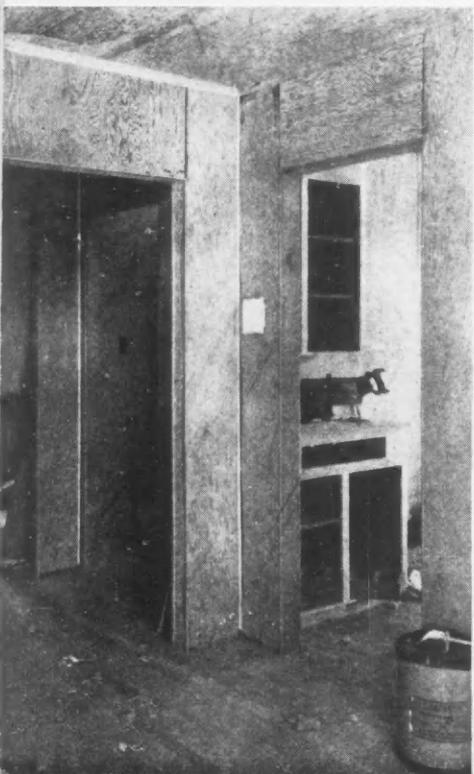
In laying out the panels, members for sole, studs and single plate are cut to size using power equipment. They are then assembled so that a special metal lining applied direct to the framing of the opening forms the jambs and head; sash balances are used in head; this eliminates the need of casings as shown in the upper details on the opposite page. On the outside of this framing,  $\frac{3}{8}$ -inch plywood is nailed for exterior sheathing. To the inside face of all studs,  $2\frac{1}{2}$  x  $\frac{1}{4}$  inch strips of plywood, called "Furstix," are nailed and the space between studs is hand packed full with rock wool. Finally,  $\frac{1}{4}$ -inch sanded plywood for interior finish is attached to these glue strips with Laux No. 888 self-bonding casein glue and nailed. The upper illustration on this page shows this framing but, since this is a view of one of the early jobs on which shop-made panels were not used, the interior plywood has not yet been applied; however, framing is similar in the completed units pictured on the preceding page.

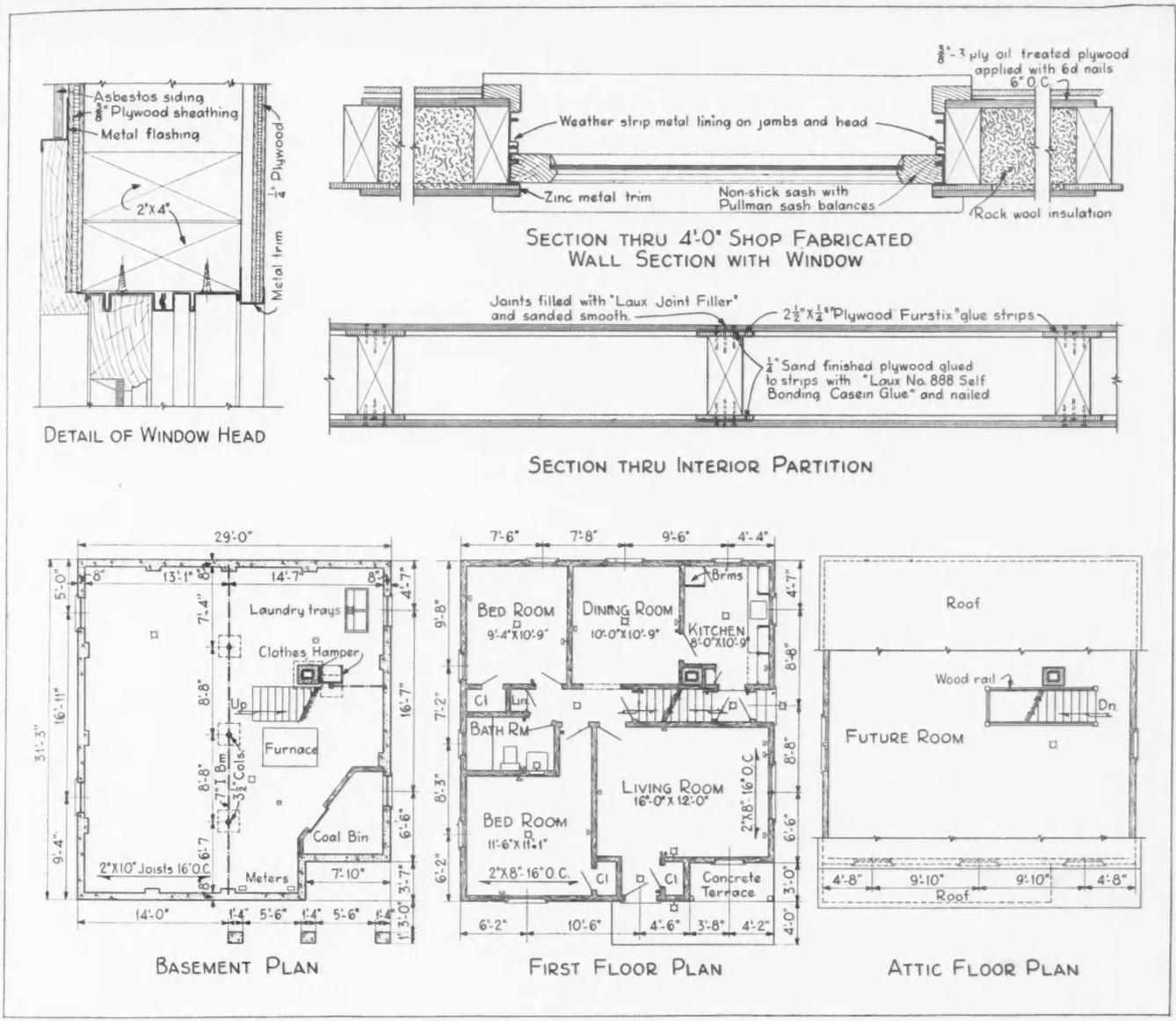
The portion of the framing erected on the job also receives glued strips on inside face of studs and the balance of the interior plywood is similarly attached to these and the projecting part of the strips on the panels. When a room is completed the ceilings and walls form a unit or shell which is permanently bonded at all joints by the "Furstix" strips so that any minor  
(Continued to page 118)



ROCK WOOL fill seen in kitchen above built-in sink where wall cabinets will be installed; glue strips on the studs at the right. The mixing box on the counter contains self-bonding glue; some pieces of the metal window trim are seen near sink.

BELOW: At left, interior view showing plywood and metal trim; joints have not yet been filled. Center, bath wainscoting will receive three coats of Pratt and Lambert Cellutone and be rubbed with pumice and water to give a durable, smooth finish. Right, view of modern appearing interior.





ABOVE: At top, details of shop-fabricated wall panels as used on "Master Built" houses. Studding frames the openings and metal weather-strip is applied directly with screws. Center, details of interior partition showing glue strip construction. Bottom, floor plans of the houses shown below which are alike in layout but have different exteriors; house in foreground to receive Brickote veneer over plywood.



# BASEMENT BUILT-INS

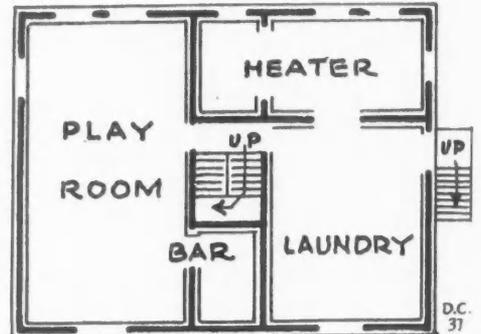
Houses Can Be Made More Attractive by Built-on-the-Job Conveniences in Both Basement Recreation and Service Rooms

By DANA DODGE CORROUGH

Architect

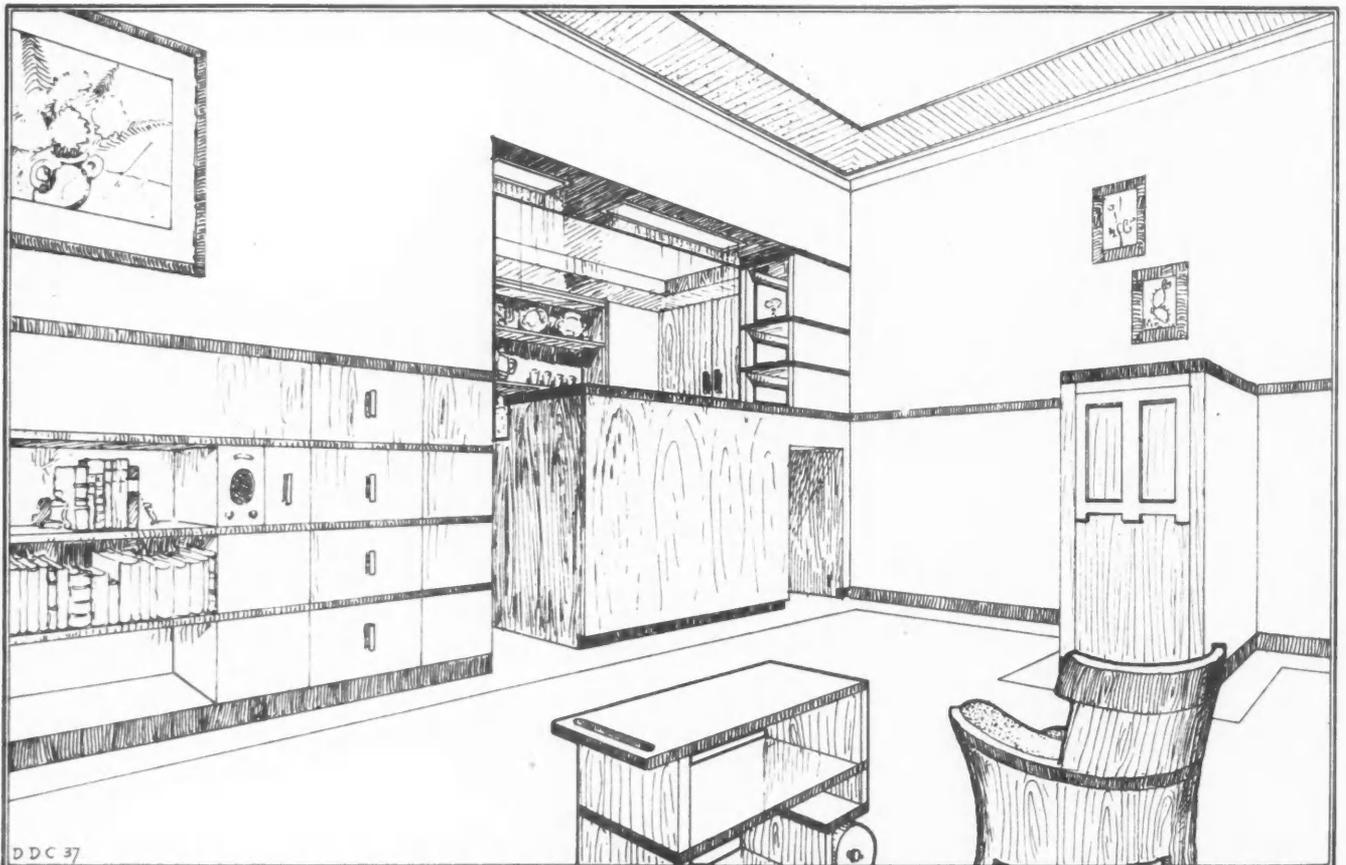
**D**EVELOPMENT of compact, attractively finished mechanical equipment for residential basements is increasing the amount of usable space in homes. Automatic heating equipment, air conditioning units, water heaters, cabinet showers, toilets, water softeners, filters, pumps, and storage tanks have been dressed up by industrial designers, and improved by engineers, so they can be "lived with" and no longer need be relegated to a seldom-used basement. Homes are planned with the idea of making active use of this space. Attractive built-in conveniences for basements have become increasingly important. Many of these objects are easy to build, inexpensive, and are so interesting that they repay their cost many times by adding to salability of a house. Others supply features that might otherwise have to be purchased and installed at a much higher cost.

To demonstrate some of the possibilities of basement built-ins as a means of making houses more livable, or as a means of using all available space, let us begin with

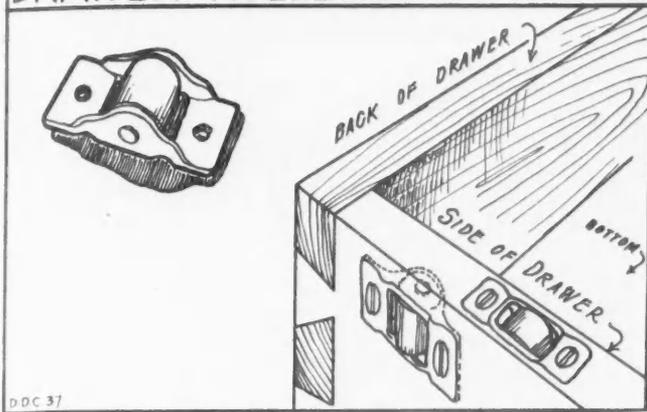


THIS typical basement is divided by a frame partition, with space for a play room on one side, and space for a heater room and laundry, or hobby room on the other.

a typical rectangular basement in a typical house. The accompanying floor plan shows such a basement. A stairway rises from the center of the room. Let us divide this space by an ordinary frame partition. On the left is space for a play room; on the right is space for a heater room and laundry, or hobby room. Beginning with bare walls on the play room side, let us see how this space can be transformed into an attractive, interesting, useful part of the house by adding built-on-the-job conveniences. A subsequent article will show built-ins for service rooms on the other side of the partition.



### DRAWER ROLLERS



TRUNK rollers set into the sides of storage drawers eliminate sticking and jamming, even when drawers are heavily loaded.

The drawing on the facing page shows a corner of the play room, with built-in book shelves, radio, drawers, snack-bar with shelves and cupboard, drop-leaf writing desk, tea caddy with stall, recessed lighting. Every item, except radio, sink, drawer pulls, faucets, light bulbs and wiring can be fabricated on the job from inexpensive materials, although the bar, tea caddy, and desk can be factory-made if desired. Some of the conveniences shown here can be adapted to other parts of the house.

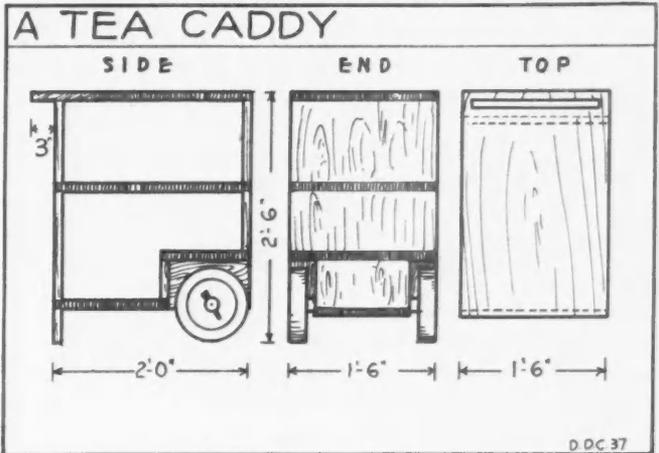
Walls and ceiling of this basement room have been finished. Bands of dark enamel have been applied to the base moulding, chair rail, exposed edges of shelves, and to the ceiling, so as to emphasize horizontal lines and give the room a modern touch. The frame partition dividing play and service rooms also encloses the stairs, and hides pipe columns supporting the stairway and bearing walls above.

Open book shelves shown at the left may be 1" boards, or 3/4" plywood, 8" wide. Each shelf board has been extended full length of the section between the stair and bar openings, so as to stiffen the partition, and provide substantial support for the storage drawers at the right. The exposed edges of this shelving have been used in the decorative scheme of the room.

A plain board has been used for a base moulding, finished in dark enamel. The chair rail above it may be

a lattice strip, or may be merely an enameled line on the partition or wall. Face of the partition below the chair rail may be finished in clear varnish, or colored enamel, depending on the material used and general color scheme of the room.

A stock picture moulding has been used on the walls, close to the ceiling. A band of color has been painted around the outer edge of the ceiling. It is edged with a strip of half-round moulding to give a recessed effect. This effect can be heightened by nailing a strip of in-



INEXPENSIVE and sturdy tea caddy that can be used out-of-doors in summer as well as in a basement recreation room.

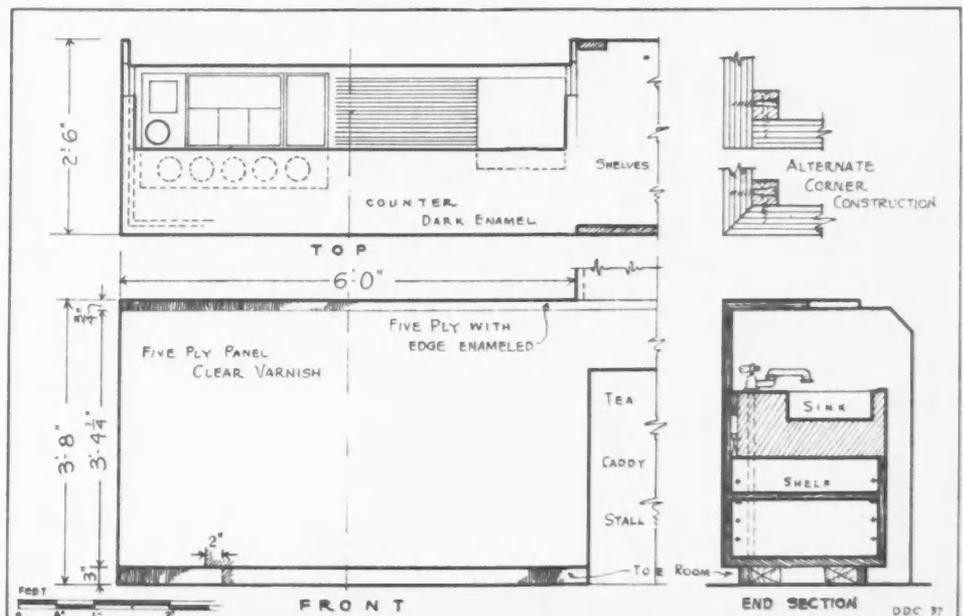
sulation board or plywood around the ceiling edge before the half-round is applied.

The radio is a stock model or chassis in a compartment of the partition adjoining the book-case section. Drawer fronts, to the right of the radio, are faced with partition material. Note that drawer pulls have been put on vertically, instead of the conventional way.

A separate illustration shows how storage drawers can be equipped with small trunk rollers so that they slide in and out at a touch, even when heavily loaded. Home owners often take more pride in showing a simple, inexpensive convenience of this kind than they do in some far more important features of their houses. Six rollers are used for each drawer. Two are set into the lower shelf, near the front, where the sides of the drawer pass over it. A roller is set into the top of each side panel,

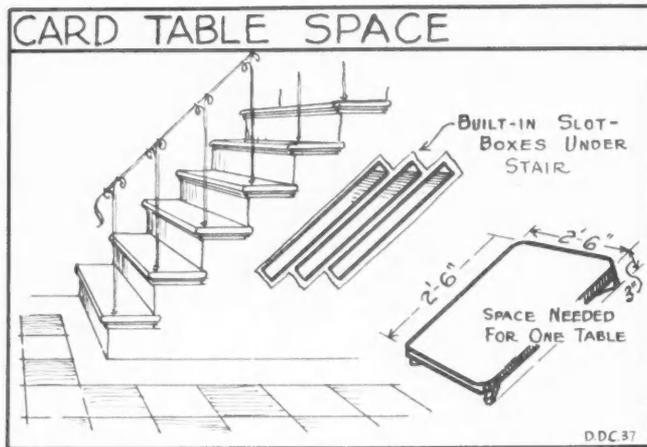
LEFT: One corner of the completed play room, with built-on-the-job conveniences, made from inexpensive materials.

RIGHT: Details of bar construction, showing location of sink, corner construction, and recessed base moulding to provide toe room.

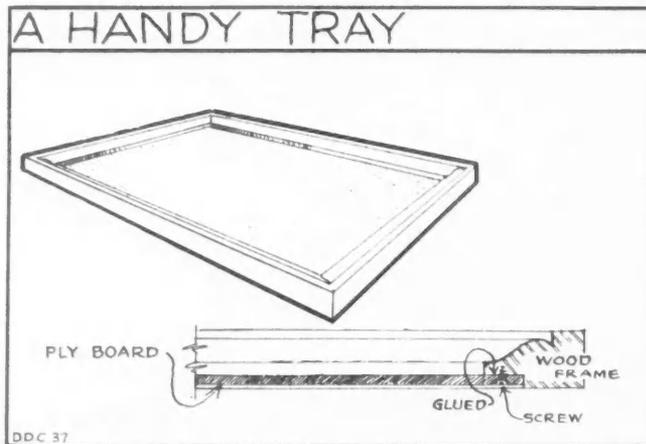


near the back, and another is set into the outer face of each side panel, near the back. The drawer is supported by rollers when it is pulled out and rests on its own weight. It can be closed easily, without sticking or jamming.

Separate illustrations show construction details and features of the bar. It can be equipped for "whoopie," or



ABOVE: Slot-boxes under a stairway provide a clean place for card tables, without cluttering up other storage space. Slots can be cut vertically or horizontally if desired.



LEFT: Handy serving trays can be made from mitered wood frames and plywood. Trays can be stacked when not in use.

BELOW: Recessed lighting can be included in practically any recreation room by constructing this simple lighting unit.

as a snack-bar for light refreshments, according to tastes of an owner. The bar counter, front, and side panels are of five-ply plywood. Counter edges are enameled. Note that this line of color is continued in the chair rail. The enameled base moulding has been recessed under the bar to provide toe room for standing guests.

The opening cut into the front panel of the bar, on the right, is a tea caddy stall. The tea caddy, detailed in a separate illustration, can be used out-of-doors in summer when the play room is not in use. The wide-tired wheel can be rolled over a lawn, and when used in the basement will not make ruts in an asphalt or rubber-tile floor. When not in use, the tea caddy is rolled into its stall. One end forms part of the bar front, and the play room floor is unobstructed. A slot cut into the top forms a hand hold. Wheels are of turned wood, on wooden axles, held in place with wood taper pins.

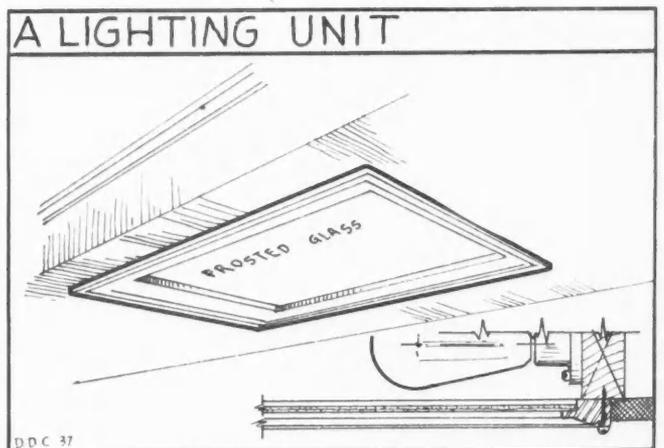
Open-end shelves above the bar counter are built like the book shelves, with exposed, enameled edges. An attractive effect could be obtained by making these shelves of glass. Built-in shelves form the back-bar. A wide cupboard has been installed at one end, against the wall. A recessed ceiling has been indicated over the bar. Openings have been cut into the soffit directly over the bar counter, and recessed lights have been installed. A separate illustration shows details of an attractive, inexpensive lighting unit, consisting of a pane of frosted glass set into a picture frame, which is fitted into the opening.

Most families have use for card tables. The play room is a place where they are needed most often. Card tables can be stored in built-in slots under the stairs, as shown. These slots provide a definite place for tables, where they are always available, and where they are kept clean when not in use. The illustration shows slots cut parallel to the stair rail, to provide extra room in case the space below the stairway is used for other storage. The boxes work equally well when placed vertically or horizontally.

Handy serving trays can be made from mitered wood frames and plywood, or hardboard. Trays of this type can be stacked, so as to occupy small space, and can be used for "cafeteria" or lap service.

The writing desk, shown against the right wall, is a drop-leaf type. What appears to be a decorative panel on the front is hinged at the top. This section is suspended, and forms legs of the desk when the leaf is lowered. Drawers are built-in below the drop-leaf, and pigeon holes are placed behind the leaf, inside the desk.

This writing desk might be replaced with a special built-in display cabinet, perhaps with glazed doors and special shelving for showing needle-work, statuary, handicrafting, hunting, fishing, or athletic trophies, a gun



rack or places for other out-door tackle. Collectors, both juvenile and adult, often have material for attractive displays that are too bulky for upstairs living rooms, yet enhance the appearance of a basement recreation room.

Many other effective built-ins can be developed to suit special requirements, or hobbies of owners, but the foregoing examples show some of the possibilities for developing conveniences that make houses more salable, and utilize space made available by improvements in present-day mechanical units.

# TVA Repairs Oust Termites

## War Time Workmen's Homes at Muscle Shoals Remodeled for Wilson Dam Workers—How Termites are Eradicated

By **E. S. DRAPER**, Director of Land Planning & Housing, TVA

**D**URING the World War when the Muscle Shoals area became the scene of an almost frenzied day and night drive to provide a major source of munitions, it was estimated that 40,000 construction workers and their families were living on a 2300 acre tract. Two other smaller Government reservations in the area were similarly crowded.

In general, the housing provided was of a temporary nature, intended to serve only the transient needs of the workers engaged in the construction of Wilson Dam and the nitrate plants. However, all three reservations included an appropriate number of permanent houses designed for occupancy by the forces to be employed in the production of electric power and munitions at the new plants.

But with the ending of the war emergency it was decided that the dam and nitrate plants would be maintained in a stand-by condition rather than operated on a peace time basis. At that time a number of the permanent houses were still under construction and work on them was stopped as soon as they could be closed in and protected from the weather.

Approximately fifteen years passed between that time and the latter part of 1933 when the Tennessee Valley Authority took over the Muscle Shoals properties. In the rush of activity following the starting of work on Wheeler Dam and the conversion of Nitrate Plant No. 2 for the experimental production of fertilizers, the TVA was faced with an acute shortage of housing

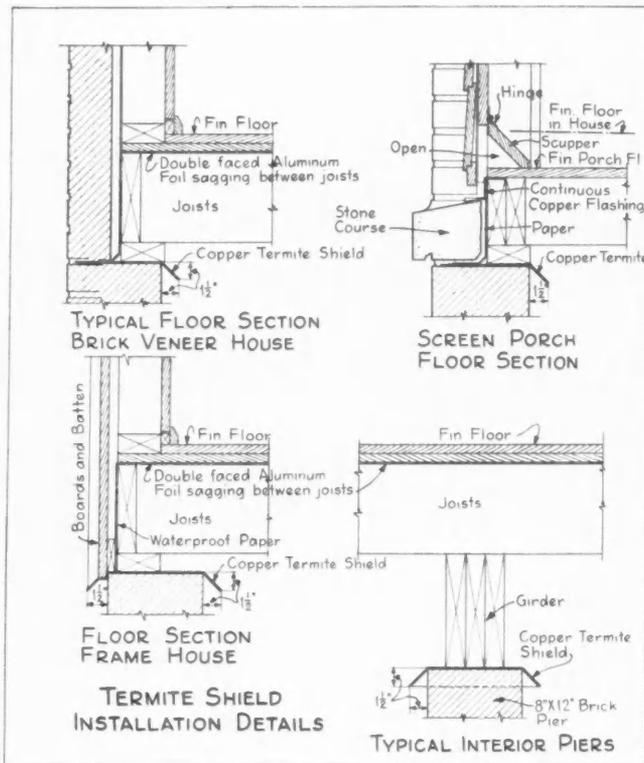
for its personnel at Muscle Shoals. Upon investigation it was found that if the existing dwellings on the reservations were put into livable shape and some additional housing provided at the Wheeler Dam site, this shortage could be alleviated considerably. The work of reconditioning these properties was assigned to the Division of Land Planning and Housing.

Left in an incompleated state and unoccupied for so long a time, it was only natural that many of the dwellings were in a bad state of repair. Added to the natural wear and tear from the elements was the fact that termites had gotten into many of the wooden structures and in some cases had practically eaten away the sills and supporting beams.

In some cases houses had been built so low on the



MUSCLE SHOALS house (above) being raised above ground level to overcome dampness and further attacks by termites. Note removal of shingles at corners to permit termite eradication and repair. Below, the same house after raising and termite eradication.



ground that portions of the wooden understructures were flooded after every heavy rainfall. This intermittent wet condition of course induced rot and attracted termites, as well as created a very unsatisfactory living condition and an unsanitary menace to any occupants of the houses and to the neighborhood in general. To correct this undesirable condition, new foundations were built under the low houses, raising them an average of two feet. Also the area around the low houses was drained by digging a 750-foot-long trench to lead the surface water away from the low ground.

An example of the effects of time on planning procedure is the fact that garages apparently were not contemplated in the original scheme for the workmen's houses at Muscle Shoals. In order, however, to meet conditions as they exist today, TVA found it necessary to build new garages for practically every house.

The Authority's experience with the effectiveness of insulation in the houses of the new communities recently built for housing the workers engaged in the construction of TVA dams, led to the thorough insulation of the ceilings of the reconditioned houses at Muscle Shoals. The relatively slight expense involved in ceiling insulation is far more than compensated for by the fact that the houses are thereby rendered so much cooler in summer and easier to heat in winter.

In some cases the smaller houses were found to have outside toilets located on porches. These were remodeled so as to provide complete bathrooms made accessible without going outdoors.

One of the most important operations in connection with the reconditioning of the houses at Muscle Shoals was the eradication of termites. It is the opinion of many people that the destructiveness of termites is part of a high pressure sales talk circulated by those who want to sell house owners some sort of termite eradicant. As a matter of fact, the danger is sometimes exaggerated, but it is none the less real. Once considered as a pest largely confined to the tropics or the extreme south, termites have now invaded almost the entire country.

A preliminary inspection at Muscle Shoals revealed

that out of one group of 165 houses the understructures of 131 of them were in various stages of infestation by termites; in the case of 30 more houses of this group the adjacent ground was infested, and in only four houses of the 165 was there no visible evidence of termites. One house of the group was so completely infested by termites, and their inroads on the structural framework were so extensive that it was decided that its repair and rehabilitation would cost more than the house would be worth. Therefore, this house was torn down entirely.

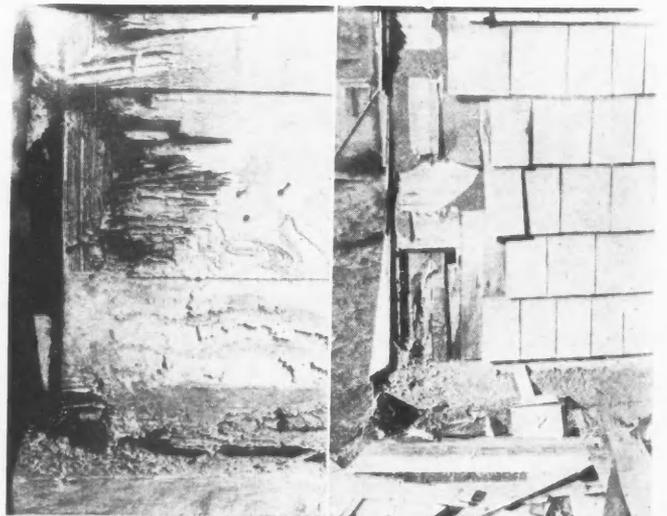
In shunning the light, and for protective purposes, a termite colony attacking a house builds tube-like runways of mud leading from the ground to the point of entrance to the woodwork. These characteristic runways are always present and give visible evidence of the presence of termites, but as the runways are often built on the inside surface of a foundation wall they usually escape detection for a long time.

Too, many of the houses at Muscle Shoals had foundation walls of hollow tile, the inner cells of which made it possible for the termites to build runways that were completely hidden from view.

To one unaccustomed to the ways of these insects, an infested building seldom shows any plainly visible signs of termite damage. But lumber which appears to be sound on the surface may be pulverized and riddled within. Secretiveness is the termite's first law of life. They are the original borers from within. They shun the bright lights of both publicity and of outdoors—self-advertisement has no charm for a termite.

However, most people have seen termites without recognizing them. The tiny, ant-like, grub-colored insects found in rotting wood and sometimes called "wood-lice" are really termites. Even though they look like ants and are often called "white ants" or "flying ants," termites really belong to the cockroach family, and true ants are their natural enemies.

The eradication of termites from the Muscle Shoals houses was a thorough job. First, all of the debris, stumps and other natural harboring places were removed from beneath the houses. Trenches entirely encircling the houses at the foundation lines were dug and the ground poisoned with chemicals. The wooden siding was removed from the walls at critical points to allow thorough inspection of the framework subject to attack. Sills and other damaged framework were replaced by new ma-



THOROUGH inspection of an apparently sound house revealed this well hidden damage to the framework (right). Note the mud-walled passageway built by termites, and the apparent soundness of the exterior shingles. Left; another view of a corner of an infested house.

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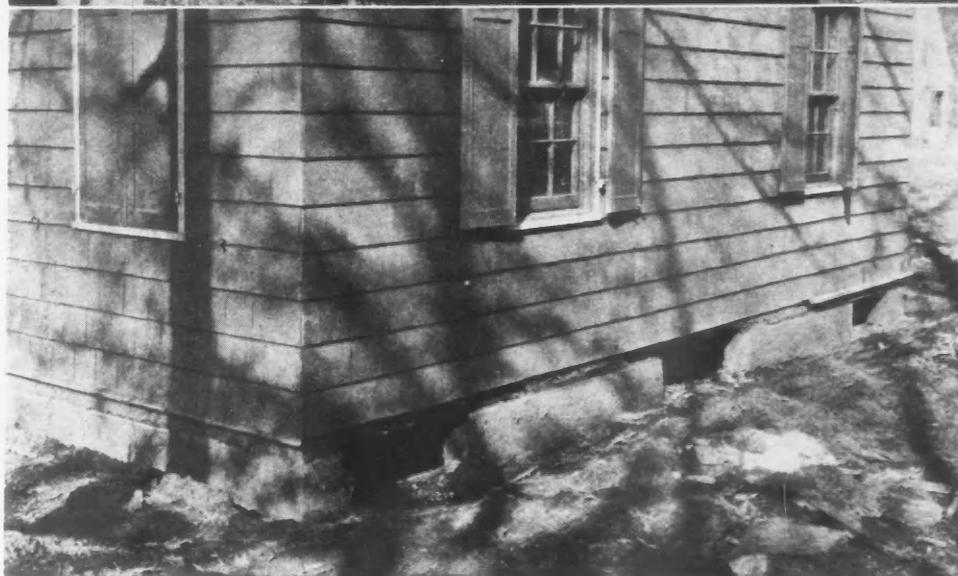
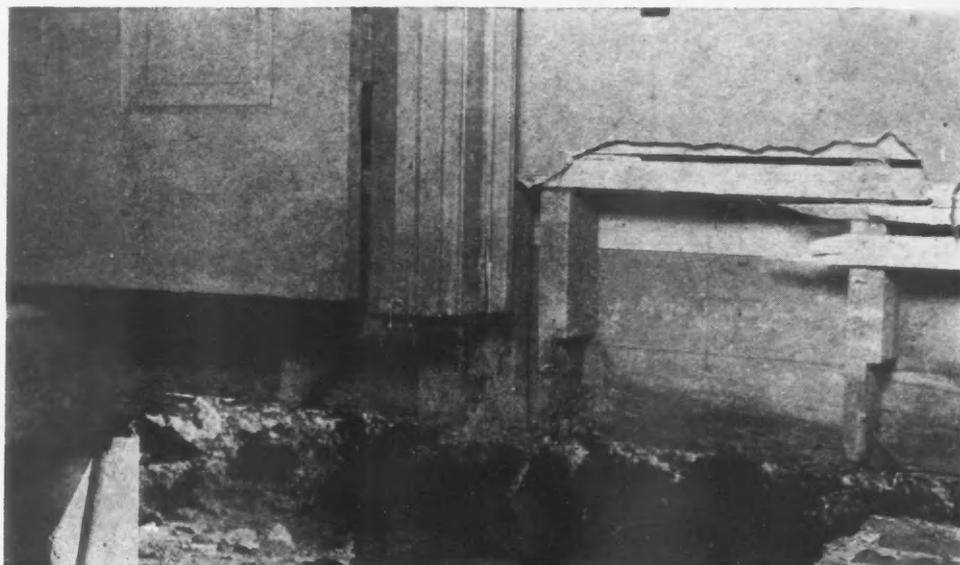
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INTERIOR view of house (right, top) showing extensive termite damage. Below; this house appeared sound until tearing away the baseboard revealed that the sill had been almost entirely devoured by termites.



terial treated with poisonous chemicals. The inner spaces of the hollow tile foundation walls were also impregnated with chemicals, and the open cells of the tile and the wooden sills were separated by inserting solid concrete sub-sills between them. Sheet metal termite shields extending one and one-half inches beyond the outer and inner surfaces of the foundation walls were installed at the sill line around all of the houses to block the entrance of termites at this critical point. Periodic inspections of the houses are now made for the purpose of early detection of any further attacks by termites.

A large proportion of the money expended in reconditioning the houses at Muscle Shoals was for labor. This was due to the fact that a great deal of usable building material was stored in the unfinished houses. Also wartime stores in the Government warehouses at Muscle Shoals were drawn on for such materials as were suitable for use in the houses. In this connection it is interesting to note that plastering material that had been stored in unfinished houses for more than fifteen years was tested and found to be undeteriorated, and was used for the new plastering. This, however, only serves to remind us that the ancient Roman law forbade the use of lime that had not been "cured" for at least three years, though modern processes have eliminated this requirement.

Aside from termite eradication and completing the unfinished houses, the bulk of the work was of a reconditioning nature. Gutters were renewed, roofs patched, rotten steps and porch floors rebuilt, sagging plaster cut out and replaced, plumbing and heating systems overhauled, exteriors and interiors repainted—in short, these houses that only a few months ago were fast becoming a total loss, are now for all practical purposes, as good as new. All of them are occupied, and transformed from a state of general dilapidation, they have become attractive, comfortable, sanitary homes for the families of TVA.

## Facts About Work and Wages

THE transition of the United States from an agricultural to an industrial economy, with a steady increase in the wage and salary earning class and rising wage levels, is reflected in a compilation of "Facts" issued by the Chamber of Commerce of the United States.

To provide for the material requirements of the 129,000,000 people of the United States 46,697,000 persons were employed in May, 1937.

Industry, including manufacturing, construction, power, etc., employs 15,460,000 persons, compared with 10,953,000 for agriculture.

Government in the United States—federal, state and local—has the longest payroll,—nearly 3,500,000 regular employees.

The Federal Government employed in the "regular establishment" in 1937 1,147,000 persons. Including workers on various relief projects, approximately 3,789,000 received federal government pay checks in February, 1937.

The Chamber estimates that not more than two and a quarter million persons, willing and able to work, were unemployed at the end of May, 1937.

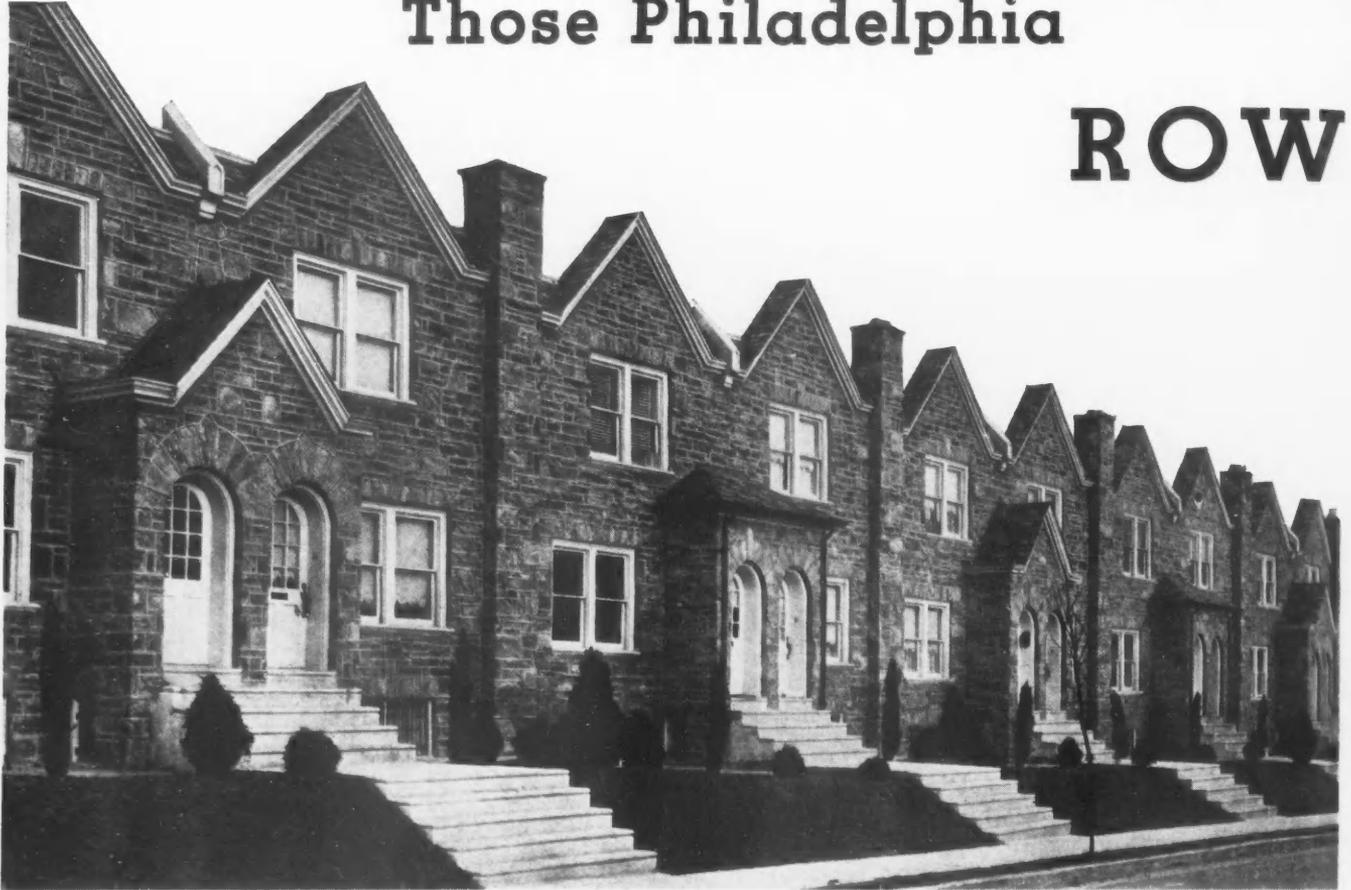
Eighteen major industries, turning out goods unknown fifty years ago, employed 1,123,000 workers in 1929 and the number has since increased.

Business—all producing, distributing and servicing activities—paid out in four depression years, 1930-1934, eighteen billion dollars more than it received.

Labor's share of the total income paid to employees was larger in 1936 than in 1929. Labor now receives 66.5 cents of the national income dollar.

# Those Philadelphia

# ROW



**D**ESPITE the unkind things that visitors from other towns say, the builders of Philadelphia continue to put up row upon row of stone-front connected houses which they appear to sell with considerable success.

In favor of the row house, its proponents point out the economy and efficiency of a single block of buildings. Critics on the other hand point out that adequate light and ventilation are difficult problems and that uniformity of appearance is a liability.

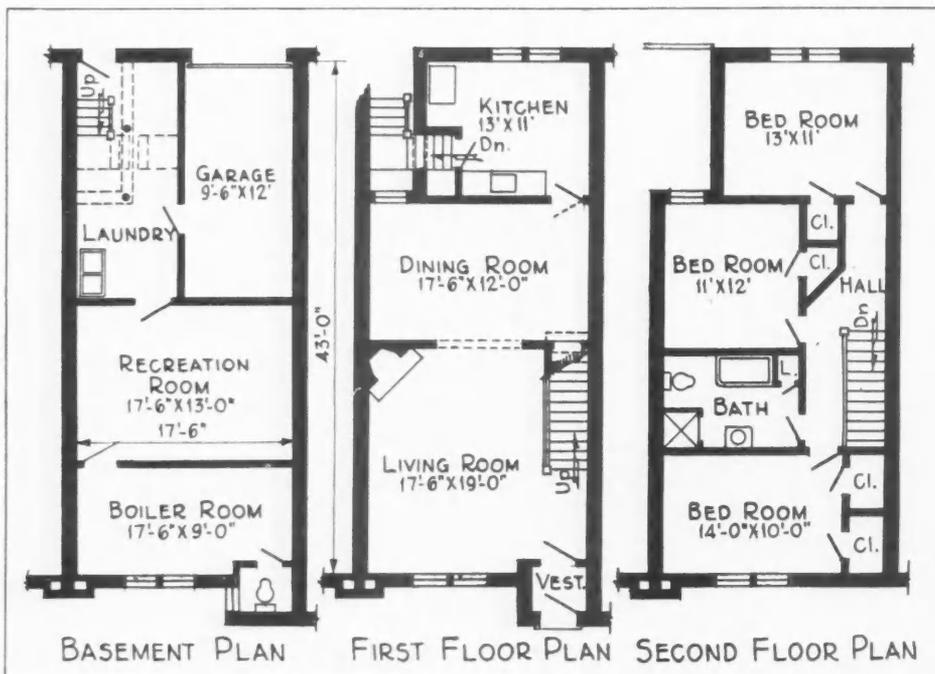
One of the better than average is illustrated, built by

the Mortimers—father and son. John W. Mortimer, Sr., started building 48 years ago and puts up an extremely substantial, well-built structure. His son continues the high standards.

The Mortimer homes extend for solid blocks, each identical in appearance and constructed of an expensive local stone. The architecture is nameless.

A typical flat is 17'-6" x 43', 2 stories and basement with recreation room and garage. The houses are built high to bring light into the basement. The basic problem of a row house—getting light and air, has

been partly solved in Mortimer's homes by leaving a small areaway at the rear to bring light into the dining room. A skylight gives ventilation to the bathroom. There is considerable waste space in the long halls. The floor plan is necessarily restricted by the row house and



**TYPICAL PHILADELPHIA** row houses built by contractor John Mortimer, who has been in the business 48 years and whose son is still carrying on. The long, narrow plan demanded by the row house makes it difficult to get light, but Mortimer produces a little in the dining room by means of a jog at rear. There is a skylight in the bathroom. This plan is better than the average for row houses but still compares unfavorably with single family homes.

# HOUSES!

## They Are Still Building Them— Regardless of the Modern Trend of Current Architecture and Design

makes necessary things that would not be considered good construction in single-family, such as the stairs opening upon the middle of the living room and a dining room with only one small window. Nevertheless, the interiors have been made bright and cheerful and are well finished and well equipped.

Heating consists of a hot-water system with Weil-McLain boiler and concealed radiators. Plumbing is modern and complete, and the bathrooms are profusely tiled in bright colors and have a stall shower with glass door. Copper pipe is used throughout. 3 x 10 floor joists are used; finished first floors are No. 1 select oak flooring. The kitchens are equipped with Magic Chef ranges, Colonial kitchen cabinets and Victor ventilating fans. They are tiled 4 feet all around. Roofs are 4-ply felt and slag, with slate peaks, copper valleys and gutters. Doors and windows are well weatherstripped and caulked. There is a large recreation room in basement. The heavy foundations, solid stone fronts, elaborate concrete porches and steps and sound construction insure long life.

The economies of row-house construction are indicated by the fact that the sales price of a typical flat early this year was \$5150. It could be purchased with a down payment of \$1150 and monthly payments, including amortization, interest, taxes, water and fire insurance, of \$39.49.

The universal answer to criticism of the appearance and the old-fashioned arrangement of most of the row houses is, "they sell." No one knows how a similar type of house, if given better architectural treatment, would sell. Perhaps it would do much better.

LIVING room of one of the Mortimer row houses. The concealed radiators are placed under the large front windows. Stairs lead directly from living room—an undesirable feature.



THE MORTIMER kitchen is well lighted, and well heated by the large concealed radiator under the window. The walls are tiled 4 feet all around. Although large and cheery, the kitchen is poorly arranged for efficient use.



A SKYLIGHT lights the profusely tiled bath.

# Monolithic Brick Homes

By **ALBERT W. LUSE**

Secy.-Mgr., Chicago Face Brick Bureau

**W**HAT about the big 70 percent market for low cost homes—for wage earners with yearly salaries \$2500, and less? It is an undeveloped market, according to all statistics. This great group of trustworthy, hard-working, home-loving people are entitled most certainly to a well-built, fireproof, up-to-date home with modern conveniences, and with a minimum upkeep cost throughout its life, for upkeep cost is certainly something to be reckoned with.

It may be thought today that it is impossible to build a modern brick house for less than \$8,000, or \$10,000; and one at \$5,000, or less, ordinary size—5 or 6 rooms—is entirely out of the question. But they can be had.

We do things differently today in 'most everything that touches our life, except probably the actual method of building our homes. The great construction industry has been slow to adopt new methods. The fact that this 70 percent market for homes is undeveloped, almost compels one to believe that it is impossible to build a low cost home by the traditional construction methods. A better home for less money must come from new methods, new ways of using our old and tried materials, getting away from the old, traditional construction. It must be done in a different way.

We are considering, at this time, low cost homes. To accomplish this it is more than likely that our ideas must be revamped to fit the picture. In other words, to effect a saving of 6, 8, up to 12 percent, we may dispense with a basement. Savings must be made in various places; and here is one. It is cheaper to build above ground than below ground. To be sure, space must be provided in this new home for laundry, heater room and storage room.

Circumstances alter cases, of course. If the building

site is on the side of a hill, a basement could be built, also probably enclosing the garage, with little additional cost. Again, where actual winter storage room for vegetables is needed, a compromise might be made on a part basement. However, it is not necessary today to have a basement for a central heating plant because we have forced circulation; and the heater can be on the floor level.

The homes we are describing are for the class of people very probably who do their own household work. Dispensing with the basement saves thousands of needless steps up and down stairs to the laundry, carrying out wet clothes to the drying yard. All these are eliminated from the busy housewife's tasks.

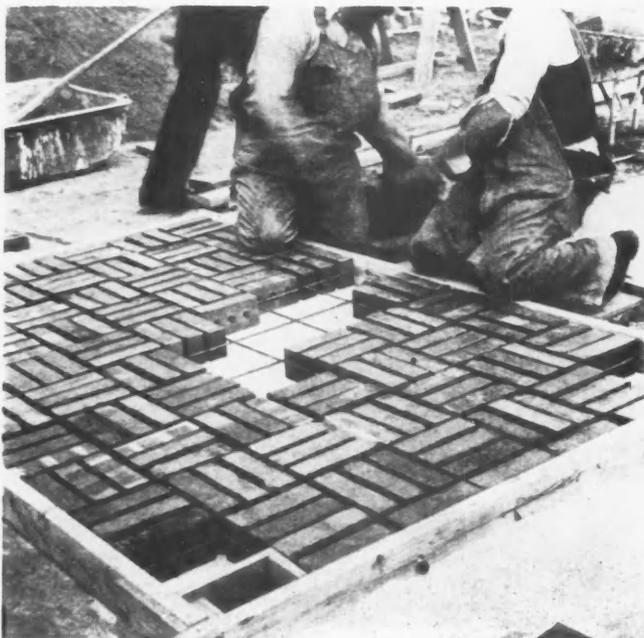
Maybe the interior finishing of the walls and also the floors are not just as our grandfathers had. These points will be treated as we proceed in our article.

Even with more favorable financing, on long terms, and lower rates, it does not bridge the small financial gap that prevents home ownership in so many instances.

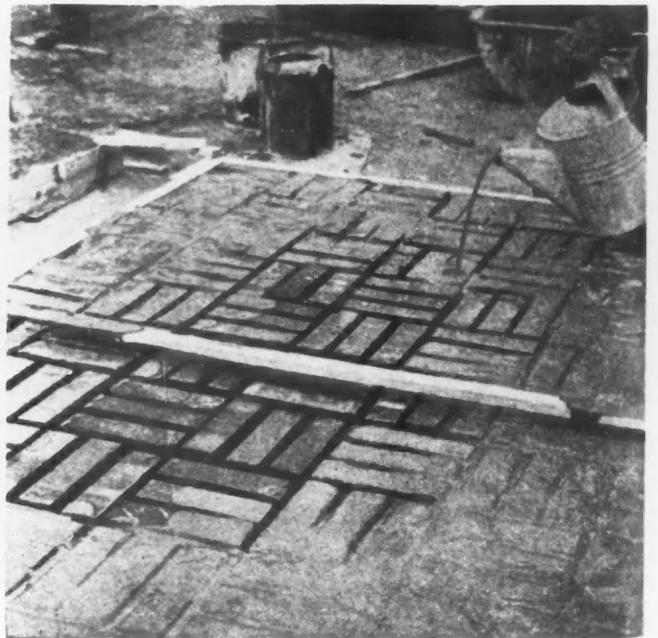
The ready-built lumber house coming to the building site cut, labelled and bundled, from the mail order house or large lumber operator, some 15 years ago, may have done some good; but it never got very far—probably because of the inability to sell such homes in such quantity as to reduce costs.

"Mass production methods, same as auto making, should be applied to home building"—has been said time and again. We don't believe it can be done. While 10 million people are each willing to buy a Ford, 100 people will not live in a community with 100 homes exactly alike except for color.

Century of Progress publicity writers ran wild with  
(Continued to page 82)



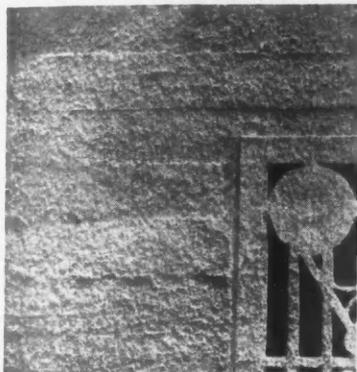
PLACING brick in the panel forms face downward on a screeded sand bed, with 1/4" deformed steel rods in the mortar joints on 8 3/4" centers.



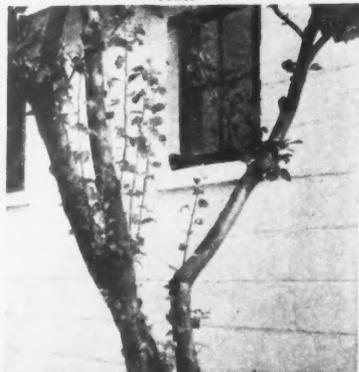
POURING cement grout on the back of the brick, completely imbedding the reinforcing rods. The brick lying on sand becomes face of exterior wall.



Monolithic concrete wall, board marked, painted. One of many textures possible at low cost when walls are cast in place.



Monolithic wall, board marked, stucco dash coat.

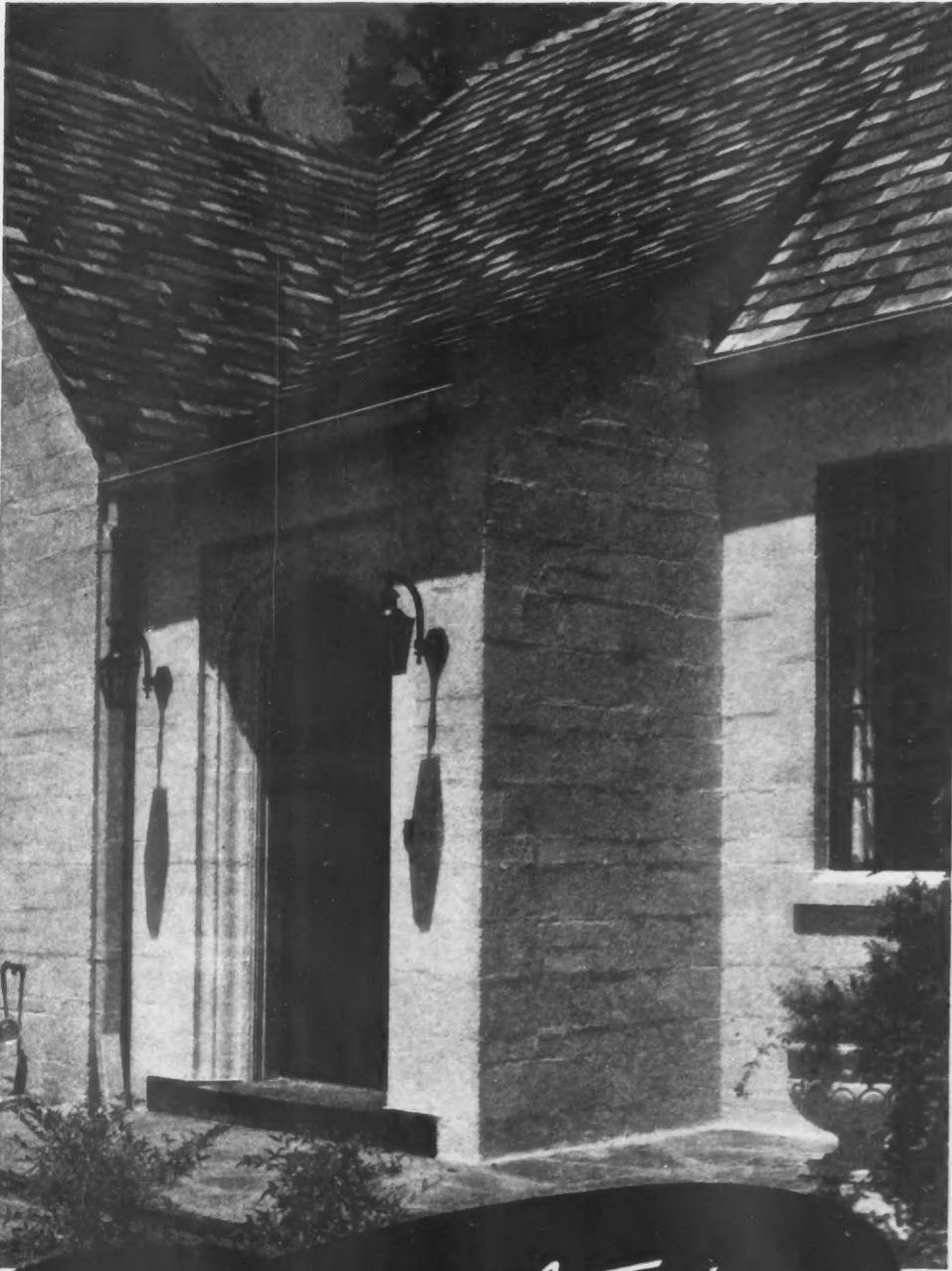


Exposed concrete masonry, all standard units.



Concrete masonry—one of many random ashlar patterns.

{Large view} Concrete masonry laid in one of many ashlar patterns possible with two or more sizes of units, painted with cement paint. This Atlanta, Ga., house also has concrete floors. Julian D. Norris, builder. Arthur Neal Robinson, architect.



# Beautiful Wall Textures

## ... ADD TO THE SALES WALLOP OF THIS FAST-GROWING TYPE OF CONSTRUCTION

If you are looking for a new eye appeal, consider concrete! You will find a choice of interesting textures for every architectural style.

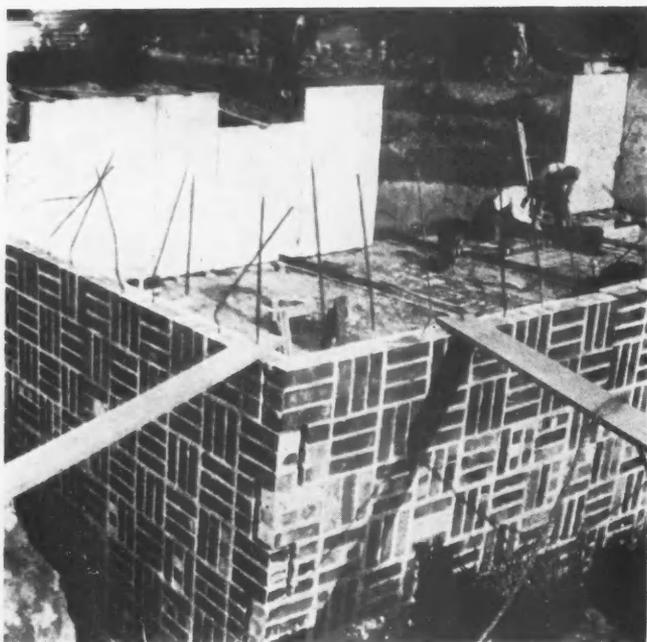
But architectural distinction is only the beginning of concrete's story. Concrete helps you offer a *better* home for the money—firesafe in the real sense . . . comfortable in all weather . . . enduring as only a rigidly built home can be. Concrete is low in first cost.

You can assure your buyers low maintenance and slow depreciation.

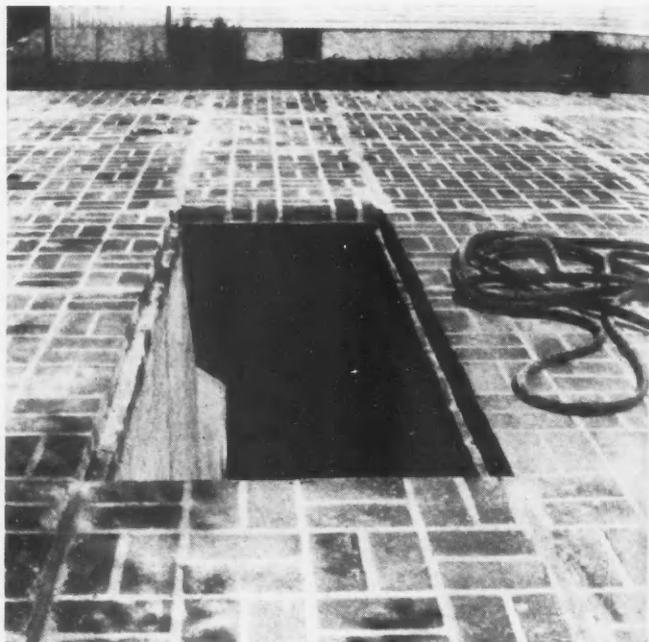
Just off the press is a new 32-page booklet, "Why People Like Concrete Homes." Thousands of home prospects will be seeing this pictorial booklet. May we send you a copy?



**PORTLAND CEMENT ASSOCIATION**  
Dept. 8-3, 33 W. Grand Ave.  
Chicago, Illinois



**BASEMENT** retaining walls of brick panels. Where panels adjoin and the reinforcing rods butt each other, these are spot welded. Notice the dovetailing of the corner panels. These come with true precision.



**REINFORCED** brick panels over full basement, supported with I-beam. Small opening at left hand for hot air register. Floors are terrazzo ground, polished and waxed. Larger opening, stairway opening to basement.

their copy that 20 percent would be cut out of home costs because of walls of steel, wood or synthetic panels. This bubble burst because the walls of a home don't allow the deduction of that cost percentage.

Wiley Corbett, outstanding New York architect, commenting some little time ago, remarked, "Every time I see a mason on the wall it reminds me that bricks are laid in the same manner as in the time of Moses." He criticized the construction methods. There is some truth in his criticism even though a brick unit may be considered a perfected, fabricated unit, when it comes to the building site. But, accepting his challenge in the broad sense, how are low cost homes to be built if we adhere to traditional building methods? It is possible to squeeze cost of labor and material enough?

Architects Holsman and Holsman of Chicago, capitalized on Architect Corbett's criticism and are placing as many as 300 brick in the wall in one operation in a method of constructing homes utilizing brick, steel and concrete and cantilever construction; and this goes for even the small home \$2500, and upwards.

It is an architect-engineer's development. It is not believed the same type of house could be built with traditional construction, using face brick and lumber, even at a higher cost.

A PWA engineer in Washington, looking over a set of photographs, remarked, "A monolithic structure." The suggestion gave the name for this type of face brick home.

The monolithic face brick house with its walls of reinforced brick panels, 4-inch load-bearing, the supporting element, eliminates wood or steel studding, or other additional courses of backup masonry. We want to make this point clear. This 4-inch panel is the load-bearing element, without any other visible support whatsoever. We made a special trip to Washington because evidently our command of the English language was not sufficient to explain this point to the FHA engineers. They wanted to know how we hung the panel to the backup material.

It is impossible to exhaust the crushing strength of

face brick in the average two-story home. If one brick course will carry the weight, why use more, when flexibility can be secured through the use of the steel reinforcing rods in the mortar joints?

There is some saving, of course, in the lessened amount of material. But a saving also arises from the  
(Continued to page 84)



**SETTING** panels in the wall.



*All-Gas Kitchens* — MODERN AS TODAY'S INTERIORS



There's Nothing  
Like Gas for  
**COOKING**  
**REFRIGERATION**  
**WATER-HEATING**  
**HOUSE-HEATING**

Model planned kitchen from an advertisement in the Gas Industry's "Modernize Your Home With Gas" campaign in national magazines of 14,000,000 circulation.

MAKE no mistake about it. Today's gas appliances are *modern* appliances! Ranges are modern in the way they virtually run themselves with automatic lighting and dependable oven-heat control; modern in the way their improved burners and effective insulation contribute to worthwhile economies. Their clean up-to-date lines reflect the *speed* for which gas has always been famous. Gas refrigerators have the same clean, modern look about them—and their record for truly

silent, satisfactory performance has never been surpassed.

Nor are the ways to use this perfect fuel limited to the kitchen alone. Automatic equipment for house-heating and water-heating brings really effortless convenience within the reach of every purse. In addition, gas is the fuel that is already known and trusted in more than 16,000,000 American homes! Get all the

facts on the appearance and performance of modern gas equipment—and check up on the substantial economies available to homes equipped to use gas for every heating need. Consult your local gas company for full information regarding the selection of modern gas appliances to meet your problem and your clients' needs.

Be sure the gas appliances you specify carry the approval seal of the American Gas Association Testing Laboratories.



**AMERICAN GAS ASSOCIATION**



Completed bungalow—Owner, H. B. Schutte, Crawfordsville, Indiana. Cost \$5,800, built in 1935. 5 rooms, and bath, full basement with built-in garage. 27' x 44' ground dimensions.

fact that the architect has greater freedom in his design. The position of the first floor walls does not set the position of the second floor walls, or vice versa. It is readily seen that the lighter weight walls on the upper stories are placed with more freedom because they do not need such heavy under walls for support.

Low cost houses are being built today with first floor partitions made of brick panels, reinforced. They are fireproof and sound proof. In the making of the panels the brickwork may be so carefully done that the brickwork is eventually left uncovered as a finished wall. There is an initial saving here of interior finish and later upkeep cost, decorating, repairing, etc.

The ground floors can also be made of brick panels chosen from the great brick color palette, practically any suitable color shade you desire. These are terrazzo ground, polished and waxed. There will be no sagging, roughing up of splinters, or creaking. If the house happens to have a basement, this brick floor over it will give a fireproof basement.

It is said that a 4-room, 2-story house can be built cheaper than a 4-room bungalow. In a 2-story house, after the first floor exterior walls and partitions are set, plumbed and braced, with the extended reinforcing rods anchored in the key slots in the foundations, across the wall tops are placed steel I-pans 4 inches deep on 17½"-centers. The upper projecting reinforcing rods are extended into the I-pans and bent over. Second floor panels are erected the same as for the first floor. In this case the lower extended reinforcing rods are bent into the I-pan. With the second floor panels plumbed and braced, roof framing proceeds as in ordinary frame construction, the extended reinforcing rods securely anchoring the wood plates.

When the required conduits, wiring, etc., have been placed in the empty I-pans, these are then filled with a light weight aggregate cement and trowelled smooth. In this one I-pan operation we have a trowelled smooth cement second floor, under it a steel ceiling for the first floor, most attractive when decorated.

For those who prefer, and can afford, more expense in the home, wood or linoleum over mastic can be applied.

Here, again, is permanency, for there will be no sagging, no cracking and losing of plaster, but instead, a permanent ceiling with beamed effect.

We have described, in short, the monolithic face brick house of reinforced, four-inch, load-bearing panels with the ferro I-pan concrete filling and cantilever

construction. This wall that we have described must have interior finish. The outer panels should have a furring strip, some of the beautiful wall boards can be used giving a finished appearance in the one operation of applying, or, again, traditional plaster may be used.

What has been gained in all of this? What about

cost? Is the method practical? Do the walls leak? Can we have individual styles of architecture? Do we need brick of special sizes? Can the ordinary contractor do this type of construction? Can single houses be built or is mass production needed in order to reduce costs?

The answer to all of this is in the old adage, "The proof of the pudding is in the eating," in this case, the doing.

One outstanding thing is the fact that all that we have described in this house follows the blue print of the house plans. As we previously said, it is problem worked out by the architect and engineer. The blue prints must be followed religiously for you are not using material that can be sawed, planed or easily cut, but you are working with more durable materials. There are no special brick of any kind required. The only thing to be ordered in advance is the steel reinforcing rods and the I-pans, but these are easily obtainable almost anywhere in the U.S. from the steel merchants.

Brick panels may be made at the building site or at a central place and brought to the building site. Both methods have their advantages and disadvantages, with the one probably balancing the other. Both methods have been tried out.

Mass production is not needed. The architect has perfect freedom to design individual styles, whatever pleases his fancy.

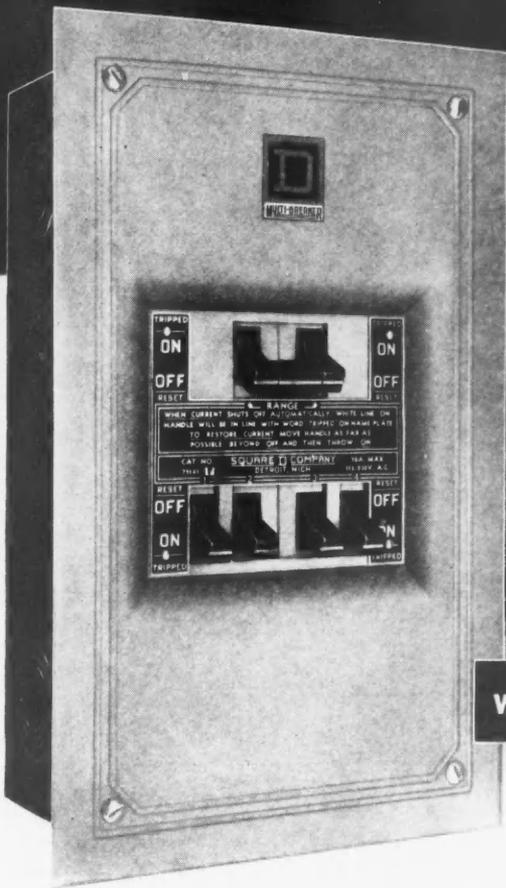
Now as to costs. The fact that 5½ and 6 room homes, —bungalow or 2-story, well designed, with enclosed or attached garage, modern, up-to-date, fireproof, termite proof, central heating plant,—oil or gas fired,—sleeping porch and sun deck, some with latest innovations as glass brick in dining nook, decorated,—have been built in the Chicago area, ranging in price from \$4500 to \$6500, is "proof of the doing."

Such homes have been built in Beverly Shores, near Michigan City, Ind.; Huntingburg, Ind.; Palos Park, Ill.; Downers Grove, Ill.; Niles Center, Ill.; Barrington, Ill.; Georgia; and contracts being let at the present moment for homes in Elgin, Ill., and Highland Park, Ill. Over 60 plans were sold from the Century of Progress house. There are undoubtedly many houses throughout the country of which we have no record.

The Chicago Face Brick Bureau, sponsored by the Indiana and Illinois Face Brick Manufacturers, has spent a great deal of time, effort and money in developing this type of construction in order to bring Face Brick homes within the reach of the masses.

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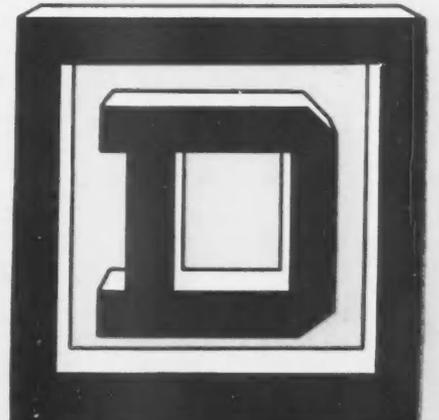
making a sale . . . Your electrical contractor will explain how you can eliminate the service entrance switch and fuses from the basement and place a Multi-breaker in the kitchen or back hall. For larger homes, a Multi-breaker on each floor is an added convenience. No more trips up and down stairs; the flip of a lever instead of changing a fuse. Write for Bulletin CA-543A.

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## Form Work Eliminated in New Monolithic Floor

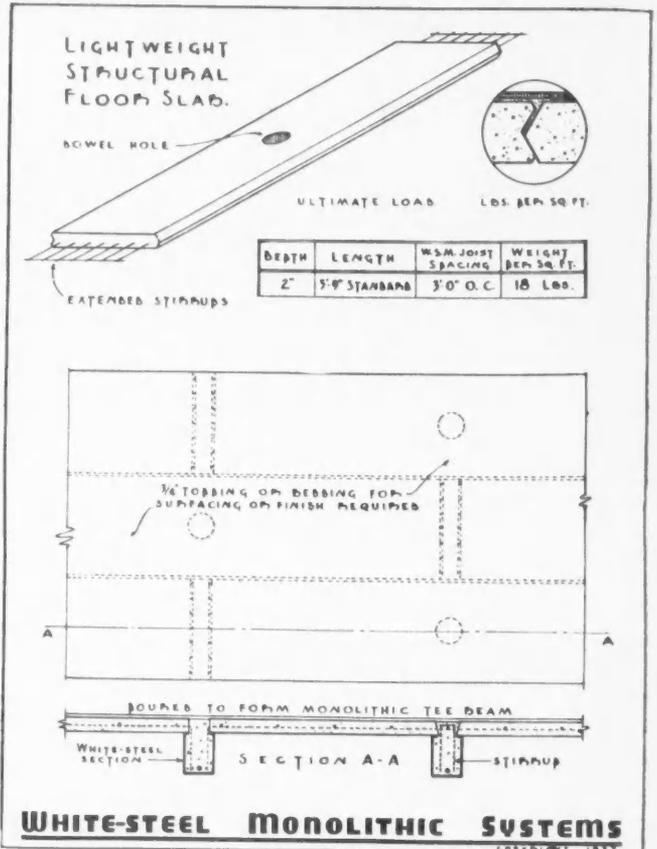
USELESS dead loads were greatly reduced in the monolithic concrete floors of a park recreation building recently completed at Glen Ellyn, Ill., by WPA labor from plans prepared by Mr. F. G. Walker, architect. These floors are of the White-Steel monolithic system designed and patented by Eugene B. White of Chicago, who is well known for his design of the Lawson memorial Y.M.C.A. building, Chicago. This new system of floor construction does away with form work and provides a monolithic T-beam concrete floor or roof which weighs only from twenty to twenty-five pounds per square foot, including the weight of the beams or joists. On this job it greatly simplified and speeded up construction work, resulting in a money saving of 35 to 40 per cent. In general, the lightening of useless dead loads effects great savings in foundations and also in structural steel.

Some idea of the great reduction in useless dead loads may be gained from a comparison of the weights of ordinary floor and roof deck construction with the patented White type of floor.

Reinforced concrete slab 6" thick	75 lbs. per sq. ft.
Tile arch construction	98 lbs. per sq. ft.
Conventional T-beam construction	40 lbs. per sq. ft.
White-Steel monolithic system	20 to 25 lbs. per sq. ft.

In the White-Steel system precast, reinforced slabs of light-weight concrete are used in combination with T-beams formed in special hollow steel sections of cold-formed, light gauge steel. Heavy reinforcing mesh projects from the ends of the slabs and is turned down into the beams to form stirrups connecting the beams and slabs by continuous reinforcing. The beams and openings between slab-ends are then poured on the job. No form work is used. The light-gauge, hollow steel sections provide an immediate working deck on which the precast slabs are placed. When the beams have been poured with continuous reinforcing, the full strength of a monolithic T-beam system results, as proved by tests of the R. W. Hunt Company, testing engineers.

Accepted T-beam formulae are used in the design of these floors and roof decks and the strengths developed are shown by loading tests to be exactly what would be expected in a monolithic T-beam system. The slabs are



composed of concrete having a compressive strength of 3000 pounds to the square inch. They are a little short of six feet in length, fifteen inches wide and two inches thick, and weigh about 125 pounds each. For the ordinary span and load, the beams are four and one-half by six inches. The system can be designed for any desired load and for long spans.

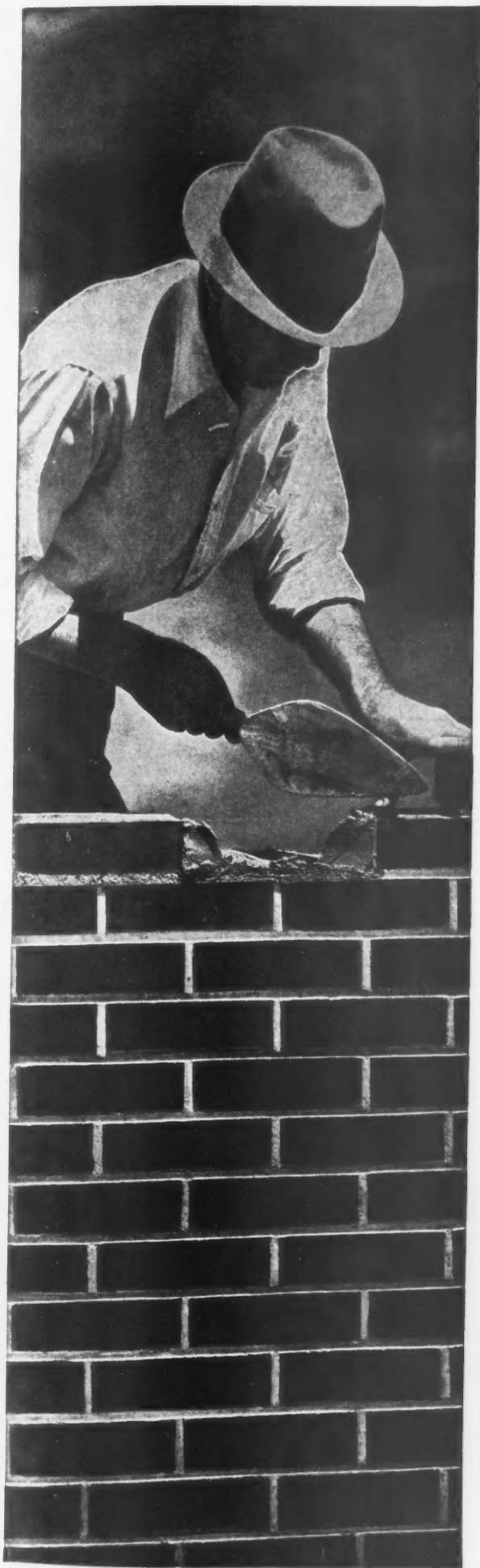
This Glen Ellyn park structure has a ground floor area of 78 x 83 feet, L-shaped. There is a small basement in one corner for heating plant. One room 27 x 67 feet is for the use of skaters in winter. A strong, rigid floor construction was essential on account of the crowd apt to gather, especially during the skating season.



HOLLOW steel sections being laid across foundation wall forms ready for laying of White-Steel slabs.



LIGHT WEIGHT concrete slabs in position and workmen pouring beams of Park house in Glen Ellyn.



# BRIXMENT IS PLASTIC!

WITH the possible exception of slaked lime putty, Brixment makes a *more plastic, more easy-working* mortar than any other materials you can use. ★ ★ But along with this plasticity, Brixment mortar also has strength greater than that of the brick itself! ★ ★ Bonds perfectly with the brick. Won't cause efflorescence. Won't fade mortar colors. Waterproofed during manufacture. ★ ★ One part Brixment, three parts sand. Five bags will lay approximately 1000 brick. Louisville Cement Company, Incorporated, Louisville, Kentucky. ★ ★

# SHOPCRAFTER'S Corner

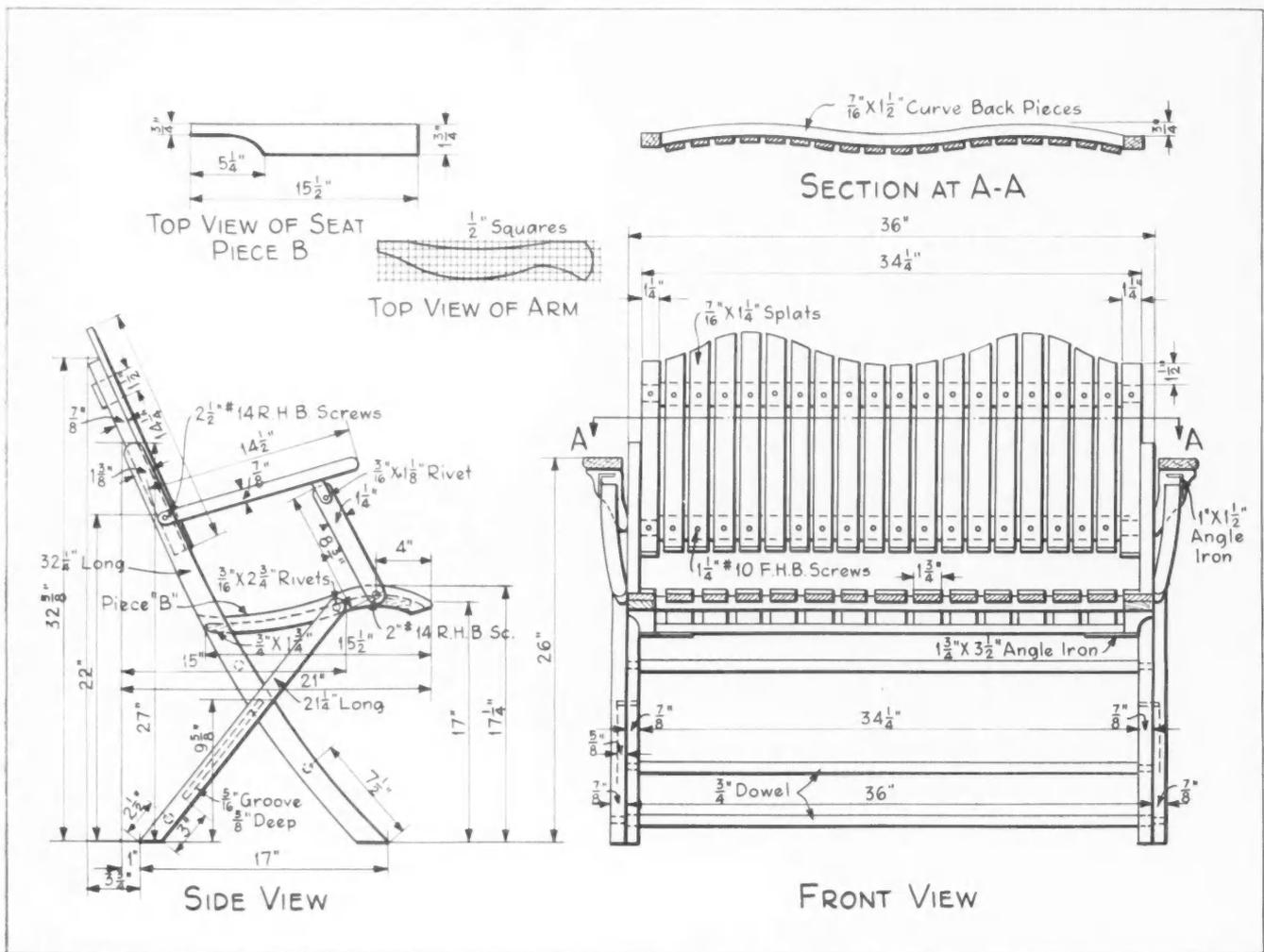
## Things To Build for Profit or Pleasure

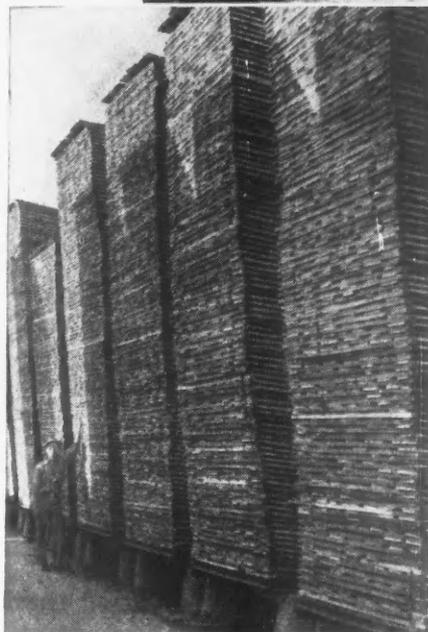
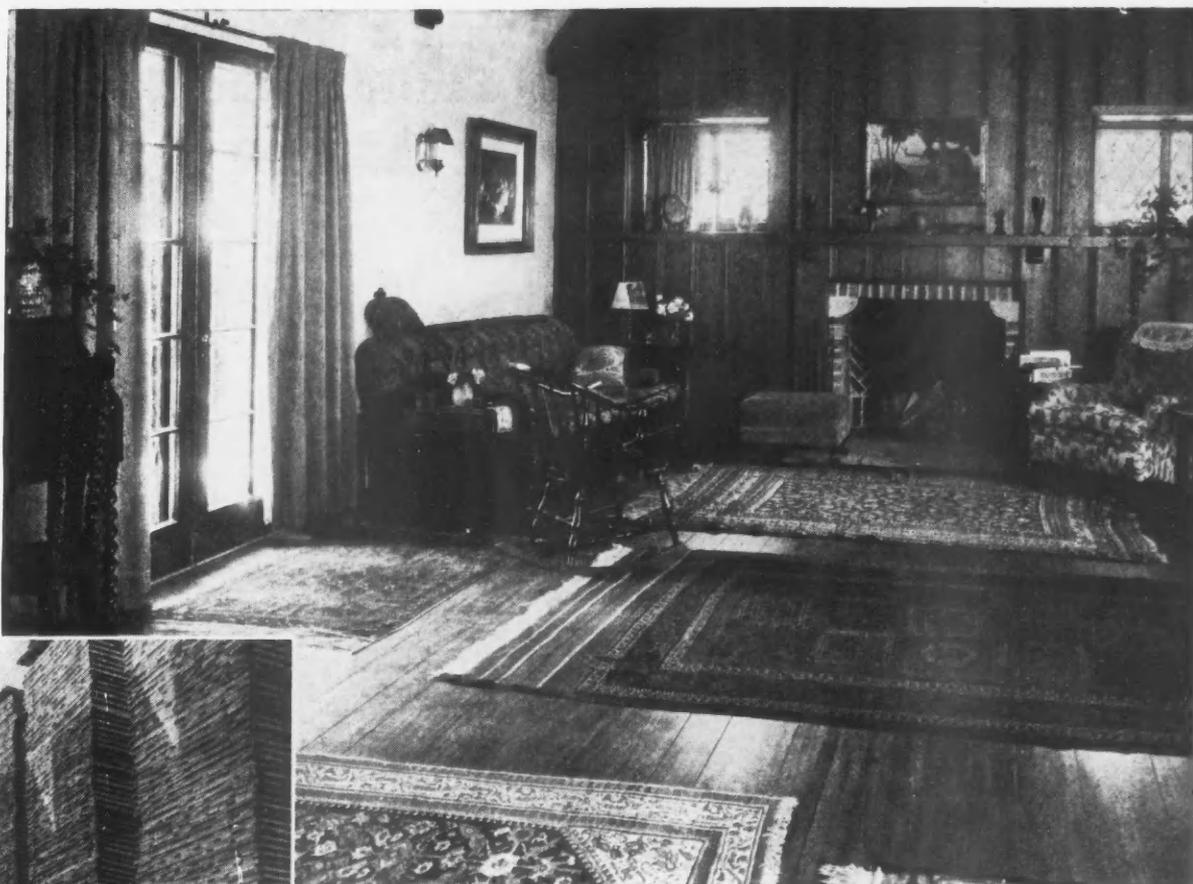
EVERYONE enjoys outdoor living in the pleasant summer months, so the settee shown in this month's Shopcrafter's Corner should prove to be a timely item. It will find plenty of use about the builder's home or several made up for sale will generally find a ready market. Being of the folding type, there is greater convenience for moving and storing; good design makes it attractive in appearance, sturdy and comfortable. The project, at a first glance, looks rather difficult because of the many measurements given and all the details shown, but after carefully studying the drawing, you will see that it is quite easy to construct.

A strong, tough wood should be used for this job, such as maple, birch, oak, hickory, rock elm, and the like. Make full-size patterns for the curved parts. Put the framework and slats together as a separate unit; also the seat; then fasten to the legs. Iron rivets and wrought iron for the angle pieces should be used. Finish the settee in a bright color, either in paint and enamel or lacquer. The same details will serve for a garden chair if made half length.

Construction drawings below and bill of material at right give the necessary details for building a garden settee. Design from "Things to Make for the Lawn and Garden" by William W. Klenke—Manual Arts Press.

- BILL OF MATERIAL**
- 2 pcs, Legs,  $\frac{7}{8}$ " x  $1\frac{1}{4}$ " x 22"
  - 2 pcs, Legs,  $\frac{7}{8}$ " x 4" x 33"
  - 2 pcs, Seat,  $1\frac{3}{4}$ " x 2" x 16"
  - 1 pc, Seat,  $\frac{3}{4}$ " x  $1\frac{3}{4}$ " x  $34\frac{1}{4}$ "
  - 1 pc, Seat,  $\frac{3}{4}$ " x  $1\frac{3}{4}$ " x 36"
  - 13 pcs, Seat  $1\frac{3}{4}$ " x 2" x 16"
  - 2 pcs, Arms,  $\frac{7}{8}$ " x  $2\frac{1}{2}$ " x  $14\frac{1}{2}$ "
  - 2 pcs, Arm-supports,  $1\frac{1}{4}$ " x  $1\frac{1}{2}$ " x 9"
  - 2 pcs, Back,  $\frac{7}{8}$ " x  $1\frac{1}{4}$ " x  $14\frac{1}{4}$ "
  - 2 pcs, Back,  $1\frac{1}{2}$ " x  $1\frac{3}{4}$ " x  $34\frac{1}{4}$ "
  - 18 pcs, Slats,  $\frac{7}{16}$ " x  $1\frac{1}{4}$ " x  $15\frac{3}{4}$ "
  - 2 Dowels,  $\frac{3}{4}$ " diam., x  $37\frac{3}{4}$ "
  - 1 Dowel,  $\frac{3}{4}$ " diam., x 36"
  - Angle-irons and rivets





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*This Finished* **OAK FLOOR** *are*  
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For it takes oak lumber that's dried right to produce Oak Floors that lay right.

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oak and its conversion into accurately machined flooring; graded, bundled, labeled and inventoried, ready for your order.

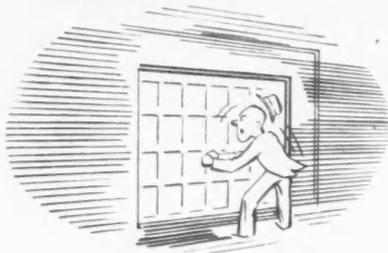
In this single continuous operation, with its assurance against any deviation from Bradley standards, lies the secret of Bradley's craftsmanship in manufacture, the merit of which is further attested by NOFMA Certified grading plainly indicated by the copyrighted Association label attached to the bundles. Available everywhere through local distributors. For literature and further information address:

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 . . . that show the VALUE in  
**THE Barcol OVERdoor**



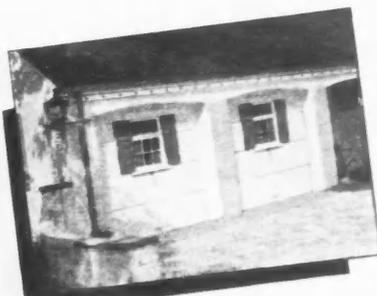
**1 . . .**  
**TRY THIS**  
 to prove that the  
**Barcol OVERdoor**  
 is  
**WEATHERTIGHT**

When the door is closed, get a good hold on the handle and try to rattle it! This is the easiest and best test for weathertightness of any door . . . we invite you to make this test on the Barcol OVERdoor. The exclusive closing action . . . found only on the Barcol OVERdoor . . . insures a snug closure at the top, sides, and across the bottom. It keeps out wind, snow, rain, or sleet and insures a long-lasting, low-maintenance door.



**2 . . .**  
**TRY THIS**  
 to prove that the  
**Barcol OVERdoor**  
 is  
**EASY-WORKING**

Release the latch, and lift the door! See how easily and smoothly it operates . . . Note how little effort is required to open it. Then look toward the stop strips . . . see how the closing action keeps the door free and avoids sticking. Look at the tailored "twin torsion" counterbalance springs, the ball bearing rollers, the direct-connected cables . . . all important factors that reduce operating frictions and insure easy, long-life operation.



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## Half a Home or Entire Home Ownership?— AT THE END OF 20 YEARS

\* \* \* \*

### An analysis of the costs of FHA 20-year Financing

**M**EMBERS of the building industry have had occasion in the past to explain to prospective home builders the merits of the Federal Housing Administration's insured single mortgage system and compare it with the old dual, short-term mortgage system that has been the method of financing home building for generations.

The question of the comparative costs of the two systems to the home builder has not been discussed as frequently as other factors. Perhaps the advantage of the insured mortgage, such as the protection of both borrower and lender, the elimination of the second mortgage and other junior liens, and the superiority of the monthly payment plan over the lump sum payment, have seemed so obvious that the question of costs of the two systems has been overlooked.

#### Carry Mortgage or Pay It Off?

To show a comparison of costs of both systems let us take as an example a hypothetical case:

John Brown and Harry White receive salaries of \$3,000 a year. They have saved \$1,200 each with which they have purchased lots in a good sub-division. They desire to build houses on these lots to cost \$4,800, so that their home will cost when completed \$6,000.

Their lots valued at \$1,200 represented what would be a down payment of 20 per cent on a \$6,000 home. Their next step was to finance the building of their \$4,800 houses.

Brown decided to finance the building of his home under the old dual, short-term mortgage system. Having his plans already prepared, he obtained from a contractor a figure of \$4,800 for the building of his house.

Next he went to a bank, submitted his plans and the contractor's figures and asked for a loan.

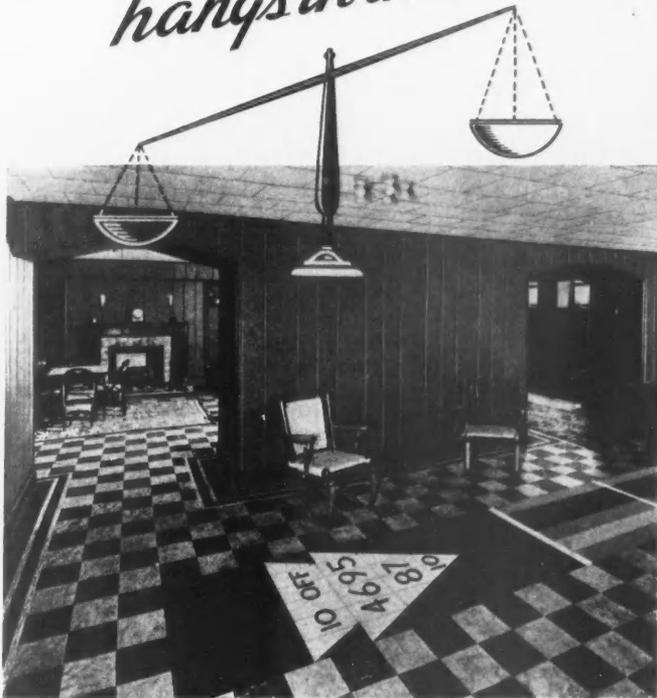
He was told that while there are some lending institutions that loan as high as two-thirds of the appraised value of the property, a conservative loan on a first mortgage is 50 per cent of the value of the property including house and lot. In Brown's case 50 per cent of the loan on his \$6,000 home would be \$3,000.

Brown was satisfied to obtain a loan of \$3,000 at an interest rate of 6 per cent per annum and to have the mortgage run for 3 years. He was also willing to pay a commission of 3 per cent of the loan for obtaining the money which amounted to \$90. Brown knew that the borrower had to pay the charges incurred by the bank to complete the transaction, such as search of title, abstract, appraisal fees, legal cost of preparing papers, recording and filing fees and other charges which was \$60.

The transaction was completed, but Brown still needed \$1,800 to complete the payment for the building of his home. He would have to borrow that sum of money and give a second mortgage on his home as security.

(Continued to page 92)

*When a sale or rental hangs in the balance*



A basement game room with gay Accotile floors makes prospects glad to sign the dotted line—at your price. Write for Accotile facts now. Walls and ceiling are Armstrong's Temlok De Luxe.

**OFFER A BASEMENT GAME ROOM WITH ACCOTILE FLOORS LIKE THIS**

**B**ASEMENT game rooms make your houses easier to sell. Inexpensive floors of Accotile make it easy for you to create eye-catching game rooms at low cost.

Accotile is a moisture-resistant asphaltic tile—the only type of resilient flooring that can be laid over concrete in direct contact with the ground, on or below grade. Installed with asphalt sheeting, Accotile floors are warmer, smoother, quieter, and more comfortable.

Thirty-four colors, in plain and marble grainings, give you a wide selection from which you may choose an attractive game room floor like the one above. In addition, you have the choice of three gauges, 1/8", 3/16", and 1/4".

Accotile is made by the makers of Armstrong's Linoleum, Linotile, Rubber Tile, and Cork Tile—the only complete line of resilient floors for homes.

It can be bought through the Armstrong Finance Plan with convenient time payments. Find out now how you can give your properties greater salability at little expense with Accotile. Write today for free copies of "Gay Floors for Basement Playrooms" and "Accotile Floors." Armstrong Cork Products Co., Building Materials Div., 1218 State St., Lancaster, Pa.



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COAL

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## Half a Home or Entire Home Ownership in 20 Years

(Continued from page 90)

Brown found a second mortgage lender, who would loan him the \$1,800 at 8 per cent interest, the mortgage to be amortized over a four year period, if he would pay a customary commission for 5 per cent of the loan. Brown felt that he was obtaining cheap second mortgage money at that figure, and that the commission was lower than many institutions charged. He paid the \$90 commission and another \$60 to cover another search of title, abstract, appraisal fees, etc.

### White Chooses an FHA Mortgage

Brown's house was built and the family moved in. Now let us turn to White, who also had the plans drawn for his home and a contractor who agreed to build it for \$4,800.

Having decided to finance the building of his home under the Federal Housing Administration's insured single mortgage system, White applied at a bank which was an approved mortgagee for a loan of \$4,800. He filled out a credit questionnaire, submitted his plans and specifications, and later, after consulting with the insurance office of the Federal Housing Administration and receiving a commitment, the bank approved the loan.

The conditions under which White obtained the money were that he pay 5 per cent interest,  $\frac{1}{2}$  of 1 per cent service charge,  $\frac{1}{2}$  of 1 per cent mortgage insurance premium. The loan would run for 20 years and be paid off monthly, the payment amounting to:

Interest and part of principal	\$31.63
$\frac{1}{2}$ of 1 per cent service charge (average)	1.16
$\frac{1}{2}$ of 1 per cent mortgage insurance premium	2.00
<b>Total</b>	<b>\$34.84</b>

As had Brown, White also paid a \$60 charge for search of title, appraisal, abstract, and preparation of legal papers, etc. In addition he paid at the rate of \$3 per \$1,000 of the loan to cover the Federal Housing Administration's cost of appraisal, which amounted to \$14.40.

### 20-Year Comparison

Looking ahead twenty years and analyzing the situation of both Brown and White. Brown had paid off his second mortgage in the stipulated time of four years. To do this it had cost him, on the principal \$1,800 and \$374 interest on annual declining balances, a total of \$2,174.

Three years after he had obtained the loan on his first mortgage it was necessary to renew it. The commission he was charged by the bank was at the rate of 3 per cent of the loan which amounted to \$90. Altogether in twenty years, Brown renewed his first mortgage 6 times at a total cost of \$540. The interest he had paid on his first mortgage over that period amounted to \$3,600.

Brown had never paid anything on the principal of the first mortgage, so at the end of twenty years he still owed \$3,000 on his home.

White, during the twenty year period had regularly made his monthly payments, so at the end of that period he owned his home, free and clear of all encumbrances.

The following itemized statements show the total amounts each had paid on their homes at the end of twenty years:

(Continued to page 94)

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*Now*  
**FOR MILLIONS  
OF HOMES**

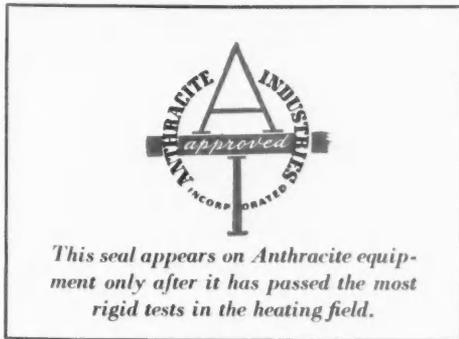
*Clean automatic Anthracite heating made possible the attractive modern basement shown here. Basements can also be dens, workshops or play rooms.*

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**AUTOMATIC ANTHRACITE HEATING AND AIR  
CONDITIONING WITH**

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**ANTHRACITE  
COAL**

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This new equipment is the most modern of all. It offers entirely new standards of efficiency and long life. With it comes cleanliness, absolute safety and dependability of Anthracite. Operating economies are even more pronounced, for the price of Anthracite has steadily gone down, while other fuels have gone up.

In addition, the broad range of automatic Anthracite heating and air conditioning enables you to fit any budget. You can install an Anthracite furnace, or boiler, and with a simple thermostat provide automatic heat. You can install a magazine feed boiler, or an automatic Anthracite burner that provides all-season firing and ash disposal.

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## 36-Story New York Apartment Hotel Reconditioned and Modernized

**W**ILLIAM E. RUSSELL and Frank L. Weil of New York City are responsible for one of the most extensive residential remodeling jobs of the present era. As trustees for the certificate holders who now own Hampshire House, 36-story residential tower at 150 Central Park South, New York, they have put through a complete reconditioning program to bring this outstanding property up to 1937 standards. As a final step in this procedure they have recently let a contract to Mrs. Dorothy Draper, well known real estate stylist, for complete furnishing and decorating which is said to be the largest in the last five years and also the largest hotel decorating job ever given to a woman.

Dorothy Draper, who has to her credit many important decorating commissions, numbering among them the Carlyle in New York and The Gideon Putnam Hotel in Saratoga Springs, says that Hampshire House, her most recent and her largest, is also the most comprehensive. Her contract calls for the decorating scheme of all formal and informal rooms open to the public . . . dining room, bar, etc., as well as 116 individual apartments. In all there are 491 units of space. Her commission does not stop however with the decorating. She has a voice in the execution of every detail of the building from the plan of the most public spaces to such essential matters as the selection and designing of service uniforms, silver, china, glass, linen, etc. In a word, nothing goes into the hotel that does not reflect Dorothy Draper's personal touch.

Hampshire House will open October 1st and, according to Roland F. Elliman of Douglas L. Elliman & Co., renting and managing agent for the building, great interest has been manifested in residential rentals as well as for transient accommodations.



MRS. DOROTHY DRAPER, real estate stylist, signing the largest decorating contract of the last five years, calling for the furnishing and decorating and styling of Hampshire House, 36-story residential tower at 150 Central Park South, New York City. William E. Russell, left, and Frank L. Weil, two of the trustees for the Series C-2 certificate holders who own Hampshire House, witness the signing.

## Half a Home or Entire Home Ownership in 20 Years

(Continued from page 92)

### TOTAL AMOUNT PAID BY BROWN

<i>First Mortgage</i>	
Cost of obtaining mortgage.....	\$ 60.00
Commission .....	90.00
Six refinancing charges.....	540.00
Interest .....	3600.00
<b>Total .....</b>	<b>\$4290.00</b>
<i>Second Mortgage</i>	
Cost of obtaining mortgage.....	\$ 60.00
Commission .....	90.00
Principal repaid.....	1800.00
Interest .....	373.84
<b>Total .....</b>	<b>\$2323.84</b>
<b>Grand total .....</b>	<b>\$6613.84</b>

### TOTAL AMOUNT PAID BY WHITE

<i>A single Federal Housing Administration insured mortgage</i>	
Cost of obtaining mortgage*.....	\$ 60.00
FHA appraisal fee.....	14.40
Principal repaid.....	4800.00
Interest .....	2803.20
Monthly service charge (total).....	280.32
Premium charge.....	480.00
<b>Total .....</b>	<b>\$8437.92</b>

\*The lender may or may not charge on new construction an initial maximum service charge of 2½ per cent of the principal. As is the rule, we are assuming that this was not done in White's case. Had it been, most of the \$60 charge would have been deducted.

On the premium charge a portion of that amount might be credited to White providing the losses in the group, of which his mortgage is a part, were sufficiently low over a certain period to obtain the credit. This possibility, however, is not being considered in this instance.

An analysis of these statements shows that by paying \$1,824.08 more than Brown did over the 20 year period,

White owned his home outright. During the same period, Brown had paid \$6,613.84 and still had \$3,000 to pay on the principal of the first mortgage. The equity he possessed in his home was exactly one-half its original appraised value of \$6,000.

If at the end of the 20 year period, Brown had received a "windfall" and was able to pay off the first mortgage he would have paid for his home \$9,613.84 or \$1,175.92 more than White paid for his home.

Because this comparison of the old mortgage system and the Single Mortgage System is based on the actual costs of financing the homes of both Brown and White, no reference has been made to yearly taxes, insurance and assessments. They are presumed to be the same on both homes, and, of course, would have to be paid.

Brown would have had to meet them with lump sum payments as they came due. White on the contrary had been paying his the easier way. Throughout the year, every month, one-twelfth of the taxes, hazard insurance premium and any assessment charges had been added to his monthly payments on the mortgage. As the extent of those items depend upon local conditions, the amount he was required to pay can only be estimated. A fair average would be about \$14, which would make his total monthly payment to the bank about \$48.84.

Another article might be written about the hazards Brown ran in refinancing his first mortgage every three years, for he was at the mercy of his banker at each renewal period. A depression or a decision on the part of the bank to liquidate some of its mortgages might have caused them to refuse renewal and demand payment at a time when Brown was least able to pay or to obtain a loan from some other source.

One of the distinct advantages of the insured single mortgage system is that the home owner has a minimum of worry, if any worry. All he has to be concerned about is that regular monthly payment which, met in full every month, means at the end of 20 years the entire possession of a home instead of half a home under the old system.



Bristow Motor Company's Ford Agency and Service Station, Pekin, Illinois. Architect, Geo. Poppo Wearda, Pekin. General Contractor, Ed. F. Lampitt & Son, Pekin.

### 8 Features to give EXTRA STRENGTH

- 1 All joints are mortised and tenoned (not wood doweled).
- 2 All commercial and Industrial Ro-Way Doors are made from Sitka Spruce—1 3/4" thick.
- 3 Panels are made of three-ply laminated fir, joined with special waterproof casein glue.
- 4 All sections are rabbeted to provide a ship-lap weatherproof joint.
- 5 All rollers are STEEL with double metal tread and full ball-bearing.
- 6 Unusually large corner brackets, measuring 11 1/4" long by 4 1/2" wide, are securely bolted to door.
- 7 Lock bars are burglar-proof, made from steel 1/4" thick by 3/4" wide.
- 8 Vertical and horizontal tracks are especially made of special steel and reinforced with angles.

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Motor Unit—Commercial Door Operator.

Enables operator to instantly reverse direction of door travel as well as usual "OPEN-STOP-CLOSE" control. This invaluable safety feature appeals to every buyer. The Ro-Way line of Electric Operators is complete for every type of installation.

# You PROFIT 3 ways -

## in selling and installing RO-WAY Over-Head Type DOORS

- 1st The exclusive Ro-Way advantages make it the easiest of all Doors to sell.
- 2nd Because they take less headroom, they are easier to install.
- 3rd Once in operation, they are trouble-proof . . . always smooth running.

The line is complete for industrial, commercial and residential use. Especially popular are the Ro-Way specially designed Torsion Spring High Lift Doors for use in public service stations, and the Ro-Way low priced doors for residence garages.

Write for RO-WAY Door Folder and Price List

### Rowe Manufacturing Co.

753 Holton St. Galesburg, Ill., U.S.A.

# Heating Equipment Leads This Month's New Products Parade

## Latest Models in Specialties, Hardware and Contractor's Equipment Also Presented

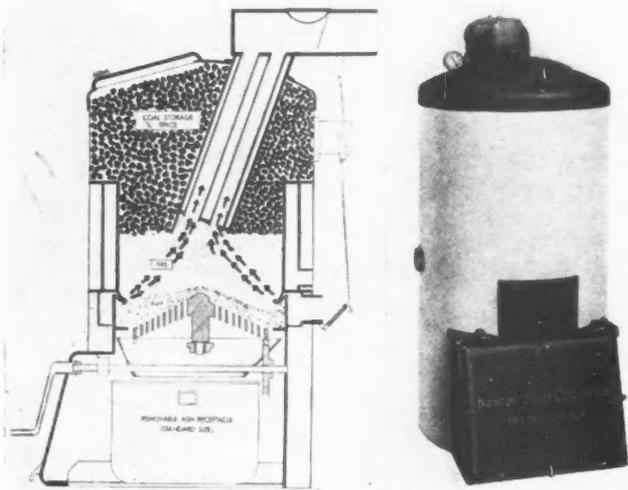
THERE have been numerous additions and new models developed recently in lines of heating plants, conditioning units and accessory equipment by leading manufacturers in this field. Improved design has increased efficiency, while a wider range of sizes and types of firing allows selection of proper equipment for the requirements of the particular job.

**ANTHRA-HEAT** is the trade name under which a new revolutionary anthracite boiler for use in heating medium sized homes by steam, vapor or hot water is being marketed. It was developed in the laboratories of Anthracite Industries, Inc., whose offices are located in the Chrysler Building, New York; the Burnham Boiler Corporation of Irvington, N.Y., and the Fitzgibbons Boiler Company of 101 Park Avenue, New York, are now manufacturing this type of boiler.

With combustion space and fire door entirely eliminated, and fitted with a flat spiral rotary grate of solid design, the new heating unit marks a major advancement in central heating units for small homes. Enough fuel can be stored in the unit itself to last for 24 to 48 hours—even 3 to 4 days in mild weather. It is charged with 290 lbs. of anthracite, and semi-automatic operation is achieved through the natural shrinkage of the fuel while burning and replenishment through the natural fall of fresh fuel without the aid of any mechanical parts.

Heat absorption is accomplished in this new boiler by indirect radiation rather than convection. A thin layer of fuel is maintained at the incandescent point of approximately 2,000 degrees. Combustion is established at a point of high efficiency so that the ash residue is especially low. Draft is accomplished through special ports above the grate line. The flue is water jacketed, as is the entire interior of the boiler.

This new heater was specifically designed to provide semi-automatic, highly efficient central heat for low-cost homes. It will heat the average five- or six-room house at an annual fuel consumption of five or six tons of anthracite. Automatic thermostat control is built in, and fuel is admitted through a large port on top of the boiler.



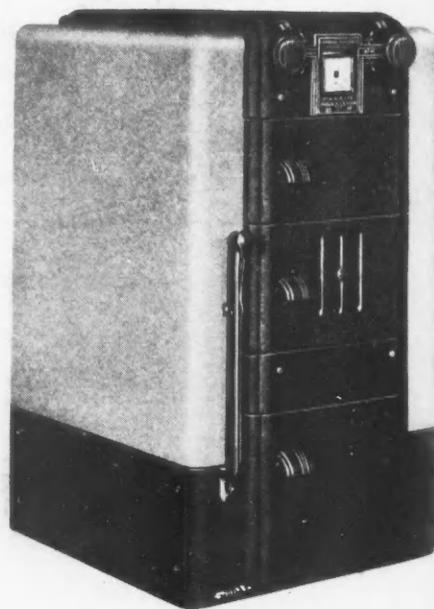
SECTION and exterior of new Burnham "Anthra-Heat" boiler.

**NATIONAL RADIATOR** Corporation, Johnstown, Pa., has announced a new boiler for residential heating with exceptional efficiency when hand, stoker or oil fired. It is finished in baked enamel. The rounded corners of the side panels and a double roll at each edge of the center front panel aid in presenting a smooth, graceful contour free from projecting instruments.

Among the features new to boiler design found on the National Heat Extractor boiler is a foot pedal to open the ashpit door, operating like similar equipment on refrigerators. Control knobs, operating on the radio dial principle, serve as a convenient means of adjusting the damper regulator and smokehood damper. The control knobs are located at the front of the boiler and are co-ordinated with numbered dials which indicate the relative setting or position. The controls eliminate the necessity of going to the rear of the boiler to adjust the smokehood damper or stretching over the top of the boiler to adjust a conventional type damper regulator.

Steam boilers of the hand-fired type have a built-in domestic hot water heating coil recessed in the back section, thus eliminating

**NEW residential boiler by National Radiator is smartly styled for efficient operation; is available in hand, stoker or oil fired models.**



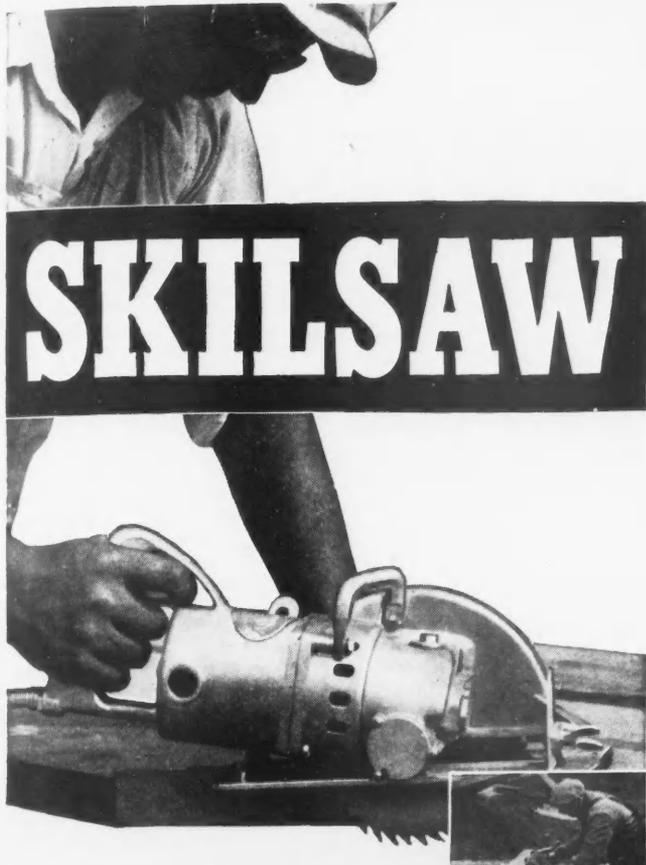
the necessity for a firebox coil or an external type heater. All the piping to the water heater is taken from the rear of the boiler so as not to mar the appearance. On the stoker-fired and oil-fired types provisions are made for two sizes of storage type and two sizes of tankless type hot water heaters, together with tappings on the rear section for all controls required for complete automatic heating.

Numerous extended fingers are placed on the sides of the water legs and along the flueways, adding heating surface which is most effective whether the boiler is hand, stoker or oil fired. The large door facilitates firing and cleaning. The opening for the removal of clinkers is exceptionally large, being 3¾ inches deep and extending practically the full width of the grate bed.

The newly designed damper regulator is extremely sensitive as it co-ordinates the action of the air intake and check draft doors, so as to prevent over-heating as well as under-heating.

Fire travel is four times the length of the boiler and the 44-inch waterline makes it adaptable for use with split-system air conditioning units. The bonded load rating for the hand-fired type ranges from 225 to 750 square feet steam and 360 to 1200 square feet hot water.

(Continued to page 100)



**SKILSAW** makes profits because it reduces costs—because it enables you to out-bid and out-perform those who still cling to the old, slow hand-saw methods! With **SKILSAW** you can do the job quicker, better and cheaper . . . and you can pay for this remarkable tool with your savings on the first job.

**SKILSAW** is America's leading portable electric handsaw—it 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 from any A. C. or D. C. light socket. *Cuts wood, metal, stone and compositions.* 7 powerful sizes.

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● Cuts out a 16-step stair stringer from 2 in. rough, in only 10 minutes!



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● Makes compound mitre-bevel cut on thirty 2 x 12 in. hip-pitch rafters in only 10 minutes!

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**SKILSAW CUTS YOUR SAWING COSTS IN HALF**

**A MODERN HOUSE, MIQUON, PA.**

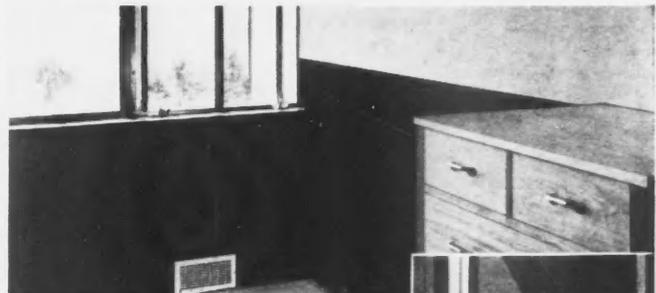


**KENNETH DAY**  
 ARCHITECT

● Large windows, spacious sun-decks and smooth, clean interior surfaces typify this modern home by Kenneth Day. The walls of the entrance hall and stairway parapet are **MASONITE TEMPERED PRESWOOD**, painted ebony black. Screw-heads are allowed to show and form a pattern throughout. The far wall is cinder block, painted white. Wainscoting in most rooms and on stairways is **MASONITE TEMPERED PRESWOOD**, selected because its hard, durable surface does not damage easily, and can be kept spotless by merely wiping down with a damp cloth. Bathroom walls are **MASONITE TEMPERED PRESWOOD** with water-proof varnish finish.



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**BEDROOM**



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**BATHROOM**

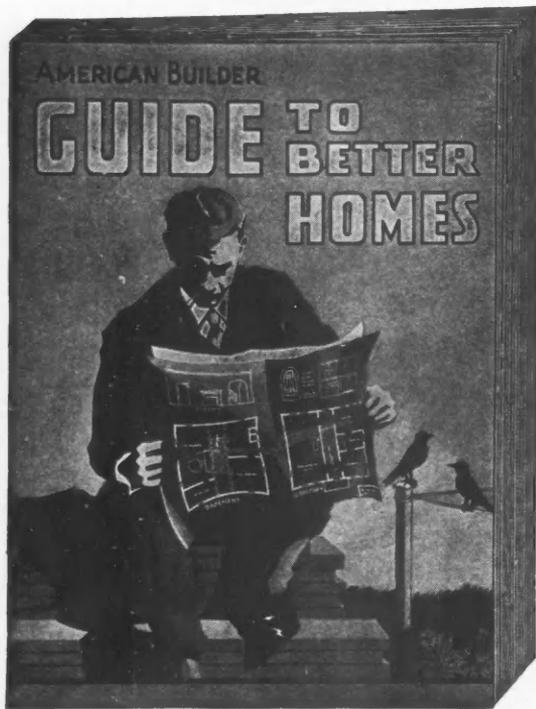
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# As a Plan Book It Is But It Is More than a

This latest of the American Builder's popular books of Home Designs goes away beyond the conventional Plan Book in the detailed information presented. As implied in its title, it is a THOROUGH GUIDE to the solution of the problems involved in the planning, construction and equipment of the Modern Home. Exteriors and interiors are beautifully photographed. Floor plan diagrams are large and well dimensioned. Definite specifications accompany many of the designs. Accurate cost information is given for each home. There are homes of all sizes, homes for every purpose and location, homes of every popular architectural style.



## The Ten Sections

1. Low Cost Homes
2. Modern Home Designs
3. Homes of Distinction
4. Florida Tropicals
5. Model Home Interiors
6. Better Details
7. For More than One Family
8. Modernizing
9. The Basement Question
10. Plans for Little Homes

## Among the 88 Best Homes of Today

featured in "American Builder Guide to Better Homes" may be mentioned:

Popular Cape Cod at Wilmette, with well handled exterior detailing . . . Long Island Bungalow, excellent example of fire-safe construction . . . Compact Colonial at Wantagh, with light and cheerful aspect . . . Low Cost Demonstration Home near Washington, with wood-paneled dining nook . . . 5-room Cottage for sloping site in New Jersey . . . Provincial Country Homestead . . . The "Equi-Temp" Face Brick Virginia Colonial . . . Chicago Colonial Demonstration Home, with exceptionally well lighted and ventilated kitchen . . . A bunch of "Kelvinator Package" Homes, in \$6,000 class.

### French Provincial Charm

A Rockville Plaza Home with many attractive sales features, some of the smartest of which are its circular breakfast nook, attached garage and fireplace niche.

### Livable Low Cost Colonial

at Rochester, with skillfully handled entrance detail and recessed fireplace formed by closet at either end. Has many appealing decorative touches.

Ideal Cape Cod at Winnetka . . . Another well-planned Cape Cod at Detroit . . . Apartment type Small Home at Fort Worth . . . 5-room Concrete Ashlar Home at Lynbrook that can be duplicated for less than \$5,000 . . . Steel Clad Birmingham Home . . . Normandy type at Erie . . . Some very fetching Gross-Morton Bungalows . . . Low Cost Garden Home . . . The First Five Purdue Test Houses . . . Oak Park New American Prize Winner . . . Kalamazoo's Home of Tomorrow . . . Buffalo Steel Chassis House . . . Ultra Modern Insulated Home near Toledo. . . .

### 42 Pages of Homes of Distinction

The cream of the crop of current good taste in New York, Washington, New Jersey, Michigan, Illinois, Virginia, Oklahoma, Connecticut, Colorado and California. Every one of the 23 homes featured stands out from the crowd.

### Florida Tropicals

Fourteen of the best homes in the South East—Riviera House, Florida Derectoire, Miami Beach's Tropical House, Coral Gables Spaciousness, Spanish Home Designs that are becoming popular the country over.

Three Homes for more than one family . . . Page after page of Plans for Little Homes, "Lots of Homey Comfort at Small Cost" . . . All cleverly planned, with graceful touches of modernism. They include Vacation Cottages, Cabins for Beach, Lake and Woods, and Homes for City, Suburb and Countryside. In the 88 Homes every popular Architectural Type is represented—Cape Cods, Colonials, French Provincials, Normandies, English, Dutch, Spanish, Modernistic, Tropicals, California Monterey.

# Is Without a Peer- a Plan Book-

## In Addition to the Home Designs

partially listed on the preceding page, "American Builder Guide to Better Homes" contains four richly illustrated sections replete with suggestions that forecast style trends, add to home values and sell homes by increasing their charm. Most of them at little or no appreciable additional cost. These are the little touches that make all the difference in the world between a pile of brick or stone or wood and a HOME, with an individuality all its own.

### Beautiful Interiors

are shown in every part of the house—Colorful Bathrooms . . . Irresistible All-Electric or Streamlined Kitchens . . . Stately Stairways . . . Hallways presenting pleasing vistas . . . Living Rooms for widely divergent tastes . . . More than a score of differently designed Fireplaces . . . Built-in Bookcases, Bars and Kitchen Storage Space . . . Cozy Dinettes . . . Recreation Rooms . . . Possibilities in Basements that you never dreamed could be . . . Bedrooms of rare charm.

### Better Details

that could have been thought up only by geniuses are presented in lavish profusion . . . Entrancing Entrances . . . Attractive Bay Windows . . . Dovecote and Overhung Gables . . . Corner Windows . . . Knotty Wood Finishes . . . Interior Wall Paneling . . . Early American Details on a Modern Bungalow—to mention but a few.

### Making the Old Over into the New

Modernizing is given the emphasis due to its importance in today's housing. You see how a whole town is being done over and rejuvenated . . . how two 50-year old nondescripts, when modernized, jump their rentals from \$600 to \$11,000 . . . How a man bought a tumble-down, derelict house, for \$800, put \$4,200 into it, and got a salable property worth \$6,500 . . . What profits can be earned in Veneer Modernizing, and how Power Shop Equipment can speed up the Restyling Job.

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Yes Sir, Fellows! I've made more money since I bought my new American Standard floor sander than I ever did before and I give my floor sander all the credit. You can increase your profits too, by owning and using the latest and finest in floor surfacing equipment—the American Standard.

There is no reason why you should not be a big success in the floor surfacing business. You already know a lot about the building game so you naturally have a head start on the other fellow.

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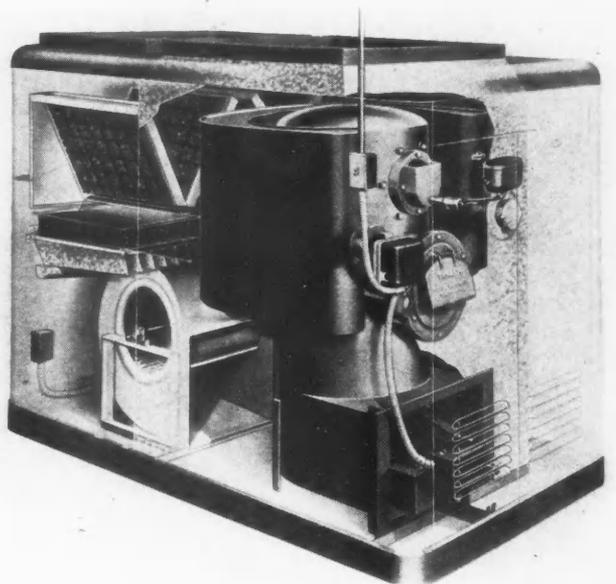
(Continued from page 96)

**AIR CONDITIONING OILFURNACE**, Model FA, recently announced by the Timken Silent Automatic Division of the Timken-Detroit Axle Company, is engineered to provide all the elements of year 'round air conditioning for the home. Available in a broad range of sizes, the furnace offers a heating capacity ranging from 90,000 BTU's output (at the plenum chamber) and cooling capacity of from 18,000 BTU's discharge (1½ tons) to 90,000 (7½ tons).

The furnace body is round, of welded steel construction, and is made in two sizes (22 inch and 26 inch diameters). The sides are of 8 gauge steel and the dome of 7 gauge steel. An evaporative humidifier is built into the front. Provision is made in the 22-inch furnace body for a domestic hot water coil.

A deep, narrow radiator of 12 gauge steel surrounds the furnace body on three sides. It is baffled horizontally in the middle so that gases entering it at the back of the unit travel to the front and return before escaping. A welded steel smoke pipe connection extending back through the filter and blower space further assists in the extraction of heat. Either a rotary wall-flame burner or a pressure-type burner may be installed in the unit.

Filters, blower, cooling coils, and dehumidifying plates are mounted at the rear of the furnace. Filters are of the dry steel wool, throwaway type, and are placed in a compact assembly just below the return air opening at the top.



CUTAWAY view of Timken year 'round conditioner.

Cooling equipment is optional. When installed, two sets of cooling coils are bolted in place on racks below the filters and connected to the compressor by hand drawn copper tubing. Moisture condensed on the coils drops into a series of dehumidifying plates which carry it away to drain. Freon is the refrigerant used.

Furnace body, blower, filters, coils, compressor, and related parts are furnished in several sizes. With the exception of the compressor, all equipment is self-contained in the cabinet. The cabinet is furnished in two sizes, the smaller being 87½ inches long, 43½ inches wide, and 57½ inches high, and the large unit being 100½ inches long, 48½ inches wide, and 61 inches high. Complete automatic controls come as standard equipment.

Plans for installations are to be sent to Detroit for approval by the factory air conditioning engineering staff.

\* \* \*

**KAINER WATER CIRCULATOR**, manufactured by Kainer & Company, Chicago, provides the means of stepping up hot water system circulation to a point where delivery of heated water to radiators is instantaneous. Actuated by a room thermostat, the Kainer circulator quietly and efficiently drives high

(Continued to page 102)

# STOKER

# Scoots

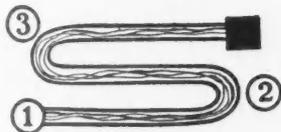
## How to Prevent Them

IT has to do with *pull* and *push*. Hand-fired boilers have *chimney pull*. Stoker-fired ones have *fan push*. Fan push is stronger and there's more of it, than chimney pull. Has to be, to burn cheaper grade coal. That same push speeds up the flow of hot gasses from firebox to smoke box, sending them scooting up chimney.

Short fire travel boilers are chimney scooters. Burnham Boilers' three times back and forth fire travel *prevents chimney scoots*.

Stokers cut down fuel costs. Burnham scooter-proof boilers cut down heating costs. Their long fire travel makes short coal bills.

Send for catalog. Get the full facts. See for yourself.



This shows you the three times back and forth fire travel in a Burnham, that prevents chimney scoots.

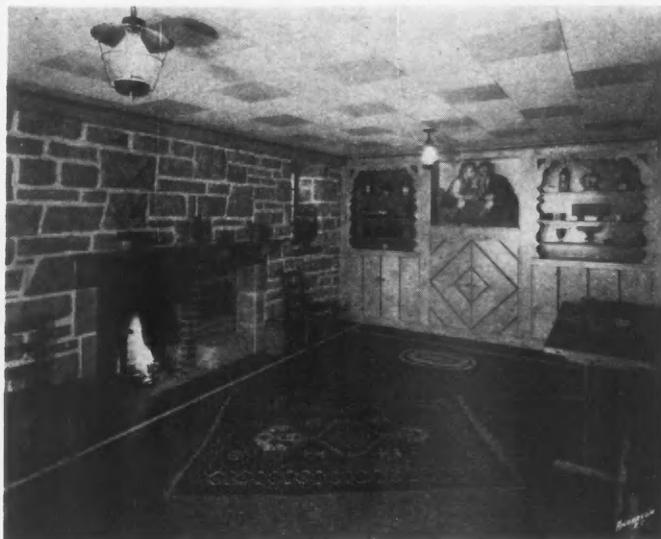
If a six section boiler had an equivalent in one-way fire travel, it would have to have 18 sections as shown above and be 15 feet long.

BURNHAM BOILER CORPORATION  
Irvington, New York      Zanesville, Ohio  
Export Department,  
116 Broad Street, New York

# Burnham Boiler

# Room

## FOR MORE BUSINESS



Pine paneled basement room of Harry L. Wagner, Kansas City Architect

There's many a gay hour spent down in the basement these days in such a room as this. Up-to-the-minute contractors and builders are suggesting to their clients a basement-recreation room or workshop paneled with one of the \*Western Pines. In new homes or old, it's a room that means more fun for the home owner, more business for the builder.

*The Western Pines will do your next job better. Try them.*

## WESTERN PINE ASSOCIATION

Yeon Bldg., Portland, Oregon

- \*Idaho White Pine
- \*Ponderosa Pine
- \*Sugar Pine



THESE ARE THE WESTERN PINES



**Here are some  
of the features  
that sold it**

**S**PEAKMAN showers and Speakman fixtures in a home are labels that quickly indicate quality construction to your prospective buyer. For 67 years, the Speakman name has stood for top quality in both external beauty and internal design. Moreover, continuous national advertising, month after month, tells your prospect how the Anystream Shower Head gives every member of the family the shower he likes best—why the Mixometer gives perfect temperature control to the shower—why Speakman bathroom and kitchen fixtures assure continuous trouble-free service for years to come.

You can make your homes doubly appealing by specifying Speakman showers and Speakman fixtures on your tubs, lavatories and sinks. In the complete Speakman line, with its wide price range, you have a choice of many types and trim to please every taste, to fit every home, and to give the comfort and efficient service your buyer looks for.

Let us send you literature covering Speakman showers and fixtures. You'll probably find our line much larger than you expected . . . and the prices will have added appeal when you find there's no price premium for the Speakman quality reputation. Mail the coupon for full information today.



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(Continued from page 100)

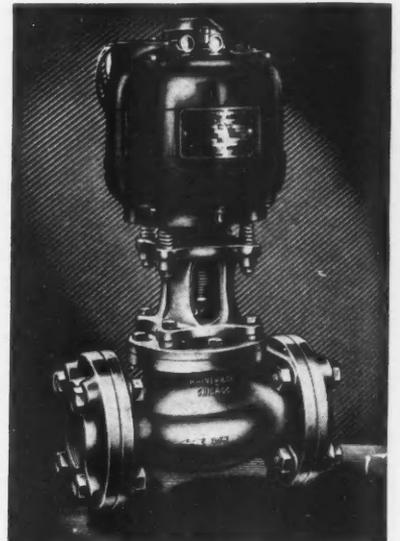
temperature water through the supply mains, into the radiators, and returns the water to the boiler in a surprisingly short time. Room temperatures are restored quickly, and heat losses in the piping are reduced to a minimum.

Adaptable to all types of hot water heating systems, the Kainer circulator is highly beneficial when used in converting obsolete and sluggish systems into modern, efficient and economically operated installations. Jobs that are slow to deliver the required amount of heat necessary to comfort, or as in many cases, radiators that do not heat at all, are instantly made over into a system that will immediately deliver an abundance of heat where and when necessary.

The body is of close grained cast iron. Unrestricted inlet and outlet openings permit a maximum water delivery with a minimum of friction. Body is flanged at both inlet and outlet openings.

Impeller is of cast aluminum, scientifically designed and micromatically machined for perfect balance and alignment. A stainless steel shaft, properly aligned by special alloy bronze bearings, actuates the impeller. An oil reservoir furnishes constant lubrication to the shaft and other adjacent parts, sealed at its bottom by an outstanding sealing device that precludes the possibility of leakage of oil or water.

Electrical motors used on all Kainer circulators are specially built for this type of service—quiet in starting and in operation, free from radio interference, durable and distinctive in appearance.



**KAINER** water circulator

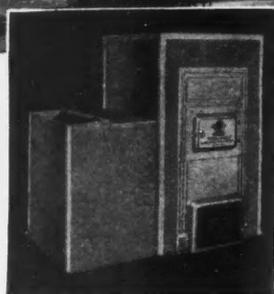
\* \* \*

**OIL-BURNING SPACE HEATERS**, named Duo-Therms, and made by Motor Wheel Corporation, Lansing, Mich., feature in 1937 models the modern furniture design and new standards of clean efficient performance due to a patented bias baffle Dual Chamber burner. Ten circulating heaters are included in the 1937 line, with special models for automobile trailer use and for tourist cabins, fishing shacks, etc.

In appearance, the new Duo-Therm circulators have much in common with the latest trend in radio cabinet design. Duo-Therm's range of clean fire is now extended to the point where users can enjoy clean fire from top heat clear down to pilot size flame. Burner has a tapered side construction which results in smoother, more uniform heat acceleration from low to high.



**DUO-THERM** heater.



**LOW COST UNIT  
PRE-ASSEMBLED  
AT FACTORY SAVES  
TIME, CUTS COST**



# A SPECIAL PROPOSITION

## to Builders of Small Homes

Our No. 720 Oil Burning Automatic Air Conditioning Furnace meets your demand for air conditioning of low operating cost in a low cost home. The burner is our Rotary Wall-Flame type famous for its economy and dependability. Burner assembly comes to you ready-built. Installation does not require oil-burner experience.

# TORIDHEET

## OIL BURNING AIR CONDITIONING FURNACES

Built by pioneers in the development and manufacture of oil burners for home heating. The No. 720 for small homes of modest income. The No. 175 Deluxe for larger homes. Both dependable, automatic, efficient. Either will help you sell a home quicker at greater profit.

**WRITE FOR OUR SPECIAL OFFER TO BUILDERS**

**CLEVELAND STEEL PRODUCTS CORP.**  
7306 W. Madison Avenue - - - Cleveland, Ohio



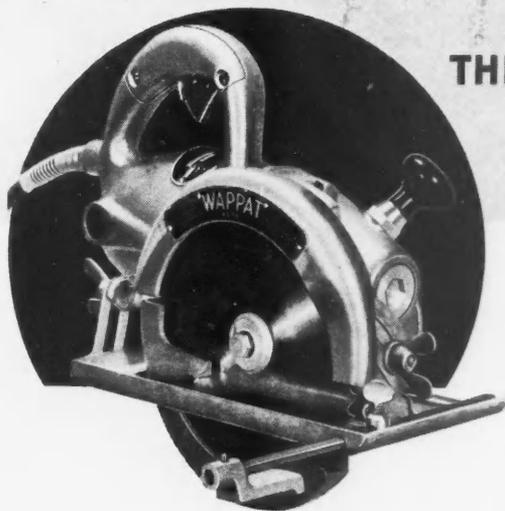
Burner assembly as shipped, ready to be shoved into place in furnace shell



Showing burner assembly half way into place. A quick, easy operation



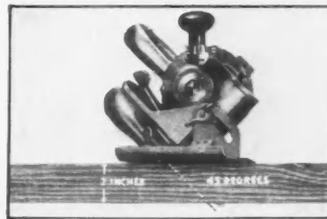
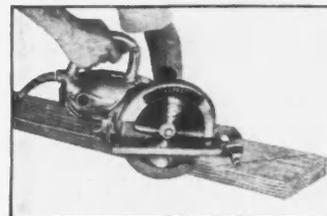
In place. A few simple connections and adjustments complete it



## THE *New* MODEL 1-A WAPPAT PORTABLE ELECTRIC HANDSAW \$105

Built for house framing . . . to the specifications of carpenter-contractors. Bevel cuts jack rafters from full 2" lumber—for any pitch roof. Saves hours on every job.

- 1** Light. Weighs but 18 pounds. Balanced for true one-hand operation. Take it wherever you need it. Trims wall and roof sheathing already in place. Your men will use it in preference to hand saws.
- 2** Price. An exceptionally low price for a WAPPAT heavy duty saw. Pays for itself on two houses of average size. Saves hundreds of dollars during the many years it will serve you.
- 3** No Sawdust. One of its most important exclusive features. No sawdust in operator's eyes . . . no sawdust covering up the cutting line. A major improvement.
- 4** Safe. Equipped with the WAPPAT patented spring-operated telescoping safety guard . . . The only guard that gives complete protection without interfering with the operation of the saw.
- 5** Accurate. Follows cutting line perfectly because you can see the line at the blade. Graduated quadrant for bevel adjustments.
- 6** High Quality. Built to WAPPAT standards of excellence. Overpowered, fast cutting, long lasting, trouble free.



**TRY IT ON YOUR JOB FREE!**

# WAPPAT

INCORPORATED

**PORTABLE ELECTRIC TOOLS**

**7564 Meade St., Pittsburgh, Pa.**

DIVISION OF SIMONDS SAW AND STEEL CO.

Without Obligation

- Arrange free demonstration
  - Send additional information
- on WAPPAT Model 1-A Electric Handsaw

Name \_\_\_\_\_

Street \_\_\_\_\_

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



No doubt you are planning to install automatic oil heat in the houses you have built and are now completing for this year. Before you specify oil burners, see the

## WILLIAMS OIL BURNER

MADE BY

WILLIAMS  
**OIL-O-MATIC**  
HEATING

*and selling amazingly low singly or in quantity . . . .*

### The WILLIAMS OIL BURNER

- 1 . . . is nationally advertised in newspapers and magazines.
- 2 . . . is backed by the prestige of the world's finest and largest selling oil burner—Williams Oil-O-Matic.
- 3 . . . is a great oil burner in its own right—the peer, in fact, of any high pressure oil burner regardless of price—as any comparison will conclusively prove.



See this great burner at your nearest Oil-O-Matic Show Room

WILLIAMS OIL-O-MATIC  
HEATING CORPORATION

*World's Largest Specialists  
in Temperature Control*

Dept. 408, Bloomington, Illinois

### Specialty Items and Equipment

**PLUG-IN STRIP** and Fill-In Raceway, made by National Electric Products Corporation, Pittsburgh, provide handy electric service outlets wherever desired around a room. In an average house, 270 feet of "Plug-In" strip (together with 55 feet of matching Fill-In raceway) installed throughout make available 540 electrical outlets in seven rooms of the house. The entire assembly can be painted along with the woodwork and is practically invisible.

Every room is supplied from more than one circuit, thereby eliminating the inconvenience of having the entire room in darkness when a branch circuit protective device opens.



PLUG-IN STRIP and Raceway fitted in baseboard.

\* \* \*

**THE BENDIX HOME LAUNDRY** rightfully can take its place as an attractive piece of kitchen equipment, doing its remarkable work with complete freedom from splashing, dripping, or other inconvenience. A day in the basement dungeon is no longer the sentence imposed on American housewives who do their own laundry. This machine made by Bendix Home Appliances, Inc., Detroit, has no moving parts to be a source of danger to playing children. The cabinet has been designed to provide an auxiliary table top, matching the height of the average kitchen workboards.



BENDIX washing unit shown in kitchen.

\* \* \*

**DUCK-BILL NO-TONE BALLCOCK** used with a tank and Flush-Husher used with a flush valve eliminate objectionable noise caused by flushing toilets. This result has been accomplished by employing roughened interior surfaces of considerable length to change the character of the flow. Other roughened surfaces  
*(Continued to page 106)*

# Playing Safe!



They're painted with

## EAGLE pure WHITE LEAD

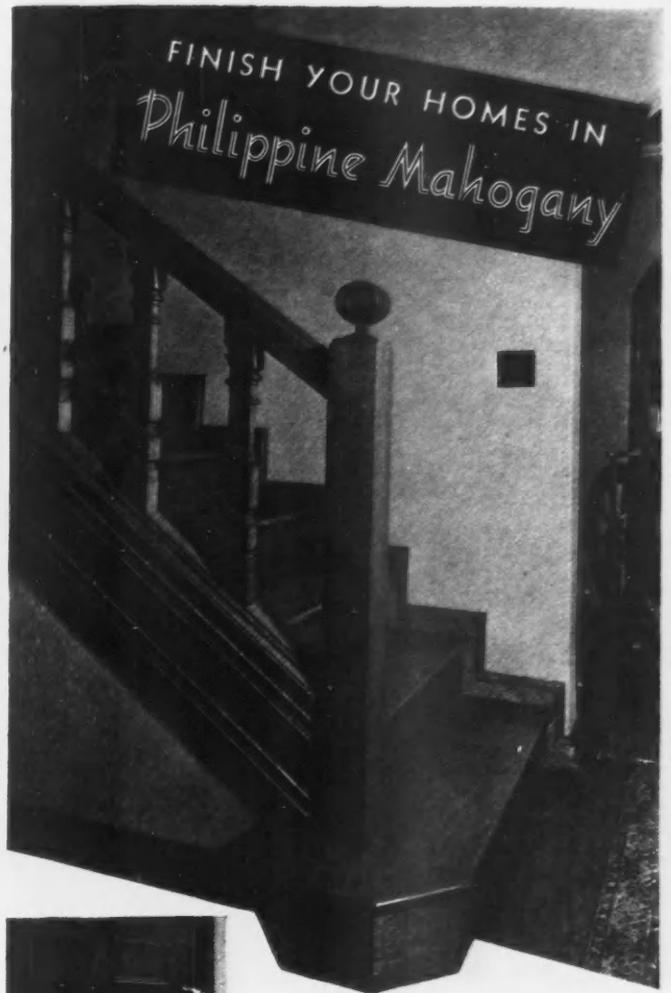
Its elastic paint film doesn't crack or scale

Ordinary paints give good service part of the time—but *Eagle White Lead* gives good service every time! It's the most dependable pigment you can specify for the properties you build—it costs less per square foot per year—because it's chemically active. When mixed with linseed oil, Eagle White Lead produces a paint film that anchors deep in the wood. It's elastic, too—expands and contracts with the surface it is applied to.

Contractors everywhere are saving all the grief of paint failures by making Eagle Pure White Lead a standard specification for all their jobs.



THE EAGLE-PICHER LEAD COMPANY, Cincinnati, Ohio



The Philippine Mahogany door bids a warm welcome. It has striking beauty of grain and figure—beauty that lasts through the years.



Used for mantel and trim of the fireplace. Beautiful and economical Philippine Mahogany lends itself perfectly to the craftsmanship of the wood worker.

For trim, paneling, mantels, china closets, doors, staircases

*You add little to cost but greatly to value*

Now you can finish even the modest home in rich tropical hardwood.

The cost of using Philippine Mahogany for interior trim in the average residence is only \$75 to \$100 more than the cost of using a common softwood. The small additional expenditure increases the value of the residence by a much larger amount.

The architect or designer who specifies Philippine Mahogany gives his client the greatest possible value. Philippine Mahogany is world-famed for its striking beauty of grain and figure. It has an air of luxury for which you would gladly pay a premium, if it were necessary for you to do so to obtain the rich effects which come naturally with the well planned use of Philippine Mahogany.

## Philippine Mahogany

MOST ECONOMICAL OF THE LUXURIOUS TROPICAL HARDWOODS

PHILIPPINE MAHOGANY MFGRS' IMPORT ASSOCIATION, INC.  
111 West Seventh Street, Los Angeles, California.

Please send coupon for descriptive literature on Philippine Mahogany.



Name \_\_\_\_\_

Address \_\_\_\_\_



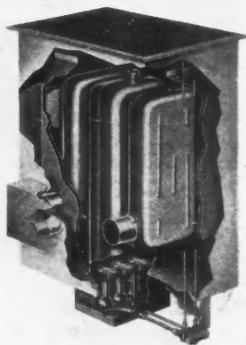
## PAYNE HEAT SELLS HOUSES

Builders are finding that to sell a home they often have to sell the furnace first. Sometimes that's a job.

But it is no problem when you've installed Payne heat. Payne's unsurpassed reputation for efficiency and economy encompasses every State in the Union.

For nearly a quarter of a century, Payne has concentrated on the manufacture of gas-fired appliances exclusively. Payne means gas heat at its best.

## NEW PAYNE FLOOR FURNACE



Payne Floor Furnaces keep room temperatures uniformly warm—"cold spots" and drafts are gone for good. These furnaces require no basement—can be quickly and easily installed. Payne Floor Furnaces were the first to pass the recent rigid requirements of the American Gas Association. Write for full information.

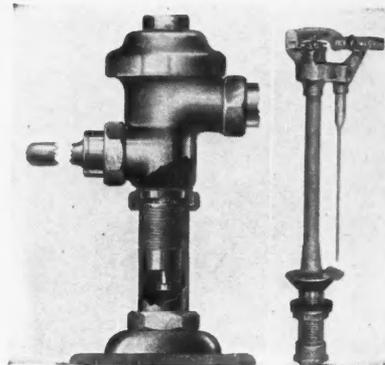
PAYNE FURNACE & SUPPLY CO., INC.  
Beverly Hills, California



(Continued from page 104)

receive the impingement of the flow where the velocity exceeds the critical point for noise.

This entirely new principle of hydrologics is incorporated in these new products manufactured by the Baltimore Valve Corporation, Baltimore, Md. The Flush-Husher is described as an auxiliary governor, which hushes the flush of any flush valve, and can be readily installed in the tailpiece in a few minutes without other changes.



FLUSH-HUSHER (left) and Duck-Bill Ballcock eliminate flushing noise.

\* \* \*

CHROMIUM CABINET HARDWARE with molded attractive colored bases and contrasting lines has been placed on the market by American Cabinet Hardware Company, Rockford, Ill. This modernly styled line provides a bright accent for kitchen cabinets, as shown in the illustration below.

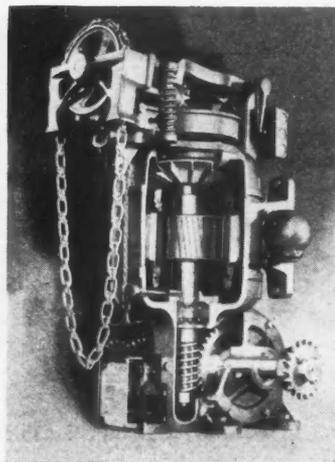


\* \* \*

ROLLING DOORS are especially adapted to electric operation and the Kinnear Power Unit provides a rugged, compact and dependable operator which is available for any size new or old door. With control stations placed at any convenient point, the door can be remotely controlled with a press of a button, magically opening and closing it with speed, smoothness and dependancy.

The door is driven by electric motor through reduction gearing. There is a provision for emergency manual operation by hand chain in the event of interrupted power service.

Each Kinnear power unit  
(Continued to page 108)



KINNEAR power operator.

# BIG JOBS

and  
LITTLE  
JOBS



## all need SISALKRAFT

NO matter how small the job—or how big—new or old—it needs Sisalkraft. And Sisalkraft has so many uses, from basement to roof, inside and out, that it has become the universal all-purpose paper for building and farm uses.

Builders use it to cover all sheathing as flashing, under roofing, under floors and turned up under baseboards, for protecting new floors and stairs, for lining attics, coal bins and garages and for protecting delivered materials on the job. Cement workers use it for curing to insure smooth, hard surfaces of dustless concrete.

Farmers know Sisalkraft, too. They use it to build temporary silos, to line poultry houses and hog houses, to cover farm machinery, as hay stack-covers and to line grain bins. Housewives use it to protect floors during muddy weather, under mattresses, and many similar purposes.

Mr. Dealer—if you don't sell the all-round all-purpose building paper, Sisalkraft—you're missing Something!

**THE SISALKRAFT CO.**  
203B W. Wacker Drive, Chicago, Illinois

"MY, BUT IT'S GRAND TO BE FREE FROM COOKING ODORS"

"YES, AND I SURE ENJOY THE FRESH, CLEAN AIR THROUGHOUT THE HOUSE"

### VICTOR IN-BUILT VENTILATORS

**HAPPY** are the folks who live in Victor Ventilated homes. That's why it's good business to specify Victor In-Built Ventilators in every home you build. This modern kitchen feature gives you added sales appeal that can clinch many a deal.

**EASY INSTALLATION ANY TYPE OF CONSTRUCTION**  
Victor In-Built Ventilators are designed for every kind of home. There's three sizes—8", 10" and 12". All have automatic operation, weathertight shutters and Victor's own super-powered motors. Easily installed in walls of any thickness or material. Write for complete information, today!

**VICTOR ELECTRIC PRODUCTS, INC.**  
791 Reading Road Cincinnati, Ohio

This folder gives you complete specifications, installation instructions and explains all the important features of Victor's In-Built Ventilators—mail the coupon for your copy now!

*Clip This Coupon and Mail!*

VICTOR ELECTRIC PRODUCTS, INC.  
791 Reading Road, Cincinnati, Ohio

Please send me your Bulletin No. 905-C which gives complete information on Victor In-Built Ventilators.

Name \_\_\_\_\_

Address \_\_\_\_\_

Town \_\_\_\_\_ State \_\_\_\_\_

Automatic Operation



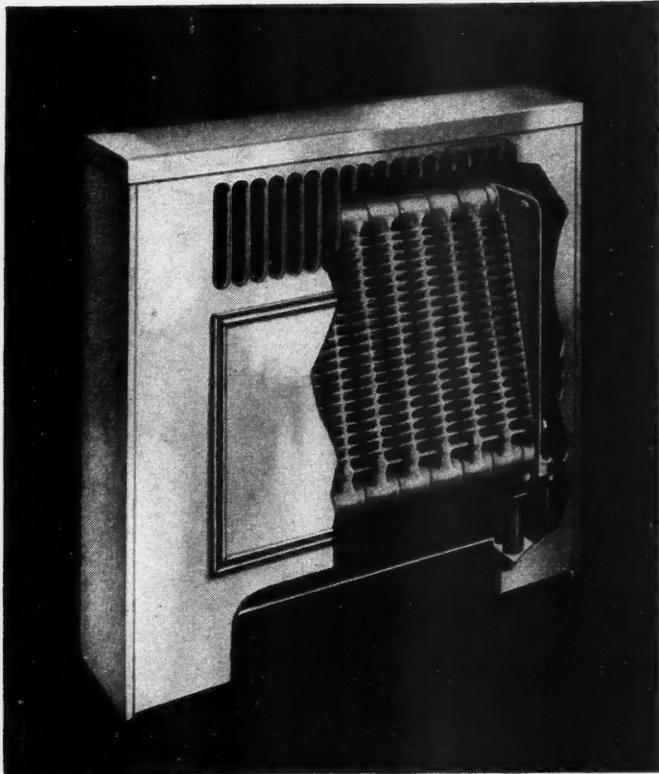
3 Speed Control



Easy Cleaning



Weathertight Shutters



## •• STYLE

### Your Construction with National

You know how the trim appearance of convectors-in-enclosures appeals to modern women! Now let us tell you the advantages of National Aero Convectors. We can't cover the *full* story of Aero's 22 major advantages in this advertisement! Why fins and tubes are cast as one durable piece—for better heat transference and to withstand rough handling in installation. Why the wide fin spacing won't clog; how Aero delivers a larger volume of moderately warm air that warms the room—not the ceiling! How effectively Aero warms the building during winter construction. This is just a small part of the story that you as a builder will enthuse over and that your prospects will readily appreciate. Get all the details! Send for our simplified Catalogue 196A. Or better still—just lift your phone and . . .

CALL IN THE NEAREST  
NATIONAL RADIATOR WHOLESALER

## NATIONAL RADIATOR CORPORATION

Johnstown, Pennsylvania

Branch Offices: Baltimore • Boston • Buffalo • Chicago • Cincinnati • Cleveland • Detroit • Milwaukee • Newark • New York • Philadelphia • Pittsburgh • Richmond • Washington

(Continued from page 106)

comprises the following: Power unit supports, motor reduction gears, magnetic brake, limit switch, emergency manual operation with interlocking limit switch, reversing panel and single station push button control. Motor is of series wound type for direct current and of high starting torque, elevator type, for alternating current. Available for 110-220-440-550-volts—AC 1, 2, or 3 phase—DC. Push button control is three button type, labeled "Open," "Close" and "Stop."

\* \* \*

### Contractor's Equipment for Faster, Better Work

**SPINNER DISC SANDER**, new addition to the line of The American Floor Surfacing Machine Co., Toledo, O., is beautifully designed, very compact and very similar to the larger Model "B" American Spinner. Every feature of this Model "C" machine is identical with that of the large professional Model "B" American Spinner, yet with each part reduced in size. The only difference in the two machines outside their comparative size and capacity is the design of the handles.

Because the Model "C" Spinner can also be used to such a great advantage on paneled walls and other perpendicular surfaces, a special set of lower handles is also available. When the machine is used on perpendicular work requiring the operator to hold the machine in a suspended position, it is perfectly balanced and there is no noticeable weight.



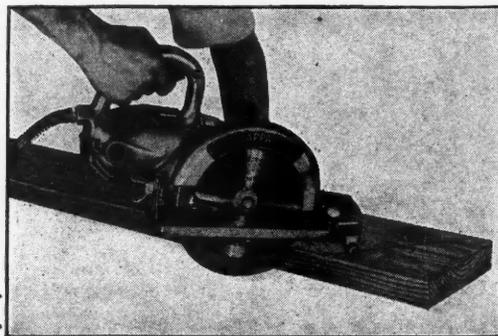
USING disc spinner on stair sanding job.

\* \* \*

**MODEL 1-A ELECTRIC SAW** is the latest addition to the line of handsaws made by Wappat Incorporated, Pittsburgh, Pa. It features a light weight of 18 pounds, but has sufficient cutting capacity to make jack-rafter bevel cuts in full 2-inch lumber, regardless of the pitch of the roof. It is designed and balanced for true one-hand operation.

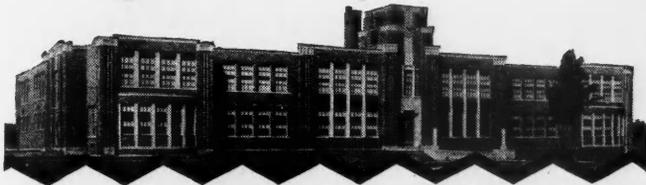
The tool is sturdily built. The main housings are of strong light cast aluminum; the shoe and hinge plate are of steel cadmium plated and braced to give full rigidity; the motor is the latest Universal type operating equally well on 60 cycle, 25 cycle or direct current, and is furnished for 220 volts at no extra charge; the gear set is a hardened steel worm mounted on the armature shaft which engages a bronze worm wheel on the saw mandrel

(Continued to page 110)

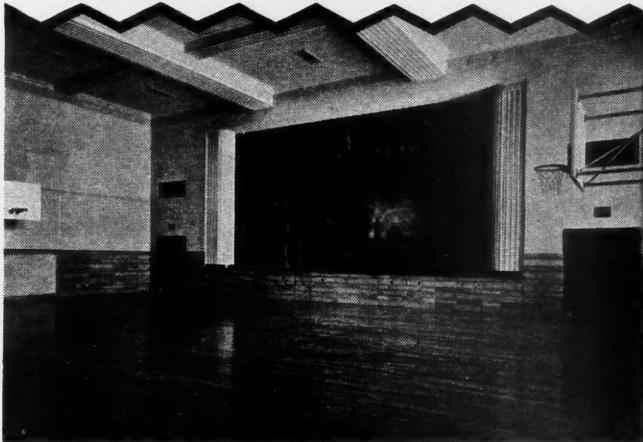


WAPPAT electric handsaw.

*Built right!*



**WITH OHIO WHITE AND OHIO SANLIME FINISHES**



Interlaken Central School, New York. Architects: Bley & Lyman, Buffalo, N. Y. General Contractor: Swartout & Rowley, Rochester, N. Y. Plastering Contractor: Henderson & Johnson, Syracuse, N. Y. Ohio White and Ohio Sanlime Finish used.

● Everywhere in America—modern buildings, both great and small, are utilizing the many advantages of Ohio Hydrate Finishing Lime for plastering. Quarried at the world's lime center, Ohio Lime is 99½% pure dolomite. It is a cool, fat lime—highly plastic—spreads easily and quickly—preserves metal lath—has definite acoustic properties—and is an ideal decorating base. Ohio Sanlime Sand Finish is ready mixed—offered in a variety of popular colors. Ohio Ritewall Hair-Fibered Lime Plaster is widely used for scratch and brown coats. Guaranteed to

meet A.S.T.M. and U.S. Government standards. The Ohio Hydrate & Supply Company, Woodville, Ohio.

**SOLD EVERYWHERE**  
in famous **ZIG ZAG BAGS**

Ohio White Finish—Hawk Spread  
White Finish—Ohio Ritewall  
Fibered Lime Plaster—Ohio Sanlime  
Finish—Mastite Masonry  
Mortar—Ohio Masons Lime  
—Ohio Ground Lime.

**OHIO WHITE**  
**LIME FINISH**

**MANY USEFUL  
CONVENIENCE UNITS  
FOR THE  
EFFICIENT KITCHEN**



★ The handy tray storage base is just one of many useful units in the regular Kitchen Maid line—important to housewives and thus to builders and architects. Others include: linen storage drawers... towel dryer rack... utility bin... inside and outside open corner shelf and base... soiled linen, vegetable and flour bins... liquor storage base... broom closet unit.

Kitchen Maid construction of wood is sturdy and serviceable, easy to install. Design is modern and attractive with flush panel doors. Durable finish is sprayed on at factory, with choice of 12 colors. Each unit is sealed against vermin; each shelf sealed to sides and back, with rounded corners—easy to keep clean. High utility, modern beauty, and worthwhile savings recommend Kitchen Maid Cabinetry for use in any home. Catalog in SWEET'S. Free Planning Dept. available.

THE KITCHEN MAID CORPORATION, ANDREWS, INDIANA



The Kitchen Maid Corp., 708 Snowden Street, Andrews, Indiana  
Send new catalog and latest details on standard unit Kitchen Cabinetry.

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
 Architect     Builder     Owner     Dealer



**Certigrade Red  
Cedar Shingles?  
... YOU BET!**

## I RECOMMEND THEM ON EVERY HOUSE I BUILD!

TAKE THE TIP of thousands of successful contractors and builders. Use Certigrade Red Cedar Shingles on both roofs and side walls of the homes you build. Because of distinctive, natural beauty, Certigrade Shingled homes attract buyers quickly. Remember, some woman will influence the sale of every home you build. And women thrill to the deep shadow lines, rich appearance, and friendly charm of real red cedar shingles.

Women, as well as men, are interested in quality and economy too. Show prospective buyers that Certigrades add effective insulation at no extra cost—insulation that keeps out summer heat and reduces winter fuel bills. Stress the long life of Certigrades, their low upkeep expense. Buyers like the assurance that even severe wind, hail and rain storms do not affect Certigrade Shingles.

Contractors find Certigrade Shingles particularly economical—a sure way to keep costs down and assure reasonable profits. With Certigrades you add real structural strength to a house—you don't require the heavy framing and sheathing of heavier materials. They can be applied speedily and there is no waste. FREE, for you, the "Certigrade Handbook"; for your prospects, "A Portfolio of Certigrade Homes". Write today! Red Cedar Shingle Bureau, Dept. AA-837, Seattle, Wash.; Canadian office, Vancouver, B. C.



(Continued from page 108)

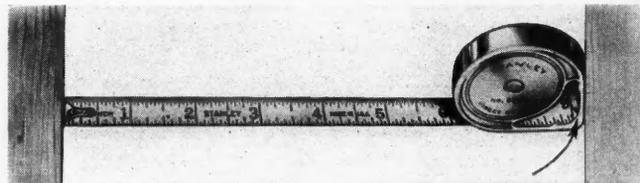
and both are sealed in a bath of lubricant; specially selected deep-groove sealed ball bearings are used throughout; all shafts are hardened alloy steel. Although motor is powerful it is exceptionally cool running due to the volume of air which is passed over it by the turbine-type fan. The switch is double-pole 100 per cent over capacity momentary-contact with a lock for the "on" position. The Simonds circular saw blade, 7½" diameter, is made for both cross cutting and ripping. Saw blade speed, running free, is 3600 R.P.M. Long lasting carbon brushes of the cartridge type are used with caps protected from breakage. This sturdy construction plus accessibility of all parts assures lowest maintenance costs.

Improvements in design include a sawdust guard which completely eliminates bothersome sawdust. Sawdust cannot get in operator's eyes. A blower keeps sawdust from covering up the cutting line. This, plus the fact that the operator sees the line at the blade, enables him to split the line on all types of cuts. Another improvement is the depth and angle adjustment. Depth of cut may be changed from 2-5/16 inches maximum to ¼-inch minimum (or less with an undersize blade) in a few seconds. A graduated quadrant permits accurate adjustment for bevel cuts. Either adjustment, once set, stays set until changed. Complete safety is assured by the patented telescoping spring-operated safety guard.

\* \* \*

"PULL-PUSH" RULE, manufactured by Stanley Tools, New Britain, Conn., has a direct reading feature for inside measurements. When the case and blade butt against the work, a red indicator on the case points to the exact inside measurement. There is nothing to add—no chance for mistakes.

The flexible-rigid steel blade has a white baked enamel surface against which the black graduations stand out and are easy to read. The blade is ½ inch wide, 6 feet long, and is graduated in inches and 16ths on both edges for the entire length. On the upper edge the blade is also graduated in 32nds for the first six inches. This No. 6386 Rule is a handy, watch size tool for measuring straight distances, circumferences, irregular shapes and for outside as well as inside measurements.



TAKING inside dimension with "Pull-Push" rule.

\* \* \*

PAINT CAN HANDLE AND BRUSH HOLDER combination, made of spring steel to snap on the can in a jiffy and eliminate the hazard of grasping a can on which paint may have run down the side, is being marketed by Handl-Grip Corporation, New York. It also solves the ever-puzzling problem of where to rest a brush when you want to stop painting operations for a moment. Heretofore, the brush has been laid on a rag or newspaper where it either sticks or picks up dirt and lint. With the new can handle-brush holder, the painter simply snaps the brush in a clamp and leaves it suspended over the paint in the can.



NEW DEVICE for holding paint brushes in cans ready for instant use.

## ... NU-WOOD JOBS Are Better-Paying Jobs for YOU



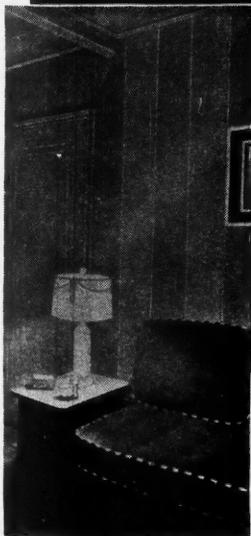
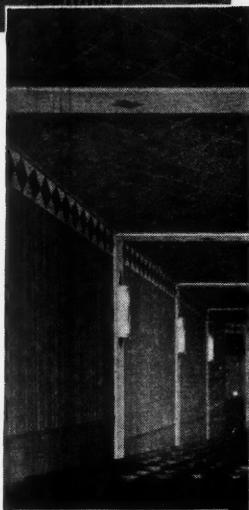
LOOK at the typical Nu-Wood interiors shown here . . . notice the *high type* of job they represent. Ordinary board, useful for minor purposes, cannot be used successfully on jobs like these. That's exactly why Nu-Wood brings greater profit to the builder . . . because it goes into larger and better-paying jobs.

Builders find that Nu-Wood is the Interior Finish of popular demand. People know the value of this material for decoration, design, acoustical correction and low re-decorating upkeep. It is being used in new and old homes, schools, churches, theaters, and a dozen other types of important buildings.

Builders like you, in towns like yours, who concentrate on Nu-Wood Interior Finish find these better jobs easier to sell. They find that one job sells many others. There is less competition and more profit selling Nu-Wood jobs because this product is superior in quality, at *no extra cost*.

Nu-Wood is quickly applied over interior surfaces, old or new—offers a wide variety of choice in design and pattern—comes in variegated shades of tan and old ivory.

Get in on this repeat business like hundreds of builders have—sell one Nu-Wood job and watch it sell others for you. Mail the coupon for full information on Nu-Wood and about how it can step up YOUR profits.



### NU-WOOD the insulating interior finish



**WOOD CONVERSION COMPANY**  
Rm. 119-B, First Nat. Bank Bldg., St. Paul, Minn.  
Gentlemen: I want to know more about Nu-Wood for  New Construction  Remodeling

Name .....

Address .....

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

**Users Assured Him Gilbarco Gives . . .**

**"most heat per dollar!"**

MR. S. KENDRICK LICHTY, prominent architect of Secane, Pa., says: "I am writing to express my complete satisfaction with the performance of the Gilbarco equipment which you installed in the model home in the new Colonial Village in Framingham, Massachusetts.

"I specified Gilbarco for this development only after a thorough investigation convinced me that Gilbarco is outstanding in performance, dependability, and economy of operation. Users assure me it gives 'MOST HEAT PER DOLLAR.'"

### NO WONDER GILBARCO GIVES "MOST HEAT PER DOLLAR!" ...IT HAS Econ-O-flex CONTROLLED COMBUSTION

Home-owners are as quick as architects to appreciate the increased economy of operation—the actual cash saved—through this latest development in combustion . . . an exclusive Gilbarco feature.

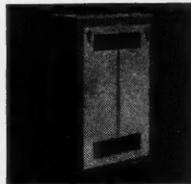
Backed by three quarters of a century of experience, Gilbarco has an unequalled record in oil burner design and performance.

To meet the requirements

of any home, there are five models of Gilbarco Burners. They are supplied alone or as an integral part of one of the oil-fired Boiler Units or of the Gilbarco Air Conditioning Units (described below)—also of the Gilbarco oil-fired Water Heater, the new and better method for supplying domestic hot water. All are fully automatic. Send coupon for complete information.



Gilbarco Flexible Flame Oil Burner. A world leader in efficiency, dependability and economical operation. Five models.



Gilbarco Automatic Boiler Unit. Compact, beautiful and efficient. Eight models to meet all heating requirements.



Gilbarco Conditioned Warm Air Unit. Heats, cleans, humidifies and circulates a continuous flow of perfect air. Nine models.

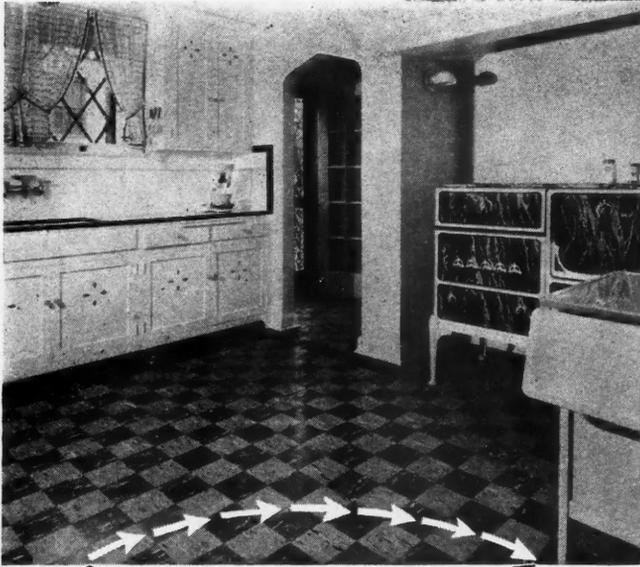
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Where Beauty Begins

No builder today ever underestimates the importance of floor coverings in adding beauty to design. Many modern interiors, in fact, definitely place their decorative appeal firmly **underfoot**. This is one of the most potent reasons for Azrock Tile's growing popularity. Azrock, available in a wide range of beautiful colors (plain or marbled) and in a number of different sizes, simplifies and encourages the creation of distinctive floor patterns. And the colors are as permanent as this long-lived tile itself!

Resilient, moisture-proof, fire-resistant, durable under hard wear, Azrock is a floor covering that satisfies every practical demand.

Write to Uvalde Rock Asphalt Co.,  
San Antonio, Tex., for name of your  
nearest distributing contractor.



OTHER AZROCK PRODUCTS:  
**AZROCK INDUSTRIAL TILE -- AZROCK PLANKTILE**

## News of the Month

Building Activities and Meetings

### New High Reached with June Construction

**C**ONSTRUCTION recovery reached a new high point in June, topping the previous recovery peak reported in July, 1936, by eight per cent, according to figures of F. W. Dodge Corporation. The June construction total covering all classes of work amounted to \$318,137,100 in the 37 states east of the Rocky Mountains. This was an increase of 30 per cent over the figure of \$244,112,800 for May of this year and represented a gain of about 37 per cent over the June, 1936, total of \$232,664,700.

Of the June, 1937, total, residential building accounted for \$93,123,100; non-residential building took \$125,087,000, while the remaining \$99,927,000 went into civil engineering projects, i.e., public works and utilities.

The June residential figure compares with \$83,937,000 for May and with \$73,604,600 for June, 1936. Increases in residential building as contrasted with totals for a year earlier were well distributed geographically with every important major area sharing in the advance except metropolitan New York and the St. Louis territory (Eastern Missouri, Arkansas, Southern Illinois and Western Tennessee).

Increases in June over a year ago in non-residential building operations occurred in every major geographic district, excepting only the Southern peninsula of Michigan, the New Orleans territory (Louisiana and Mississippi) and Texas.

Civil engineering projects showed increases over June, 1936, figures in every district except upstate New York, the Southeast (The Carolinas, Georgia, Florida, Alabama and Eastern Tennessee) and the St. Louis territory.

### Real Estate Survey Shows Increasing Improvement in Market

**T**HE twenty-ninth semi-annual survey of the real estate market made by The National Association of Real Estate Boards shows prices advanced at least 10 per cent over last year in the majority of cities; shortages have begun to appear in business space; office rents have made first appreciable gain; there is a growing scarcity of houses for rent; there has been acceleration in sale of home sites.

Further findings of the survey show that real estate prices are higher than they were a year ago in 84 per cent of the cities of the country. A 10 per cent advance has been experienced in 63 per cent of the cities, and increases of 15 and 20 per cent are not infrequent. The market for real estate is more active than last year in 91 per cent of the cities. The survey covered 256 cities. It was compiled from confidential reports by the Association's local member real estate boards.

Other changes found are as follows:

1. Practically no remaining over-supply of single family dwellings. Under-supply of such dwellings in 73 per cent of the cities, and a prospective shortage reported in an additional 19 per cent of the cities. Shortage of apartment space in 58 per cent of the cities, and a prospective shortage indicated by an additional 16 per cent.

2. New home construction bringing definite acceleration in the sale of home sites. But comment from city after city that recent rise in building costs, including materials and labor, is so great as to discourage new building.

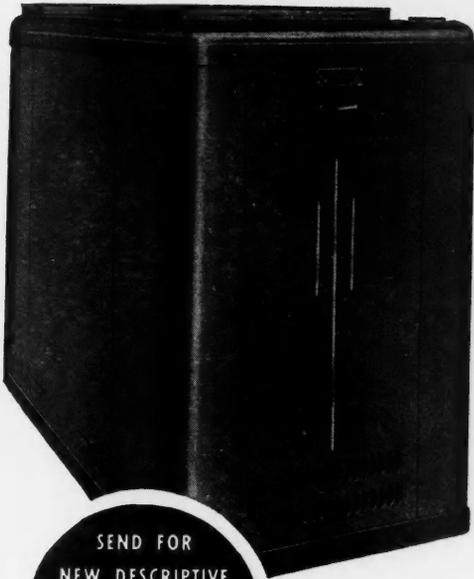
3. Rents for business space in central districts at a higher level than a year ago in 78 per cent of the cities reporting, and not a single city reporting lower rates. Space in outlying business districts renting at a level higher than a year ago in 56 per cent of the cities.

4. Office space, which has been slower to recover, now beginning to advance. Downtown office space rates are advancing in 43 per cent of the cities, with only one city showing rates going down. A year ago only 28 per cent showed an up trend.

5. Apartment rents higher than a year ago in 87 per cent of cities reporting, and rents for single family dwellings higher in 90 per cent of the cities.

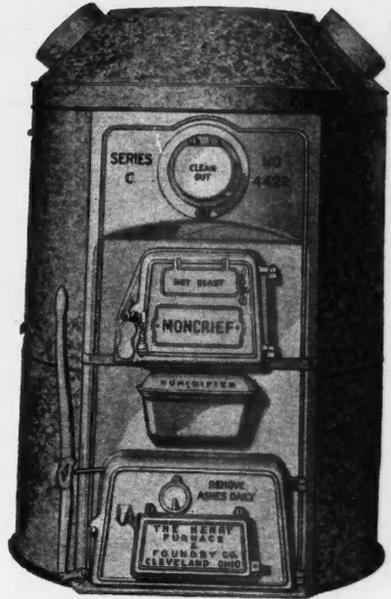
(Continued to page 114)

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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* . . .

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"Standard for almost Half a Century"



## More Glass in the Home ~

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# First Rules for Builders

## STANLEY "PULL-PUSH" The Rules of 1000 Uses



No. 1266—6 foot blade, mirror finish nickel plated steel case. Nickel plated blade graduated in 16ths and inches.

Blade is rigid for measuring straight—horizontally or vertically.



No. 7506—Gun black steel case with target rings for good grip. 6 foot removable blade.

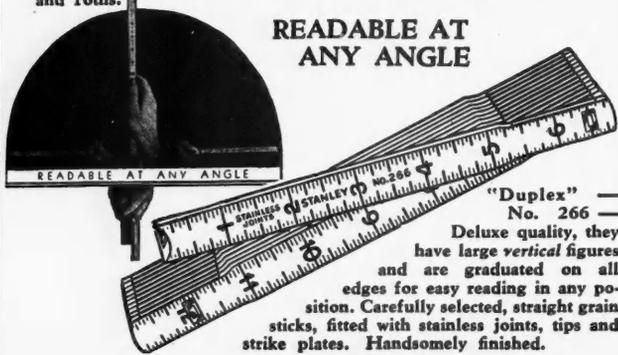
You can take measurements with a "Pull-Push" Rule in restricted spaces where no jointed rule can enter.

A case no larger than a watch—a steel blade that can be rigid or as flexible as a steel tape, at your will—accurate, easily-read graduations—those are the features that have sold hundreds of thousands of these Stanley Rules.

## STANLEY "ZIG ZAG" RULES The Rules You've Always Carried



No. 106—Proof that Stanley "Zig Zag" Rules, always ahead, are now better than ever. Graduated all edges; large, easily-read figures; stainless joints and handsome finish. 6 foot length, graduated inches and 16ths.



READABLE AT ANY ANGLE

See these tools at your hardware store, or write for catalog 34.

# STANLEY TOOLS

The Choice of Skilled Workmen for 80 Years  
NEW BRITAIN, CONN.

## News—Real Estate Survey

(Continued from page 112)

6. Money seeking mortgage loans in 73 per cent of the cities reporting, while loans are seeking capital in only 11 per cent of the cities. But—

7. A 6 per cent interest rate still decidedly the most common rate for first mortgages on new single-family dwellings. It is checked as the most common rate for this type of loan by 59 per cent of the cities replying. A 7 per cent rate or higher is cited as the commonest rate in 10 per cent of the cities. Only 2 per cent of the cities check a 4½ per cent rate as common, and none any lower rate.

### Widespread Rise in Prices

Price Rise: While 212 cities out of the 256 showed advancing prices, only 189 attempted to measure the degree of the upturn. A 5 per cent increase is reported by 15 per cent of these 189 cities, a 10 per cent increase or more by 85 per cent of the cities, making 63 per cent of all cities surveyed, a price rise of at least 15 per cent in 30 per cent of the cities, a rise of 25 per cent or over in 5 per cent of the cities. Only one city reporting indicated a down turn.

Business and Office Space: Shortage of business space is reported by 18 per cent of cities, and an additional 7 per cent show prospective shortage. But 14 per cent still report over-supply. What is more significant, 82 per cent of all cities of over 500,000 population report an over-supply and none report an under-supply. No city of over 200,000 population reports any prospective shortage in business buildings.

On the other hand the larger cities are the group showing most uniformly an up movement in use of office space. Cities of over 500,000 population show central district office rents up in 50 per cent of the cases; 57 per cent of the cities of 200,000-500,000 population report an advance.

Industrial Space: Such a city as Cincinnati, for example, gives this additional report: "Very little available vacant space for small industries."

### Many Sections Report Upward Trend in Rents

Residential Rents: Only one city shows any down movement in residential rents, no city any down movement for single family dwellings. Cities of over 500,000 population in 100 per cent of cases report residential rents higher than last year in every type of accommodation surveyed. In both the Great Lakes and North Central regions, every city reporting showed the trend as up. In the Northwest and Southeast, about one-fourth of the cities still report rents stationary both for apartments and for single family dwellings.

Growing scarcity of detached houses for rent is acting to advance the buying of used homes and the building of new homes, the reports point out.

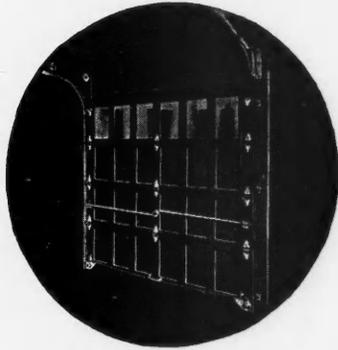
Home Site Purchases Now Substantial in Number: A very significant indication shown in the survey is the substantial number of home sites now being purchased. (Special inquiry on this made for the first time in current survey. Findings now being tabulated.) A more active market for home sites than a year ago is reported by 72 per cent of all cities and by 100 per cent of all the cities of over 500,000 population.

### Comparative Statistics

Geographic Variations: Per cent of cities reporting higher market activity in various regions is as follows: Great Lakes Region, 98 per cent (Ind., Mich., O., Ky., Ill.); New England, 94 per cent; North Central Region, 94 per cent (Wis., Minn., Ia., N. Dak., S. Dak., Nebr.); Central Atlantic Region, 93 per cent (N.Y., N.J., Pa., Del., Md., D.C., Va., W. Va.); Southeast Region, 86 per cent (Tenn., Ala., Ga., N. Car., S. Car., Miss., Fla.); Southwest Region, 85 per cent (Nev., Utah, Ariz., Calif.); South Central Region, 84 per cent (Mo., Ark., Kans., Okla., Colo., La., Tex., N. Mex.); Northwest Region, 78 per cent (Wash., Ore., Ida., Mont., Wyo.). Per cent of cities showing higher prices: Great Lakes Region, 96 per cent; New England, 78 per cent; North Central, 81 per cent; Central Atlantic, 68 per cent; Southeast, 83 per cent; Southwest, 89 per cent; South Central, 89 per cent; Northwest, 89 per cent.

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**OVERHEAD DOOR**  
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*Salt Spray Steel*  
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 BY A STANDARD SALT SPRAY TEST  
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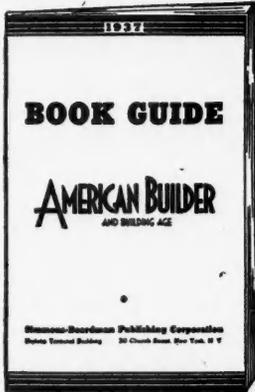
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**Book Guide**  
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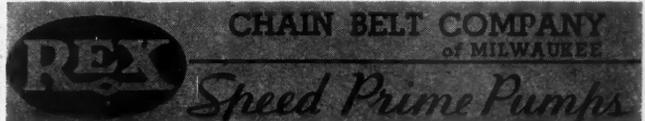
**American Builder and Building Age**  
 30 CHURCH STREET NEW YORK, N. Y.

*Low Cost WAY*  
**REX**  
**SPEED PRIME**  
**PUMPS**  
**A SIZE FOR EVERY JOB**

The little 2-inch, 7-M Speed Prime pictured above is only one in the long line of Rex pumps. There are nine sizes from 2"—7-M to 8"—125-M—each obtainable in any of two or three different mountings—wheelbarrow, two-or-four-wheel trailer, or skid—with gas or electric power optional on all of the larger sizes. Each has the Rex Completely Automatic Prime Control—Rex Positive Recirculation Cut-Off—Rex Self-Cleaning Impeller and the patented Rex "Peeler"—features that assure most gallons per dollars whether you're pumping seepage or full capacity—features that are not offered you in any other line of pumps. Before you buy, for your pocket book's sake, investigate the Rex line of contractors' pumps.

Write for our new bulletin today!

**CHAIN BELT COMPANY**  
 1621 W. Bruce Street Milwaukee, Wis.



# THIS ADDED CONVENIENCE HELPS SELL HOMES

## It Moves UP or DOWN

The patented adjustable feature of this HOWARD 4-STAR Ironing Board adds a finishing touch to the house you build—Short women or tall women, standing or sitting in an ordinary chair, may use this board with absolute comfort—Strongly constructed of the best grade lumber—Unusually large ironing surface—Door may be hinged either side—Standard size cabinet—Fits between 16" center studing and levels with 6'-8" doors.

See It At Your Dealers

### 4★features

- ★ Adjustable to any height— "No more ironing day back-aches"
- ★ Full metal hung — Rigid, strong, no side sway or wobble
- ★ Automatic ratchet control — "A child can adjust its height"
- ★ Longer, wider board — "with far more ironing surface"

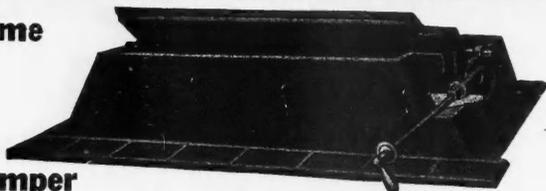


No. 171  
Recess or built-in type cabinet—3x14x7 1/2" — cabinet eased all around. Ready to install including one panel door. Ironing Board 12x52" — sleeve board 6x24"

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**THE CHINOOK MFG. CO., INC.**  
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## Dome



## Damper

Peerless dome dampers cut fireplace construction costs. Gives perfect control of the fire and conserves heat. Successful operation of the fireplace can be assured. Three models to choose from—Rotary Control—Poker Control—Chain Control. Made of heavy stove plate cast iron they will last indefinitely.

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### OTHER PEERLESS PRODUCTS

Fireplace fixtures—ash dumps—coal windows—ash pit doors, garbage receivers and gas heaters.

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

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

Please send Peerless Fireplace Damper Information.  Other Building Specialties.

Name .....

Address .....

Town..... State.....

## Two New Plants for J-M

NEGOTIATIONS have been completed for the acquisition of two new properties by the Johns-Manville Products Corporation. In Watson, suburb of Los Angeles, an option to purchase a 50-acre plot of land has been acquired; and as soon as possible construction will start on the first unit of a new million-dollar factory there to produce rock wool home insulation and Transite asbestos-cement pipe. When completed early in 1938, the new plant is expected to employ approximately 300 men.

The second new plant was secured by the purchase of the Richmond, Ind., plant of the Fibre Conduit Company. It will house equipment for the manufacture of a new type of low temperature insulation recently perfected in the J-M Research Laboratories for use on railroad, passenger and refrigerator cars, mechanical refrigerators, and automobile bodies.

## P.C.A. Promotes Sheets to Presidency

FRANK T. SHEETS has been elected president of the Portland Cement Association, effective Sept. 1. He succeeds Edward J. Mehren, who resigned last month to take care of his personal interests. Mr. Sheets for the past four years has been P. C. A. consulting engineer and director of development.

## New Identifying Plaque for Insulite Homes

THE Insulite Company, Minneapolis, Minn., has prepared burnished brass plaques, size 6 x 5 inches, embossed with red lettering, on a black background, and punched for tacking on the walls or supporting columns of structures in which their products have been used. The plaque is furnished without charge and provides prominent spaces in which the names of the builders, the designer, and the address of the building are engraved by The Insulite Company. It also carries an imprint showing the company's seal of approved application.

The company feels that by thus identifying their products on the actual job they will not only support their national advertising campaign, but will enable the builder to adequately demonstrate to his prospect that the house really contains sufficient insulation to be permanently effective.

## Graff Elected President of Ryerson Company

AT A RECENT meeting of the Board of Directors of Joseph T. Ryerson & Son, Inc., Everett D. Graff, first vice president, was elected president. Mr. Graff has been with the Ryerson company for thirty-one years, having come with the company immediately upon graduation from college in 1906.

## Owens-Illinois Promotes McGiveran

STANLEY J. MCGIVERAN, formerly assistant general sales manager of the Glass Container Division, Owens-Illinois Glass Company, has been appointed to the newly created position of director of advertising for the parent company. The new department will serve to co-ordinate marketing policies and stimulate co-operation between the company's several selling units. T. K. Almroth, as advertising manager, will work with Mr. McGiveran in handling these activities in the enlarged field.

## New Line and Catalog for Briggs

BRIGGS Manufacturing Company, makers of Briggs Beauty-ware plumbing fixtures, have expanded their line of products and are preparing a new catalog listing a wider selection of models, many new products and features, a revised price structure, new specifications and installation data.

## Concrete Engineering Changes Name

EFFECTIVE July 1, the name of Concrete Engineering Company was changed to Ceco Steel Products Corporation. Ceco products now include steel joists, steel windows, metal frame screens, metal weatherstrip and metal lathing materials as well as reinforcing steel and welded wire fabric, patented steel forms and adjustable shores and column clamps. There will be no change in management, personnel, or location of offices.



## OPENS BIG PROFITABLE MARKET

**FOR  
HOMES  
HOSPITALS  
CHURCHES  
SCHOOLS  
OFFICES  
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BUILDINGS**

Now—a quality rubber-tile flooring—pre-set on felt—for modernization or new construction of all kinds—costs no more than good grade linoleum. Wide range of colors and designs. Conveniently packed. Exceptionally easy to lay. Suggest it to your prospects. A good profit on every installation. Write for details and illustrated booklet.

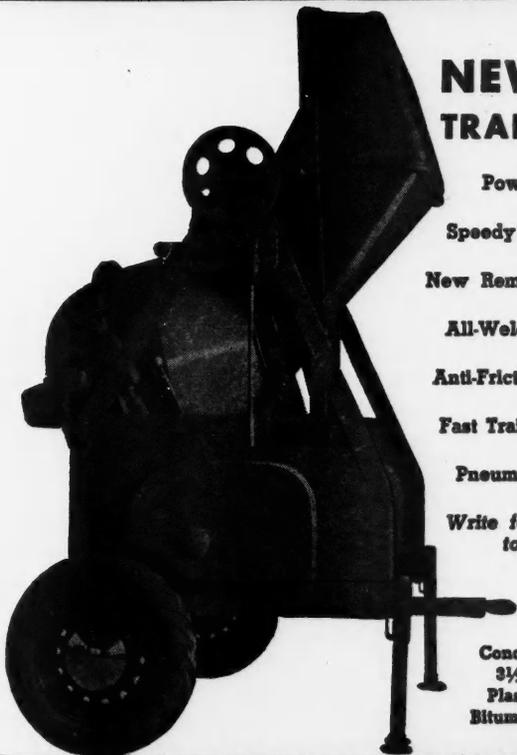
**WRIGHT RUBBER PRODUCTS CO.**

1603 Layard Ave.

Racine, Wis.

# WRIGHT RUBBER TILE

# KWIK-MIX

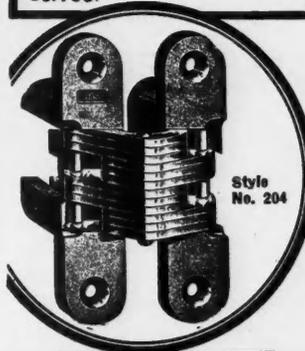
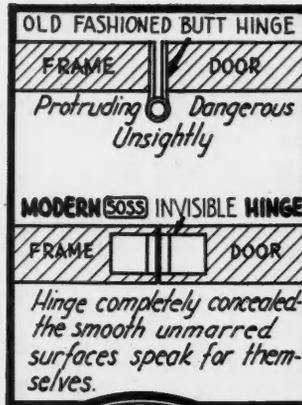


## NEW 5-S TRAIL-MIX

- Power Tilt
- Speedy Discharge
- New Remixing Action
- All-Welded Frame
- Anti-Friction Bearings
- Fast Trailing Speed
- Pneumatic Tires
- Write for bulletin today.

Concrete Mixers  
3½-S to 10-S  
Plaster Mixers  
Bituminous Mixers

**KWIK-MIX CONCRETE MIXER CO.**  
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## A Modern Hinge for Modern Buildings

Soss Invisible Hinges permit complete freedom in working out streamlining and modern decorative design.

There are no protruding parts to catch dust or to injure or to be damaged.

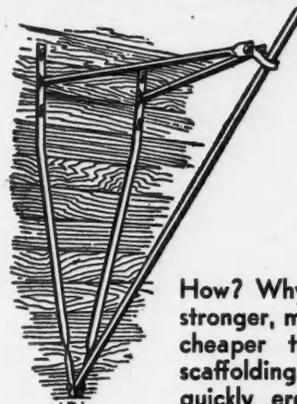
The hinge cannot be tampered with when the door is closed.

There are many more features of greater convenience, safety, and service.—Write for complete data today.

**Soss Manufacturing Co.**  
654 East First Avenue  
Roselle, New Jersey

**S OSS** Improved  
**INVISIBLE HINGES**  
A TYPE AND SIZE FOR EVERY REQUIREMENT

## Reliable Scaffold Brackets



**SAVE  
YOU  
MONEY**

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

Let us prove their value. Send for catalog—then ask us to ship first pair C.O.D. for your inspection and trial.

Reliable Jack Company, 1401 West Second St., Dayton, Ohio

**RELIABLE**  
SCAFFOLDING BRACKETS

## You, too, can get more jobs



AND MAKE  
**more money**  
BY USING  
**EDWARDS  
METAL SHINGLES**

Why spend your life competing with every Tom, Dick and Harry for jobs that always go to the lowest bidder? Forget the profitless staples and specialize on our high quality Metal Shingles. No trick at all to interest your customers in their unrivaled beauty, their interlocking features, their protection from fire, lightning and wind as well as from weather. These advantages more than justify the price and assure you substantial profits and satisfied customers.

Write for Metal Tile and Shingle Catalog  
No. 72. Please give name of your dealer

**THE EDWARDS MANUFACTURING CO.**  
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**K & E WYTEFACE**  
STEEL MEASURING TAPES

*Easy  
to read..*

easy to clean, and the crack-proof white surface protects the steel from rust. Ask your dealer, or write for complete information.



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**KEUFFEL & ESSER CO.**

HOBOKEN, N. J.  
NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO DETROIT MONTREAL

### FHA Personnel Changes

**A**PPPOINTMENT of C. Wylie Allen, prominent Chicago attorney and building and loan consultant, as savings and loan director has been announced by Federal Housing Administrator Stewart McDonald. Mr. Allen succeeds Eugene A. Skehan, who has been appointed special assistant to the deputy administrator.

Mr. Allen comes to the Federal Housing Administration on a leave of absence from the Loyola University School of Law where he is a member of the faculty. In his new capacity he will have charge of all savings and building and loan activity of the Housing Administration.

\* \* \*

**FREDERICK M. BABCOCK**, director of the Federal Housing Administration's Underwriting Division, has announced the resignation of David L. Montonna, underwriting supervisor. The post will be filled by promotion from the present staff.

Mr. Montonna has accepted a position with Allied Building Credit, Inc., a subsidiary of the Weyerhaeuser Corporation of Minneapolis, and will assume the position of manager of the Central Zone on Aug. 15. He will direct, from Chicago, mortgage lending operations of the company in 21 middle western and southern states.

\* \* \*

**THEODORE E. DAMM**, chief of Industries Section, Federal Housing Administration, died at Mt. Alto Hospital, Washington, D.C., on July 2.

Mr. Damm was well known for his work in uniting industry in the Better Housing Program and was in demand as a speaker at conventions and other group meetings. He came to the Federal Housing Administration originally as an industry adviser for the National Paint, Varnish & Lacquer Association, later heading the Industries Section of that administration.

### Durbin Plywood Houses

(Continued from page 70)

shrinkage or swelling will not cause cracks. The joints and nail holes are filled with Laux joint filler and sanded smooth with a Stanley disc sander.

Very little interior wood trim is used. The edges of the plywood at jambs and heads of openings are finished with a narrow metal trim. When painted like the walls this is hardly more noticeable than a metal corner bead. Base, picture mould, stool and apron are kept to a minimum in width; flush type Rezo doors maintain the simple treatment. The finished result as seen on page 70 is modern in appearance, easy to clean and subject to a minimum of structural defects.

The three houses on page 71 present three attractive exterior variations of the floor plans which are shown above on the same page. The layout is very efficient and combines modern livability with economy of construction. Plywood has been used as described in this article; the house in the foreground with plywood still exposed will receive a veneer of Brickote. These houses were erected according to "Master Built" specifications, an outline of the carpentry specs being as follows:

**FRAMING LUMBER:** Framing lumber, in general, unless otherwise indicated on plans, shall be of the following sizes:

- (a) First floor joists shall be 2 x 10 spaced 16" o.c.
- (b) Ceiling joists shall be 2 x 8 spaced 16" o.c.
- (c) Main rafters joists shall be 2 x 6 spaced 16" o.c.
- (d) Studding joists shall be 2 x 4 spaced 16" o.c.
- (e) Bridging joists shall be 1 x 2 spaced White Pine

**WALL PLATES:** Place 2 x 8 wall plates on top of all basement walls and assist the mason contractor in leveling in a bed of cement mortar.

**JOISTS:** All joists to be sized to width and to be framed on the ends with material of same size as joists.

Trimmers and headers of double joists shall be put around all chimneys, stairway or fireplace openings. Place double joists

(Continued on page 120)

# Cut Costs with this MODERN *Monarch* Portable TREADLE SAW



No. X23 - for all ordinary rip and cut-off work. Sturdy—Compact—Self-Contained

**\$126.50**

Complete (without motor)

f.o.b. Hackettstown, N.J.

Machines must take the place of hand labor nowadays if you are to turn your quotations into orders. This machine quickly pays for itself in time and labor saved . . . Entirely portable,—take it with you to the job . . . Tubular construction makes it light yet strong.

Available for electric or gasoline drive. Saw frame easily swung by hand lever or foot treadle, and saw locks in any desired position.

Send for folder on this and other Monarch Woodworking Machines.

**AMERICAN** SAW MILL MACHINERY CO.  
Makers of Woodworking and Saw-Mill Machinery  
60 MAIN STREET HACKETTSTOWN, N. J.

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**LASTING  
BEAUTY AT  
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*Flexible*  
**WALL TILE**

Tile-*Tex* Decorative Wall Tile is easily applied in old or new buildings. Made in a wide range of colors and gives a permanent wall of lasting beauty at low cost. Ideal for Bathrooms, Kitchens, Stores, Barber Shops, Beauty Shops, Public Buildings, Restaurants, Bars and Lobbies.

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Write us today stating whether you are interested in a dealer proposition or if you want information for prospective home builders. Free literature will be sent promptly.

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*Decorative* WALL TILE  
**TILE-*TEX***  
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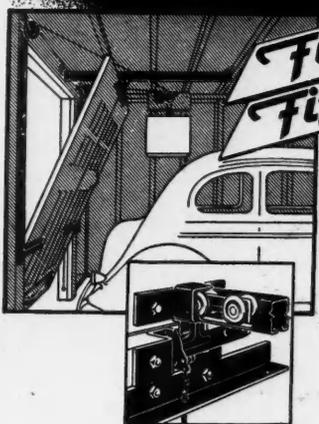
**JAEGER**  
-the Half-Bag Trailer with Pneumatic Tires, Timken Bearings and "V" Bottom Dual Mix Drum

Latest high speed model of world's most popular mixer. Built for faster hauls, higher production, longer life than ever before. Get new Catalog and prices, all sizes.

**THE JAEGER MACHINE CO.**  
521 DUBLIN AVENUE  
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RED KING 75-105  
MONTHLY TRAILER

## ALLITH DOOR HARDWARE



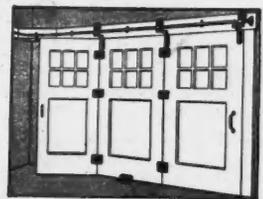
*"Fifty  
Fifty Push-Over"*

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of Its Class . . .**

Swings the garage door hardware business YOUR way . . . because it gives smooth-working efficiency, durability and satisfaction at a price your customers are ready to pay. ALLITH quality in every detail, too. "50-50" has been a heavy seller all this season. Let it get business for you.

### Hardware for any DOOR

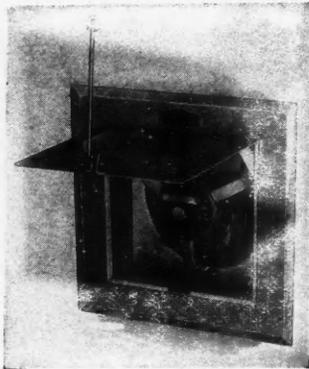
Complete sets for over-head, round-a-corner, folding-sliding and straight sliding doors of all sizes and types, as well as a full assortment of hangers, track, hinges, latches and all door hardware. ALLITH has been a leader for 36 years.



**WRITE FOR THE NEW CATALOG**

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QUIET**

*Buffalo*

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Ventilating  
FAN--**

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Branch Offices in Principal Cities  
In Canada: Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

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*Harbord*



**THE OUTDOOR PLYWOOD**

Communications addressed to Harbor Plywood Corporation in any of the following cities will receive prompt attention.

BRANCHES: Atlanta, Chicago, Indianapolis, Milwaukee, Philadelphia, Pittsburgh, Cincinnati, Louisville, Jacksonville, New Orleans.

REPRESENTATIVES: Cleveland, Columbus, Toledo, Baltimore, Washington, D.C., Worcester, Kansas City, Omaha, San Francisco, Los Angeles, Billings.

**HARBOR PLYWOOD CORPORATION**

(AB) Hoquiam, Washington

Please tell me what Super-Harbord can do for a live builder or dealer.

Name.....

Address.....

Builder.....

or Dealer.....

## Durbin Plywood Houses

(Continued from page 118)

under all partitions running parallel to same and where these partitions contain heating ducts, vent pipes, etc., set the joists 3½ inches apart, well blocked and spiked together. In this case, double joists shall be used on each side of openings. Provide any other framing required to make a complete job.

**BRIDGING:** All rows of joists 12 feet and under shall be bridged, with 1 row of bridging nailed with 2 nails at each end of bridging; spans of joists over 12 feet to have 2 rows of bridging.

**STUDDING:** All outside and inside corners to be formed with three pieces of 2 x 4 spiked together. Plates to be 2 x 4, doubled at top on all partitions and so installed as to tie into intersecting partitions.

**SUBFLOORS:** All subfloors are to be 5⁄8-inch oil treated five-ply fir plywood.

**SHEATHING:** Cover all exterior walls with 3⁄8-inch three-ply plywood, with all joints broken on studding or plates. Same shall be nailed with 6d "box" nails 6 inches on centers on each studding.

**ROOF BOARDS:** Cover all roofs to be shingled with 1 x 6 boards or shiplap No. 2 Y.P. laid tight for asphalt shingles.

**ROOFING:** Roof of house to be covered with 235 lb. double coverage asphalt shingles. Color and design to be selected by the owner.

**EXTERIOR TRIM:** All exterior trim unless otherwise specified or marked on plans to be No. 2 Idaho White Pine for painting.

**EXTERIOR DOOR FRAMES:** All exterior door frames are to have 1¾-inch White Pine jambs rabbeted to the thickness required for doors, as shown on plans; where brick moulding is required for masonry walls the same shall be of proper thickness to receive 1½-inch screen or storm doors and where same are set in frame portion of the house they shall be 1½-inch casings.

**SASH:** All sash are to be Non-Stick Sash as manufactured by the Currier Lumber Co., construction with metal lined jambs, heads, and weatherstrips. Provide same with Pullman sash balances and building wall as per full sized details on drawings.

**EXTERIOR DOORS:** All exterior doors to be of sizes and design shown on plans, to be manufactured from clear White Pine and to be 1¾-inches thick.

**INTERIOR DOORS:** Interior doors on all floors above basement to be 1¾-inch fir slab doors.

**FLOORING:** (a) Flooring for all rooms on first floor except where specified for other materials than wood to be 2¼-inch face select Red Oak. (b) All floors specified for linoleum to have 5⁄8 x 4 No. 2 Yellow Pine flooring.

**OTHER INTERIOR TRIM:** All interior wood trim to be clear Yellow Pine. Door and window trim to be metal trim as indicated on plans.

**BASEMENT AND ATTIC STAIRS:** Stairs to basement to be plank stairs as indicated on plan. Stairs to attic to have 7⁄8-inch stringers, treads and risers. Same to be No. Y.P. sanded.

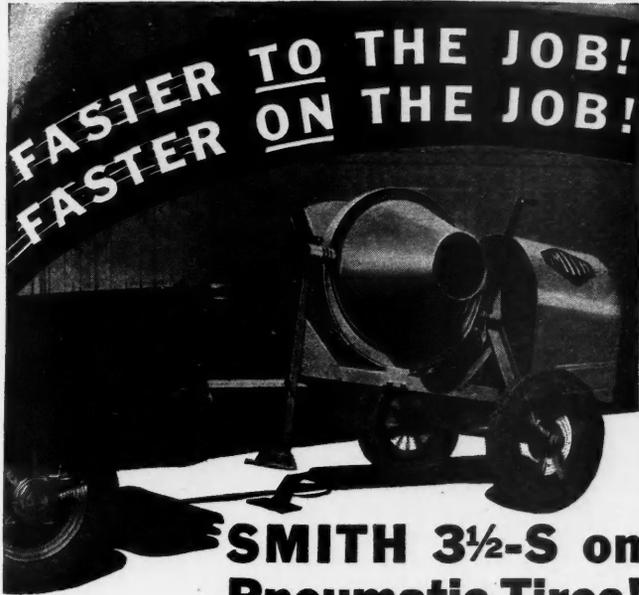
**KITCHEN AND OTHER CASES:** Kitchen and breakfast nook cases are to have 2-inch hinge stiles and 2-inch center stiles.

All cupboard doors are to be ¾-inch plywood flush as shown on plans, rabbeted on all sides for offset hardware. In every case the doors shall be made for sizes to fit the opening rather than adjusting the width of the stiles to fit the doors.

All drawers to have 7⁄8-inches side and back, lip front and ¼-inch veneer bottoms.

**EXTERIOR WALLS:** All exterior walls to be covered with Johns-Manville, Carey, or equal asbestos shingles applied according to manufacturer's directions.

**INTERIOR WALLS:** All interior walls and ceilings on first floor to be covered with ¾-inch Fir plywood, same to be laid over patented "Furstix" strips. "Furstix" strips to be nailed to studding and veneer to be glued to "Furstix" with "Lauxein" glue.



**SMITH 3 1/2-S on Pneumatic Tires!**

**S**PEED up small concrete jobs with this fast 3 1/2-S Tilter. It's light weight — well balanced — quickly portable to the job — and equally fast on the job. Equipped with spring-mounted axle, roller bearings, handy feed chute, Smith end-to-center mixing action, "tilt and pour" discharge, and a choice of pneumatic tired wheels, cushion tired wheels or steel wheels. Other small Smith Mixers in 2 1/2-S, 5-S, 7-S, and 10-S sizes. Write for literature.

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THE BOULDER DAM MIXERS

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WITH **PECORA COMPOUND**

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Attach letter stating age, employer's name and address and that of at least one business man as a reference.



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Architecturally correct in every detail SAMSON COLUMNS are built to last as long as the house—only the finest fir is used in their construction. These columns simplify your porch construction problems. There is a SAMSON COLUMN for every need. See them at your dealers or write us for descriptive literature. We manufacture Columns, Porch work, Door Frames, O. G. Fir Gutter and Fir Finish. SAMSON COLUMNS can be had with or without taper.



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TACOMA, WASHINGTON

## LETTERS from Readers on All Subjects

Facts, opinions and advice  
welcomed here

### Finds Homes Cost Less Today

San Francisco, Calif.

To the Editor:

Just received your "Building Outlook Letter" entitled "An Answer to Criticisms That Building Costs Are Too High." (Editorial pages 45 and 46, July *American Builder*.) Incidentally, I take a great deal of interest in all your building letters as well as the *American Builder* which I find unusually instructive and suggestive with a very noticeable improvement in successive issues; and I utilize the same continually in my numerous contacts with prospective and actual homeowners seeking up-to-date instructive information.

Just lately a local financial publication issued a circular stating that the noticeable present slacking up of home construction was due to the drastic advance in labor and material costs that go into a building. It came to me very forcibly that this was an erroneous report, although the buying public at large may believe this is correct, but overlook the fact that they invariably were comparing costs prevalent during the depression period, when materials were sold below actual costs, and labor was willing to accept almost any wage and that majority of jobs were taken at a loss to the contractor, that is to the extent that his profit was nil, being usually satisfied to keep busy.

During the period from 1925 to 1930 inclusive I personally designed and constructed some 1100 homes, the majority being speculative. We sold the homes usually before actual completion and we had no trouble in selling five and six room homes, modernly equipped, including land, at prices from \$10,500 to \$12,750 and in some cases up to \$16,500. Of course, the majority of these homes were financed with a bank and carried a second mortgage, and in some cases a third mortgage. The owner absorbed in the building costs, expensive advertising, discounting of second and third mortgages, selling costs and a substantial profit to provide for opening and developing later properties.

I could, with present building costs, duplicate any of these homes, at least twenty to twenty-five per cent less cost and at the same time following modern and improved building practices giving them greater value.

There are available now homes in the adjacent territory of very attractive designs, modern equipment, well constructed and more cheaply and safely financed, selling for \$12,500, that would have sold at a price up to \$18,000 during the predepression period.

If I personally required a home at present, I would "build now" and feel that I had made a very wise investment, that in case of a resale would net me a profit within the next few years.

I grant that efficient labor is not now available to the extent that it was some years ago, but with modern mill operations, and improved equipment on the job, this lack is overcome.

I therefore substantiate the statements from other localities as outlined in your editorial.

CALIFORNIA REDWOOD ASSOCIATION  
By L. J. Klein

### A "Job" for Every Building Industry Man

North Tonawanda, N.Y.

To the Editor:

We want to congratulate you on your timely article in July regarding the criticisms that building costs are too high. No doubt these facts should be widely distributed and a definite drive put on to enlighten the public as to building costs. There is so much said about building costs being high that it has

(Continued to page 124)

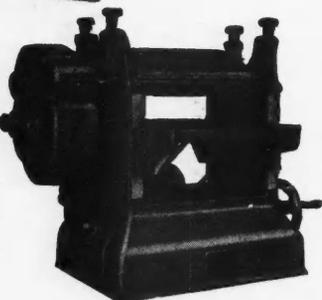
### 8 Machines in One!

8 full-sized machines, each independently operated. Does whole job from rough lumber to finest trim and finish.



MODEL "A"  
PLANING MILL  
SPECIAL

Rip and cross-cut saw,  
22" band saw, 12"  
jointer, tenoner, hollow  
chisel, mortiser and  
borer, swing cut off  
saw, reversible spindle  
shaper and sand disc.



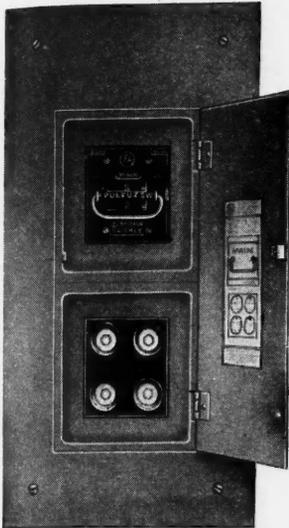
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SERVICE  
EQUIPMENT**

*Cat. No. SE63PF4F Service Equip-  
ment with Main Switch and four  
Lighting Branch Circuits*

HERE is one of the new FA dead-front, safety-type Service Equip-  
ments—designed for new sequence meter connection—  
equipped with New FA PULFUZSW Units designed exclusively by  
FA to take advantage of the newest development in ferrule type  
cartridge fuse clips. Assures low resistance at fuse clips and con-  
tinuous trouble-free operation.

Furnished in 30 and 60 ampere capacities—single and double  
pole—from 2 to 8 circuits, with range feeder circuit—or 2 to 12  
circuits, without range feeder circuit.

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space . . . FA quality throughout.

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found in up-to-date books. We will be glad to  
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MAN WANTED—Millwork superintendent,  
competent to handle moderate size shop and fa-  
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location. Good record and references required.  
Write Box 737, American Builder.



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stocks ready for Immediate  
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speed. When you need steel draw  
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This remarkable  
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Ideal for special  
mouldings and trims.  
Has complete range  
of cabinet and sash  
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builders all over the country are cutting costs, in-  
creasing profits with "Delta" tools which include:  
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Builders prefer them because of ease of installation. Owners prefer them because of their smooth performance.



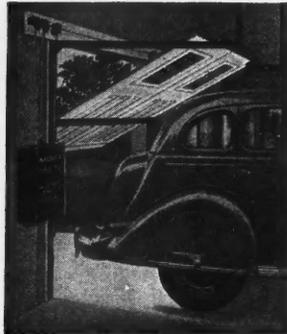
## WAGNER CANOPY

Converts old doors (one—two or more sections) into modern overheads. Also provides an economical one-piece door for new structures. Easy to install—weathertite—smooth operating. Write today for literature on Wagner Overhead Doors and Hardware.

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DEPT. AB. CEDAR FALLS, IOWA

## WAGNER GLIDE-OVER

Furnished complete with doors and hardware. Hand or electric operated. The "Glide-over" represents perfection in modern overhead door features. Easy opening—easy closing—weathertite.



Compare features, operating costs and results and you will choose the NEW

# SKILSAW FLOOR SANDER

It's faster . . . handles easily . . . leaves no wave marks in the finished floor. Advanced mechanical features insure many years of fast, trouble-free operation. It's a great value and a real money maker for contractors. The New SKILSAW Floor Sander is perfectly balanced . . . has just the right amount of weight for fast work. Surfaces right up to the quarter-round. Extra powerful motor. Grease-sealed ball bearing construction. Separate motor operates vacuum system—picks up all the dust. Patented clamp holds paper tight without wedges. Operates from any light socket.

Write for free demonstration.



SKILSAW, INC., 3314 ELSTON AVE., CHICAGO

## LETTERS DEPT.

(Continued from page 122)

discouraged many who were contemplating building.

Who are the organizations in the building industry which you think can put across the idea that building costs are much lower than they were back in '28 and '29 and that building right now is the real smart thing?

WEATHERBEST CORPORATION  
By W. W. Prescott, Asst. Treasurer

## "Basement or No Basement"—That Is the Question—SHAKESPEARE

Chicago, Ill.

To the Editor:

We have again forwarded the group subscription of five for the coming year, for *American Builder*. It is hard to estimate the value of the magazine, for even one article alone in many of the monthly issues is invaluable. It would be very costly if one were obliged to go out and dig up the facts.

In your July issue I am referring to the "\$1,000 More House for the Money," illustrated on pages 68-70. The basementless house gives a bigger construction saving percentage than I had been using in my argument for no basement. From architectural magazines and various articles I had obtained a six or eight per cent figure as the saving in low cost housing without a basement. The Olsen Construction Co., in their article, show a saving of a good 15 per cent on the \$6,500 house.

In view of this saving, how can an owner of a low cost house afford a basement? \$1,000 at six per cent is \$5.00 per month, year in and year out, during the life of the home. Rather a high interest charge for a basement when it is not needed for heating or storage purposes. It is acknowledged to be cheaper to build above ground than below, so the storage and utility rooms are furnished above ground.

Low cost housing will not come as quickly as it should because of following traditional custom, including basement, etc., and with the two million dollar advertising campaign of the gas people for the Chicago area, embodying recreation room in the basement, still later here.

We, of course, have no argument against a basement when the owner can well afford it, although even then we personally prefer to live above ground than below.

You are presenting both sides of the basement question, however, for your June issue features an installment, "Plan for a Modern Basement."

We are making good use of the Olsen Construction Co. article with our group and in connection with our monolithic face brick homes.

CHICAGO FACE BRICK BUREAU  
By Albert W. Luse, Secy.-Mgr.

## More Complete Building Figures Needed

Washington, D.C.

To the Editor:

There has recently come to my attention a copy of your Building Outlook Letter referring to the failure of the construction census to adequately cover the building industry.

The subject matter was of interest as indicating the surprising lack of statistical information concerning the building and construction industry, the welfare of which is so vital to general economic welfare.

It is our understanding that the Federal Government is spending upward of \$5,000,000 a year for statistical research in the field of agriculture and \$500,000 a year for statistical work concerning foreign and domestic commerce.

It is interesting to note that the appropriation for the collecting and analysis of statistics relating to construction and real property now available for the Bureau of Foreign and Domestic Commerce of the Department of Commerce is approximately \$12,000 per year.

On recommendation of the Department of Commerce, the President and the Bureau of the Budget approved and included in the Budget recently considered by the Congress an item

(Continued to page 126)



**MASTER STRIPS**  
keep the  
Weather  
out!

## Install MASTER METAL WEATHERSTRIPS

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DEALERS WANTED—Many territories still available in all parts of the country. Write for complete information.

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No. S-18 BARROW - - FOR CONCRETE

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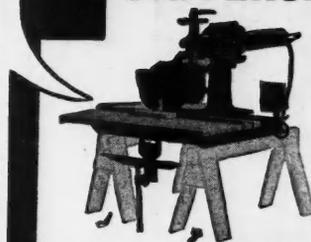
save time, labor—and therefore, money. Weather-proof insulation—for exterior or interior use. Write for *Precision-Built Home Plans* showing how you can build a six-room house complete—approved for FHA 20-year Mortgage—for around \$4000.

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Send for  
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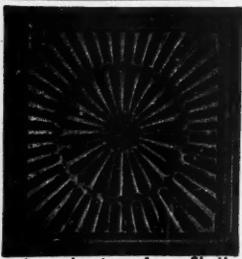
WHAT ABOUT

# FLOOR SANDERS?

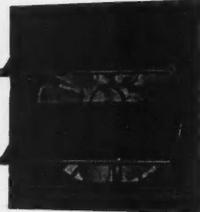
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## LETTERS DEPT.

(Continued from page 124)

which included approximately \$100,000 for the collection and analysis of statistics relating to construction and real property.

This appropriation was not approved by the Appropriation Committees of the House and the Senate. In explanation of the failure to take favorable action on the appropriation, the Chairman of the Senate Appropriation Sub-Committee offered the explanation it was considered that the activities covered by the appropriation had been adequately cared for by other appropriations made for the use of the Forest Products Laboratories.

As the latter appropriation and the work of the Laboratories refers to the physical testing of materials used in construction work while the appropriation desired definitely referred to statistical research there would appear to be a fruitful yield for educational activity on the part of the construction industry to make clear the importance of the industry to the general economic welfare and the necessity for complete and authoritative statistics as a basis for intelligent and comprehensive planning, both public and private.

CONSTRUCTION LEAGUE OF THE UNITED STATES  
By Theodore Irving Coe, Assistant Secretary

### From a Fire-Safe Fan

Binghamton, N.Y.

To the Editor:

I wish also to add to the letter of V. S. Lewis, of Stewart, Nev., printed under the caption of "Favors 'Fire-Safe' Materials" in the letters department, June, a loud and sonorous "Amen."

There is apparently a dearth of information on this subject. I am interested in small houses of concrete or cinder blocks with quality appearance to sell at \$4,000 and eliminate the painting and upkeep necessary in frame construction. In this vicinity the mention of a house without a basement causes a contractor or architect to throw up his hands in horror. Yet I have read *American Builder* five or six years and in your pages I find much to recommend such construction. I would appreciate any information on the subject or source of information to which you can refer me.

LOREN H. TODD

### Wants to Cool Off

Tucson, Ariz.

To the Editor:

I like your magazine but DO wish you would tell us more about what is being done with fireproof home construction with materials such as Dunbrik, Dunstone, and other forms of concrete construction.

It's funny you have so many ads on heating equipment in the June issue, but none on cooling systems—which is what we are interested in.

DR. C. J. WILKERSON

### Stairway Data Wanted

Houston, Texas

To the Editor:

I would like to secure information or studies on stairways for two-story duplexes, apartments and residences, but particularly duplexes. The feature I am most interested in is the location of stairs with respect to the general room arrangement.

A few years ago you published several articles on stairway details, i.e., details of the stairway itself, and I got quite a good deal of information therefrom, but that is not what I want now. In the case of duplexes we tried to camouflage the fact that the building is a duplex, and if possible locate the stairway so that it will not be conspicuous and not indicate a second main entrance; at the same time to place it so that it will interfere as little as possible with rooms on first floor and yet give the entrance to second floor in a way that it will not cut off some of the rooms.

E. E. WORTHING, Builder

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*Instructor, Building Vocational High School, Cincinnati, Ohio*

This forthcoming textbook will set forth the latest principles of dwelling construction, together with the related studies of drawing, mathematics, English composition, civics, and first aid. The text is thoroughly illustrated with photographs and detail drawings, many of which have appeared in "American Builder and Building Age." The manuscript has been carefully checked by a former contractor, and combines the practical outlook with the author's extensive trade teaching experience.

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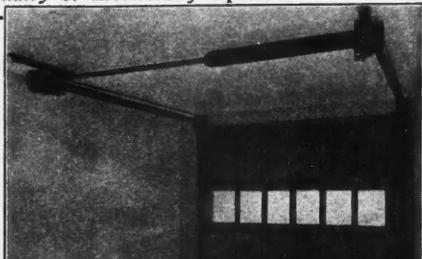


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## CONTRACTOR'S EQUIPMENT

**315A—Electric Drills, Saws, etc.**—"Stanley Electric Tools" is an attractive folder giving important features of all Stanley electric tools for use by carpenters and building contractors. "Stanley Router-Shaper Catalog No. 61" presents this popular equipment with its various attachments for use by craftsmen and carpenters.—STANLEY ELECTRIC TOOL DIVISION, New Britain, Conn.

**316—Crescent Wood Workers**—A new series of catalogs presents today's extensive line of Crescent Wood Working Machinery including the Crescent universal wood worker, Crescent variety saws, Crescent band saws and Crescent planers. The first of these having to do with the Crescent universal wood worker is a 24-page catalog, illustrating all attachments and showing how five men may conveniently work on it at one time, each performing a different wood working operation.—THE CRESCENT MACHINE CO., Leetonia, Ohio.

**317—Syntron Portable Electric Saws**—New data sheets present illustrations and complete mechanical specifications for the new models of these well known saws; now available in both tilting base and plain base models.—SYNTRON COMPANY, Pittsburgh, Pa.

**318—Texcrete Block and Brick Plant**—New folder headed, "Big Rewards Offered Men Ready to Grasp Rare Opportunity," illustrates a present market for concrete block, brick and roof tile, and illustrates the Texcrete color fusing machine and the block and brick plant with overhead mixer and tamper developed to serve this market.—CONCRETE EQUIPMENT CO., Holland, Mich.

**319—New Trailer Mixer**—"Kwik-Mix 5-S Trail-Mix" is a bright, interesting 4-page circular illustrating all mechanical details and giving specifications of this new model.—KWIK-MIX CONCRETE MIXER CO., Port Washington, Wis.

## OF SPECIAL INTEREST

**320—Square D Multi-Breaker**—Every home detests the nuisance of blown-out fuses. Houses equipped with Square D Multi-Breakers have no fuses. The flip of a lever restores the service. A new bulletin for architects and builders illustrates the Multi-Breaker and explains its simple wiring requirements.—SQUARE L CO., Detroit, Mich.

**321—Plan Book**—"The Kelvin Home Package" is a big de luxe portfolio of 32 large pages illustrating the complete line of Kelvin Home designs and discussing every important detail of construction to achieve satisfactory all-weather air conditioning. Kelvinator home equipment is included in supplementary pages.—KELVINATOR DIV., Plymouth Road, Detroit.

**322—Anthracite Heat**—"A Man's Home Is His Castle" is a 32-page booklet of unusual interest, discussing the planning of a home, the selection of the heating plant and the reasons for favoring anthracite fuel, these being listed as comfort, safety, economy, cleanliness, steady heat, abundance of hot water and the convenience of full automatic control. A valuable booklet, both for property owners and builders, prepared by —ANTHRACITE INDUSTRIES, Inc., Chrysler Bldg., New York City.

**323—Basement Plans**—"27 Ways to Plan a Basement" is a 32-page illustrated portfolio presenting results of a nation-wide architectural competition. Recreation, laundry, game and furnace rooms are shown,

together with details of coal stoker installation, including the Coal Flow.—IRON FIREMAN MFG. CO., 3170 W. 106th St., Cleveland, O.

**324—Weatherstrip Data Book**—"Master Metal Strip Service" is offered as a loose-leaf portfolio of 66 pages in Fabrikoid binding, and is a combined catalog and data book on metal weatherstrips, thresholds, kickplates, edgings, stair nosings, stainless steel mouldings, Venetian blind guides, screen guides, caulking compounds and special tools for installing these products.—MASTER METAL STRIP SERVICE, 1716 N. Kilbourn Ave., Chicago.

**325—Copper, Brass and Bronze**—"Portrait of a Rust-Proof Home" is an interesting little 16-page brochure covering cellar waterproofing, termite shields, flashings, leaders and gutters, trouble-free piping, bronze screens, etc.—THE AMERICAN BRASS CO., Waterbury, Conn.

**326—Brick House Plans**—A new 4-page data sheet illustrates a well designed practical brick home built in Cleveland in 1937 for \$5,980. Other interesting brick house plans and suggestions are included, as well as itemized cost figures.—THE NATIONAL AUTHORITY ON BRICK CONSTRUCTION, Brick Manufacturers' Assn. of America, Cleveland, O.

**327—Concrete on the Farm**—"Step Up Profits with Improvements That Pay" is the headline of a new 8-page folder illustrated with actual photographs of recent farm improvements of concrete. Many good ideas here for contractors, builders, architects, dealers, as well as for property owners in the country.—PORTLAND CEMENT ASSN., 33 W. Grand Ave., Chicago.

## BUILDING MATERIALS

**328—Gypsum Wallboard Improvement**—"For Better Wallboard Construction, a Perfect Low Cost Joint Concealment and Reinforcement" is a new 6-page data sheet presenting (1) the new recessed-edge Sheetrock suitable for horizontal or vertical application, (2) the new Perf-A-Tape reinforcement for joints, and (3) the new USG method of decoration, Textone for texture and Texolite for color.—UNITED STATES GYPSUM CO., 300 W. Adams St., Chicago.

**329—Truscon Hollow Partition Studs**—New information on this material and system of construction is presented in a 4-page data sheet which illustrates these studs and presents specifications for their use. Complete with detail drawings.—TRUSCON STEEL CO., Youngstown, O.

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

(August, 1937)

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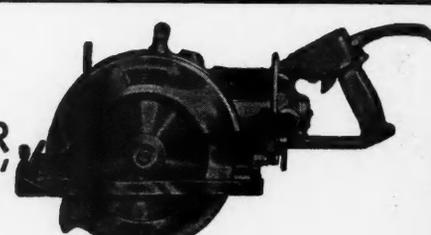
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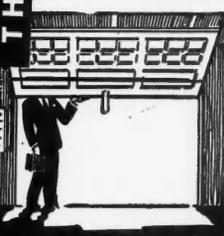
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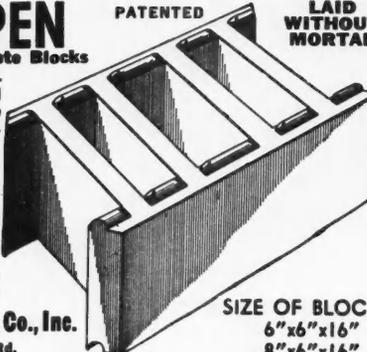
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