



CRISP, trim feeling in \$8,000 Cleveland home, E. Milton MacMillen, architect, F. J. Welz, builder.

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and Building Age

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JUNE, 1937

59th Year

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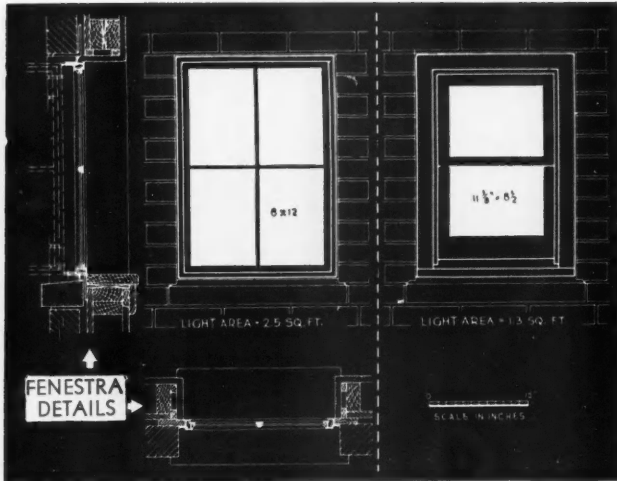
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Why not GET ALL THE LIGHT AND AIR

you PAY for?

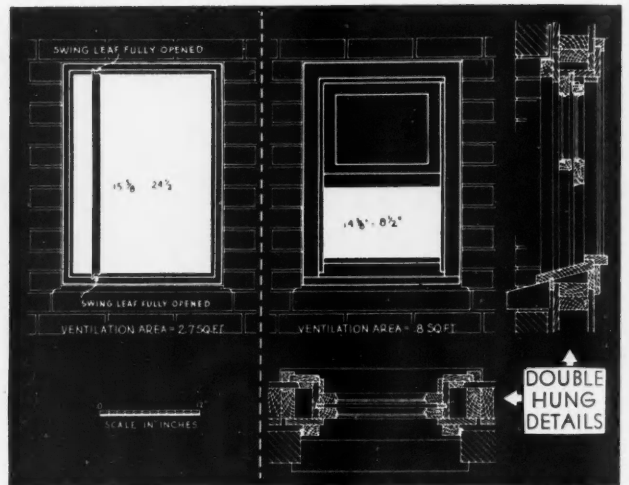


Compare the Light Areas: Fenestra Casement, left; ordinary double-hung window, right.

You buy windows to admit daylight and fresh air into your home, don't you? Light and air make your home livable—make it salable. You're paying, not for the windows themselves, but for the convenience and comfort they provide. Then why not get all the convenience and comfort you can for your money?

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The Fenestra Casement delivers 2.5 sq. ft light
 The Ordinary Double-hung Window delivers 1.3 sq. ft. light



Compare the Ventilation Areas: Fenestra Casement, left; ordinary double-hung window, right.

The Fenestra Casement provides 2.7 sq. ft. of ventilating area

The Ordinary Double-hung Window provides .8 sq. ft. of ventilating area

In addition, the Fenestra Casement PROJECTS into the air stream outside the building, deflecting additional air currents inside, a service which the ordinary window cannot render.

Also, Fenestra Casement gives you finger-touch operation; easy washing from the inside; inside, bronze mesh screens; inside storm windows for winter.

And the surprising thing is, that you can use Fenestra Casements, even in very small homes, usually at no greater cost than ordinary windows.

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THE COMPLETE WINDOW

Fenestra

PUBLISHER'S PAGE

Employes or Customers?

WE tried to emphasize on this page last month that *businessmen*, large and small, must remedy the discontent of the masses which is promoting government and labor union attacks on all business that threaten the destruction of the system of private enterprise.

Why businessmen? Because politicians and labor leaders are engaging more and more in competition with businessmen for the favor of their *employes* and *customers*. In order to survive and succeed businessmen must meet every kind of competition, including this. Either they will meet it, or politicians and labor leaders will in future run business—and when they run it there won't be any efficiency or profits in it.

BUSINESS can satisfy its *customers*—who include everybody—only by providing them increasing amounts of goods and services that they want at prices that they can and willingly will pay. They are the *market*, and no company or industry can long dictate to its market. Buyers can, and often do, strike; and when they strike there are depressions, unemployment for labor and losses for business.

Apparently the principal competition to which the management of industry is subject at present is for the favor and co-operation of its employes. Consequently, many advances in hourly wages are being granted. But any advance in *hourly wages* in excess of the advance in *hourly output per employe* increases operating costs, and therefore either cur-

tails profits or necessitates *advances in prices* that customers must pay.

There is only one means by which, even temporarily, to satisfy both employes and customers. This is to acquire and use improved machinery and adopt improved methods that will *increase average output per employe per hour*. Only by this means can production costs be kept down in spite of advances in hourly wages; and only by keeping down production costs can profits be made while charging prices that will satisfy customers.

FOR any industry or all industries merely to raise hourly wages will not solve present economic and social problems. The direct and indirect customers of every industry are much more numerous than its wage-earners, because a large part of the buying public—farmers, for example—*do not work for wages*, and, therefore, are not benefited, but, as customers, may be injured, by advances in them.

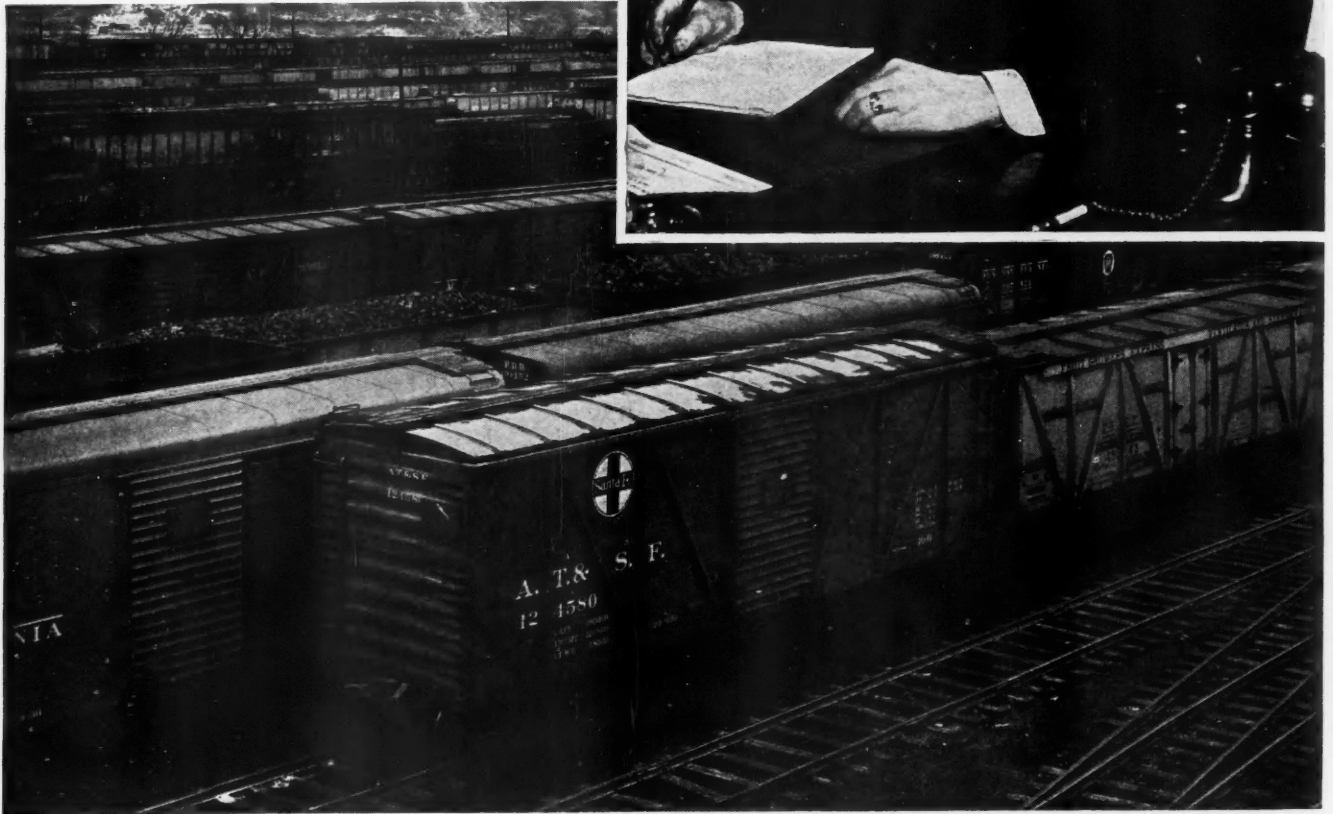
Its customers, not its employes, are the most important problem of every industry. Only satisfied customers will provide business that will afford the workers of an industry with good jobs and its owners with good or any profits.

Labor and its leaders imperatively need to learn this fundamental economic fact. Many managers of business apparently need just now to be reminded of it.

Samuel O. Dunn

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out of hats”*



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AND BUILDING AGE

Build Up, Not Down

THE Federal Housing Administration has recently issued booklets giving the Minimum Construction Requirements for New Dwellings. The requirements contained in these booklets vary according to the territory which they cover. Local building practices have made it necessary to confine the scope according to sectional differences in practice.

In setting up these requirements, the intention was not to provide a recommended specification for housing construction but merely to define the *lowest construction limits* which would have to be followed to obtain FHA mortgage insurance; and they do not eliminate the necessity of providing complete specifications in connection with new construction. It is positively stated that "these requirements are not to be built down to but form a basis to build up from, and this administration (FHA) will recognize and give credit to construction that exceeds these minimum construction requirements."

It is the purpose of this editorial merely to call attention to the fact that such requirements have been set forth. *American Builder* has followed a consistent policy of advocating increasingly better construction, and for this reason will not devote space to publishing these minimum standards. They are available in pamphlet form at local FHA offices to anyone interested.

Return of Shoddy Building

With a steadily increasing volume of construction such as has been experienced in the last three years, it was to be expected that the jerry builder would again start operations. This small group has, unfortunately, no interest in the long term outlook of the industry. They are generally those attracted from practically every other line of business who see a golden opportunity in a reviving field and welcome every chance to build to minimum standards and lower. Their primary object is a quick profit. Building, of course, is not the only business which suffers a periodic influx of undesirables. Sad to say, it has without doubt received more unpleasant publicity on this score than most businesses; and this has reflected on the honesty and integrity of the great majority of reliable builders, both contract and speculative.

Poor specifications are the jerry builders' stock in trade and represent the major point of departure from good building practice. Frequently shoddy workmanship follows; but, denied a good standard, it is impossible

to produce honest construction from dishonest "specs." The reputable sub-contractor and workman who has been trained to craftsmanship and takes pride in doing his job properly has only one alternative—that is, to refuse to bid on such construction as is obviously substandard.

Curbing Jerry Building

More inspection on the job has been advocated by many as a cure-all to curb poor construction. Inspection is one of the necessary phases of building, just as in other lines, to check the human element which has always been subject to mistakes in judgment. However, constant inspection should not be required to assure careful fulfillment of a contract. If there need be more inspection, it should be on the builder's past performance, ability and qualification.

This brings up the question of licensing or some form of certification. These approaches are not new, either in the building or other fields. Groups serving the public such as lawyers, doctors, architects, real estate brokers, etc., generally have state registration and also their associations or societies, national and local, which require definite qualifications for membership.

Some states have established builders' licensing and others are working on such legislation. A varied success has been reported, and there doubtless can be improvement in the method after wider experience. Likewise associations are being formed by local groups whose purpose is to confine membership to reliable men subscribing to the best practice. Their objectives entitle them to full support and encouragement. But as a final word of warning—those responsible should not confine membership to a small group seeking to limit the field for their personal benefit; all those having a reasonable claim on eligibility including the younger men should be welcomed into such organizations.

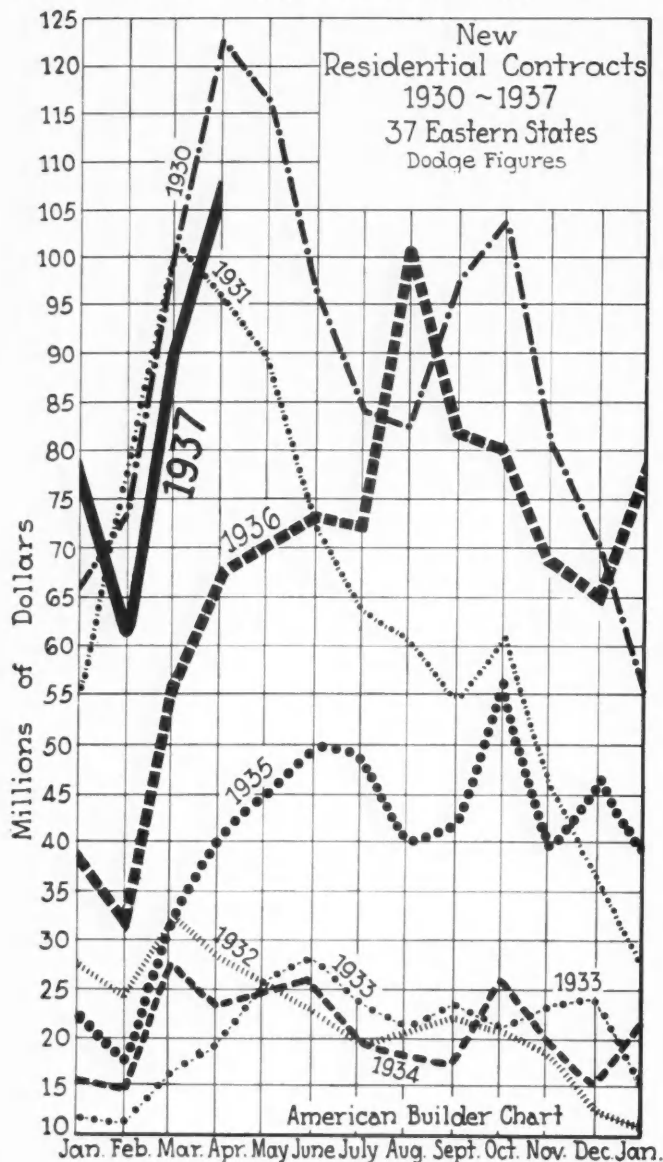
BEST SINCE 1930

IN the closing days of 1936, when this publication was peering ahead into the new year, balancing human impulses and known home building needs against political uncertainties and rising costs, all in an effort to forecast the probable volume of 1937 residential construction, the prediction was made (in the January issue) that this

nation would experience a rise in home building in 1937 of from 65 to 100 per cent over the 1936 volume.

The first four months of the new year are now on the record; and, taking merely the reported contracts as tabulated by F. W. Dodge, residential building has run 78 per cent ahead of the first four months of last year. Since current studies by several of the Government bureaus concerned with home financing and building show that the rate of building *per capita* is largest this year in the smaller cities and towns, it is fair to conclude that these Dodge figures should be substantially increased by those interested in complete building data, including both reported and "hidden market" contracts and projects. So the total increase over the first four months of last year is no doubt more than 78 per cent.

The diagram on this page shows the monthly volume of home building contracts for each year, January, 1930, to April, 1937. Note that from the three years of depression-low (1932-4), there has been a strong and steady improvement without backset, bringing the current April point right up to 1930. In fact, April, 1937, with \$108,204,400 in residential contracts for the 37 eastern states is the biggest month since May, 1930.



A continuation of this upward march is expected by this publication. In spite of the threat of strikes, lockouts and general turmoil, in spite of sharply increasing costs which are upsetting to confidence and at least temporarily paralyzing to the will to go ahead, we look for a continuing rise in the public demand for better housing and more modern homes. This demand seems too universal and too insistent to be long denied. Millions of old properties to be modernized and new homes in every small community desired and needing to be built will carry building activity onward and upward.

FIREPROOFED WOOD

NO industry is large or powerful enough to continue leadership without adjusting itself to meet the march of progress. Probably the most recent noteworthy progress in the lumber industry has been in plywood, which is now enjoying increasing demand. Preservative treatments against decay saved the market for ties, poles and much construction timber, while creosoted wood piling still enjoys the confidence of engineers. Combustibility of wood remains a drawback for many uses for which it is otherwise ideally suited. Now comes U. S. Senate Report No. 184 on the "Morro Castle" disaster and recommends the *elimination* of woodwork on passenger vessels.

Senate Bill 1916 aims to carry out the recommendations of this Report and to outlaw the use of wood in ships. Will the lumber industry meet this challenge and purge itself of being "standpatters," fearful of acknowledging the weaknesses of its product and unwilling to meet the challenge of noncombustible materials?

Years have rolled by since the appalling Iroquois Theatre and *Morro Castle* disasters in which wood was blamed for the loss of so many lives; and yet during all this time fireproofed wood was available, though its feeble voice could not be heard above the roar of the substitute materials which gloated over each failure of wood. More than a year ago the Underwriters Laboratories placed their seal of approval on fireproofed wood as permanently noncombustible.

On every large modern passenger ship built since 1930 fireproofed wood has been used and this includes the U. S. liners "*Manhattan*" and "*Washington*." Complete information on fireproofed wood is available to acquaint all specifiers and users with this advancement of science. With products recognized by fire insurance interests the lumber industry can build for itself a permanent market in the field of noncombustible structural materials. Will the industry be able to muster enough votes in Congress to prevent wood from being outlawed on American ships?—or will it be more reasonable to go along with the march of progress and present a solid front for wood from which combustibility has been removed by chemical impregnation? The home and light commercial building industry is equally concerned with ship building to see fireproofed wood utilized in an increasing volume.

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"ACCURACY always" is the motto of this electric saw seen in operation in the new 103-home project of Levitt & Sons in Westchester County, N. Y. Practically all lumber for the job is cut here.

Photos by John Gass

"HEADWORK" QUALITY

A Camera Study of the Construction Methods of One of the Nation's Most Successful Builders. How Levitt & Sons Achieve Quality by Forethought and Thorough Study of Modern Materials

WHEN the *American Builder* editor and cameraman visited Levitt and Sons new 103-home development near Scarsdale, N. Y., some twenty houses were in various stages of construction. It was possible to get a quick birdseye view of the Levitt construction methods from foundations to roofs.

This new Levitt development marks the entrance of a most successful Long Island builder into exclusive Westchester County. Houses being built range in price from \$8,000 to \$16,000, on plots 60 to 100 feet wide. There is talk among the building crew of finishing the 103 houses by midsummer, and the rate of activity indicates that this may be possible.

One of the first things noted was a centrally located DeWalt Woodworker on which the bulk of the joists, rafters, bridging and framing for the job is cut. General superintendent Anthony Baker has prepared a chart of a typical house on which he indicates the principal framing members by letters—AA, BB, etc. It is a matter of a few minutes only to estimate the number of each type of member required for a typical house. These are cut accurately and squarely on the power saw and delivered to the carpenters ready for nailing in place.

About 100 men are employed in this Scarsdale development which has been given the title "Strathmore in Westchester." The assistant superintendent is Fred Callfield. These two men, with two carpenter foremen, run the entire job, which is, like all of Westchester County, 100 percent union.

Much has been written about the smartness and style of Levitt-built homes. The Levitt developments have been uncommonly successful. In addition, the firm uses and features prominently nationally advertised products, such as General Electric oil and gas



Every 4th Joist Doubled—

STANDARD LEVITT CONSTRUCTION procedure includes diagonal sheathing and flooring and No. 1 lumber throughout. The 2 x 8 second floor joists are doubled at every fourth member. Second floor bridging is power cut 2 x 3's of No. 1 spruce. A 3 x 10 solid header is seen over the arch, and doubled 2 x 6's over the door opening.

Framing members fit square and true because they were cut on a power saw.

furnaces, American Radiator radiant convectors, Johns-Manville insulation, Fenestra steel casements, Armstrong linoleum, Bangor slate roofs, Standard plumbing fixtures, etc.

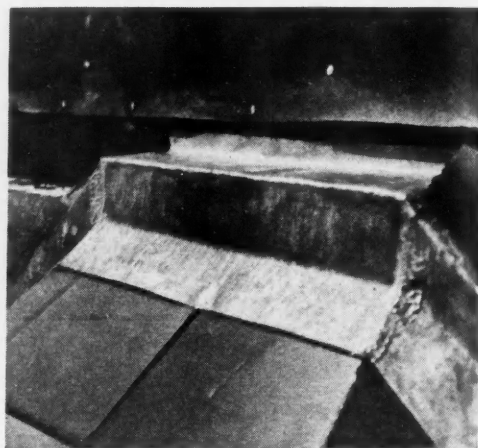
But what about the *hidden* construction features? It is the purpose of this article to describe these methods, and the accompanying photographs, taken at random and indicating typical operations, speak for themselves.

Levitt and Sons do not always use the most *expensive* materials. But it is apparent that they put quality products where they are most needed and will do the most good. They achieve quality also by headwork—by studying the characteristics of new materials and using them in the most efficient way. A small “research laboratory” has been set up to devise better methods and materials. In addition, a wealth of prac-



Efficient Radiators—

New type radiant convector radiators which provide maximum heating efficiency are recessed in wall. One-half inch gypsum board with a metal foil face is nailed to wall behind radiator. Front is exposed as shown. Simple wood mould is nailed to grounds around radiator.



Tight Flashing—

Heavy copper flashing is used at all junctions. Note how the above cap flashing has been built up 4 inches above slate so snow cannot back up behind. The 24-lb. building paper is brought well down, carefully lapped and nailed.

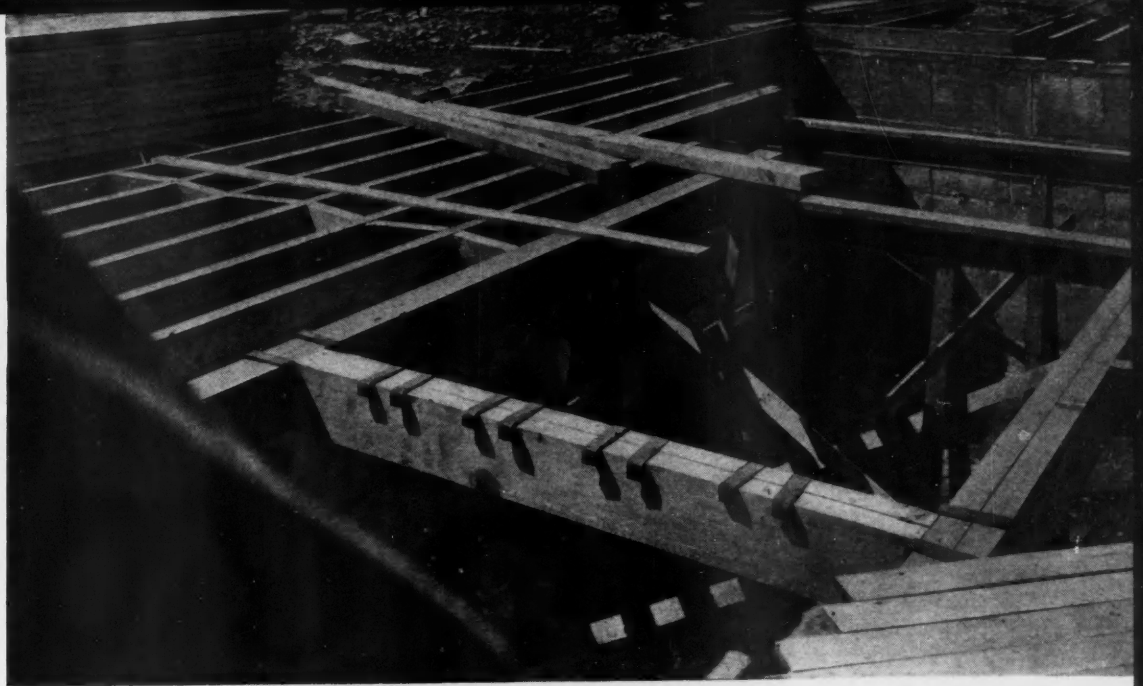
tical experience has been built up by construction men well grounded in the field and who have been with the firm many years. Following are highlights of the Levitt construction practices:

FOUNDATION AND JOISTS—High quality, watertight, solid concrete foundations are achieved using steel forms. First floor joists are of No. 1 3 x 8's on 16-in. centers. These are supported by steel I-beams supported by lally columns. A 2 x 6 plate is placed on the I-beam to equalize shrinkage.

BRIDGING IS UNUSUAL—It consists of 3 x 8 blocks cut at a slight angle on the power saw and fitted tightly between joists. These are, of course, not nailed up tight until the job is completely finished. A desirable feature of this type of bridging is that the blocks can be further tightened by the home owner with a few blows of the hammer at any time during the life

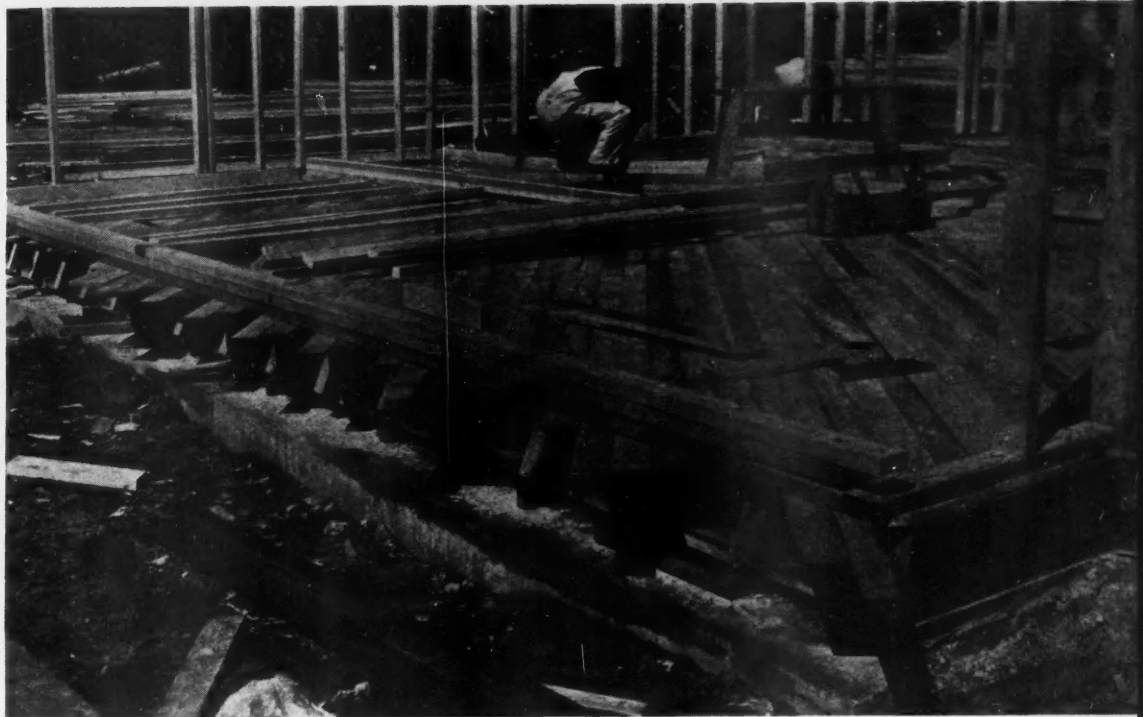
3 X 8 Joists—

The Levitt foundations are of high quality solid concrete over which are laid No. 1 quality 3 x 8 floor joists. These are supported in the middle by steel I-beams upon which a 2 x 6 is placed to equalize shrinkage. The bridging is 3 x 8 inch blocks cut on a power saw and placed at a slight angle to provide the maximum bracing effect. Bridging of this type can be easily and quickly tightened with a few hammer blows at any time in the life of the house.



Fire Cuts—

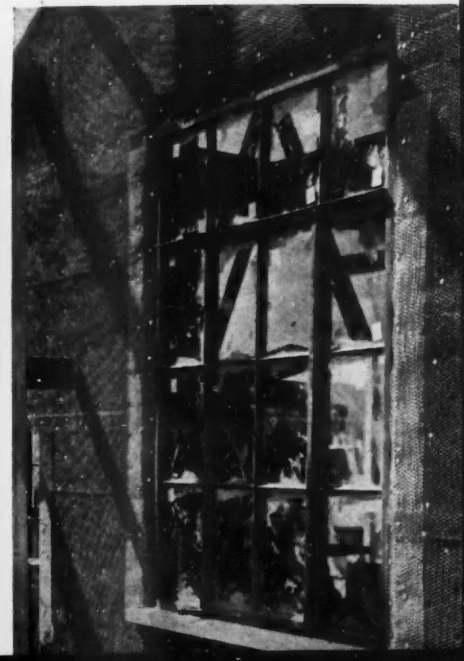
The camera shows in the picture at right how fire cuts have been made along the first floor where a brick wall is to be erected. In the foreground is also shown the half-lap joint of floor plate at the corner. Note the square-cut studding which were all precut on a centrally located power saw. The 1 by 4 flooring is merely tacked in place at first to allow for swelling and shrinkage until after plaster coat has dried. Boards are then tightly nailed, 3 nails to a board.



Air-Tight, Water-Tight Steel Windows—

Photos by John Gass

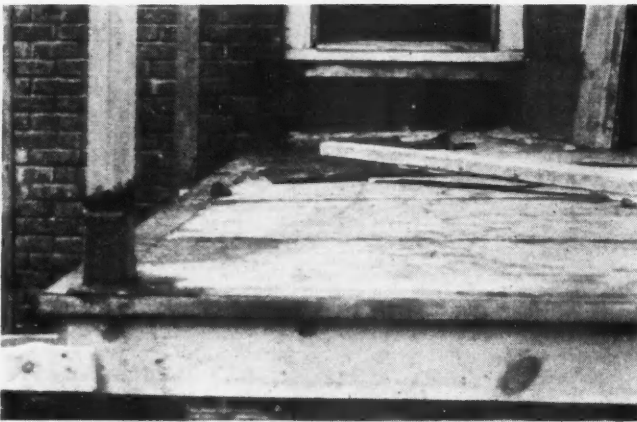
Three steps in producing tight steel windows are shown below. A Strip of Sisalkraft building paper is wedged into frame along with mastic before window is placed in opening. The 24-lb. felt building paper is brought up close to edge of window and a layer of black mastic smeared on, as indicated in picture at left below. The Sisalkraft is then lapped over the mastic and felt and tacked in place. The final step, metal lath is brought close to frame and thoroughly nailed.





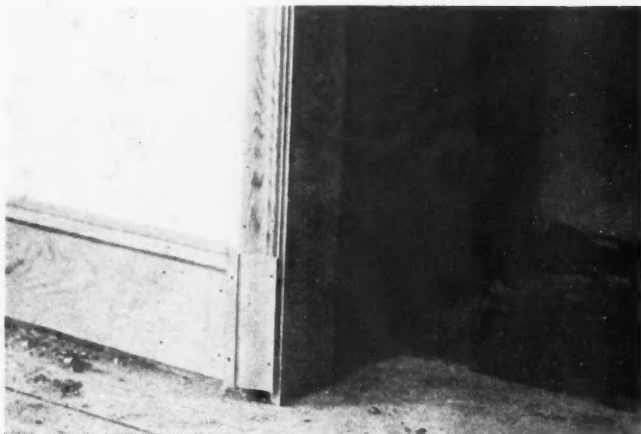
Non-Shrinking Header

The header over this bay window is built of two 2 x 8's between which is bolted a 1/2-in x 8 steel flitch plate. The plaster head is furred out to allow for shrinkage. The photo also shows use of insulating lath on exterior walls and perforated gypsum board on interior walls and ceiling. Full corner beads placed square and true have been set in place. Picture also shows how exterior building paper has been brought up inside window frame at bottom and tacked.



Waterproof Deck—

This second-story roof deck has a strip of copper flashing all around edge. Corner posts are set in mastic and copper flashed before being boxed.



No Floor Cracks—

A 1 x 4 ground insures smooth plaster. Base is nailed to this ground board. Flooring projects underneath baseboard so that no crack will be revealed by shrinkage. Base shoe is nailed to baseboard clear through to ground so that floor can move independent of shoe or base.

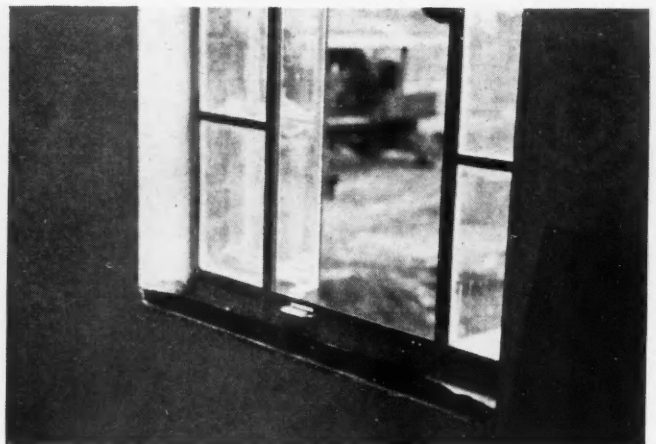
of the house. Second floor bridging is of 2-in. by 3-in. No. 1 spruce.

ROUGH FLOOR—Rough flooring is No. 1 four-inch boards laid diagonally. Flooring is merely tacked in place at first so that it can swell and shrink as necessary during construction of house. Just before finished floors are laid the rough flooring is tightly nailed with three nails to the board at every bearing point.

FRAMING AND SHEATHING—All lumber is No. 1 quality. Sheathing is laid diagonally. Second floor joists are 2 x 8's with every fourth member doubled. Headers over archways and doors are extra heavy—for example, two 2 x 6's over a 30-in. opening.

Headers carrying second story load such as over a bay window are built up of two 2 x 8's with a 1/2-in. by 8-in. steel flitch plate bolted between to eliminate sag or spring.

BATHROOM FLOORS—Levitt believes the usual 4-in. concrete deafening is an unnecessary load and
(Continued on page 146)



Copper Window Pan

Levitt places a copper pan at base of window under finished sill. This carries off any condensation to outside of exterior wall.



Popular on West Coast

See two following pages for photos and plans of this Los Angeles home by Leo Bachman, architect and Wm. Melanthin, builder.

California-Monterey House with Outside Fireplace Introduces 16-Page Section of Designs from West, East, South and North

CALIFORNIA-MONTEREY STYLE HILLSIDE HOUSE

Wm. Mellenthin, Los Angeles, Builder

Leo Bachman, Los Angeles, Architect

THIS two-story, hillside home overlooking Silver Lake, Los Angeles, is designed to take full advantage of the terrain and of the view offered on all sides. Entrance is on the upper floor, with sleeping rooms arranged on the lower level. There are four bedrooms and three bathrooms, one bathroom connecting with the service porch on the second floor. Wide overhanging balconies on both sides of the house give it an individual setting, while the barbeque fireplace in a forecourt which slopes

downhill, is another interesting feature. The same chimney serves flues from two other fireplaces, one in the corner of the master bedroom, the other in the living room as seen below.

Construction Features—Foundation: Continuous concrete footings; Exterior: Lower story brick, Upper story knotty pine vertical boards with antique white finish; House painted white with golden yellow trim; Roof: Red cedar shingles with tile ridge.

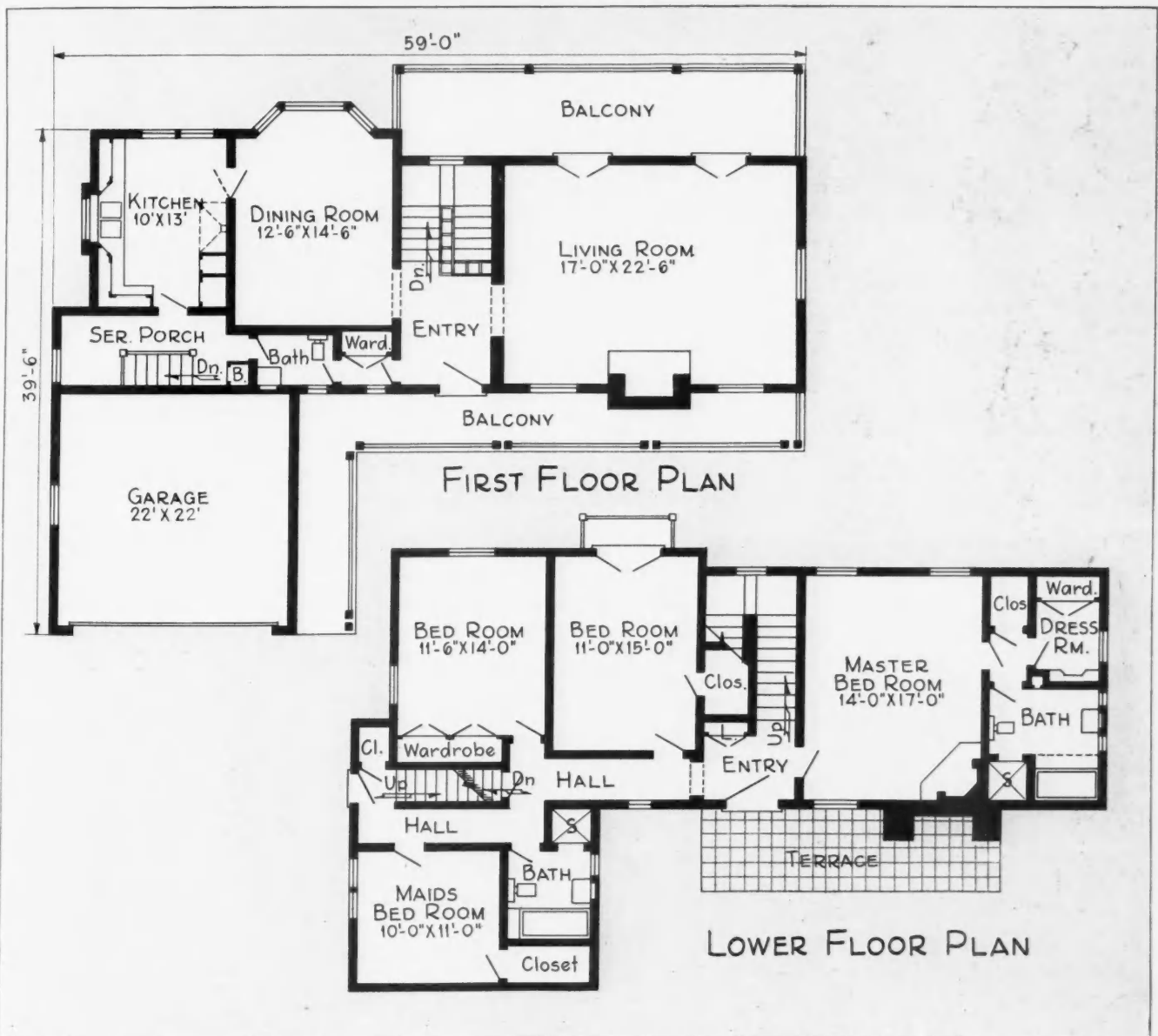
Cost Key is 2.852—200
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22.

ROUGH-hewn timbers set off the ceiling of the living room from the pine panelled entry hall. The beamed ceiling is insulated with Celotex exposed on the inside of the room. In the living room the pine is painted white with the knots left in natural finish, while the entry hall is in natural finish Ponderosa pine.





Two-story, California-Monterey Hillside Home, living quarters arranged on upper level and sleeping rooms on lower level, with barbeque fireplace in forecourt. Overhanging balconies on two sides.





COLONIAL WITH 2-STORY PORTICO

**Built by Ryan Bros. & Sather, Elmhurst, Ill.
Edward E. Baird, Des Plaines, Ill., Architect**

Cost Key is 1.867—131—950—40—25—13.



A HOUSE that would appeal to a person who likes the Southern Colonial type of home with a tall columned portico is shown above. Although this feature does not add to functional purpose of the plan, there are those who will admire the effect which bright light and deep shadow give to the front. A house similar in plan and exterior except for the entrance porch appears at the left; it was also built by Ryan Bros. in the same suburb. The portico added about three per cent to the total construction cost.

A center hall plan presents an uncrowded, well lighted and ventilated interior. However, the house has been kept to a 35-foot width and space is used efficiently. A small back service hall connects kitchen, lavatory, grade entrance, front hall and basement stairway; the latter can give direct access to a recreation room. A breakfast room with wall cases is well placed between kitchen and dining room. On the second floor there are three bedrooms having ample closets and a bath. A rear roof deck is reached from the hall.

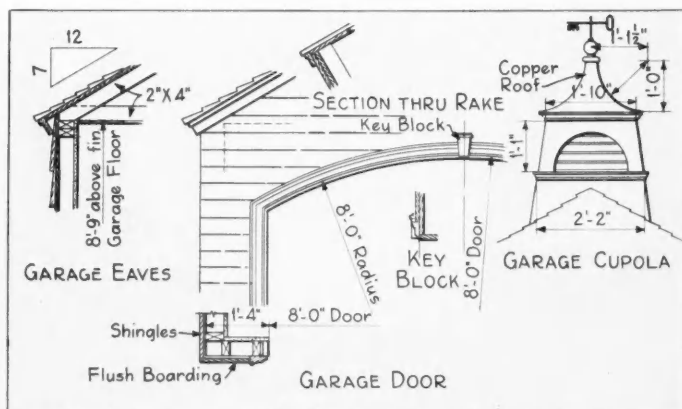
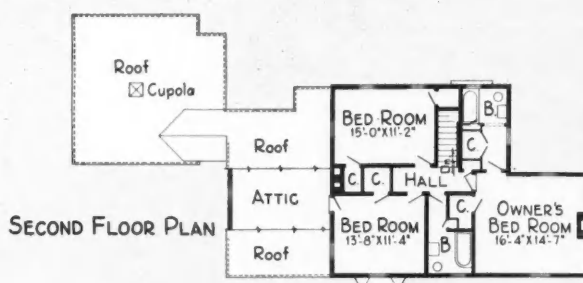
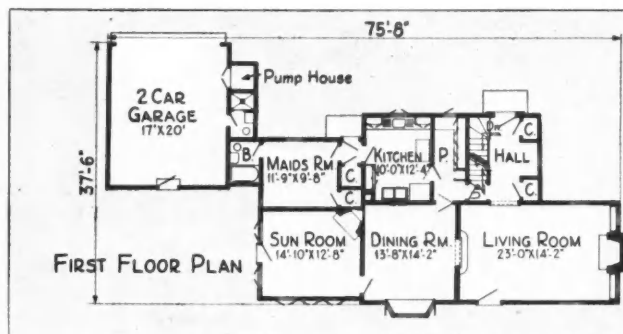


GARAGE AND DOORS BEAUTIFY THIS HOUSE

Burton Ashford Bugbee, Architect
Philip M. Punzelt, Builder

ALL PRINCIPAL rooms have southern exposure in this country house in Connecticut owned by Colin S. Locke. Cubage is 33,400. Garage and overhead doors have been treated with special skill, and Locke's key is featured in the weather vane atop the cupola. The shower in garage is useful after a swim or work in the garden.

Cost Key is 2.621—248—1258—55—38—25

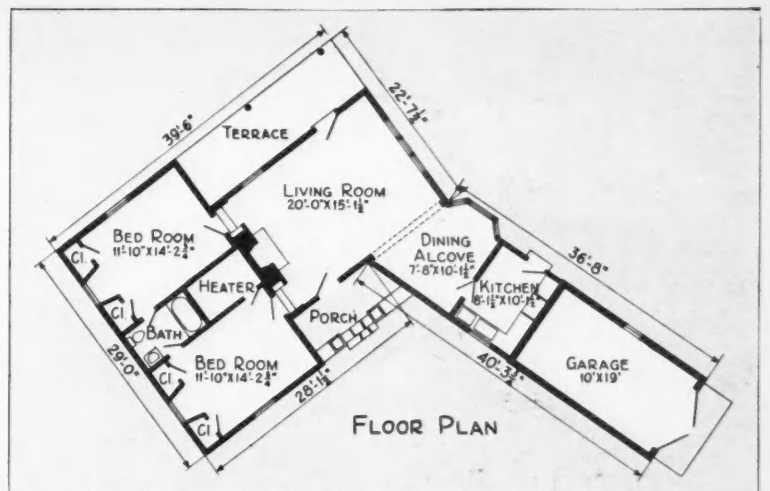


DETAILS of the garage construction show the unusually attractive arched openings, graceful cupola with key weather vane and attractive design of the overhead type doors. Recessed bookshelves feature fireplace at left.



BUILT AT AN ANGLE

UNUSUAL small house, designed by Architect Robertson Ward and built by Contractor John C. Smith in New Canaan, Conn., is built on an angle providing unusually good light and view. There is no basement. Floor is a concrete slab which follows exact grade with no filling or grading. Wood block floors were laid on the concrete. Air conditioning unit is located in heater room behind fireplace. The cubage is 14,000 cu. ft. Walls of heater room are sound-proofed.



Cost Key is 1.545—224—
(1067)—(48)—23—17

WOOD paneled fireplace dominates the end of the living room. Air conditioning unit enclosed in a sound-proofed room is located directly behind fireplace between 2 bedrooms. The ceiling treatment and arched door openings are unusually interesting.





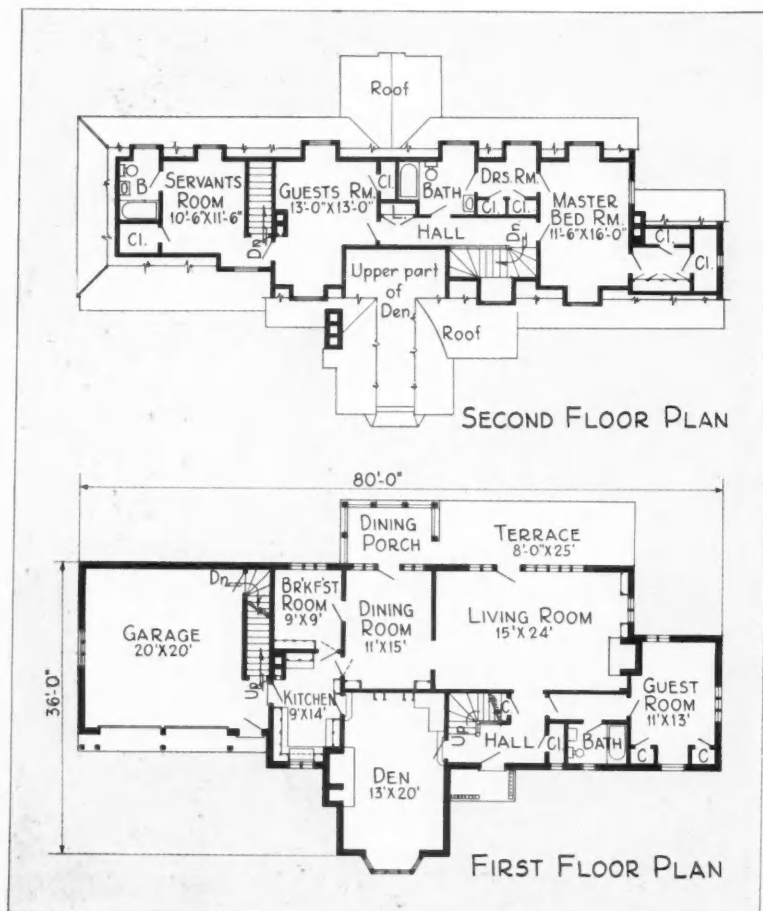
DESIGNED FOR ENTERTAINING

Home of Mr. and Mrs. Charles C. Theis, Wichita, Kans.

Butler and Rochester, Wichita, Architects

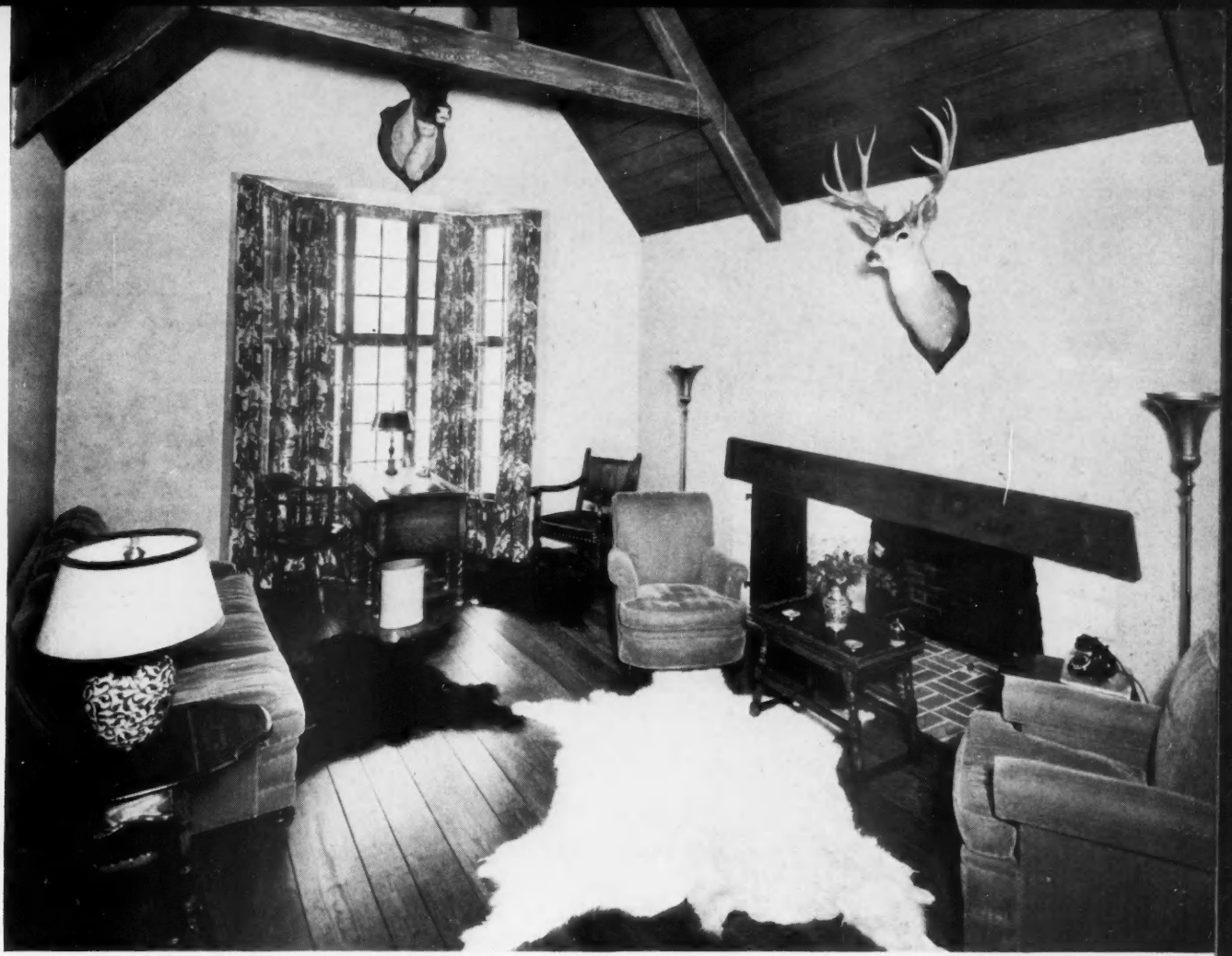
M. R. Stauffer, Newton, Builder

Cost Key is 3.144—236—1452—62—32—39



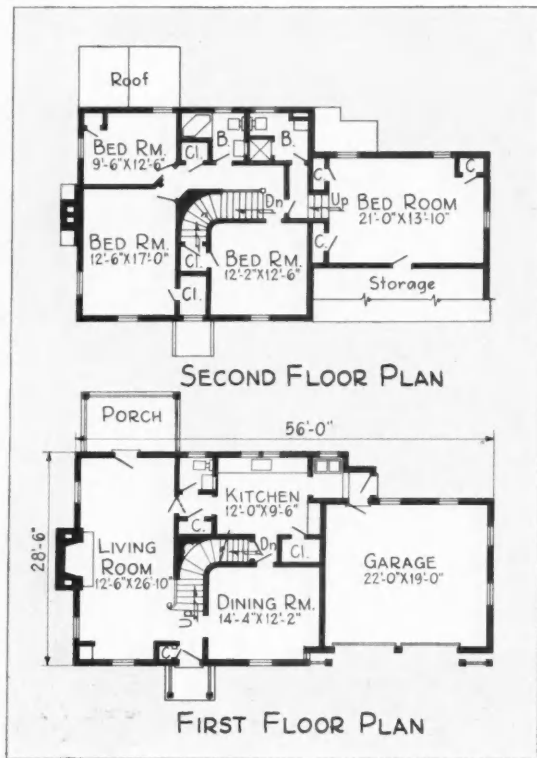
THIS English Cottage type house was designed for the home entertaining needs of the owner, who operates the radio station KANS in Wichita. For entertaining he uses the den which is situated close to the front entrance and also near the kitchen for convenience in serving. The den has been made spacious enough that large dinners may be served in it also, if desired.

There are nine rooms in this house besides the three bath-rooms, two hallways, and furnace-room, and laundry-room. The two-car garage with overhead doors is at the front of the house and adjacent to the kitchen. The outside finish of this home is brick-veneer; trim painted in variegated rust color; pre-stained shingles of a very dark brown shade for the roof. Interior walls have Idaho white pine paneling, canvas, and paint. The floors are of solid oak planks put down with screws covered with dowel pins and finished with stain and wax. The ceiling beams and all other heavy timbers throughout the building are of solid fir. The kitchen has completely modern equipment, with Armstrong's plain blue inlaid linoleum on the floor and cabinet top: There are two wood-burning fire-places, one in the den and one in the living-room. The spacious windows on the east and south sides of the living-room make a most cheerful room either when covered or not by the heavy draperies. Another attractive feature of the living-room is the placing off center of the fire-place and mantel.



ABOVE: Interior of Den with high ceiling, studio window and wood burning fire place. BELOW: the Living Room in Wichita home of Mr. and Mrs. Charles C. Theis.





TWO-CAR GARAGE WING ADDS BEAUTY

BEAUTY OF THIS NEW ENGLAND COLONIAL is enhanced by the well proportioned 2-car garage which has a large bedroom over it. Bedroom is down 4 steps from the second floor level. The overhead type garage doors are set back under an overhang which is attractive and well designed.

CONTRACTOR W. E. Wilkerson of Livingston, N. J., erected this house last year from plans by Architect Emil Kleeman of Newark, N. J. It was opened as a Johns-Manville demonstration home featuring cedar-grain asbestos siding shingles, Rockwool insulation, Steeltex plaster base and other J-M products. Rooms are spacious and well arranged. The curved stairway is an attractive feature. The plumbing fixtures are grouped for maximum economy with 2 upstairs baths adjoining each other, placed directly above the downstairs lavatory and kitchen.

Cost Key is 2.376-169-966-42-32-21





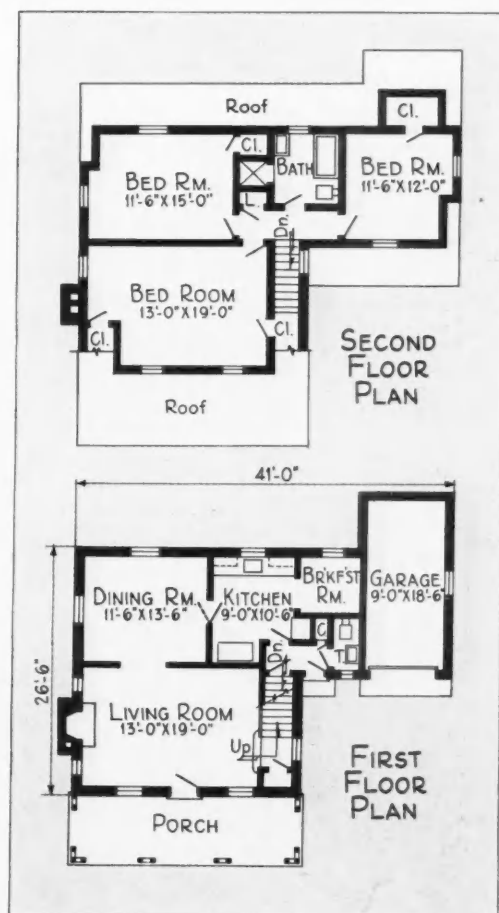
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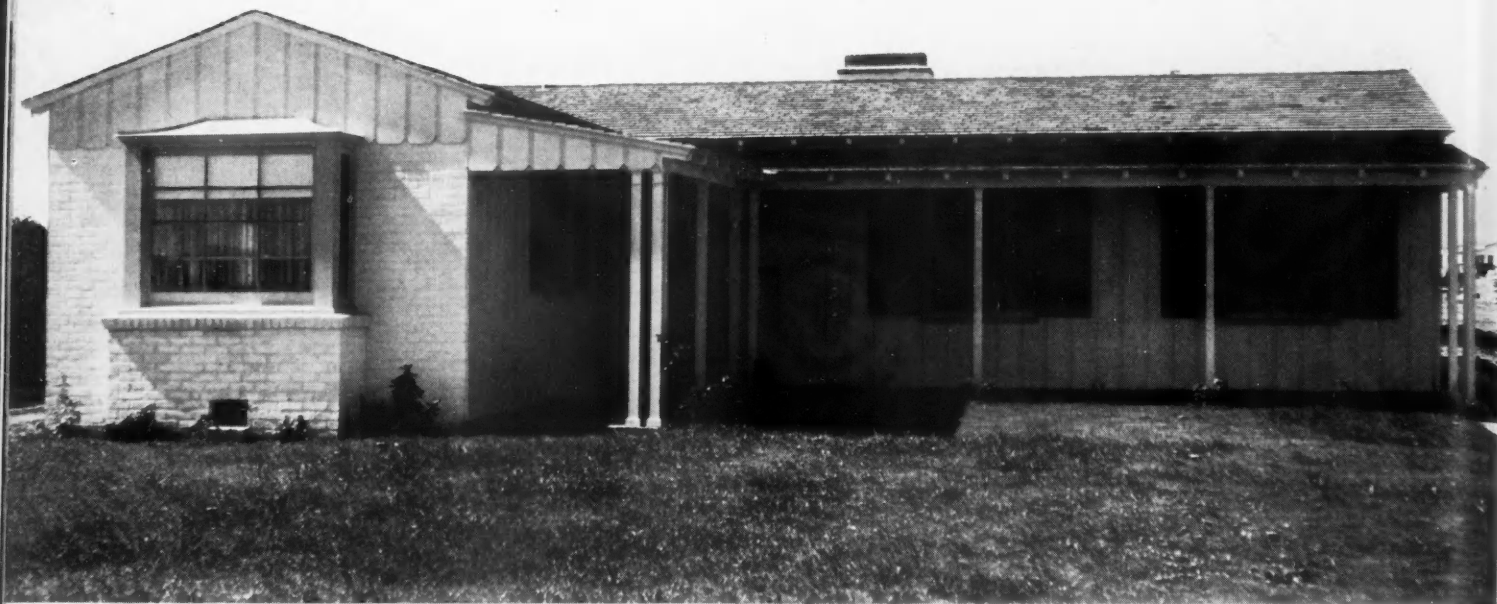
6-ROOM DUTCH COLONIAL MAYWOOD, N. J.

Cost Key is 1.809-146-722-32-23-16

FRANK A. LEERS, Inc., of Bogota, N. J., built this attractive Dutch Colonial from plans by J. Norman Hunter of Teaneck, N. J. The house is compact and interesting with an attractive front porch and a convenient side entrance next to the built-in garage. The downstairs lavatory and a breakfast room are extra features that give charm to so small a house.

THE LATTICED PORCH columns attract attention, and an additional impression of size is given by the garage wing which has been set back of the normal center. This makes possible a desirable window to light the stairs. This is a Triple-Insulated house which was opened in Maywood, N. J., last year as a Johns-Manville demonstration home.

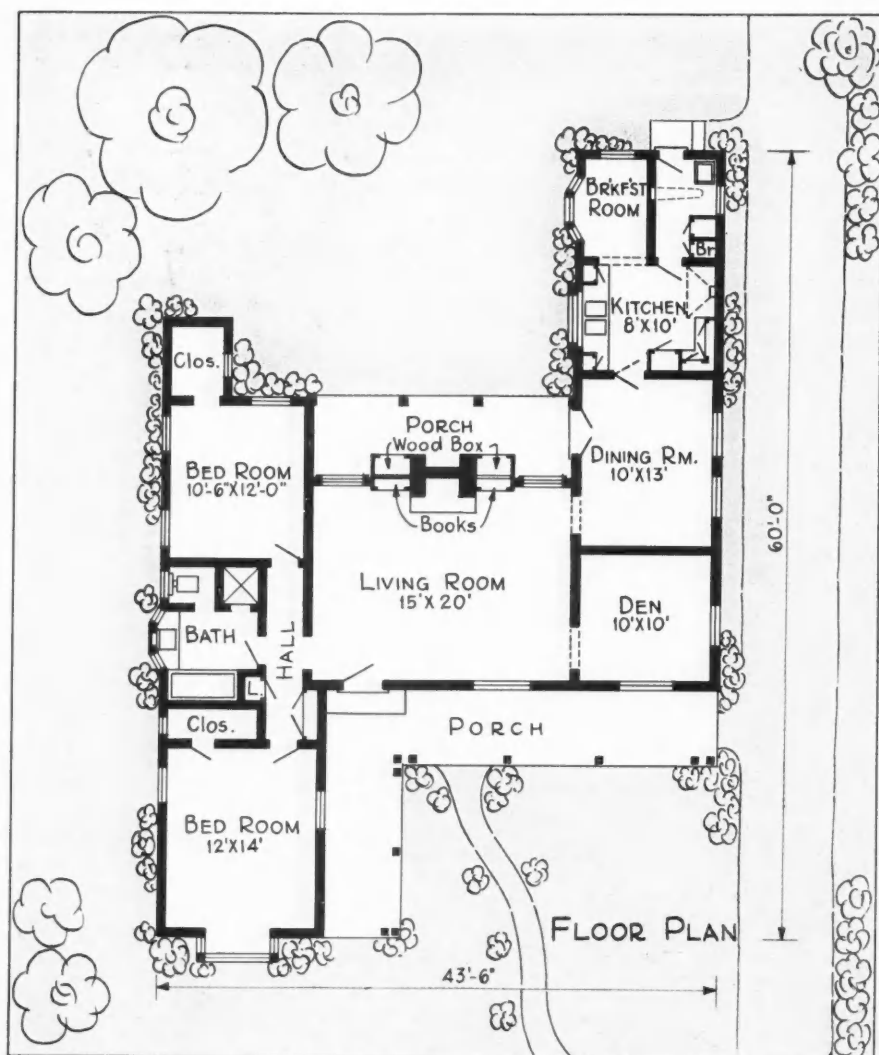




WITH BARBEQUE FIREPLACE

Cost Key is 1.564-219-(1344)-(58)-21-20

Leo Bachman, Los Angeles, Architect
Wm. Mellenthin, Los Angeles, Builder

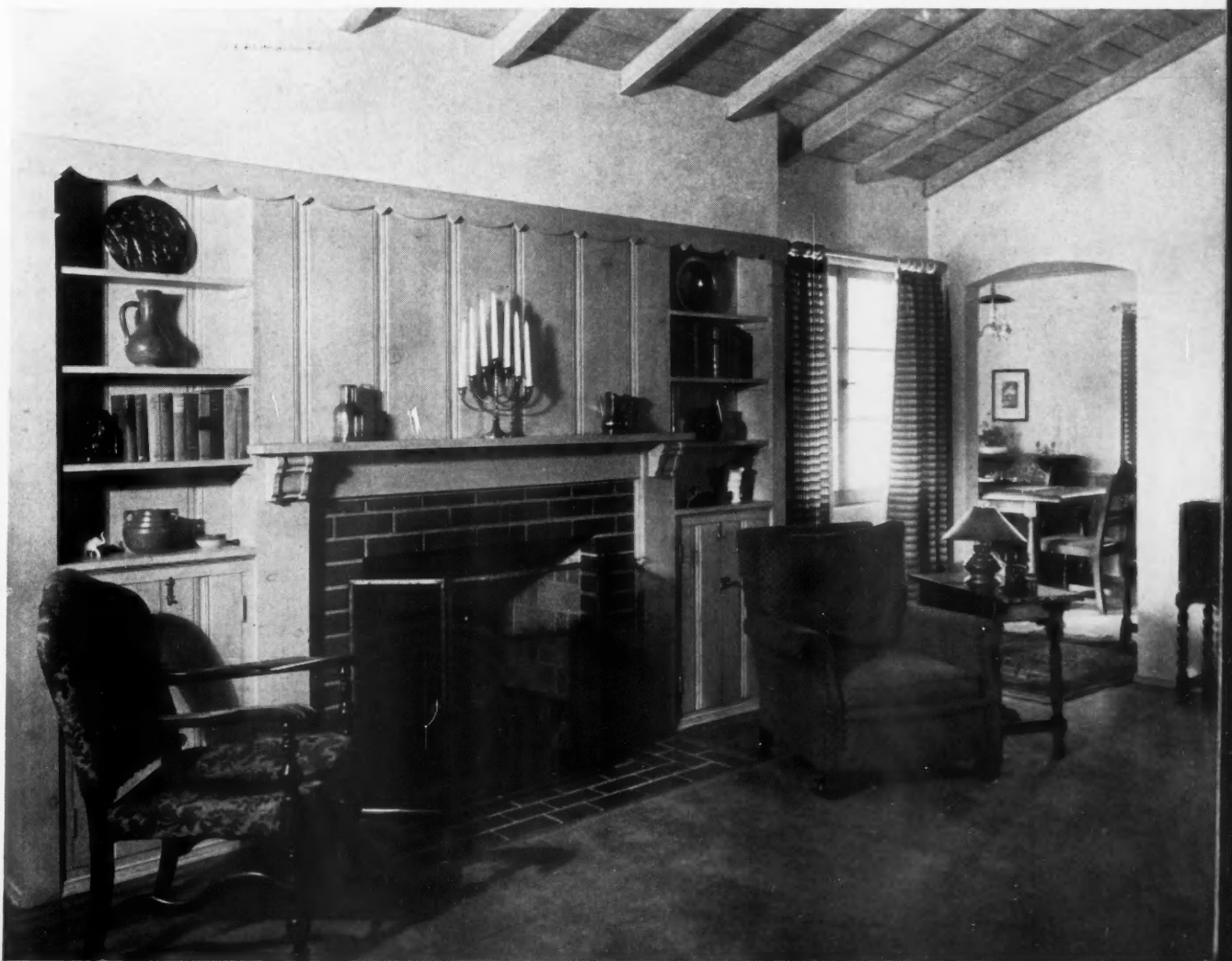


FRONT and back porch areas are important features of this seven room house with spacious living room, den and bedroom fronting on the street. An outdoor fireplace and lounging terrace heighten the Bohemian mood which predominates this studio-type cottage. The living room fire-place with its band-saw scroll across the top of the wall panelling and beamed ceiling further carry out the general atmosphere.

Construction Features—Foundation, Solid continuous concrete footings; Exterior walls 2x4 studs with brick veneer; Interior walls, stucco for all rooms with exception of bedrooms which are wall-papered; Roof Redwood shingles stained green; Plumbing, Standard fixtures, bath rooms tiled; Heating, Monarch wall heaters—gas units. Living room presents an unusual effect in fireplace treatment with white pine panelling, built-in bookcases at each side of an extremely wide fireplace and woodboxes underneath the built-in features. A band-saw scroll across the top of the fireplace panelling adds to the unusual effect. The exposed beamed ceiling is of pine, painted off white to harmonize with the interior stucco walls of the room.



ABOVE: Outdoor fireplace and lounging terrace add to the informal atmosphere of this Carmel studio home built by Wm. Mellenthin, North Hollywood. BELOW: Living room with fireplace. The exposed beamed ceiling is of pine painted an off white to harmonize with the interior stucco walls.

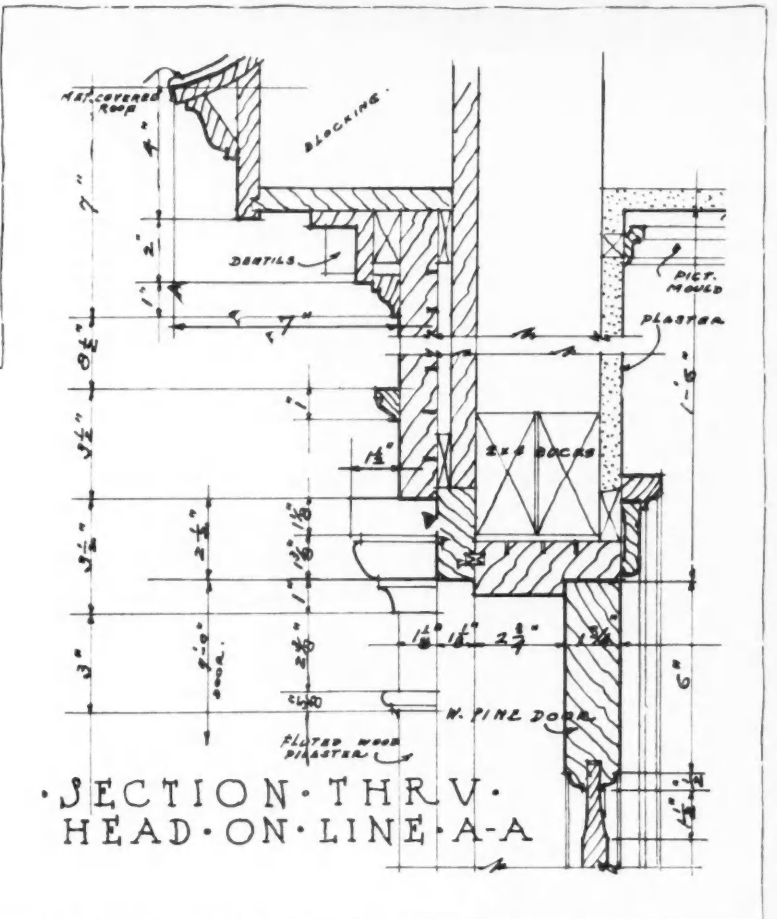
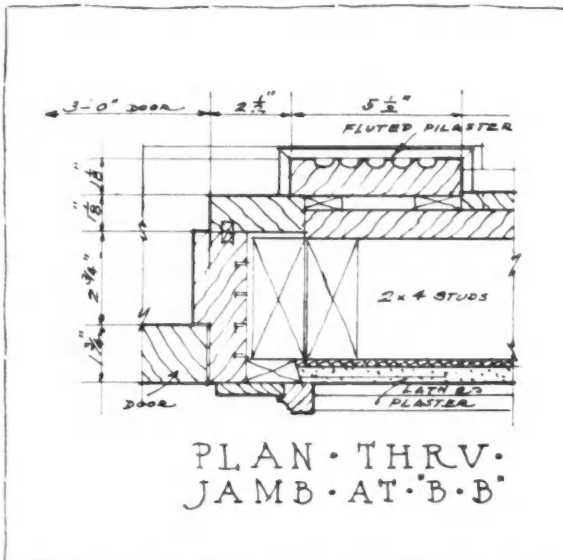


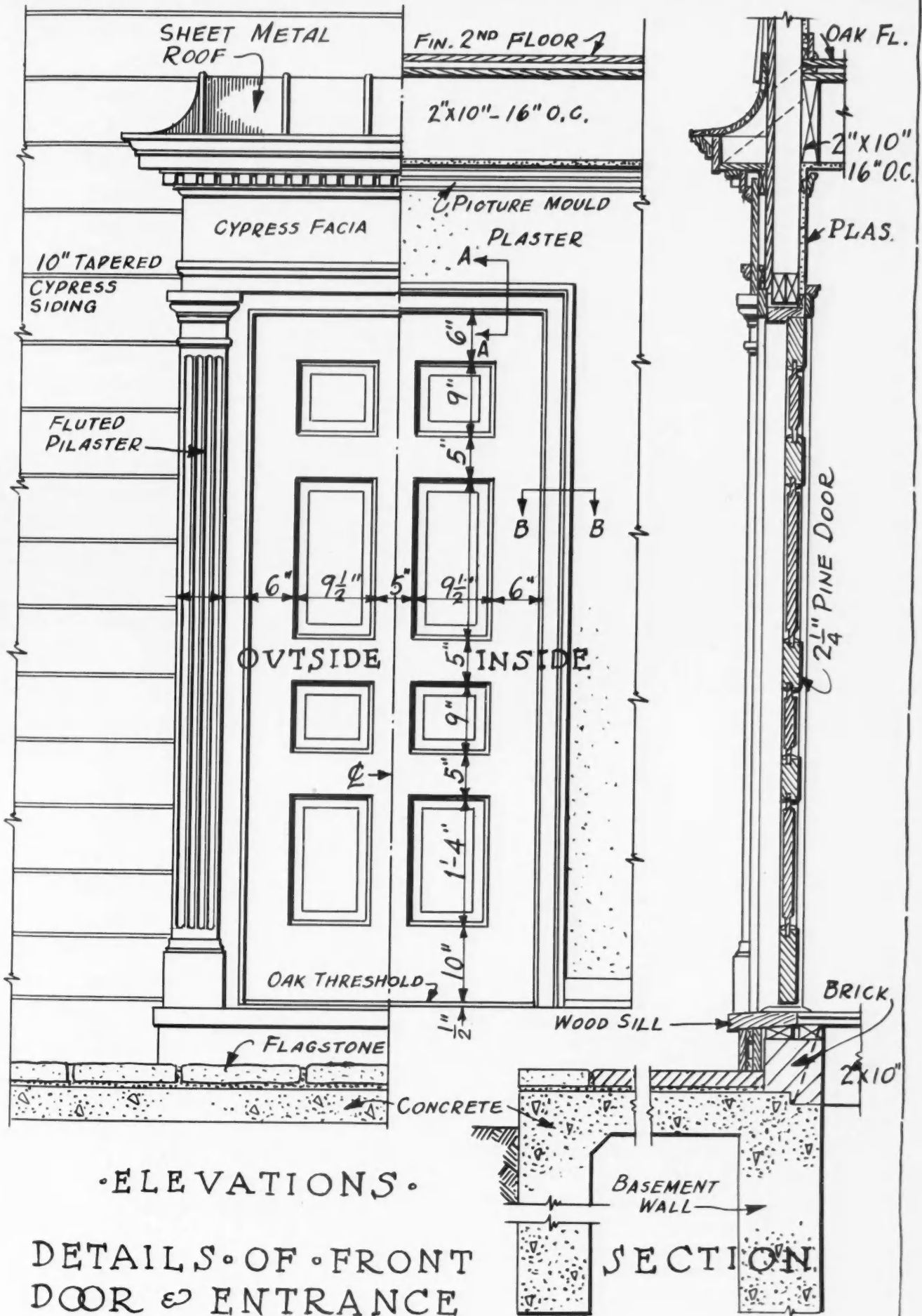
A NEW SERIES OF BETTER DETAILS

PRESENTING IMPORTANT DESIGN FEATURES OF A COLONIAL HOME IN PARK RIDGE, ILLINOIS MORRIS HENRY HOBBS, CHICAGO, ARCHITECT

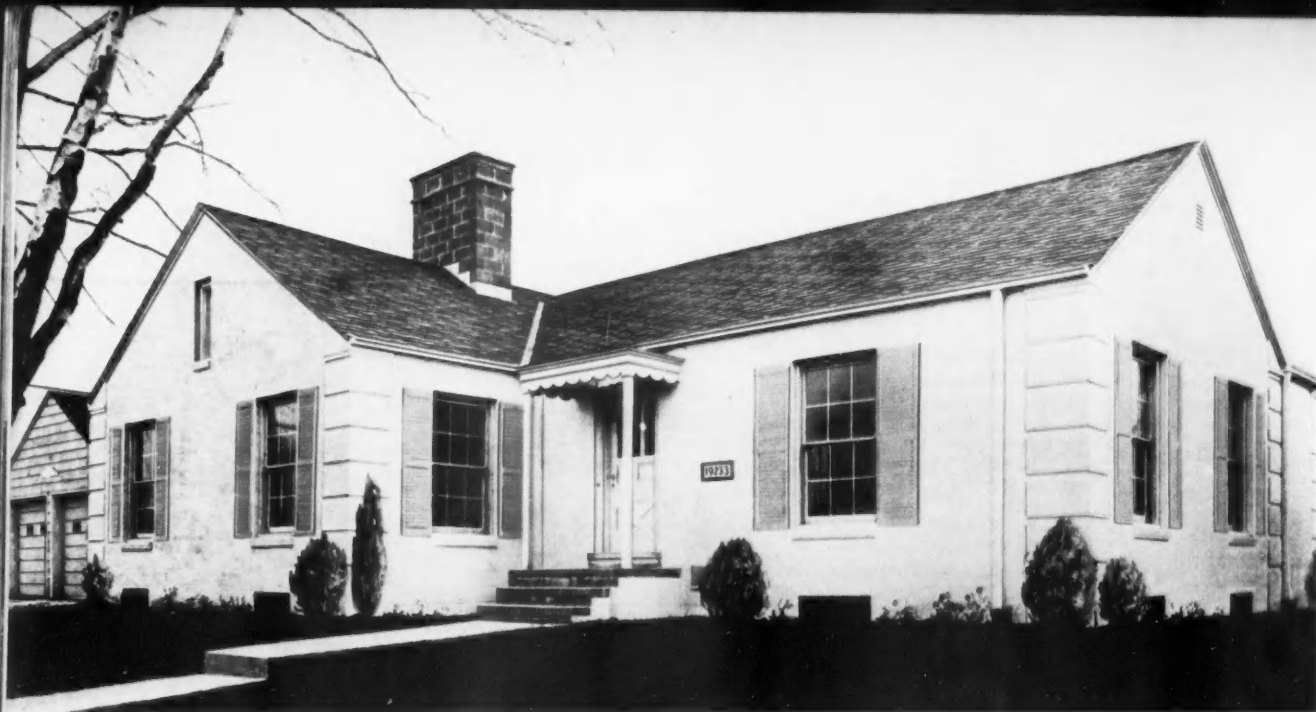
THE American Builder Better Detail Series starting in this issue will include four of the important elements of home design as combined by Morris Henry Hobbs, Chicago architect, in one of his small homes. Unusually complete and refined detailing such as is characteristic of his work is to be found in this Colonial example. On the exterior, the front entrance and a portion of the rear consisting of dormer and enclosed porch were selected; the stairway elevation of the hall and the fireplace end of the living room will be presented as interior highlights.

The front door and entrance, being one of the first points of interest to be seen upon approaching, is important because it gives a first impression of what can be expected in the other portions of a house. The view above to the right shows an attractive handling of this feature. Door paneling is well proportioned; pilasters and cornice are in good scale and finely detailed; flagstone steps and walk add color and interest. The construction is indicated by the outside and inside elevations and sections.





•ELEVATIONS•
 DETAILS OF FRONT
 DOOR & ENTRANCE



DETROIT'S 1937 IDEAL HOME

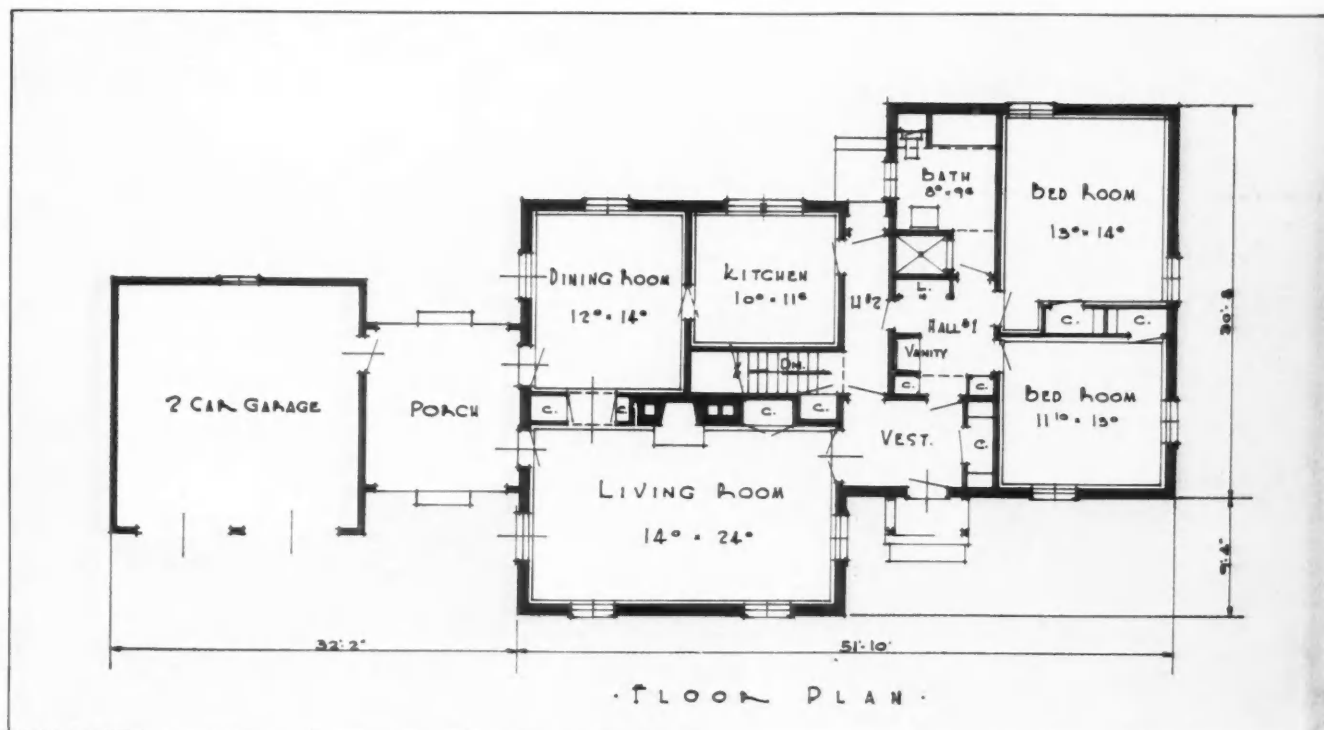
**Built by Knight-Menard Bldg. Co. for
the 19th Annual Detroit Builders' Show
D. Allan Wright, Architect**

Cost Key is 1.918-182-1612-66-20-29-25.

AMERICAN Colonial design in this home has been adapted to modern style of living. On one floor, the living room, dining room, two bedrooms, kitchen and bathroom are well grouped for their separate functions. The full basement contains a recreation room, hobby room, furnace room, laundry and fruit cellar.

The house has been built under the most modern construction methods, and the materials used were selected with a view of giving it longest durability. Concrete basement, concrete joists, a concrete floor separating the basement from the first floor, and concrete block veneering make the house fireproof.

Fully insulated, it will be cool in summer and it can be heated with economy during the heating season. A modern automatic heating and air conditioning plant was installed, giving both summer and winter comfort by means of humidity control. The two-car garage is connected with the house by an archway above a side porch. Plumbing and wiring has been extended to the attic; the owner of the house may add one or more rooms below the insulated roof when more space is needed.



Southern Miracle Performed for \$3000

By **THOMAS H. JOHNSTON, JR.**

of Stevens & Johnston, Architects—Starkville and Corinth, Miss.

DO YOU remember the old house of the late nineties, with its flair for towers, cupolas, stained glass windows and innumerable loads of "jig-saw scroll-work" for the final decoration? I am sure that you do. It represents one of the hardest remodeling problems of the architectural profession. It is surprising what a little "face-lifting" will do and how reasonably! All of those mansions of the past are soundly built, and it would cost a small fortune in this day to attempt to replace the timbers that were so carefully selected then. The craftsmen were slow but thorough, and it was nothing at all to consume a year or several in building one of these homes.

The house shown here was completed in 1888, and from all that can be learned, it took almost three years to complete and was considered a palace in its day. The studding are heart long leaf pine, 4" x 4" and 24' - 0" high, sills heart long leaf pine 10" x 12", joists 3" x 12"—12" on centers and mortised into the sills.

No real changes on the inside were necessary, except to remove one partition, between the entrance stair hall and the old front parlor. The corner fireplace was removed, walls replastered and the parquet floor repaired and pieced out. Upon removal of the partition this disclosed the carved walnut stair curving gracefully from one end of the new living room thus formed. The dining room was enlarged by projecting a bay on the north elevation, closing of a door leading to the outside, walls were replastered and papered in a mid Victorian paper of a beautiful shade of yellow.

The exterior was given the most careful thought after deciding that the main mass of the house would be right if squared up. The roof lines were good and could be made to conform. We began by removing the tower with the "wash-pot dome," and squared up this side of the house on the south. On the north and west the porches and old porte-cochere with its marble

columns were removed. After undressing the old house as it were, the recessed porch opening on the porte-cochere was uncovered. This side was squared up in a like manner, providing a study paneled in knotty yellow pine, for the master of the house on 1st floor and a sewing room on the second floor. The study opens through a former window into the newly formed living room. A new porte-cochere was added on the north with an entrance to the new study.

To balance this mass on the north elevation a screened porch of the same dimensions was added on the south, opening from the living room and projecting under the magnolias and elms.

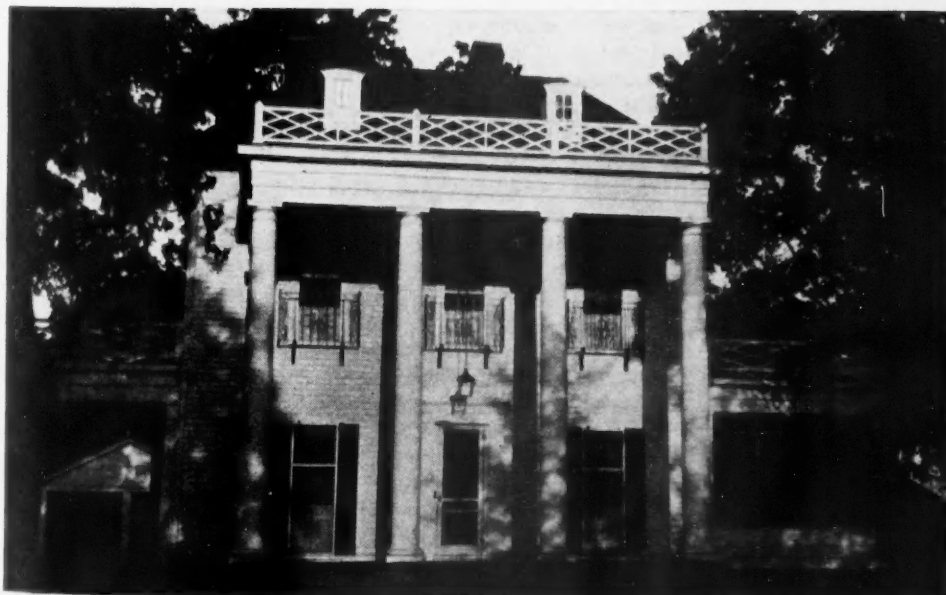
New siding was used on the entire front or west elevation. The new portico across the front is formed of 20" round redwood columns, of the simple Tuscan order, 21' - 0" in height, having cast iron ventilating plinths, and copper covered caps. The floor is paved with common brick, basket weave, over a reinforced concrete slab. The addition of the shallow wrought iron balcony rails at the second floor windows, and the large lantern swung from the ceiling give a most pleasing effect; particularly so after comparing the "before" and "after" photographs.

The unnecessary dormers were removed and new ones more in keeping were designed to replace them, the old roof was repaired and pieced out as needed to match the old. It was in perfect condition and of 40 lb. tin with standing seams. The roofs of the

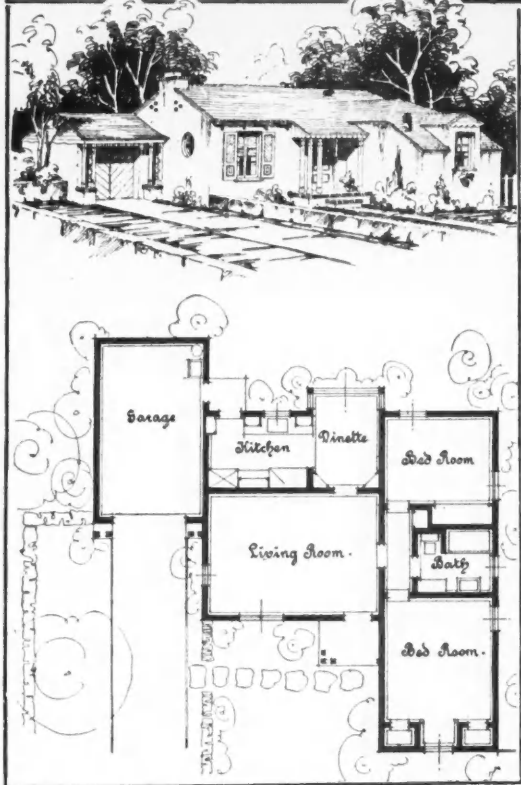
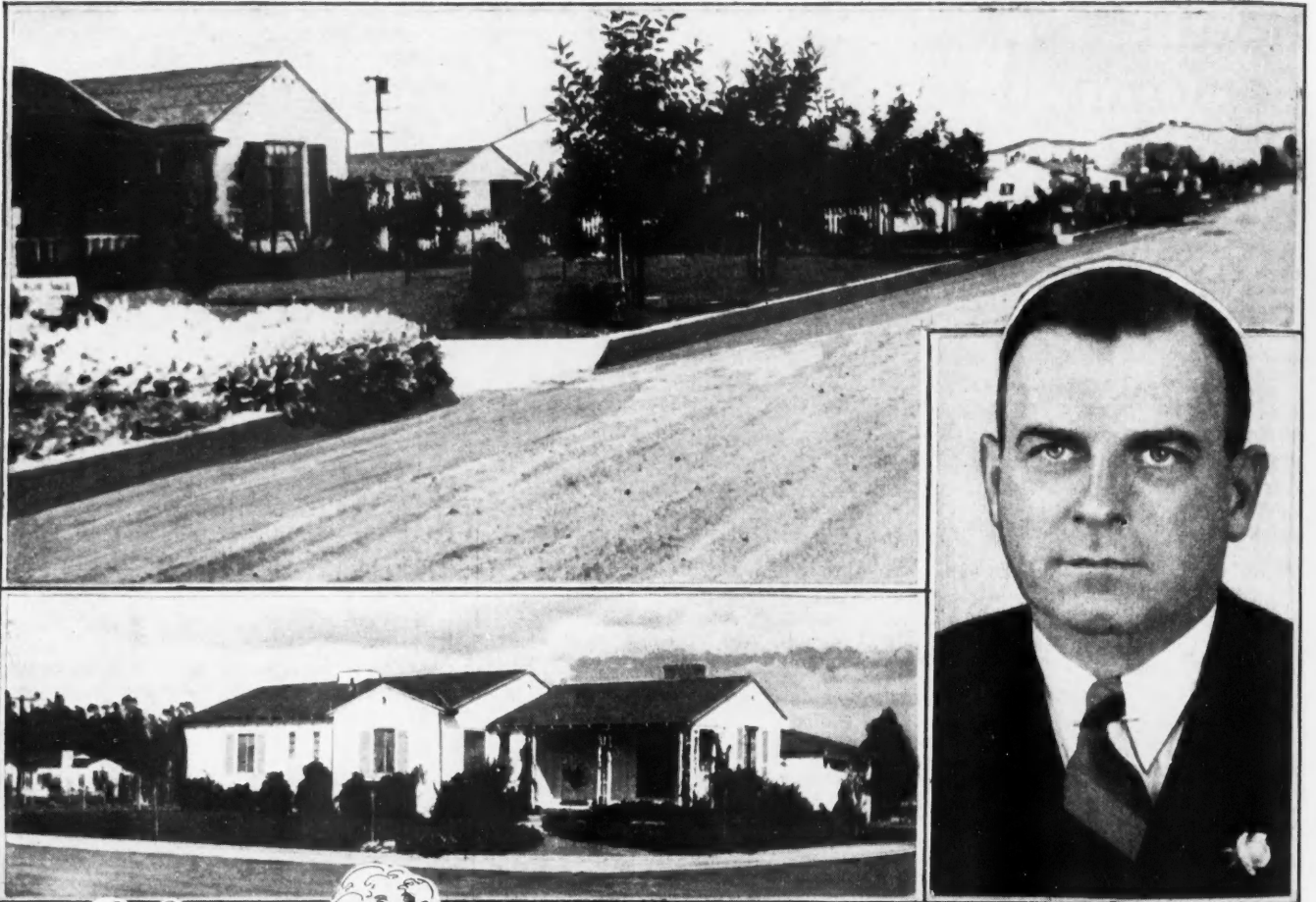
(Continued to page 146)



OLD HOUSE of the late nineties at Corinth, Miss., completely remodeled as shown below for \$3,001.00.



RESTYLED house after Stevens & Johnston, architects, and Roy F. Norman, builder, completed their work.



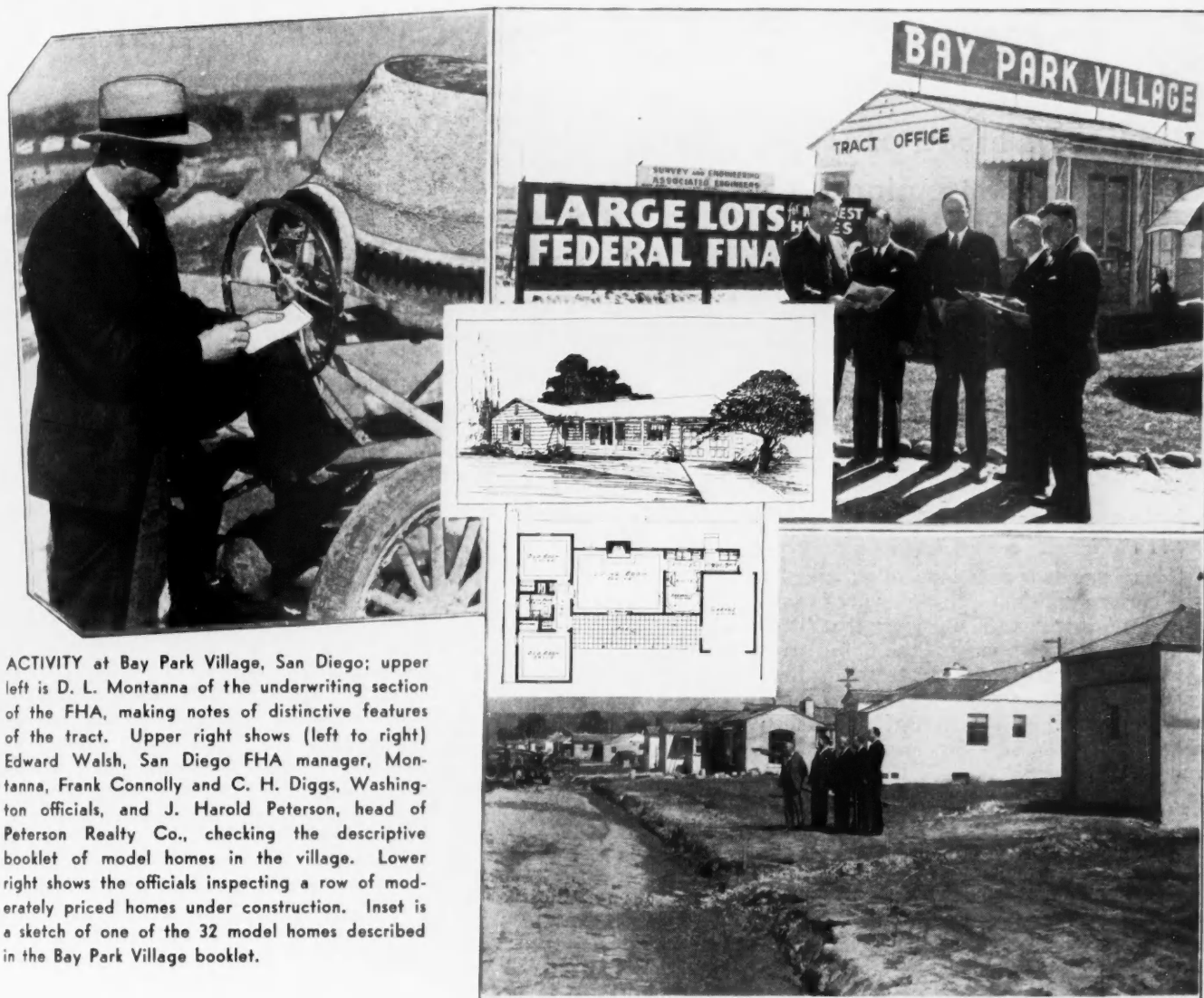
J. HAROLD PETERSON, prominent building supply dealer and real estate developer of San Diego, Calif., with views of his Bay Park Village model low cost homes.

Builders' Contest Peps Up San Diego

SEVENTEEN San Diego (Calif.) home building contractors have joined with a prominent local real estate developer and supply dealer to stage a novel low cost home demonstration and contest that has caught the eye of home buyers and has given the 1937 home building season a peppy start in San Diego. The scheme hinged around a public voting contest in which the buying public was invited to inspect and register their approval on 18 new homes of popular size and price, recently completed by these contractors in Bay Park Village, a tract opened by the Peterson Realty Co. last summer. J. Harold Peterson, whose "House of Ideas" sales office is well known in lumber dealer and home financing circles, was the moving spirit in this setup to get the independent contractors busy building on his subdivision.

Reporting on this project early in March, Mr. Peterson said, "In our first unit of 225 lots we are already over 25 per cent sold out and practically every sale has been to an actual home builder. Over 35 houses are already in course of construction, although there were only 18 entered in the contest. According to our plan each contractor submitted two designs which he proceeded to build; and of these he designated one to be in the contest. The way that this has worked out is that the contractor has sold his alternate plans as well as his contest house, and many of them have sold five or six additional jobs. The people who buy lots generally buy them after having been impressed by one of the houses, and they naturally turn to the contractor whose house impressed them.

"Bay Park Village is laid out on a tract of 1,000 acres facing on Mission Bay 8 minutes from downtown San Diego. We laid out the tract under FHA advice, providing for 60 by 100 foot lots,



ACTIVITY at Bay Park Village, San Diego; upper left is D. L. Montanna of the underwriting section of the FHA, making notes of distinctive features of the tract. Upper right shows (left to right) Edward Walsh, San Diego FHA manager, Montanna, Frank Connolly and C. H. Diggs, Washington officials, and J. Harold Peterson, head of Peterson Realty Co., checking the descriptive booklet of model homes in the village. Lower right shows the officials inspecting a row of moderately priced homes under construction. Inset is a sketch of one of the 32 model homes described in the Bay Park Village booklet.

all view property facing the Bay with paved streets, curbs and improvements all in and paid for, which could be sold at from \$600 to \$700 per lot with no bonds or assessments against them. Having laid out the tract, we proceeded to interest a number of our local builders in this building project. To do this, we sent out scouts with cameras all over Southern California to take pictures of houses which were most attractive and which we estimated could be built in the neighborhood of \$3,000, having five rooms, two bedrooms and one bath. We made note of all the color schemes in these houses and we had them reproduced on 35 mm. still film and colored so that they could be projected in the projection room of our 'Home of Ideas.' We then got the contractors together, showed them these pictures, took them to the proposed tract which was then raw acreage, and then took them on an expedition to Los Angeles where we had these houses marked out in a route where they could actually see them and visualize them in connection with Bay Park Village.

"After that, we submitted to them the proposition of designing two houses and entering one of them in our contest. The houses all had to be built within a price range of not to exceed \$3,200, so that the home owner could buy a lot and start paying \$32 per month for house and lot complete. During the month of March the public was invited to decide which was the *Prettiest House* and vote accordingly. Of the votes cast the house receiving the most votes is so named, and the contractor receives his choice

of a lot as a prize." This was a very clever idea.

The houses already built under this plan are all outstanding in appearance and the public is very much pleased with the Exposition. These model homes, and all the others dotting the Bay Park Village landscape, caught the attention of FHA officials from Washington, D.C., on their recent visit to San Diego.

On a recent Sunday, more than 3,000 interested spectators were attracted to Bay Park Village to view the model homes exposition.

"The model homes exposition is free, and we want every San Diegan to see it," said Scott King, sales manager for Peterson Realty Co., in issuing the public invitation. "More than that, we want the public to help us select the 'Prettiest Home' in Bay Park Village. Every visitor to the exposition will be privileged to cast one ballot for the home that appeals to him most. Through this co-operation the builders will be able to gauge the public's reactions to this or that type of home, general layout, and the special features of each."

The builders co-operating with Peterson Realty Co. in this model homes exposition are Louis Moisan, T. J. Lords, Carl B. Hays, A. L. & A. E. Dennstedt Bldg. Co., Stallard & Oates, Loring & Co., G. F. Samuel & Son, Stanley J. Nash, Joseph C. Kelley, W. B. Watson, Ira M. Johnson, P. M. Burrows, Diamond Construction Co., Depew Bldg. Co., Bob Lutes, A. R. Georgia & Son, C. F. Tifal and D. C. Stevens, all of San Diego.

How to Build to Save Fuel

Professor Larson of University of Wisconsin Determines Theoretical Results Based on Nine Construction Combinations

Assists Builders to Answer Home Owner's Queries

*"How much fuel can I save if I insulate my home?"
"Is the investment really worth the cost?"*

These are two questions often asked of the builder and contractor when a home owner is thinking of building or remodeling. The answer that "It all depends" is never wholly satisfying and the failure to produce specific evidence may frequently leave the builder in an embarrassing position, for he knows that the real facts can only be secured as the result of an exhaustive survey and a variety of more or less intricate calculations. It has remained for Professor G. L. Larson, head of the Department of Mechanical Engineering of the University of Wisconsin, to provide a solution to this problem which should be of interest to many builders.

Drawing on the research data in the Guide of the American Society of Heating and Ventilating Engineers, of which he is past-president, Professor Larson calculated the theoretical economic values of nine different combinations of insulation if applied to his own home—a typical

suburban residence of eight rooms in Madison, Wisconsin.

The result of his investigation, illustrated by the table and by the accompanying charts, discloses what a homeowner can reasonably expect in fuel saving, reduction in size and cost of heating plant, return on the investment, length of time necessary to amortize the cost of the insulation and other factors. In fuel saving alone, Professor Larson shows savings ranging from \$9.00 per season to more than half what the fuel bill would be without insulation of any kind.

The data he used were based on a heating season of 260 days. The fuel was oil containing 140,000 B. T. U. per gallon, selling at 7.2 cents. Cost of the hot water heating plant was calculated at \$1.50 per sq. ft. of radiation installed, with a seasonal efficiency of 65 per cent. Cost of applying insulation was figured at 5 cents per square foot, installed, for the ½ inch insulation; 10 cents per sq. ft. for the 4 inch. Weatherstripping was estimated at 20 cents per linear foot, installed; and the storm sash and doors at 25 cents per sq. ft. Interest was charged at the rate of 5% per year; depreciation at 2% on the insulation; 5% on storm sash and doors.

"I hope that this study," said Professor Larson, "will offer a practical yard-stick by which the home owner may evaluate the economic savings from properly insulated homes and that it will encourage scientific building and remodeling for comfort and health. I conducted this investigation because I felt that little or no scientific data of this character was available in simple understandable form."

To the question what type of insulation was used in his calculations and experimental tests, Professor Larson replied: "The figures will apply generally to any good material properly installed."

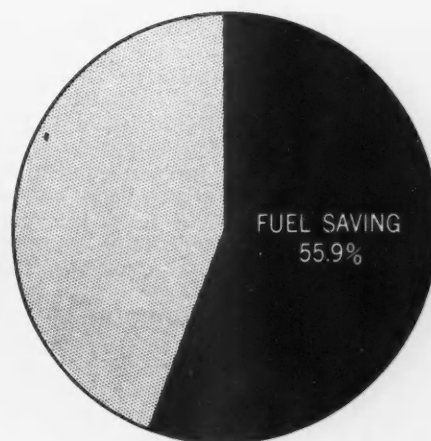
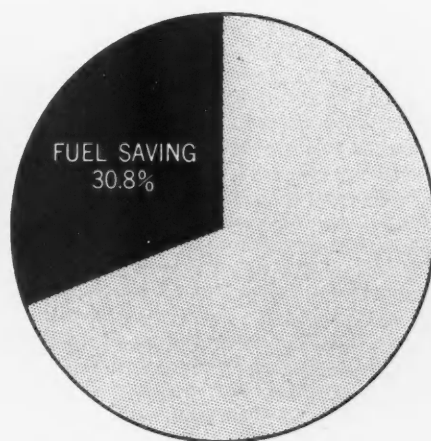
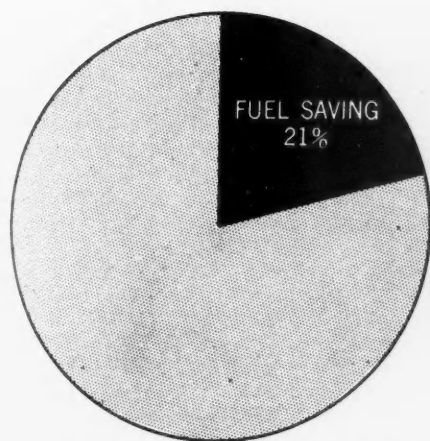


RESIDENCE of Professor G. L. Larson, Madison, Wis., on which novel insulation calculations described in this article were made.

Record of Heat-loss Tests—Nine Types of Construction.

	1—Ordinary house construction without weatherstripping, storm sash, storm doors or insulation.	2—Construction improved by adding half-inch insulation on upper ceiling.	3—Four-inch insulation on upper ceiling.	4—Half-inch insulation on ceiling and walls.	5—Weatherstripping only on all windows and doors.	6—Four-inch insulation on ceiling and walls.	7—Storm sash and storm doors all around.	8—Half-inch insulation on ceiling and walls, plus storm sash and storm doors.	9—Four-inch insulation on ceiling and walls, plus storm sash and storm doors.
	1	2	3	4	5	6	7	8	9
Total Heat Loss.....	159,175	153,871	149,524	139,974	125,741	118,773	110,383	91,182	69,981
Per Cent Saving.....		3.34	6.07	12.1	21.0	25.4	30.8	42.7	55.9
Sq. Ft. H. W. Radiation.....	1060	1025	995	932	837	791	735	608	466
Oil Per Season, Gals.....	3980	3847	3738	3499	3143	2969	2759	2279	1750
Cost of Oil Per Season.....	\$ 286	\$ 277	\$ 269	\$ 252	\$ 226	\$ 214	\$ 198	\$ 164	\$ 126
Saving in Fuel.....		\$ 9	\$ 17	\$ 34	\$ 60	\$ 72	\$ 88	\$ 122	\$ 160
Cost of Construction.....		\$ 51	\$ 102	\$ 142	\$ 129	\$ 284	\$ 106	\$ 248	\$ 390
Interest and Depreciation on Investment.....		\$3.57	\$7.14	\$9.94	\$9.03	\$19.88	\$10.60	\$20.54	\$30.48
Net Saving.....		\$5.43	\$9.86	\$24.06	\$50.97	\$52.12	\$77.40	\$101.46	\$129.52
Per Cent Return on Investment, Net.....		10.6	9.65	16.9	39.5	18.3	73.0	41.0	33.4
Years for Net Fuel Saving to Pay off Investment.....		9.4	10.3	5.9	2.53	5.45	1.37	2.45	3.01
Cost of Heating Plant.....	1590	\$1537	\$1492	\$1398	\$1256	\$1186	\$1102	\$ 912	\$ 699
Reduction in Plant Cost.....		\$ 53	\$ 98	\$ 192	\$ 334	\$ 404	\$ 488	\$ 678	\$ 891

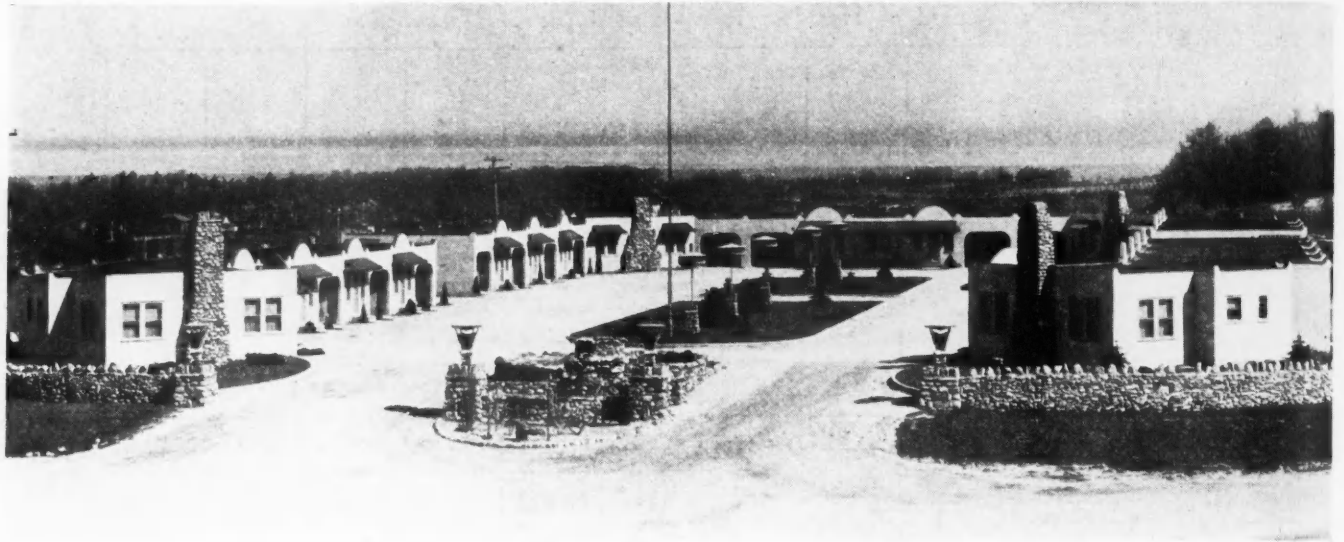
THE NINE numbered columns in the above table represent different combinations of insulation. The house to which these calculations were applied is two stories high, with unfinished attic space. It contains eight rooms and bath above the basement and is of frame and shingle construction with a concrete foundation.



Column 5—in Table—This chart shows what would happen if the house were insulated with weatherstripping only on all windows and doors. Saving in fuel would amount to \$60 per season, or 21%. It would return 39.5% on the investment; pay for itself out of fuel savings in about two and a half years. The cost of the heating plant required would be reduced by \$334 and the heat loss would be cut by 21%.

Column 7—in Table—This chart tells the story if storm sash and storm doors were used all around. The fuel bill would go down \$88 or 30.8%. It would return 73% on the invested cost of the insulation and pay for itself out of fuel savings in about a year and four months. It would reduce the cost of the heating plant by \$488 and lop off 48,792 B.T.U. which represents a reduction in heat loss of 30.8%.

Column 9—in Table—This chart shows the most complete form of insulation—four-inch insulation on ceilings and walls, plus storm doors and sash. The saving in fuel would be \$160 or 55.9%. It would return 33.4% on the investment. The net fuel saving would pay for the investment in a trifle over three years. It would reduce the cost of the heating plant by \$891 and effect a saving of 55.9% or 89,194 B. T. U. in the total heat loss.



Grande Vista Tourist Homes

Erected on U.S. Highway No. 12 at Stevensville, seven miles south of St. Joseph, Mich.

Owned and operated by "House of David," Benton Harbor, Mich. H. T. Dewhirst, Chief Counsel.

Wm. Wright, Architect and Builder, House of David.

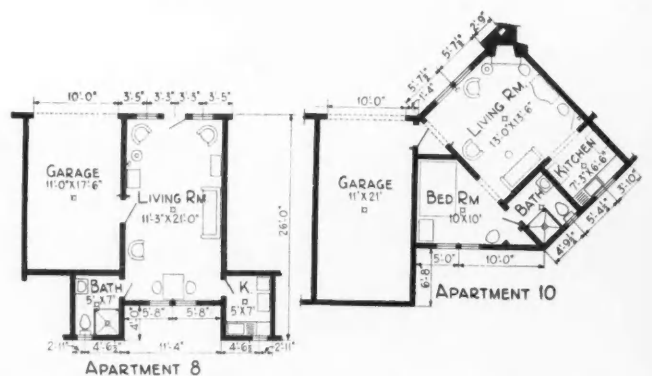
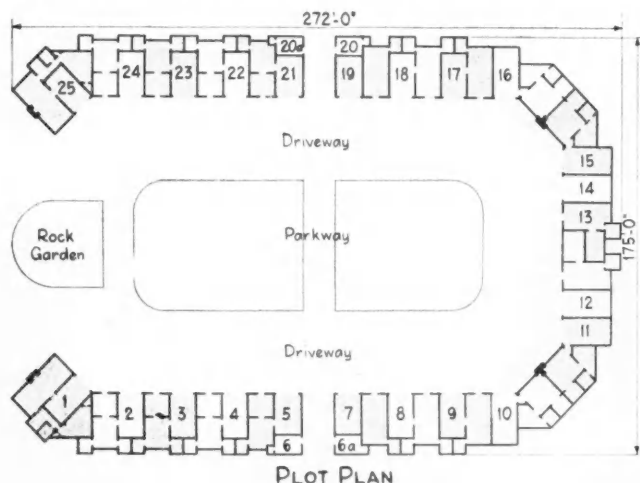
ON a slight elevation and commanding a view of the blue waters of Lake Michigan, the hills, shore line and the fruit orchards of the surrounding country, the House of David has erected this impressive group of tourist cottages. The success of this first group, containing 25 units, has been so immediate and convincing that, as this issue of *American Builder* goes to press, a second unit is being completed. This consists of 39 cottages and is located across the highway from the first.

Mr. William Wright, the architect and builder of these groups of buildings, gave time and thought to the comfort and ease of the weary traveller, upon whose whim the

success of this or any other like development depends; at the same time he considered costs of construction and furnishings, so that a sound investment is assured.

These cottages cover a plot of ground fronting the highway 175 feet with a depth of 260 feet. The greater percentage of this land is given over to the beautiful central court with its driveways and beautifully landscaped garden. Those who visited the Chicago World's Fair will recognize immediately the lawn lighting fixtures and the beautiful illuminated fountain, similar to those in the Firestone Exhibit; this adds an attractive note at night when the fountain plays in ever-changing color.

For the construction of the first unit of these Grande Vista Tourist Homes, stucco over Ecod Fabric was used on all outside walls, inside walls being plastered over wood lath. Hardwood floors were used throughout the original group of buildings; but in later construction cement floors were laid and these are covered with Johns-Manville Floortile. This type of floor Mr. Wright advises will be standard with them in the future. The furnishings in these cottages are sturdy and comfortable; in the later group a very modernistic style is used. Each cottage has its own gas heater, but as there was no gas in the vicinity "bottled" gas (Pyrofax) has been used with very great success; its cost being no greater than the local utilities rate for gas in nearby towns. This bottled gas is piped to each cottage from a central supply.



PLOT PLAN of big U-Shaped group containing 25 Home Units, each with adjacent garage. ABOVE are detailed floor plans of two of the units.

IN THE SPIRIT of the Southwest these white stucco and red tile tourist homes invite inspection. Sturdy construction inspires confidence and interesting details, like use of petrified wood in the chimneys, holds visitors for extended stays.



As the plans show each cottage is roomy with living room 11' x 21' attractively furnished and decorated. Consequently many travellers who stop to spend the night remain there for indefinite stays. This is the reason, we are told, that these cottages hold such a high-tenancy record.

Reliable authorities state that over \$500,000,000.00, (Five hundred million dollars) will be spent by tourists for such accommodations this year. Here is a vast new market for labor and building material, that will affect in no way the present residential market.

Both Messrs. Dewhirst and Wright feel that there are thousands of localities in this country where projects of this type can be erected. To builders who may be promoting tourist court construction, they stressed several points:

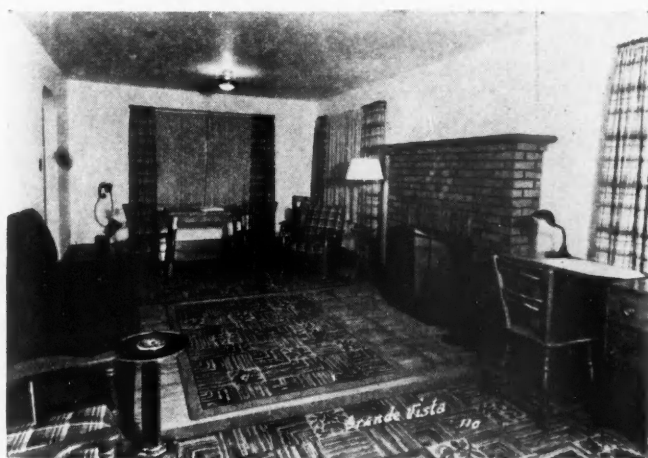
1. Put into each unit you build every comfort and convenience that the modern home knows.
2. Let the Average home suffer much by comparison with the equipment of the cottages you erect.
3. Spend money on landscaping your property. Have the exterior just as attractive as possible. It is the exterior that first catches the eye of passers-by; and just as the well dressed window attracts purchasers to the store, so

does the attractive exterior extend an invitation to travelers to "bide-a-while."

4. Be doubly sure that the interior loses nothing by comparison with the exterior.

We are informed that these cottages were built and furnished at a gross cost of about \$1,400.00 per unit (\$400.00 of this amount figured for the furnishings) and that the operating cost of each unit is about \$14.00 dollars per month. This of course takes into consideration all kitchenette equipment with dishes, linens, etc., however, under the House of David management, when the kitchenette is used an additional charge of \$.50 per night is made. The regular charge per night per person is \$1.50. From this one can figure out the percentage of profit from developments of this kind.

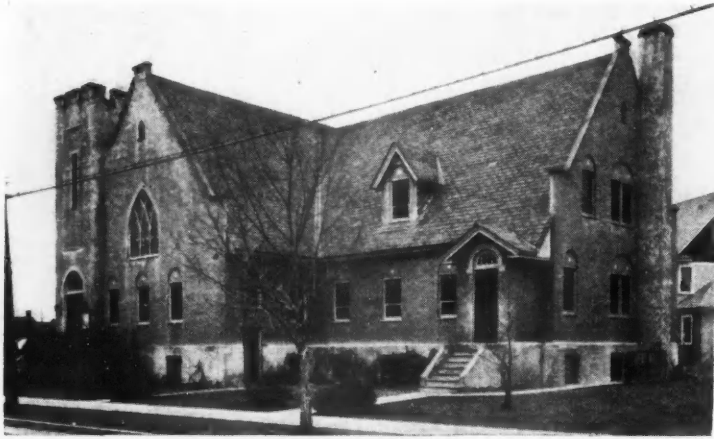
The front and corner cottages are fireplace equipped, and they are real woodburning fireplaces too. To build the chimneys for these fireplaces the House of David imported 25 tons of mineral bearing ore, petrified wood, quartz, etc., from the Southwest and blending these with native rock produced some real works of art that are worthy of much mention. All the ornamental fencing around the group of homes as well as the chimneys and fountain were constructed of this material.



TYPICAL furnishings of Grande Vista tourist homes (apartments 8 and 10 as diagramed on opposite page).

2" Split Brick Transforms Church Exterior—Makes Many Friends

**"Best advertising we ever had," say
Glens Falls, N. Y., Builder and Dealer**



BEFORE—This is how the Glens Falls Methodist Church looked. The ladies of the congregation were truly ashamed of it.

ONE of the best pieces of advertising that has ever come their way is now being enjoyed by C. H. Sherman, builder, and the Finch, Pruyn Lumber Company of Glens Falls, N. Y. It is that best of all advertising—the word of mouth comment resulting from a spectacular and satisfactory job.

The job that has attracted such flattering attention is the modernizing of the local Methodist Church by giving it a completely new exterior of two-inch split brick. The work was done by C. H. Sherman, builder, from plans by H. B. Kendall, architect associated with the Finch, Pruyn Lumber Company, which supplied the materials. The ladies of the church had long wanted to do something about the ugly, old-fashioned appearance of their church. The stucco was discolored and in bad shape. They got a number of estimates

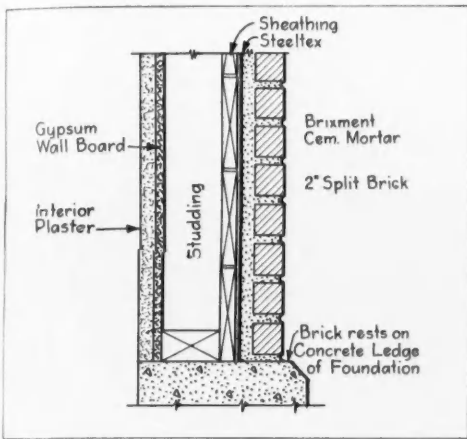


AFTER—Here is the Glens Falls Church after the exterior had been covered with 2" split brick laid over Steeltex. The ladies of the church were so pleased with the transformation that they told practically everybody in town about it, which was fine advertising.

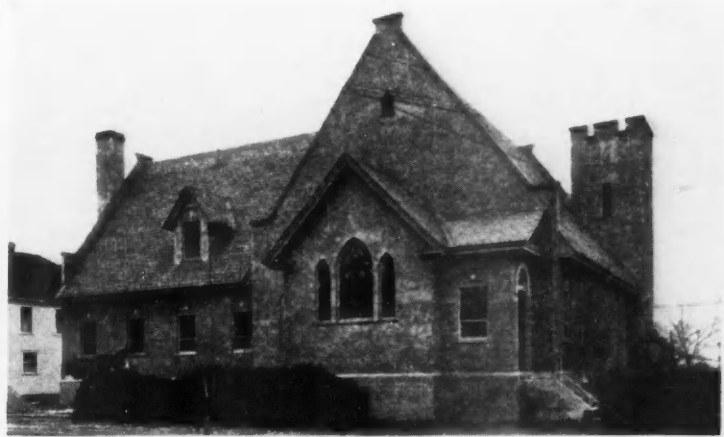
for a standard face brick exterior but these ran too high. The Finch, Pruyn Company investigated the matter and recommended use of a new two-inch brick made by the Binghamton Brick Company of Binghamton, N. Y. They brought in Builder Sherman and soon had the job. The method used was to take off the old stucco and replace it with reinforced Steeltex wire lath with paper backing. The two-inch brick were laid upon the existing projecting concrete foundation and were carried up one

inch away from the Steeltex. This space was filled with Brixment waterproof cement. The mortar fills this space completely and grips the Steeltex reinforcement. It thus produces a waterproof three-inch reinforced slab of brick, steel and concrete.

The job went ahead rapidly and the results were extremely pleasing to the members of the church. The cost was under \$3,000, which included a small extension on the choir loft.



DETAIL of 2" brick application over Steeltex backing with one inch of cement mortar.



BEFORE—Another view of the Glens Falls Church before the old stucco was removed and the new 2" split brick face applied, at very low cost.



AFTER—Rear view of the church after modernizing, showing how beautifully the new brick surface improved its looks. A slight addition was made to the choir loft projection but very few other structural changes were required. Cost was under \$3,000.

COMMON SENSE in Kitchen Planning

JUST a few sound, common sense principles can make a kitchen a big sales asset. Just a few "boners" can spoil it.

In spite of all that has been said and written about better planned kitchens, less than one out of five in new houses last year were done right. Consequently a good many women are pretty bitter about builders who are "too dumb or stubborn to learn."

Illustrated below are six scientific arrangements produced by a kitchen planning institute that has designed thousands. They will fit practically any average house. Study of these layouts will illustrate some of the common sense principles below.

Work Space for Each Unit

One of the worst and most common mistakes builders make in kitchens is placing the stove or the sink or the refrigerator by itself without any work space or counter near it. Common sense says that there must be a place for the housewife to put things within easy reach of each of these pieces of equipment. Figure it out this way:

Groceries or supplies are brought in from outside and placed on a counter or work space near the refrigerator. This should be near the outside door. They are put away; then next they are taken over to another table or work counter near the sink to be prepared or cut up and washed. Then they go to the stove, which must have a counter

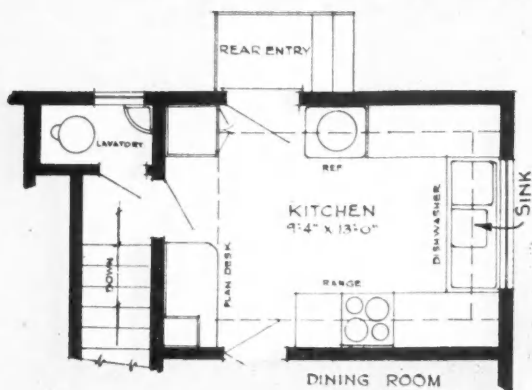
space near it to set things on. They are "prepared for serving" on a table or counter near the dining room door, then go into the dining room. When the dishes are brought out they must be placed on a "cleaning up" space near the sink. When they are washed in the sink the housewife should be able to store them close by.

It is clear from this that a work surface is needed for each piece of equipment. Don't put the refrigerator in a deep niche, or in another room where it makes the housewife carry things back and forth. Don't put the stove in a distant corner with a door or window on each side so there is not room for a counter to set dishes on.

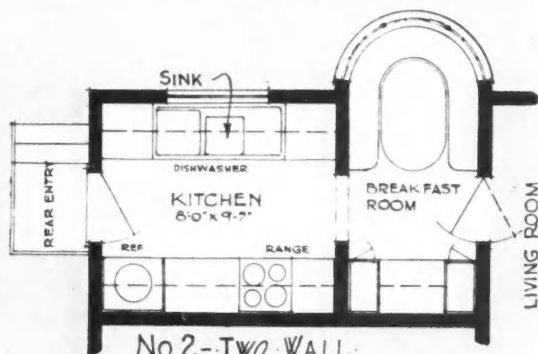
One of the best and simplest arrangements is the "U"-shaped plan well illustrated in Nos. 1, 3 and 4 below. Doors are grouped so that people passing through do not interfere with work. In each case the stove, sink and refrigerator are located in convenient relation to each other and to the doors. There is continuous counter space between the units, and ample cupboard and storage space above.

A well planned kitchen need not cost any more than a poorly planned one; in fact it can cost less. The kitchen can be cheerful and colorful, but expensive trimming and fancy wood work are not needed. It should be kept simple and easy to clean.

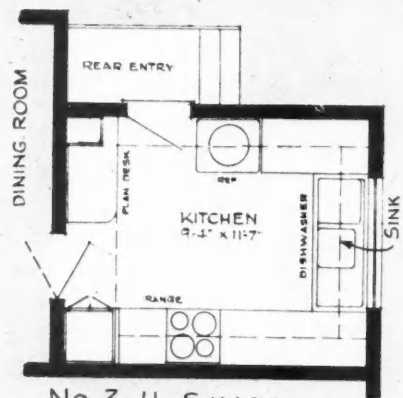
How big should a kitchen be? It varies with the needs of the family. But no matter how big it is, the equipment should be compactly grouped together in one part of it. Then if the owner wants space for a rocking chair for grandpa, or a place to eat, or a place for the dog to sleep or something of the sort he can have it—but these activities or uses should not be mixed up with the working area between the sink, range and refrigerator. Average sizes for kitchens should be about as follows: small



No. 1 - U-SHAPE
SUITABLE FOR 6 TO 8 ROOM HOUSE



No. 2 - TWO WALL
SUITABLE FOR 5 ROOM HOUSE



No. 3 - U-SHAPE
SUITABLE FOR 6 TO 8 ROOM HOUSE

THREE typical planned kitchens laid out in a way that helps the housewife are illustrated below. No. 1 is a "U"-shaped type suitable for the average small house, with sink placed under a window, refrigerator near the door and range opposite. Ample work counters connect these 3 units. Plan No. 2 is for a small two-wall kitchen, and No. 3 is a variation of the "U"-shaped plan to fit a very frequent type of floor plan.



TWO modern, well equipped kitchens, showing ceilings furred down to top of cabinets, good lighting and good arrangement of equipment. Gas kitchen at left; new electric "unit" kitchen at right.

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kitchen 8' x 9', medium sized 9' 6" x 13', large 10' x 10' to 14'.

SPECIFICATION DETAILS

FURRING DOWN CEILINGS—Fur down ceilings above cabinets, (usually about 1', so that wall is flush with face of cabinets.) Soffit may be of wood, plaster or wall-board. It is desirable to extend soffit around entire ceiling area.

WAINSCOTING—Wainscoting should be of clean, washable material such as tile, steel or composition tile or linoleum. Provide bull nose cap and return at windows.

FLOORS AND BASES—Floor should be of flexible sanitary material, such as linoleum, rubber tile, composition materials. Provide sanitary cove base of floor

PLAN No. 4 is a typical 9 by 12 kitchen with 2 doors. Door to dining room is brought close to right wall so as not to break up the work area between range and sink. No. 5 suggests an "L"-shaped arrangement with corner windows. No. 6 also provides an "L"-shaped arrangement of equipment and suggests an attractive circular breakfast nook.

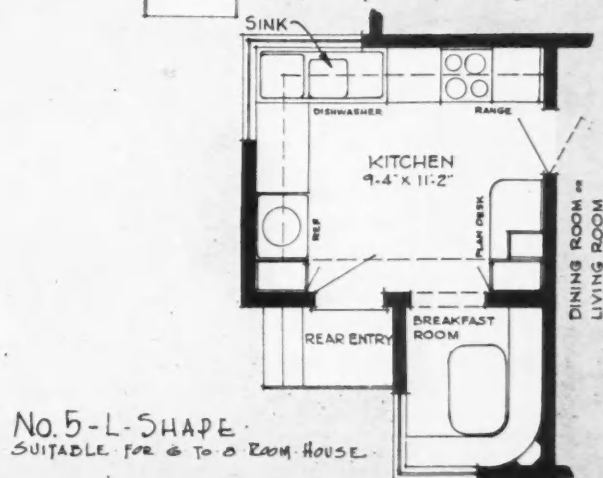
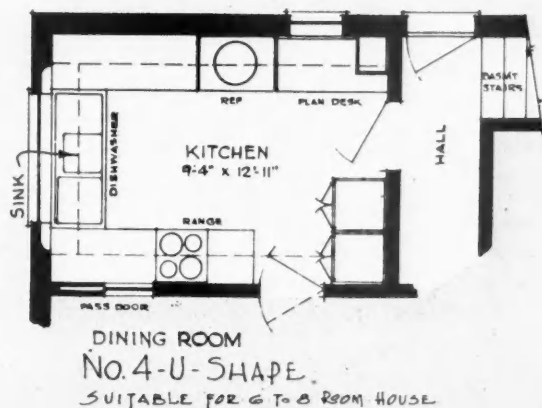
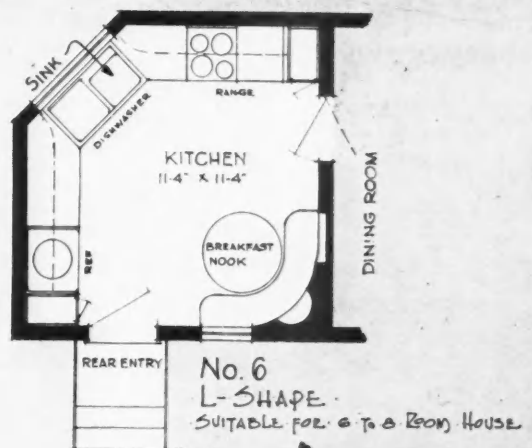
material, carried into toe space beneath cabinets. Toe space should be 4" high and 3" deep.

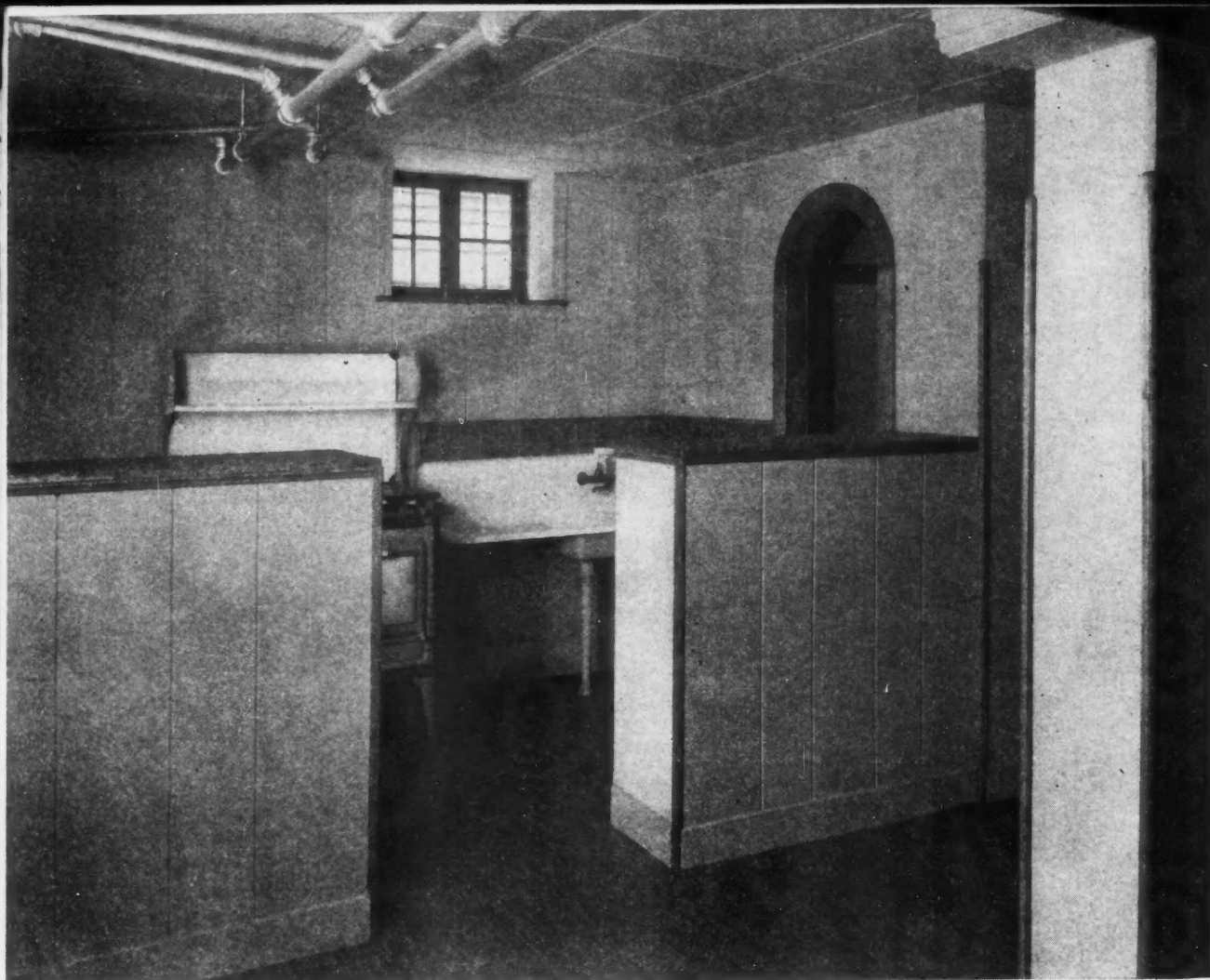
WINDOWS—In a small kitchen, 1 window located over sink not less than 3' 4" wide and 3' 4" high is recommended. Window returns should be plaster with metal corner beads. Stool should be of slate, tile, or washable material.

DOORS—Flush panel doors are recommended for the kitchen as they are easiest to keep clean.

PAINTING—Walls, ceilings and trim should be painted with light, cheerful colors in enamels or semi-

(Continued to page 144)





A CLEAN, modern laundry replaces the basement jumble shown below in this New York City job by Home Remodeling and Building Company. A. E. Klueppelberg was the architect.



No Less Than "AMAZING"

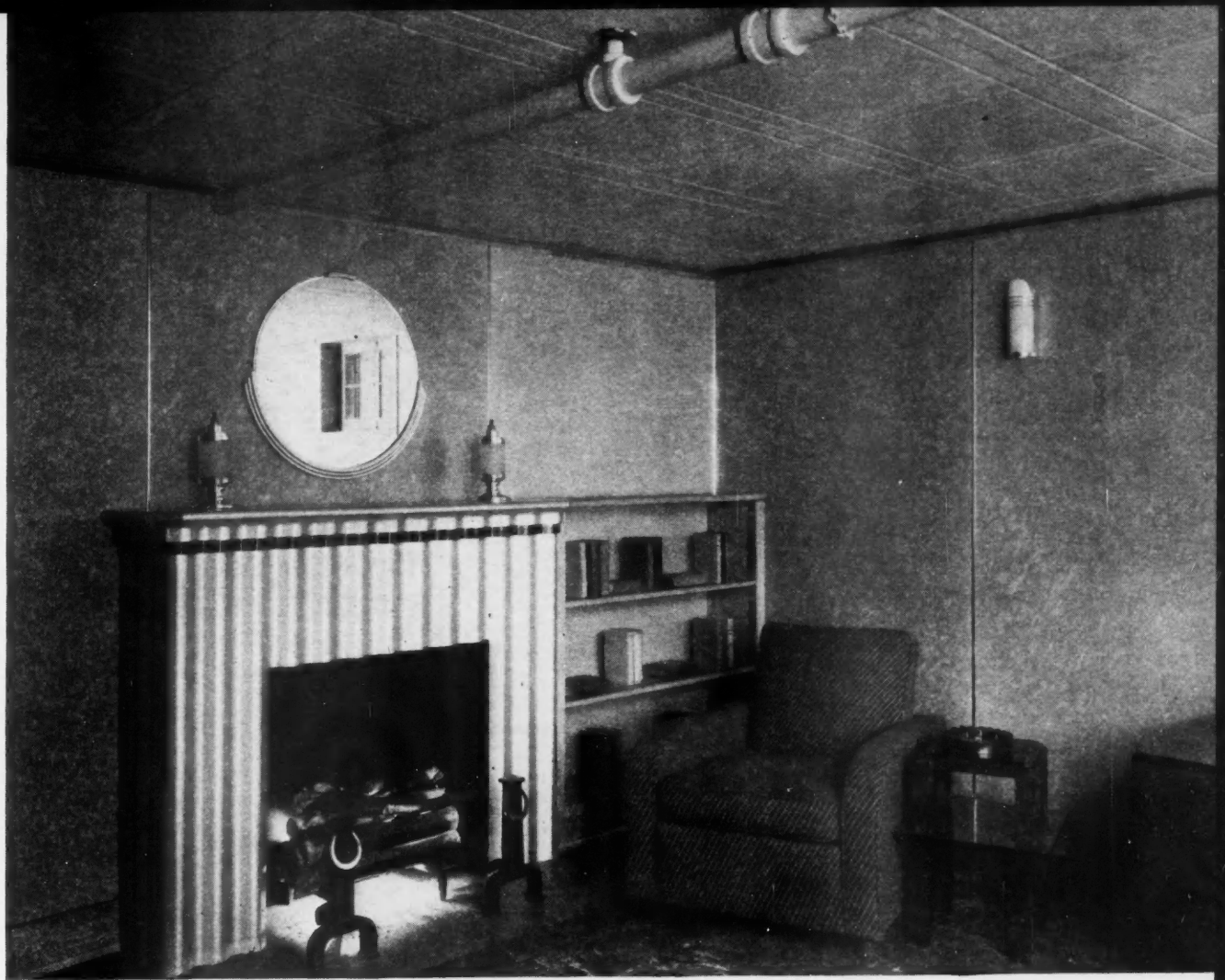
Two Basement Transformations

WHAT a smart builder and architect, working with modern materials, can do to transform useless basements into attractive livable rooms is beautifully illustrated in the accompanying pictures. The laundry, above, is in the basement of an enterprising mortician in the Bronx, New York City. He had a pressing need for additional space. The pictures show better than words the results he achieved, thanks to the work of Architect A. E. Klueppelberg and the Home Remodeling and Building Company.

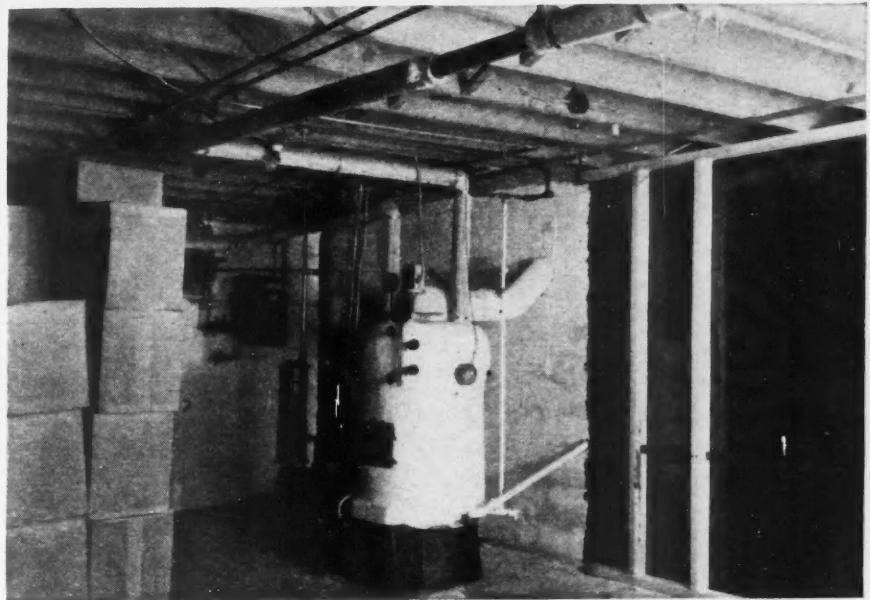
Studding were erected against all of the outside walls. These were cross furred to permit an even, substantial backing for Johns-Manville Decorative Insulating Board which was then applied. The insulated walls

furred out in this fashion provided a warm comfortable room. Pipe covering was removed to provide heat, and the pipes were then painted. The old window was given an attractive casing and new inswinging casements installed. Linoleum on the floors, plus a little simple wood work and clean paint did the rest.

The attractive modern basement on the page opposite was done by the Quality Improvement Company of Freeport, Long Island, from plans by Architect William Morrison. This is the basement of a typical 6-room bungalow, and the "before" picture, showing the heating plant, is typical of many such basements. The young couple that owned the house needed additional entertainment space. The first step was to water-



THE BEFORE and after story of an amazing basement transformation is shown on this page. Walls were water-proofed, and packed with insulation, then covered with asbestos Flexboard. The fireplace is built from corrugated Transite. The modernized ceiling is of insulating board, and the concrete floor is covered with asphalt tile.



proof the masonry walls as indicated in the "before" picture. Two by four studs were then erected, and the 4-inch space filled with J-M Ful-Thick Rock Wool. A partition was built, cutting off the heating plant. Full size sheets of Asbestos Flexboard were then applied and the joints covered with a narrow metal molding. Cross furring was applied to the ceiling joists and Decorative Insulating Board Tile applied. The old pipe covering was removed and the pipe given a coating of flat paint to match the buff color of the insulating board. With the basement walls thoroughly insulated in this fashion, the heating pipes kept the room very comfortable during cold weather.

The fireplace was built of Corrugated J-M Transite, and an attractive bar was built at the other end of the room by curving standard Flexboard around wooden supports.

The old basement sash were removed and placed on the outside to act as storm sash. New inswinging casement sash of much more attractive appearance were then installed. The concrete floors were covered with Asphalt Tile and attractive modern lighting fixtures were installed. The result is an extremely attractive 24 by 26-foot entertainment room for the O'Hara family and their many friends which adds immensely to the value of this property.

Facts and Fallacies about Red and White Oak Flooring

PUBLIC favor for white oak flooring has added to the serious inroads made upon the supply of white oak timber available in the United States today. Yet all those closely connected with the hardwood industry recognize the fact that, for flooring, and indeed for certain other purposes, red oak is the equal of white oak. How, then, can this public preference for white oak flooring be explained?

For many years almost all the oak lumber used in the United States was cut from the region of Ohio, Indiana, Kentucky and West Virginia. The oak that came from this district was white oak. Therefore, for a long time oak flooring meant to the consuming public—white oak flooring.

Only White Oak Suitable for Cooperage

Another factor explaining this preference is that white oak, with its tight pores and low content of tannic acid, is the only wood suitable for whiskey, wine and beer cooperage. The great demand for white oak by the beverage industry naturally shot the price up. So the public,

Can You Tell the Difference Between Red and White Oak?

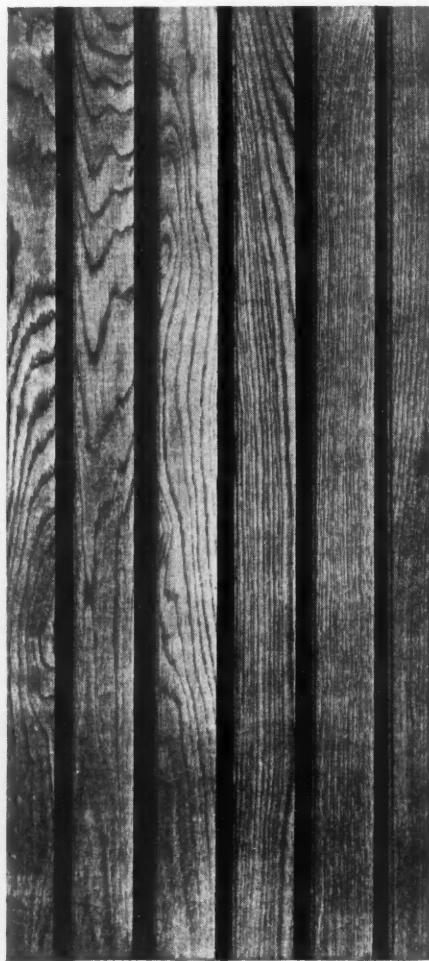
There is not as much difference in the appearance of red and white oak as many people seem to think. Pictured below are white and red oak flooring in three grades. See if you can differentiate the red from the white oak.

(Photos courtesy National Oak Flooring Manufacturer's Assn.)

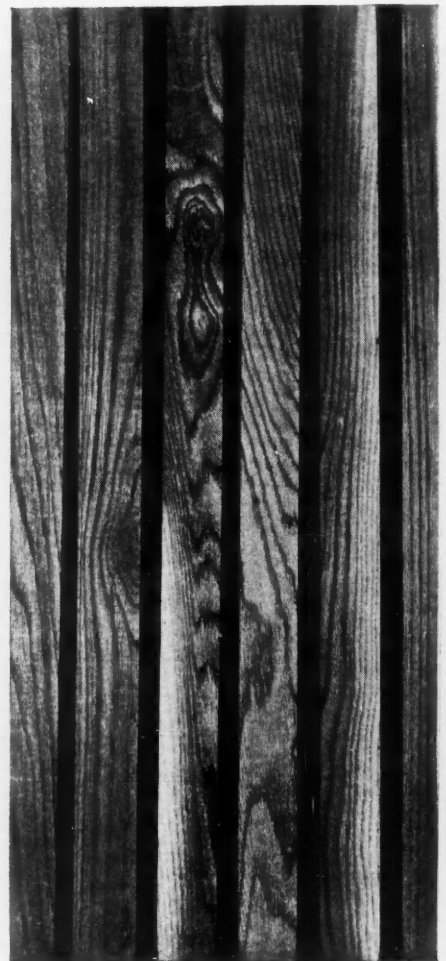
concluding that quality is always expressed in terms of price, became more fixed in its preference for white oak flooring. In this connection it should be noted that the



CLEAR Plain Red Oak



CLEAR Plain White Oak



SELECT Plain Red Oak

relatively high content of tannic acid in red oak (a reason for its unsuitability for cooperage purposes) serves as a natural preservative for the wood.

A third, and perhaps the only valid reason for the demand for white in preference to red oak flooring is that a few years ago only quartered oak was considered acceptable for flooring in fashionable homes. Quartered white oak presents a larger and more pronounced figure than does quartered red.

These are the three main reasons for the public's preference for white oak over red oak flooring. The first two are obviously prejudices, based on custom and an insufficient knowledge of the facts, rather than real reasons. What are the real facts about the desirability of red and white oak flooring?

First, red oak usually grows to larger sizes than white oak, providing greater average lengths of flooring, and therefore resulting in greater economy in both millwork and in laying the finished flooring.

Next, there is the question of color. There is much similarity of color between the two, the characteristic color of red oak being slightly darker than that of white. It is impossible to discriminate between the two woods by color. Much white oak is more red in appearance than red oak. Red oak is more uniform in color.

Red Oak Takes Better Finish

When it comes to the question of color in finished floors, red oak's superiority is evident. The pores of red oak are larger and more open than those of white oak and will take the stain and finish better. The result is usually a more even and beautiful finish.

Because of its closer texture white oak is somewhat

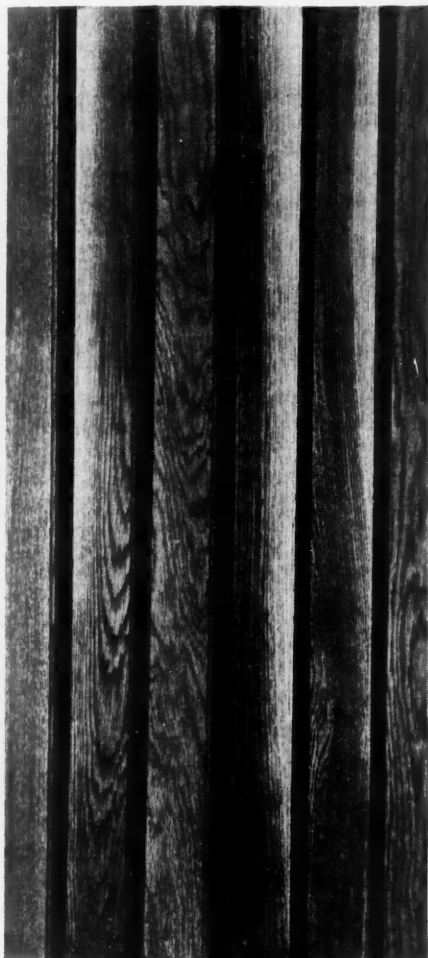
harder than red oak. However, this does not mean that it is more suitable for flooring. On any well finished floor the wear and tear is on the protective finish, rather than on the wood itself. It is conceded that red oak, with its large open pores, takes a much better finish than white oak—the pores absorbing more of the filler used and presenting a smoother surface. As for this whole question of durability—any oak floor, properly finished and maintained, will ordinarily last the lifetime of the building in which it is installed.

Red Oak Less Expensive

There is one other simple yet important reason why red oak should be desired for flooring rather than white oak, even though the buyer should deny the superiority of the red for this purpose. As has been mentioned, the great demand of the cooperage industry and the relative scarcity resulting has forced up the price of white oak, and promises to force it even higher in the future. This differential in price is altogether out of line with the value of these two woods for floors. Those who pay the higher price for white oak flooring are not paying for extra quality in flooring, but for a scarcity brought about by an entirely different use.

Action Suggested

In some sections red oak flooring is now used more than white oak. This is because architects, contractors and dealers have awakened to the fact that red oak offers a greater dollar value and possesses all the beauty and durability expected of a hardwood floor. The building industry can do its customers a favor by recommending red oak flooring.



SELECT Plain White Oak



NO. 1 Common Red Oak



NO. 1 Common White Oak

Anchored Foundations Prove Worth in Recent Floods*



ORDINARY good construction of toenailing studs to sills, and bolting sills to foundation, prevented dislodgment of this bungalow, although it has been exposed to a swift current and submersion.

THE Forest Products Laboratory, as a part of its general researches on the more efficient utilization of the Nation's timber resources, is particularly interested in studying the performance of frame structures in service so that the serviceability of wood may be improved. The Laboratory was therefore greatly interested in the damage caused to frame construction by the Ohio River flood of 1937, and made a brief inspection of a few typically flood-damaged houses in Louisville, Ky., and Jeffersonville, Ind.

The inspection included: (1) Houses that had been subjected to very high waters and strong currents with resulting structural damage, and (2) houses in somewhat higher areas where the water reached only a few feet above the first floor with little or no structural damage resulting, although the damage caused by long continued soaking was considerable.

The houses inspected in Louisville that had been submerged were of the modest bungalow or small low-cost, one-story type. The foundations were either timber posts, or masonry piers of concrete, brick or stone. Only a few had a concrete wall foundation with basement. Many of these houses had been shifted from their foundations. As a whole the houses in Jeffersonville that had been submerged were of a somewhat better type, but many of these had also suffered structural damage but not to the extent of those in Louisville.

The primary cause of the structural damage in these submerged houses was nonuniform bearing as a result of the shifting of the house from its foundation. Lack of sufficient anchorage was primarily responsible for the houses being shifted. In fact, in most of the houses that had been shifted, overturned, or even floated away, no

*An article on the *Behavior of Frame Construction in the 1937 Ohio River Flood* by R. F. Luxford, Senior Engineer and E. C. O. Erickson, Associate Engineer, Forest Products Laboratory, Maintained by the U. S. Department of Agriculture at Madison, Wis., in cooperation with the University of Wisconsin.



THE OVERTURNING of this house was caused by high flood waters, swift current, and lack of anchorage to the brick foundation.

evidence of any anchorage whatever could be found. Where anchorage was found in houses that had shifted it was entirely inadequate and much below what ordinary good building practice would call for.

The following are examples of insufficient anchorage observed:

1. Wood posts driven only about 18 inches into the ground. The buoyant effect of the water and the force of the current were sufficient to lift the house and pull the posts from the ground, the posts remaining attached to the building.

2. Studs mortised into wood plates, but not otherwise attached to the floor system. The house had apparently been lifted from the first floor, leaving the floor system and sills attached to the post foundation.

3. Tying of the house to the foundation by thin metal straps screwed into the side of the house and anchored into the ground. The straps were few and the fastening inadequate, allowing the house to shift from its foundation.

4. Drift pins which were anchored into masonry piers and were of sufficient length to extend through the sills, but evidently were not intended to resist lifting of the house. Only the piers were left, the house apparently having been lifted by the water and then floated away.

5. Overturning of concrete piers on account of not having been extended far enough into the ground.

Suggested Methods for Reducing Structural Damage to Frame Construction by Floods

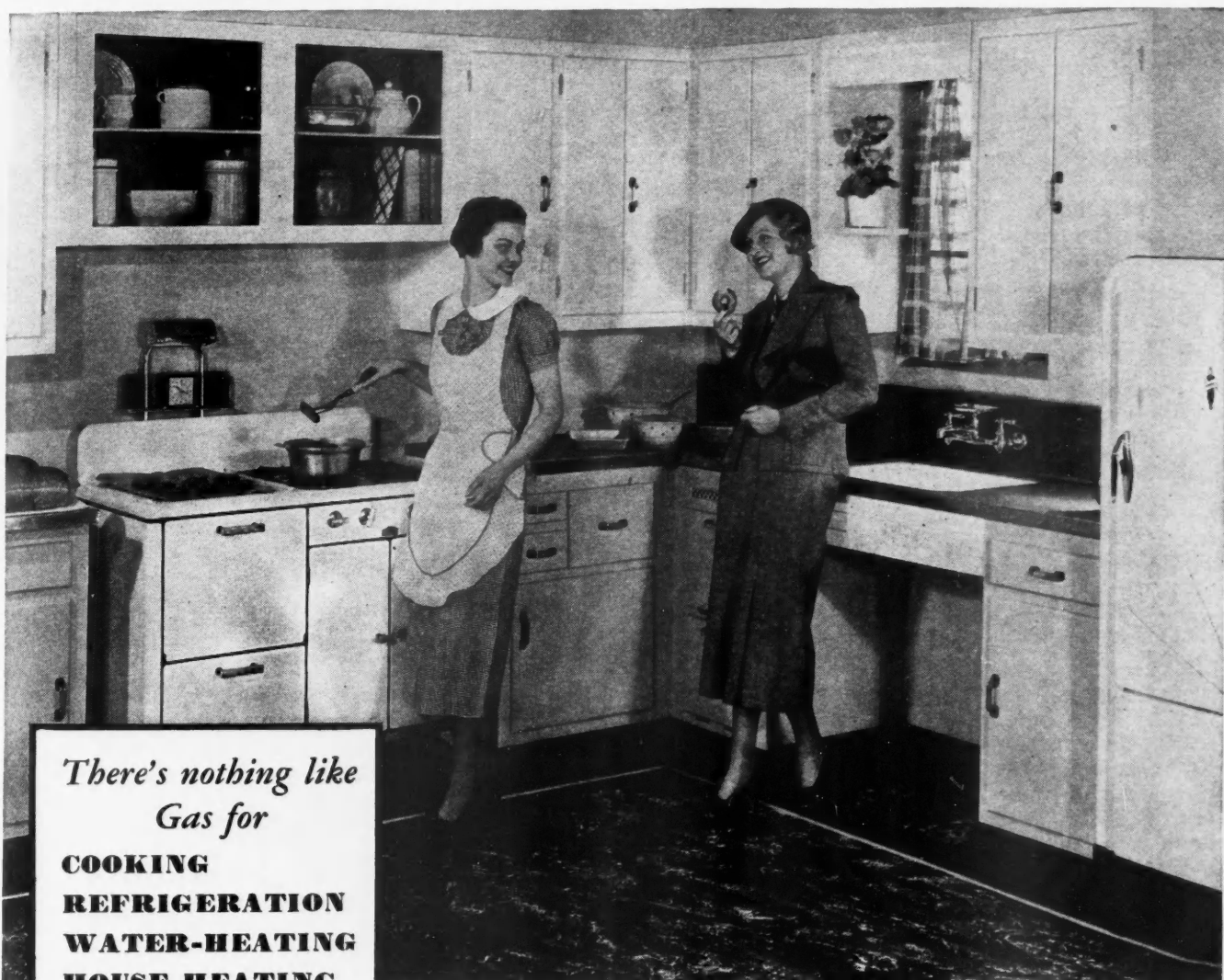
There was no appreciable structural damage found in the houses that had been only partially submerged. The partially submerged houses did, however, suffer severely from dirt and muck swept into the houses, from buckling, warping and swelling of the floors and woodwork, from damaged natural finishes, ruined interior paint finishes and wall papers, and in some instances badly damaged plaster.

(Continued to page 90)



IT'S JUST A *Kitchen* ON THE PLAN..

Gas MAKES IT A PLEASANT PLACE TO WORK



*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.

ALL the thought and planning behind your kitchen layouts adds up to just one thing. *To make each one a pleasant place to work.* Up-to-date gas appliances can help you make this a reality. A single look at the trim lines of today's ranges and refrigerators will tell you they belong in modern kitchens. As for performance, they more than live up to their appearance.

Modern gas ranges have automatic lighting, dependable oven-heat control, highly efficient top burners that give an infinite number of heat variations, and insulation that keeps the

kitchen cooler. Gas refrigerators go about their work in a way that's unequalled for silence and long years of satisfactory performance.

This same businesslike appearance and efficient performance extends to automatic gas equipment for water-heating and house-heating. As is the case with ranges and refrigerators, these appliances offer the time-tested dependability of gas—already the preferred fuel in more

than 16,000,000 American homes! In addition to its up-to-the-minute convenience, gas brings definite economies to homes equipped to use this perfect fuel 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

Anchored Foundations

(Continued from page 88)

The general survey of the flood damage to frame construction indicates that most of the structural damage could have been prevented if ordinary good construction principles had been rigidly adhered to, especially as concerns the anchoring of buildings to well-designed foundations, such as would result from taking the following precautions:

Timber Post Foundation

Where the use of timber posts is permissible they should be given a preservative treatment to prevent decay, and should extend into the ground at least 36 inches. They should, of course, be of sufficient size and spaced closely enough together to carry the load safely. If less penetration is used the anchorage should be supplemented by bolting treated anchor boards to the lower end of each post, the anchor boards being placed horizontally in previously excavated trenches. The sills should be securely anchored to the posts. It is very desirable that the corner posts be diagonally braced to the sills. It is also good practice to brace intermediate posts.

Concrete, Brick, or Masonry Piers

These piers should rest on firm soil, preferably below the frost line, or at least 18 inches below the ground on spread footings.

The brick or stone piers should be well bonded with a good cement mortar. An anchor bolt of good size should be imbedded an ample depth in each pier, and of sufficient length to project through the sill and be provided with good sized washers and nuts, thereby firmly tying the sill and foundation together.

Continuous Concrete or Concrete Block Foundation

The concrete blocks should be well bonded with a good cement mortar. The wall should be provided with sufficiently large anchor bolts, spaced not over 8 feet on centers, and extending at least 18 inches into the foundation. These bolts should project through the sill and be provided with washers and nuts. A bolt should be used at or near each corner and angle of the building. If the house is without basement the walls should extend below the frost line.



THIS church roof of timber construction still structurally intact, had floated off the brick walls for lack of sufficient anchorage.

Framing Members

Diagonal sheathing securely nailed to the sill and wall plates is very effective in anchoring building to sill. Where diagonal sheathing is not used each joint should be securely toenailed to the sill. Where platform construction is used each stud should be securely toenailed to the plate. Obviously, for good construction all parts must be securely fastened together.

While it cannot be definitely said that the adherence to the foregoing principles of anchorage will in all cases prevent structural damage to flood-exposed buildings by dislodgment, the danger of such damage occurring will be greatly reduced.



THE BUOYANT effect of submersion caused this house to rise off its concrete piers and float away. The straight anchor rods imbedded in the piers without washers and nuts proved insufficient anchorage.

"100% RUSTPROOFING PAYS"



—Builders tell us

Here is how Anaconda Copper products make this home more desirable:

- Roofing—10 oz. Economy Copper (standing seam)
- Gutters and spouts—16 oz. Copper
- Window Flashings—10 oz. Copper
- Termite Proofing—20 oz. Copper
- Water Piping—Anaconda "85" Red-Brass
- Foundation Waterproofing—"Electro-Sheet" Copper
- Weatherstripping—Bronze
- Screens and Frames—Bronze



One small ad in a Boston paper aroused widespread interest in this charming home. The owner gives Anaconda Copper products a large share of the credit for the sale of the house.

HERE is more proof of the sales advantages of Anaconda Economy Copper Roofing and other non-rust products. The house that is protected against rust certainly appeals to the home-buyer, and helps assure the profit to which the builder is entitled.

First to catch the eye in the home shown here is the copper roof. This is the new Anaconda standing seam design. Lighter in weight (10 oz. per sq. ft.), and in narrower sheets (13 $\frac{3}{4}$ "

between seams), this design provides the permanence of copper at a reasonable cost. Why not use this roofing on your new projects?

Anaconda Copper Tubes and Solder-Type Fittings for hot and cold water and heating lines are another important feature in modern construction. This modern non-rust piping costs very little more than a rustable job. Let us send you our booklet describing these and other Anaconda Copper products for the home. 37239



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The Professor's House

Federal Housing Administration and Adult Education

By V. L. SHERMAN

QUITE different nowadays is the feeling about building or owning a home. When the borrower can look ahead over a period of twenty years without the renewal of a mortgage, can feel free of any junior mortgage, and knows that his installments cover all of his community obligations, then he enters on the project with a freedom of mind. The benefits derived through the policies of the Federal Housing Administration have a steadying effect. The prospective owner has changed from the older days of cutting costs and skimping and become an interested student of good building construction.

"Adult education" has become a popular expression within the last few years. To the reader's mind it may mean anything from a missionary field developed by educators to extend their influence to a renewal of the old pioneering spirit among the grown-ups. Then, too, comes this slant so far as engineering graduates are concerned. These seem to be more and more in general demand. Possibly it is because the engineering graduate of recent years appreciates the tremendous changes of late years in all of the industries and is so easily convinced that his knowledge is only a starting point that a little persuasion is enough to keep him right on as a student in the industry.

But it is a fact that the grown-ups have changed. They are anxious to take an interest in serious matters outside their vocation or profession, and as students they can generally make their undergraduate friends call for time out. But adult education is not a mere matter of schools and colleges. It is a matter of improving our ways of living and our livelihood, it is the backbone of research, and a leavening for all of us. This adult education affects the building industry in various ways, all of them for good. We were first taught, by the insurance companies, I think, that there were better ways of financing the building of homes. Further study of their methods leads us to the Federal Housing Administration. Then the industries had to teach their advertising men that the self-educated market was more interested in information and careful explanation than it was in dogmatic claims. As publicity improved so did the market. Which leads me to say that it is not so surprising, on looking around, to discover that a large portion of new building is going into larger homes, completely equipped.

From my own observations it seems an appreciative market has been built through its desire to learn and the improved publicity. The market is bound to grow, become more acquisitive, and, with increased understanding, afford more money for an improved way of living. Improvements in mechanical and electrical equipment get a quick reaction from this market. Take, for instance, Figure 1. Here is a complete unit for a determined capacity. Outside the words "expansion valves" there is none that would stump an average man intent on building for his best comfort, and if it was the first time he had come on "expansion valve" in connection with air conditioning equipment he would not be long in finding out its function. The term "air conditioning" is no longer acceptable to the average man. Its limits must be defined.

But this insistence on definite information is honest and improves the market.

The mechanical and electrical equipment manufacturers are surely paralleling the automobile industry in the matter of adult education. Their salesmen must become engineers and must lend their help to the agencies and sub-contractors who in turn must be able to teach the buyer. "Ask your heating contractor." The growth of the automobile industry did not come just because cars were faster or prettier. And the growth of improved mechanical and electrical equipment is not just happening. It is a matter of adult education.

The unit shown in Figure 1 is an indication of one of the wants of a market. There may be various means to the same end, but they must all be satisfactory.

When I started to prepare this article it occurred to me that I could get some interesting photographs by following the Dundee Road east into a locality somewhat near "The Professor's House" of many readers' acquaintance. That the house I had in mind was really a professor's house. That the professor was keenly intent on adult education, as much of a student as a professor. That he and the architect had met a situation and come to a satisfactory conclusion. The results of the conclusion interested me. The professor's name need not appear. The architect is William Campbell Wright. The first view of the house, from the road, is shown in Figure 2. The house is on level, woody ground, so situated that the absence of a basement is preferable. And the type and style of the house is such that a level layout adds convenience.

In Figure 3 we have driven up to the garage doors and stepped inside, facing the utility room. The conditioning unit can be seen in the background through the screen door. The garage is a large double garage
(Continued to page 94)

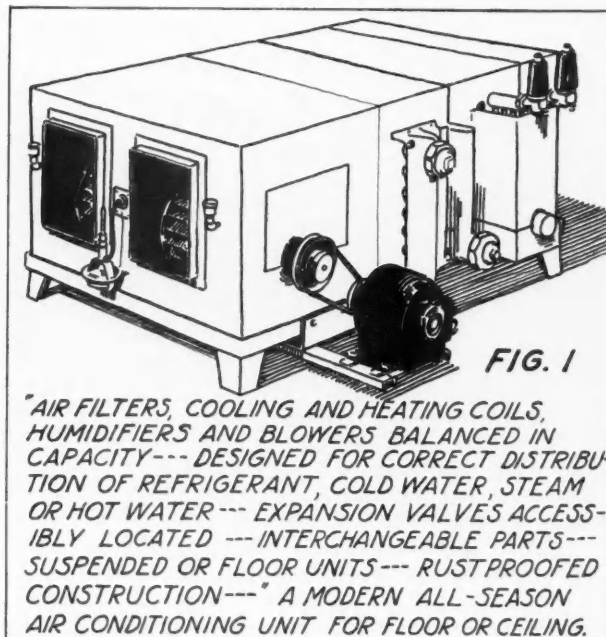


FIG. 1
"AIR FILTERS, COOLING AND HEATING COILS, HUMIDIFIERS AND BLOWERS BALANCED IN CAPACITY--- DESIGNED FOR CORRECT DISTRIBUTION OF REFRIGERANT, COLD WATER, STEAM OR HOT WATER--- EXPANSION VALVES ACCESSIBLY LOCATED --- INTERCHANGEABLE PARTS--- SUSPENDED OR FLOOR UNITS--- RUSTPROOFED CONSTRUCTION---" A MODERN ALL-SEASON AIR CONDITIONING UNIT FOR FLOOR OR CEILING.

1400-GALLON "TAXI" HAULS GOLDFISH

A TRUE "FISH STORY"

By LOWELL THOMAS

"Talk about strange cargoes. Listen to this true 'fish story.' Out in Martinsville, Ind., is the world's largest goldfish hatchery. The principal market, New York City, is a thousand miles away. To make this jump the Grassyfork Fisheries built a special tank truck, a ten-tire giant that can haul 200,000 fish in one load.

"To protect this precious shipment, the truck is heavily insulated. A special engine drives a compressor, forces a constant stream of air through the 1400 gallons of water.

CAN'T TAKE CHANCES

"Once a week in zero-weather January or broiling July this big truck makes the eastward journey. Carries fish for the East, rare specimens to go aboard Atlantic liners. They must 'bring 'em in alive.' Delays would be costly. You can't take chances on tire failure with a job like this.

"But they tell me they just don't have tire trouble with

Goodrich Triple Protected Silvertowns. Not one sidewall failure! And they run up tremendous mileages.

"In all my travels I've noticed that on the toughest trucking jobs you usually find Goodrich Silvertowns."

Lowell Thomas is right! Where the going is hardest Goodrich is first choice. Goodrich Tires are being tortured in heavy forests under crushing log loads of 15 and 20 tons, through burning deserts on fast schedules at 130° temperatures—over jagged rock in coal mine operations—in the army through ditches and underbrush, *on no road at all!* And they take this punishment in their stride.



Goodrich Silvertowns are Triple Protected in the sidewall—built with an invention that checks 80% of all premature failures. Only Goodrich gives you this 3-way safeguard:

- 1 PLYFLEX—distributes stresses throughout the tire—prevents ply separation—checks local weakness.
- 2 PLY-LOCK—protects the tire from breaks caused by short plies tearing loose above the bead.

3 100% FULL-FLOATING CORD—eliminates cross cords from all plies—reduces heat in the tire 12%.

On your trucks, too, you can get a new freedom from road delays and big repair bills and at the same time increase mileage with Triple Protected Silvertowns. See the Goodrich dealer and start saving. Or write The B. F. Goodrich Co., Akron, Ohio and Los Angeles, Calif.

Goodrich Triple Protected Silvertowns

SPECIFY THESE NEW SILVERTOWN TIRES FOR TRUCKS AND BUSES

MECHANICAL EQUIPMENT FOR 20-YEAR FINANCED HOUSES

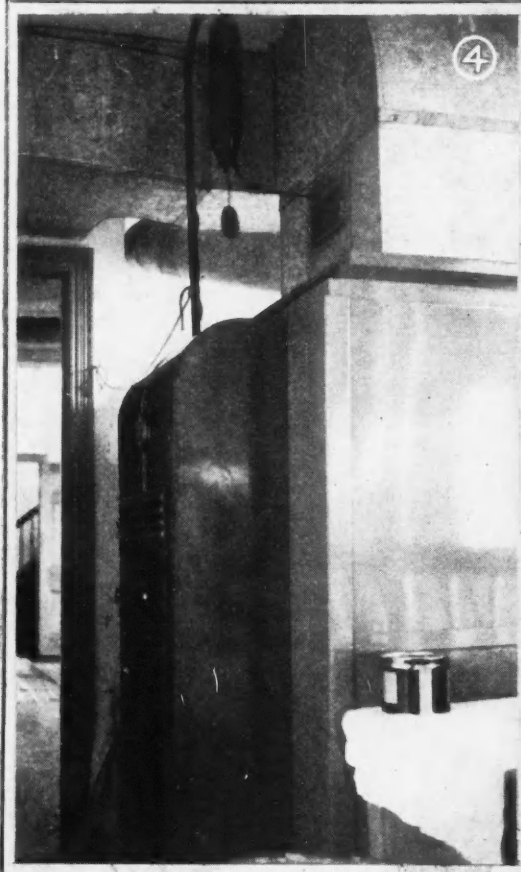


FIG. 2—The home without a basement built over a reinforced concrete slab mounted on concrete piling. Fig. 3—Entering the utility room from the garage. Conditioner in background. Fig. 4—Oil burner conditioner. Looking toward the kitchen and dining room. Fig. 5—Electric hot water heater berthed opposite pantry. Narrow access door.

dining room into the living room shown in Figure 7.

Above stairs is a large bedroom of the size of the living room with another ample fire place, a somewhat smaller bedroom with much sunny exposure to the south, and a bathroom over the study bathroom directly below. Possibly this gives enough description to open a discussion.

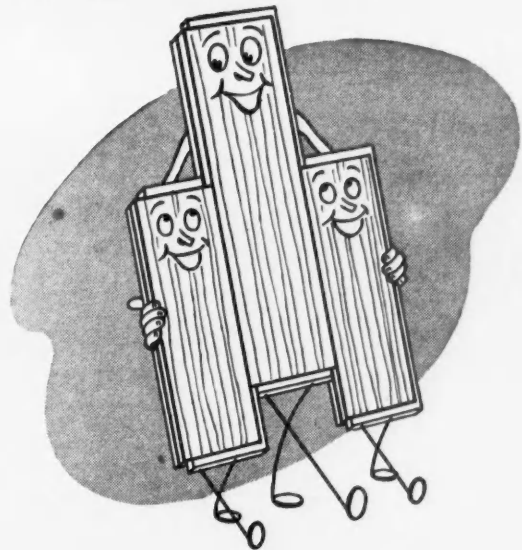
(Continued from page 92)
with roll-up doors, as can be seen in the extreme upper right of the picture.

Stepping through the door into the utility room we have Figure 4. Turning a trifle to the right we have the conditioning unit, oil-burner heat, automatically controlled for warm air. Beyond, is the door into the pantry, and beyond that the kitchen and dining room. Opposite the pantry to the left is a maid's room and bath. But next to the maid's room, and possibly to her advantage, is a small berth or room with an automatic hot-water heater electrically fueled. This little room is shown in Figure 5, accessible through a narrow door.

From the pantry door we can see, in Figure 6, the electric kitchen range, and beyond is the dining room. Leaving the dining room, entrance hall, and the ample study beyond to your imagination, we go on through the

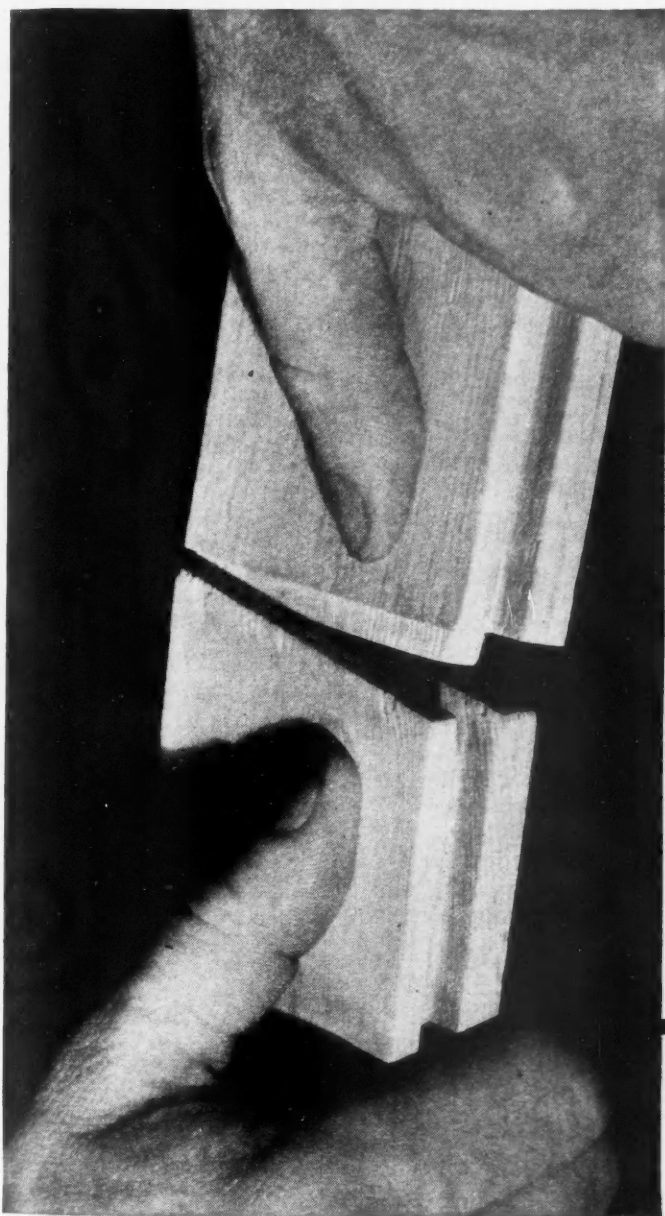
In the first place the question of a basement was not a financial one. And the question of supplying heat with clean air circulation had already been settled satisfactorily by the manufacturer. Heating and cooling and air conditioning by almost any medium do not require a basement nowadays. The question of fuel was considered from a sound basis. In this locality it is possible to furnish electric power at surprisingly low figures. Fuel costs depend mostly on transportation, or, in this case, transmission costs. It was found that, by using electricity for all wants except heating, the rates named took the low bid. Electricity for every want but heating. What extra for summer cooling when added to the rest? A glance at the rural power distribution map of the state's Commerce Commission will show the reasons.

The owner of this house is the third professor of my
(Continued to page 98)



ENDLESS SHEATHING LUMBER

—for lower building costs and greater building strength



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With Weyerhaeuser *ENDLESS*, fitting of joints over studs is unnecessary. There is no waste and less time is needed for sawing. Diagonal wall sheathing, with its greater bracing strength, can be provided at no greater cost than ordinary lumber applied horizontally.

ENDLESS LUMBER possesses the mechanical principles of hardwood flooring. Short-length pieces which mesh at ends and edges provide the extra strength and rigidity of flooring for general construction purposes.

Forty per cent of the lumber on the average house job is "boxing" lumber—wall and roof sheathing, subflooring. Fewer saw hours required to use *ENDLESS* mean more profitable hammer time to contractors.

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HEATING-AIR CONDITIONING-PLUMBING AND WIRING

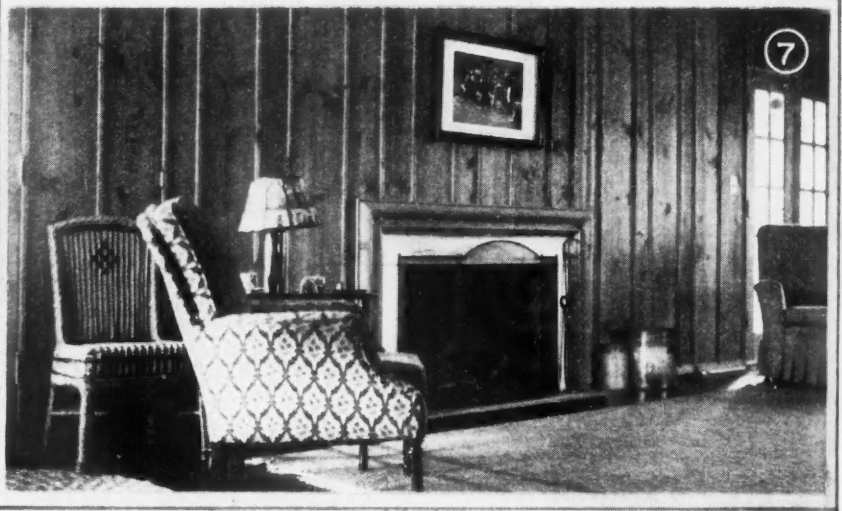


FIG. 6—Electric range next to the dining room door. A cooler overspace because of insulation. Fig. 7—Living room. Notice snug fit of doors on either side of fireplace, giving continuous paneling.

(Continued from page 94)

acquaintance to tie into this use of current. They are all pleased with it. When it comes to an electric range in the kitchen with its snug insulation of heat they all succeed in displaying some device in the way of a decorative shelf directly over the range to show its quality. Small blame to them, but they should provide "kitchen matches" for guests.

This house was framed over a reenforced concrete slab which extends above reenforced concrete beams fixed to reenforced concrete piling, five foot centers. The floor slab is deeply bedded and carries 2 inch square sleepers between which lie insulation. Under the slab, from the study to the utility room is a concrete tunnel, 2 feet square, which carries the return air. As a plenum for use during the hot weather on a reversed system it should prove of great advantage.

The wall plates are anchor-bolted to the concrete bearing beams as are the partition shoes. Thorough insulation is provided for the walls. A home situated as this one is, and serving the owner as it should, has plenty of sunlight. There must be no dark corners. To accomplish this in any home is easier these days than it used to be. Doors and window sash of all sorts are much improved, and door and window hardware has more than kept the pace. Beyond the French doors of the living room, Figure 7, a large screened porch extends across the north side of the house. By carrying the framing on the outside flush with the chimney two large sized closets are provided, one on each side of the fireplace. These closets are accessible from the screened porch, and may be provided with fire-logs and such small accessories as are likely to be used either on the porch or within the house. What interested me was that in providing access doors from the living room, on either side of the fireplace, the fitting

was done so nicely that the hinges and the handles were hardly apparent. This is especially a feature when such paneling is used. I noticed, by the way, an advertised door hinge which really duplicated, in a larger way, a very fine little cabinet hinge with which I used to be quite familiar. There is a strong market for such hardware as this.

Getting back for a little to "adult education." It certainly is not just attending classes. One of this professor's fellow-professors had given up golf to try his hand at raising dahlias. Within a few years he has become so expert and so high an authority that he has had to build a trophy room. He should, by this time, have no mean library well chosen from seed, flower and growers' texts. It is the advertising that counts, as it did with Kipling's inventor Zigler.

Electric Rates Favor Increased Use

This article having at least hinted that there are advantages to be gained from rural electrification, it would be well to quote from an authoritative source. The Rates and Research Section of the Illinois Commerce Commission in Bulletin No. 20 gives interesting facts and figures.

"It is particularly significant to note that the Illinois companies which have electrification programs based upon the idea of extending rural service to the farmers at rates which are reasonable have made the greatest expansion and have the lowest rates. . . .

"During the year 1936, 2,850.64 miles of rural lines were authorized by this commission to serve 7,592 customers in addition to the number shown. At the close of the year 1936 there were approximately 33,500 farm customers in Illinois, according to reports submitted to this commission."

As facilities increase to make use of electric power during the periods of lighter loads, as at night, the cost of producing power will decrease. It is somewhat the same as increasing mileage in an automobile and thereby decreasing costs by maintaining a constant speed. Pumping and heating can often be done at night where storage facilities are available.

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Like all K&M products, these new shingles are backed by more than 60 years' pioneering in the development of asbestos materials. Rigid quality-control insures lasting satisfaction. The K & M line is complete, priced right and sold by the right people.



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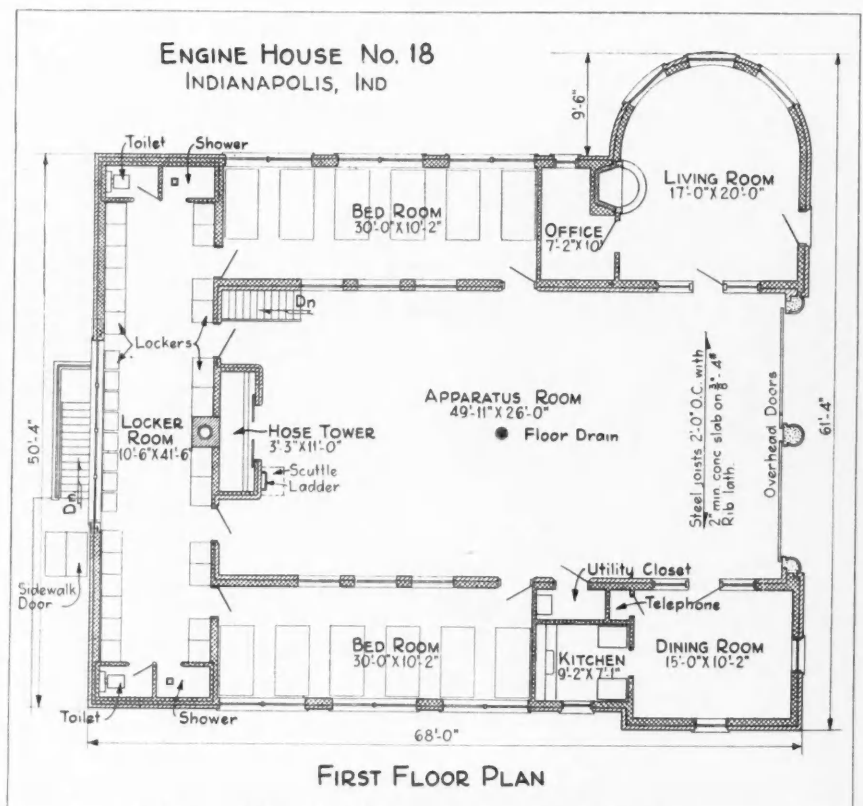
Modern Fire Station for Indianapolis

FUNCTIONAL modernism is the order of the day—now even fire stations are models of efficiency in planning and construction. The building above, Fire Station No. 18, in Indianapolis, lacks the classic bell tower, brass poles and elaborate stalls which characterized such buildings of twenty years ago. Instead it is compactly planned on a single floor with an exterior having modern lines and clean cut decoration.

The layout as indicated in the plan at the right shows a central apparatus room, the entrance equipped with upward acting doors. Dormitories on both sides provide bunk room for the fire company; the locker room with showers and toilets extends across the rear and is directly connected with sleeping quarters. At one side of the front there is a pleasant, well lighted recreation or lounge room with fireplace and a small office adjoining to the rear. Opposite are placed the dining room and kitchen. The small tower which can be seen in the exterior view is used to dry hose and not house the fire bell, as was the former function of such details.

Construction is fireproof, with ma-

sonry walls of haydite concrete block and brick facing, reinforced concrete floor, concrete ceiling slabs on steel joists and steel casement. The cost was approximately \$20,000; Pierre and Wright of Indianapolis were the architects responsible for the efficient planning and modern appearance of the structure.



FIRE STATION recently completed in Indianapolis is very modern in exterior appearance as above and extremely efficient in layout shown in the floor plan at right.

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The specialized types for gas, coal or oil are handsomely finished in two tones of red or green fine-grain crackle. Their splendid appearance harmonizes with and does credit to the finest of surroundings.

Builders will find in the complete Moncrief line a type and a size for every air conditioning need—everything moderately priced and of the finest appearance, quality and workmanship. Get in touch with the Moncrief dealer in your neighborhood and get further particulars and estimates.

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BOOKS on BUILDING

A REVIEW of current publications in the building field. For information about these books, write American Builder, Book Service Dept., 30 Church Street, New York City or the publishers.

125 SMALL HOME PLANS—by R. C. Hunter, New York Small Homes Architect. 1936. 125 plates, 7½x10, paper, spiral binding, \$2.00.

Twenty-five photographs of recently built houses, 5 not before published, and 95 which previously appeared in the author's portfolio of "100 New Small Homes" of 1931 design. Each house is shown with floor plan and cubic footage is given so that approximate cost can be figured for any section of the country.

ARCHITECTURAL GRAPHIC STANDARDS—by Charles G. Ramsey and Harold R. Sleeper, Architects. 1936. 2nd. 284 pages, 260 plates, 9¼x11½, cloth. John Wiley and Sons, Inc., 440 Fourth Ave., New York City. \$6.00.

Graphic and diagrammatic presentation of architectural details, data, standards and information. The index lists 3,000 items so the man in the drafting room can quickly find information on almost any technical problem likely to be met with. This edition covers the new materials, new standards and new methods in building construction that have developed in the past three years, including insulation and air conditioning. The drawings are large and the lettering is clear. Everything from foundation to furniture is presented in construction order.

VARIAN'S HANDBOOK OF CONSTRUCTION DATA—by Arthur M. Varian. 1936. 30 pages, tables 5 x 7½, paper. \$5.00.

Useful information in the form of tables and formulas. These include weights and measures, mensuration, weight of building materials per cubic foot, rafter lengths, board measure, brick requirements, covering capacity of paint, size and weight of cast iron pipes, method of figuring radiation, etc.

MORE HOUSE FOR YOUR MONEY—by Dorothy Ducas and Elizabeth Gordon. 1937. 320 pages, 70 illus., 5½x8¼, cloth. William Morrow and Co., 386 Fourth Ave., New York City. \$2.50.

A handbook for those who want to build. The prospective builder is informed about building materials, foundations and roofings, buying land, raising money, securing an architect, planning the house, insulation, weather-proofing, and anything likely to come up for decision. There are lists of things not to forget, and advice on where to be economical and where only the best will do.

GUIDE OF THE AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS. 1937. 15th. 1170 pages, illus., 6x9, flexible. A.S.H.V.E., 51 Madison Ave., New York City. \$5.00.

Two hundred specialists contributed to this handbook containing reference data on the design and specification of heating and ventilating systems. It is based on the transactions of the society, investigations of the research laboratory and of cooperating institutions as well as the practice of members and friends of the society. A manufacturers' catalog section shows modern equipment. There are complete indexes to technical and catalog data.

MARKETS FOR PLUMBING AND HEATING FACILITIES IN RESIDENCES. 1937. 156 pages, tabulated data, 8x10½, Dept. of Commerce, Bureau of Foreign and Domestic Commerce, Washington, D.C. 10 cents.

The data in this study forms a complete analysis of this phase of the Real Property Inventory of 1934, covering 64 selected cities. It shows the number of homes with private indoor water closets, bathtubs and showers, also heating facilities, type of fuel used, and the extent of the market for hot water installation in residences having running water but no hot water equipment. The material is further subdivided by city proper, environs, and metropolitan districts, and the tables are arranged by geographical divisions.



A seal is insulated against arctic cold with a heavy layer of blubber. Over the blubber is the skin—a separate tough and waterproof cover to protect insulation. The insulation for a home needs similar separate protection—Sisalkraft.



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EVEN nature provides an additional wind-proof and waterproof covering for insulation—and it's hard to improve on nature.

Likewise, all building insulation should be protected with a complete separate covering that is tough, windproof and waterproof—it should be sealed with Sisalkraft.

Insulation, to be effective, must be kept porous and full of air cells—not filled with asphalt. A separate windproof and waterproof covering increases the insulating value and prevents air infiltration through the walls. Insulation that is sealed with Sisalkraft is waterproof and air-tight—and the asphalt in Sisalkraft is protected between two layers of kraft covering so that it cannot dry out.

Sealing insulation is only one of the many inexpensive jobs for Sisalkraft around any building. We'll be glad to send samples of Sisalkraft to any builder.

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Every cent you pay for paint and labor will be refunded if you use Bondex or Modex, or both. Just keep your painting bills and mail them to us when your name is announced as a cash winner. Read the suggestions below.

MODERNIZE Walls and Ceilings WITH MODEX POWDER CASEIN PAINT



Soft color harmony in the home with Modex.

The trend is to warm, rich, velvety casein paints—washable and practical. Being a powder, Modex gives all the advantages of casein paint at lowest cost. White, black, and 12 colors.

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A weatherproofing coat of Bondex protects this Florida home. One Bondex treatment waterproofs, beautifies, and preserves. Keeps basement walls dry, too. White and 16 colors.

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Read this ad from Better Homes and Gardens and you'll see why there's so much interest in Bondex and Modex

See that your stock of folders on Bondex and Modex is complete Write today

RUNNING WATER

Expands Home Building Opportunities

Electric Water Systems and Power Line Extensions Bring Modern Conveniences to Suburban and Rural Home Builders

By **LYMAN M. FORBES**

This installment of American Builder's "Plan For a Modern Basement" series tells about the Electric Water Systems Council and its nationwide campaign in behalf of pumps and power companies that has introduced some unexpected and interesting changes in the present home-building revival.

The Editors

PEOPLE who live in cities often dream of owning a home in the country, where they can have plenty of fresh air, trees, grass, and sunshine—without giving up the conveniences to which they are accustomed. Conversely, people who live in the country usually yearn for conveniences of city homes. Rapidly increasing numbers of contractor-builders, developers, dealers, architects, and finance men find they can satisfy the yearnings of both classes of prospective home owners with the aid of electric water systems. As a result, a surprisingly large percentage of new homes in the present building revival are being erected "beyond the water mains" of suburbs and improved subdivisions, or near paved highways in the open country, fifteen to thirty miles from the nearest city.

Technical Knowledge Not Needed

Builders find that aside from a few simple details about proper housing of pumping equipment and storage tanks, they need know very little about the technicalities of well drilling and water systems, although plenty of interesting and instructive literature is available. Experienced well drillers are available in practically every county, and in every city, to give dependable information on purity of local water supplies, depth at which usable water usually is obtained, its relative hardness, rate of flow, drilling costs and similar details. A well-schooled, sales-minded army of pump dealers, installing contractors, and representatives of electric companies is spread over the country to help builders by giving them information that can be passed on to their clients about water consumption per family, pump capacities, costs of installations and operation, together with helpful suggestions for providing cooking and lighting facilities.

The unique feature of this well organized movement is that it was born of near-desperation at the bottom of the depression as a drive to increase electric consumption on farms. One result has been a 270 per cent increase in sales of electric water systems during the past three years. Another result was 48,000 miles of power line extensions during 1936. A third result is that contractor-



A NATION-WIDE army of sales-minded pump dealers, drillers, and electric companies display this seal of the Electric Water Systems Council, to indicate where contractor-builders can get helpful information on water systems for homes.

builders, developers, and architects today suggest electric water systems to prospective home owners as a means of getting all modern conveniences on low-cost, outlying building sites where taxes are extremely low.

Let us examine a typical suburban community of 5,000 to 10,000 population where new home building is most active today. On every hand we see newly completed or partially completed houses. "Suppose we drive to the edge of town where the houses begin to thin out and the gardens, lawns and orchards grow larger. We pass the last fire hydrant, indicating the end of the city water mains. We are just a few minutes by car from Main Street. No difference is apparent in the well kept homes, lawns, cars and appearance of the people. All advantages of city life are still available. There are telephones, good roads, mail delivery, school facilities, electric power." And we continue to see newly completed homes, and others under construction. The answer is provided by electric water systems, and by contractor-builders who are utilizing them to widen building opportunities for prospective home owners.

Privately owned water-supply systems for homes probably are nearly as old as the first windmill. Water pumps have been driven by gasoline engines and by steam engines for many years. Not even electrically driven pumps are new, but the organized promotion of electric water systems is new. Activities of the Electric Water Systems Council, and allied organizations are outlined in this article so that additional contractor-builders, dealers, architects, developers, finance men, and prospective

(Continued to page 106)

BUILDERS — HEATING MEN — HOME OWNERS AGREE

*Here's Practical
Air Conditioning*

FOR THE MODEST HOME!

consisting of 3 simple parts

— newest equipment
in the complete line of

AMERICAN & IDEAL
RADIATORS BOILERS

1 A Good Heat Source

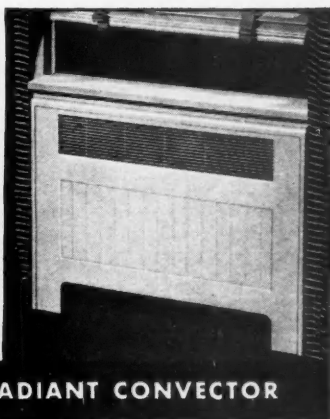
is the first requisite of good air conditioning. The "Lucky 7" is universal—burns any fuel—coal, oil, coke or gas. Has many high-priced features never before incorporated in a low-cost boiler. Model for automatic or manual operation.



NEW "LUCKY 7" IDEAL BOILER

2 Sun-Like Radiant Heat

is essential to health and comfort. This new type concealed radiator provides radiant heat from the radiant panel, convected heat from the upper grille. Sizes to fit snugly under most windows.



NEW ARCO RADIANT CONVECTOR

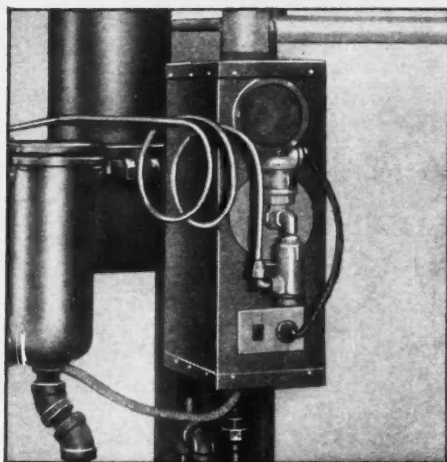
TODAY most people know that the basis of the best air conditioning is *modern radiator heating*. Humidification is the next important step. Now, at low cost you can install practical air conditioning that combines these important features in inexpensive homes. Win new sales... sell more prospects than ever before!

These new products are part of American Radiator Conditioning Systems

The new universal "Lucky 7" Ideal Boiler, the new Arco Radiant Convector and the new Arco Humidifier combine perfectly to provide all-important radiant heat and healthy humidified air. Domestic hot water too—for winter and summer

AMERICAN RADIATOR COMPANY

DIVISION OF AMERICAN RADIATOR & STANDARD SANITARY CORPORATION
40 West 40th Street, New York, N. Y.



NEW ARCO HUMIDIFIER 8000

3 Humidity Benefits Health—

is a vital factor in air conditioning. This perfected humidifier supplies correct moisture to entire house. Easily and quickly installed in connection with the "Lucky 7" Boiler. Requires only one 3" space-saving main. Circulation accomplished by small, efficient blower. Evaporates 12 gallons of water per 24 hours. Automatic or manual control.

—is part of the system with a Taco indirect Heater. The system costs little to operate... can be completely automatic.

Clinch sales with the fact that the entire system is made and backed by American Radiator—famous over 50 years for fine heating equipment—nationally advertised in magazines, newspapers, radio. Write today for the full facts. Build extra sales... extra profits!

LISTEN IN!
American Radiator
Fireside Recital...
every Sun. 7:30 P.M.
(E.D.S.T.) WFAF-
NBC Network.

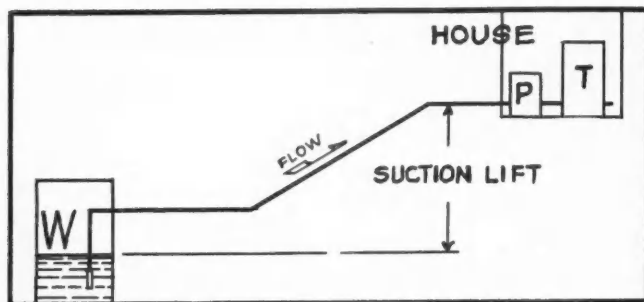
FEATURED IN THE

New AMERICAN RADIATOR CONDITIONING SYSTEMS

BRING IN FRESH AIR • ADD HUMIDITY • CLEAN THE AIR • CIRCULATE THE AIR • GIVE SUN-LIKE RADIANT HEAT • WARM EVERY ROOM EVENLY • SUPPLY YEAR-BOUND DOMESTIC HOT WATER

home owners will have a better understanding of, and can make better use of these facilities.

The movement is backed by leading manufacturers of electric water systems, by electric companies, by plumb-



SHALLOW well with pump and tank at point of discharge. Dangers of freezing are overcome by placing pumping equipment in basement of house. Used where vertical suction lift and friction loss in suction pipe do not exceed 25 feet.

ing and allied industries, by an army of well-drillers, pump dealers, and installing contractors. The Electric Water Systems Council was formed in 1932, when electric consumption, particularly on farms, was at low ebb. The initial campaign was directed to owners and prospective owners of farm homes.

It was pointed out that the installation of a water supply system on a farm raised living standards of the owner and his family to a new and higher plane. It was demonstrated that the installation of an electric water system is almost invariably followed by installation of flush toilets, with septic tanks or other sewage disposal system, modern kitchen and laundry equipment, and other mechanical conveniences. "Sell Running Water First," became the official campaign slogan.

According to Herbert C. Angster, secretary-director of the Electric Water Systems Council, 57,000 electric water supply systems were sold in 1933. In 1934, sales increased to 77,000. They went up again in 1935 to 108,000. Sales of 154,000 electric water systems in 1936 exceeded the 1929 total of 123,000 units.

Running Water Raises Standards

Improved living standards in farm homes with running water were demonstrated by a recent survey of 974 farm families with uniform annual incomes. Out of 486 farm homes without running water, 31 have electric ranges, 93 have electric refrigerators, 397 have electric washing machines. Out of 488 farm homes with running water, 71 have electric ranges, 212 have electric refrigerators, 440 have electric washing machines. The average home without running water uses 713 kilowatt hours yearly. The average home with running water consumes 1,170 kilowatt hours yearly.

The Electric Water Systems Council has prepared stimulating sales manuals for dealer use and for sales departments of electric companies. Another is available for distribution to owners of farm homes. Still another gives valuable pointers on the use of deep-well water for summer cooling in theatres, stores, and homes. Much of this material is of interest to contractor-builders.

The dealer manual, entitled, "Where Water Runs—Dollars Flow" points out sales opportunities in farm, suburban, and city markets. Dealers are urged to "follow the rural electric lines" as their first point of attack, and to sell "water service" rather than water systems.

The manual shows that a woman in a farm or suburban home spends more time in the kitchen than in any other room; that she needs water for laundering, cooking, dish-washing and scrubbing. The luxury of run-

ning water for bathing is illustrated and contrasted with older methods of heating and carrying water. The subject of sewage disposal and its relationship to healthful living is touched on. The advantages of running water for the home laundry are emphasized, with figures showing that an average family of five needs at least 175 gallons, or well over a half-ton of water a day. "Over 37 tons every year has to be carried in for the kitchen alone," says the manual. "And then 20 more bucketfuls on wash day."

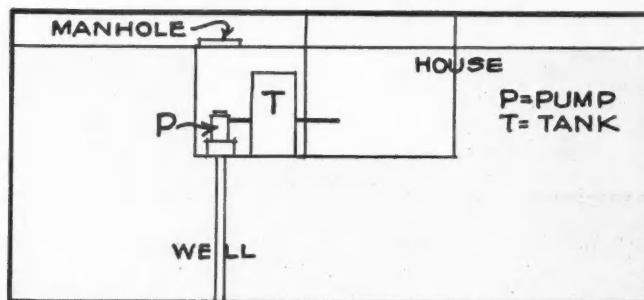
The advantages of fresh running water for live-stock are presented, with figures on yields. Test cows increased milk production 20 per cent when they had plenty of water. Egg production is increased by having plenty of water available for poultry. Horses and mules do better work when watered frequently, and water is a very definite factor in stock fattening. Running water provides "crop insurance" for small gardens. Electric pumps provide irrigation water from wells, springs, streams, pools, or other dependable sources. Fire protection is stressed, with instructions for protective armoring of power lines to pumps.

Suggestions For Pump Prospects

The manual also gives practical suggestions on selection of pumps, based on figures showing daily water consumption of humans and live-stock, water consumption of home fixtures, yard fixtures, and public buildings. A table shows friction and loss of head in water pipes of varying sizes. Diagrams show simple layouts of shallow-well and deep-well systems.

Technical data for the foregoing promotional manuals was written by engineers of the pump producers, edited and produced by the Plumbing and Heating Industries Bureau, with the cooperation of allied organizations.

The special manual on summer cooling with deep well water stresses economical operation, and indicates that a home of average size can be cooled for \$16 to \$18 a season, and that the system will also provide an ample



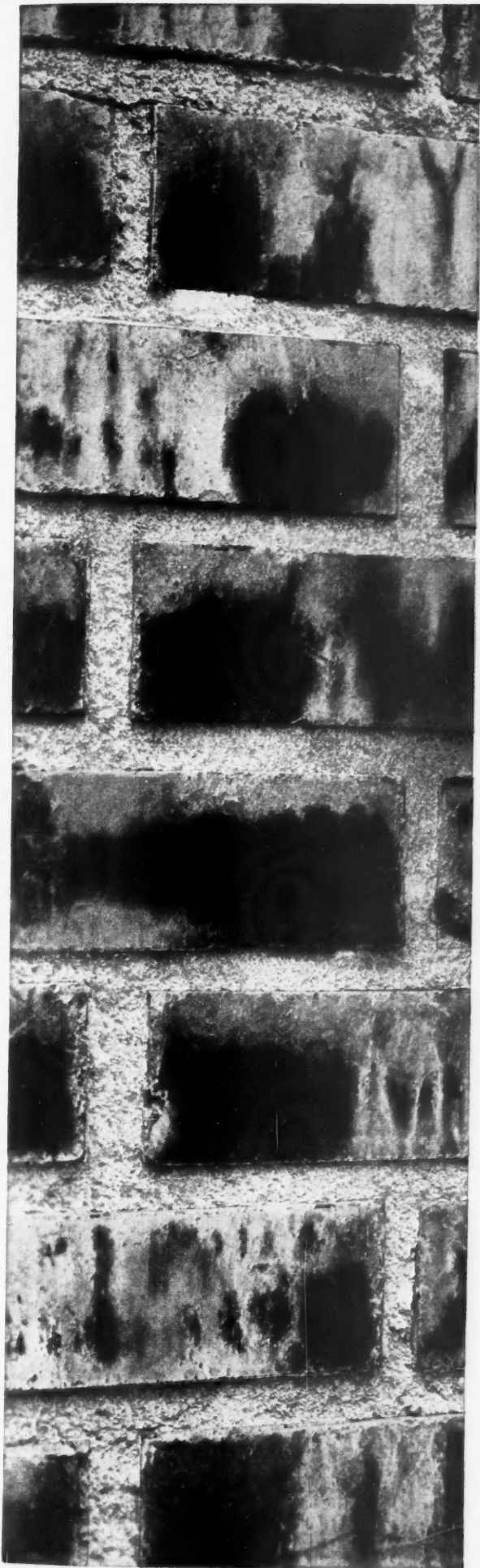
DEEP WELL with pumping head and tank housed outside of the foundation wall. Pump room is part of heated basement. Plunger of pump can be pulled up through manhole for inspection, cleaning, renewal of cylinder crimps, or cup leathers.

supply of water for lawns, garden, and other outside use at no additional cost.

Preliminary field surveys by *American Builder* indicate that with very few exceptions it costs less to install a water supply system on an inexpensive outlying building site than to connect up with a city water system on a comparatively costly, fully improved lot.

Suppose a contractor-builder or architect suggests use of an electric water system to a prospective home owner who is trying to decide between a building site "in town" and another in the country. Many elements of cost and convenience should be taken into consideration. If there is a spread of \$500 to \$1,500 or more between cost of the urban lot and an unimproved outlying site, this difference

(Continued to page 108)



BRIXMENT

CAN'T CAUSE

EFFLORESCENCE

IF YOU are troubled by efflorescence on your brickwork, use Brixment for mortar. ★ ★ Brixment never causes efflorescence because it is so free from soluble salts. Even when soluble salts are present in the sand or brick, the waterproofing in Brixment prevents their being brought to the surface. ★ ★ Easier to mix. Makes more plastic mortar—enables the bricklayer to do faster, neater, more economical work. *Waterproofed.* Won't fade mortar colors. Is stronger than the brick itself. One part Brixment, three parts sand, make perfect mortar for all masonry and stucco. Louisville Cement Company, Incorporated, Louisville, Kentucky. ★ ★



I Make Big Money Surfacing Floors

Gosh Fellows! I might still be a carpenter's helper except for the fact that I read an ad similar to this by the AMERICAN people less than a year ago. I'm not hinting that carpentry isn't a fine and honorable trade—No Sir!—it is one of the best there is, but now I have my own little business—floor surfacing.

Floor surfacing is a dandy way to make a living and my American machine has made big profits for me. I don't need any helper—do all the work myself. My American floor sander is light enough to transport from job to job. Because of the exclusive features in American sanders, smooth control, perfect balance and a powerful motor, there isn't a fellow in town that can beat me sanding floors. I didn't know a thing about running such a machine last Fall but I caught on quickly—the American machines have smooth, easy controls.

Start Now—Send Coupon Today

See the coupon at the bottom of this page—sign it, my friend, and get details, complete prices and circulars completely describing the features of American machines. The manufacturers of this swell floor sander will be glad to send you details without any cost or obligation whatsoever.

If you want to see and try one of these machines with your own hands, ask for a demonstration—it won't cost you a penny either.

The above is not a signed testimonial by any ONE American floor machine owner, but is the actual comment of HUNDREDS of new American machine users.

THE AMERICAN

FLOOR SURFACING MACHINE COMPANY

511 So. St. Clair Street, Toledo, Ohio

Gentlemen:

Send complete details, general catalog and prices on your American floor sanders without any cost or obligation to me whatsoever.

Name

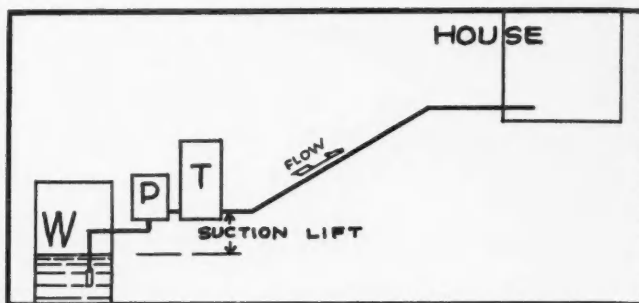
Street

City State

Running Water

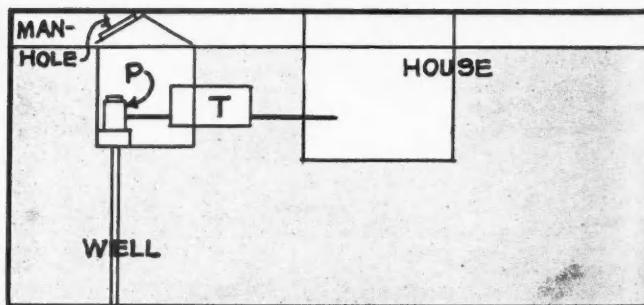
(Continued from page 106)

can be applied to cost of a water supply system in the cheaper location. Differences between annual taxes in the two locations can likewise be applied. Cost of connecting the urban dwelling with electric light lines, telephone lines, gas and water mains, storm and sanitary sewers should be set down. Water and utility rates should be figured. An intangible value in favor of the city lot will be convenience, because it is closer to shopping districts, transportation lines, to the owner's business, and possibly closer to schools.



SHALLOW well with pump and tank at source of supply. Separate housing has been constructed for pumping equipment, which is placed in pit to eliminate freezing hazard. Used where suction lift does not exceed 25 feet.

Savings in initial cost of the cheaper location, and savings in annual taxes on the completed property should be measured against cost of drilling a well, cost of installing a pump and tank, a septic tank and tile. Consumption of electricity and pump maintenance should be measured against water bills in the urban location. Cost of

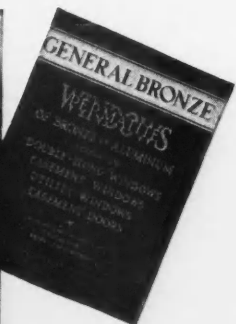


DEEP WELL with pumping head in ventilated, frost-proof pit, separated from house. Tank is laid horizontally and projects into the ground beyond wall of the pump house. Gauges and controls are attached to the end of the tank in pump house.

connecting with a power line should be compared with the same service at the other site. Telephone connections and rates should be considered. Cooking may be done electrically at special rates, or "bottled gas" may be used. Intangible values in favor of the outlying location may be found in larger size of the site, freedom from noise, crowding by neighbors, a safer and more desirable place for children to play, natural beauty, cleaner air.

Lee R. Moser, of American Housing Company, Chicago, is developing a tract known as New England Village, at Lincolnshire, located in Will County, 28 miles south of the city. The company is erecting houses that sell for \$7,000 to \$12,000 with land. Lots are figured at \$970 each. Houses are connected to power lines with a three-wire circuit. Each has a deep well, with an elec-

(Continued to page 110)



Send
FOR THIS BOOK

PERMATITE
WINDOWS



Insulated or
air-conditioned buildings require
WEATHERTIGHT WINDOWS

Air leakages reduce the efficiency of air-conditioning or insulation—and fuel is wasted. In order to build thoroughly up-to-date homes, apartments, schools, hospitals, etc.—you should know all the sales advantages of aluminum or bronze Permatite Windows.

The new, built-in, metal weatherstripping forms a virtually airtight seal—necessary for effective insulation and air-conditioning. This feature likewise keeps out moisture, dust and dirt, prevents annoying rattles and cuts heating costs.

Permatite Windows—both case-

ment and double hung—will not warp, stick or rust. They are surprisingly easy to operate. No painting is required. The upkeep is negligible.

These and other patented Permatite features will appeal to even your toughest prospects. And—you can now install these fine Permatite Windows at a price that is lower than ever before for windows of equal quality.

May we send you our illustrated catalog? It contains complete construction details and specifications for the contractor. Mail the coupon for your copy today.

**PERMATITE
WINDOWS**

Bronze or Aluminum • Casement or Double Hung

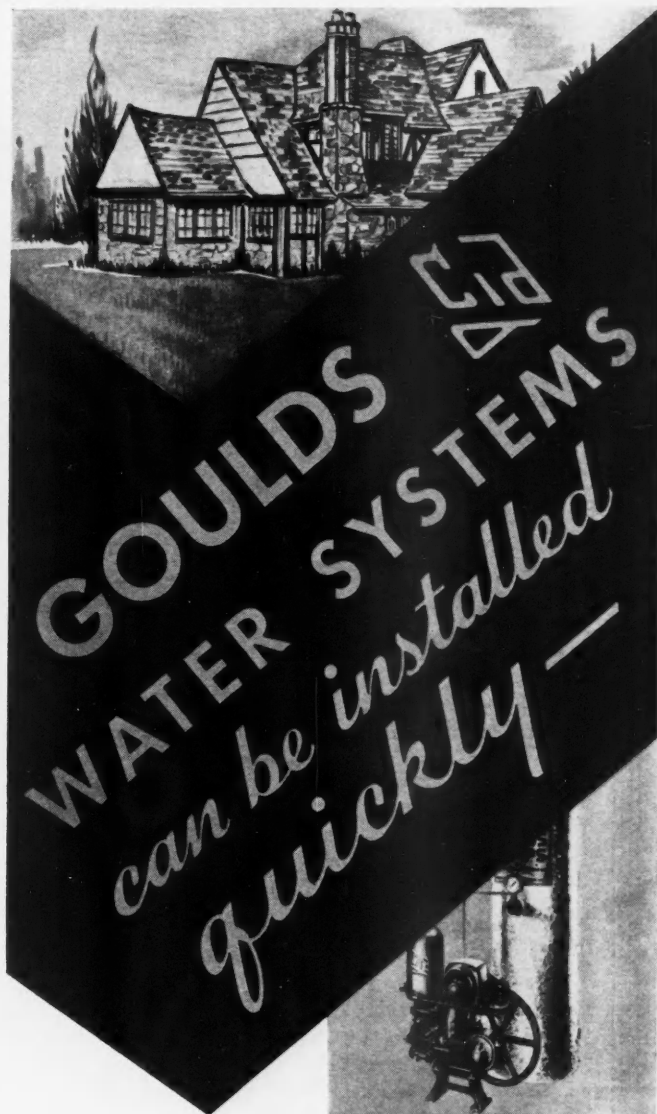


GENERAL BRONZE CORPORATION
34-19 Tenth Street, Long Island City, N.Y.

Send us FREE Specifications Book on Permatite Windows.

Name.....

Address..... 21



Goulds CID Water Supply System for shallow wells



Goulds CID Water Supply System for deep wells

Goulds CID Water Systems can be installed quickly in a new or remodeled home. These modern automatic electrically operated water systems will furnish running water in abundance under pressure from every faucet at an amazingly low cost.

There is a Goulds CID Water System to meet every capacity requirement for either deep or shallow wells. CID pumps are definitely quality products of dependable performance.

You can build a reputation for recommending and using only the best if you specify and install Goulds CID Water Systems. Go to your nearest Goulds dealer and see for yourself what quality and strength has been built into Goulds CID Water Systems, or write us direct for complete information.



GOULDS PUMPS, Inc., 230 Fall St., Seneca Falls, N. Y.

Please send me the name of the nearest Goulds Distributor. I am interested in a pump for
 deep well shallow well service.

Name.....
 Street or R.F.D.....
 Place..... State.....



PRACTICAL HELP

for architects
and builders

Anthracite Industries, Inc., is a non-profit corporation, organized to focus the experience and services of all factors interested in Anthracite, upon the improvement of home heating comfort, convenience and economy.

Many services available are of special value to the architect and builder. Among these, one of primary importance is the Anthracite Industries' Laboratory.

This is not only a source of knowledge gained from long and exhaustive research. It is also a service laboratory. Makers of Anthracite equipment have long relied upon it for accurate testing of equipment. Its staff of engineers makes many suggestions for the improvement of existing equipment, and for the production of improved equipment.

When the Anthracite Industries' Laboratory issues its seal of approval, the architect, the builder and the public alike, know that the equipment that bears it has passed an impartial, thorough test and has met the most rigid requirements in the heating field.

Technical data available include actual performance ratings of approved equipment, a vast store of specifications, and information on allied heating problems.

● Consult the headquarters organization of Anthracite Industries, Inc., at any time. Use its extensive field organization for help in specific construction cases. The concentrated experience of the Anthracite industry is at your service on request.

ANTHRACITE INDUSTRIES, Inc.
Chrysler Building New York, N. Y.

Pennsylvania
ANTHRACITE
COAL

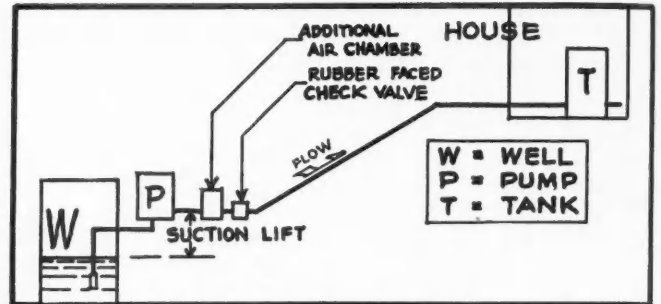
THE SOLID FUEL FOR SOLID COMFORT

Running Water

(Continued from page 108)

tric pump that supplies water at 25 to 40 pounds pressure. Every house has a modern bath, just as though in a city location.

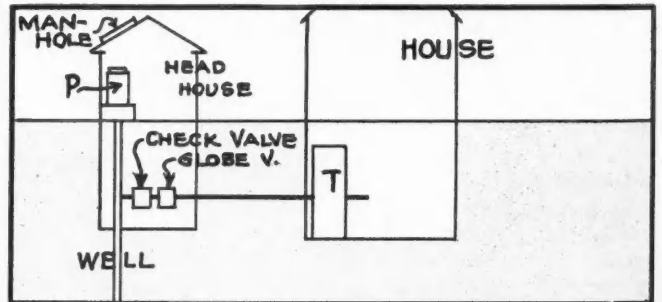
Prices of comparable lots in urban locations begin at \$1,600 to \$1,800, a minimum difference of \$630 that can be applied to a water system. Good water is obtained at a depth of 100 feet, at a drilling cost of \$1.60 a foot



SHALLOW well with pump at source of supply, and tank at point of discharge. An air chamber with rubber-faced check valve at lower end of discharge line absorbs pump pulsations. Automatic pressure switch should be installed on tank rather than on pump.

(4½" galvanized casings). Mr. Moser reports that it costs \$50 to break into a city water main, and that sometimes a bond must be put up for opening a street, where a main has not been stubbed-in properly. City sewer work costs about \$125, which will more than pay for a septic tank in the country, one that will be recognized as fully healthful by state authorities and by government loaning bodies. Taxes are about one-third of those for improved property beyond the nearest county line.

Water is heated electrically for domestic use, and cooking is done on electric ranges. One owner who has



PUMPING head of this deep-well unit is housed above grade. A frost-proof set has been attached to the pump so that discharge pipe to pressure tank in basement runs below the frost line. A rubber-faced check valve in the discharge line is recommended.

lived in the community for more than six years reports that he averages \$7 a month for electric service, including pumping of water, heating domestic water, cooking, and operation of an electric refrigerator.

The next installment of this series will include pictures of houses in suburban and rural locations, with detailed information about equipment and land costs.

Meanwhile, contractor-builders should become better acquainted with their local pump dealers and well drillers, and should write for literature on the subject of electric water systems. Thus they will equip themselves to discuss the subject, and to make definite recommendations regarding water supply installations to prospects who may be interested in building a home where land costs and taxes are low.

COMPLETELY AUTOMATIC HEAT! REALLY MODERN AIR-CONDITIONING!

at the lowest possible cost with

ANTHRACITE

Amazing forward strides have been made in recent years by Anthracite equipment. Today you can provide any desired type of heating, air-conditioning, automatic fuel and ash handling, with modern Anthracite equipment.

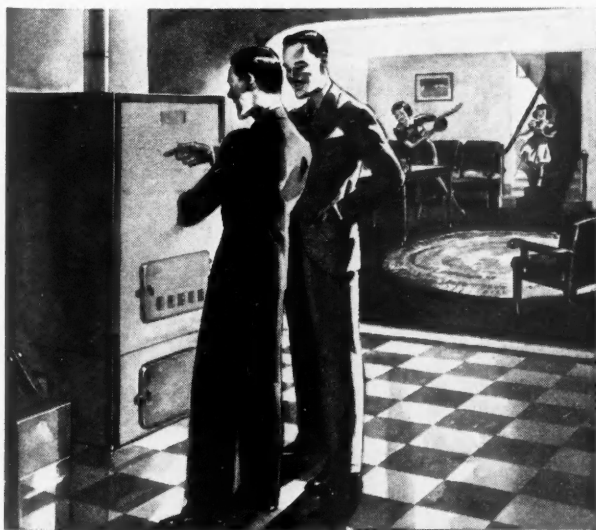
Matching the convenience other fuels can offer, Anthracite has plus advantages no other fuel can match. In addition to cleanliness, dependability and absolute safety, Anthracite provides the ultimate in economy.

With Anthracite you can stay within the building

budget for the modest bungalow or cottage. With Anthracite you can provide the ultimate in automatic heat, with air-conditioning, for the most pretentious home—and the fuel savings go a long way towards paying for the entire installation.

Anthracite offers a known source of fuel supply at a stable price. Anthracite equipment offers any desired convenience in heating and air-conditioning. A copy of Bulletin 10-B, listing and describing the equipment approved by Anthracite Industries' Laboratory will be sent on request.

The headquarters staff of Anthracite Industries, Inc., and a field force of trained heating men are at your service for information and help in any heating problem affecting Anthracite. ANTHRACITE INDUSTRIES, Inc., Chrysler Building, New York.



Pennsylvania
ANTHRACITE
COAL

THE SOLID FUEL FOR SOLID COMFORT

A home free of Cooking Odors.

..that's her **FIRST** demand!




VICTOR In-Bilt VENTILATORS

● The modern woman has very definite ideas about that new home they are going to build or buy. She takes for granted all the regular kitchen features—but ventilation is a "must" item. Turn this present-day trend of thought to your advantage by featuring Victor In-Bilt Ventilators in the homes you plan or build. Nothing you could include provides so much in comfort, utility and sales closing power for so slight an outlay. The anticipation of fresh, sweet air in the living quarters as well as the kitchen, regardless of what foods are cooking—the absence of greasy fumes that make constant cleaning and frequent redecoration necessary—are powerful appeals that women can't resist.

MANY EXCLUSIVE FEATURES

Architects, builders, home owners, and all who have investigated ventilators for the home agree that only Victor In-Bilts have every desirable feature. In appearance, performance, convenience, construction and ease of installation—truly, there is no equal. Don't assume that any ventilator will do. Compare values and you, too, will choose Victor In-Bilts.

HERE'S COMPLETE INFORMATION ON VICTOR IN-BILT VENTILATORS!



Get the whole story of Victor In-Bilt Ventilators, simply by using the coupon below. Bulletin No. 905-C illustrates, describes all features, gives specifications, installation data, etc.

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



CLIP THIS TIME-SAVING COUPON NOW

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

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

Name _____

Address _____

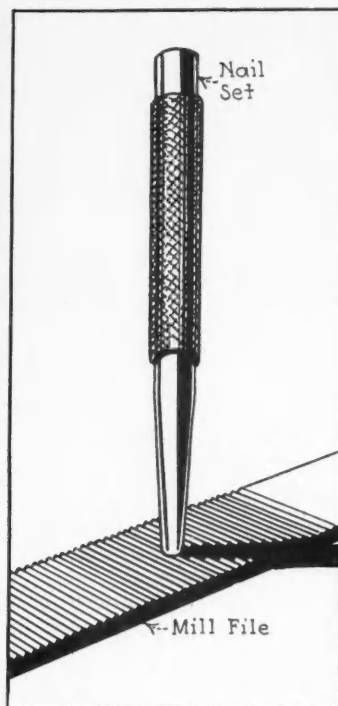
Town _____ State _____

PRACTICAL JOB POINTERS

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

Reclaiming Broken Nail Sets

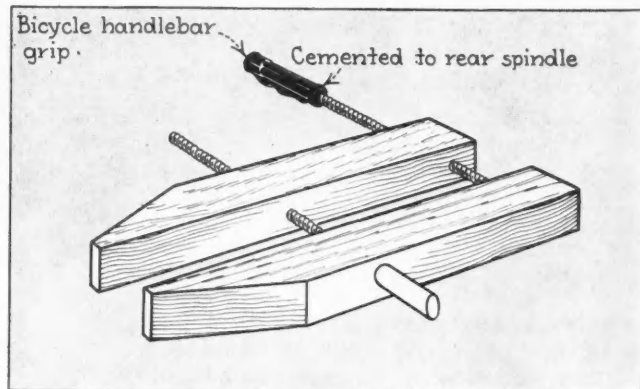
NAIL sets wear out and break off, and then are thrown away. To reclaim such tools, first square up the end of the nail set, and round it off to the size that is wanted. Place a mill file on solid metal flat-wise, then place the end of the set on the file as though you were going to set a nail and hit it a sharp blow with your hammer; now turn the set a quarter turn and repeat. This will give you a nice knurled end and make your set as good as new.—FLOYD E. MATTOX, Pomona, Calif.



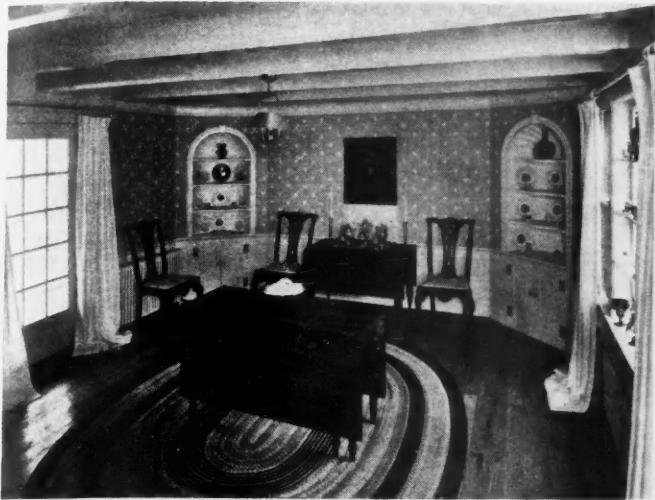
BROKEN nail sets can be ground down and given a knurled face by striking while held on a mill file as shown.

Rubber Grips on Clamp Handles

TO relieve irritation to the palm of one's hand resulting from applying numerous handscrews, equip your set of clamps with rubber grips improvised from bicycle handlebars. Molded to fit the hand, these, when cemented to the pressure spindle of the clamp, provide a powerful grip which does not redden or tire the hand.—WAYNE C. LECKEY, Aurora, Ill.



BICYCLE grips on clamps provide better hold.



The **WESTERN PINES***
make a room like this . . .
and a room like this
makes **SALES!**

There's money and profit in building this year! But you've got to build what the public wants. Today's big need is the "Small Home"—yet it must be practical, attractive, and well worth the price!

The Western Pines bridge your problems and your clients' needs and wishes. You'll save on labor, you'll build better and handsomely with these soft woods.

The "Small Home" market knows and appreciates the Western Pines! People have been educated to the quality and beauty of these woods by steady advertising. Don't overlook that when you make your recommendations. A well-known product is bought quicker than an unknown!

Mail the coupon today. Western Pine Association, Yeon Bldg., Portland, Oregon.

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

THESE ARE THE WESTERN PINES

There's money to be made this year . . . with "small homes" built of the **WESTERN PINES**

WESTERN PINE ASSOCIATION
Dept. B—40 Yeon Building
Portland, Oregon

Send me your FREE illustrated book "Western Pines"

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

Most Heat Per Dollar

That's why this brilliant scientist chose Gilbarco for his own home . . .

Home of Gilbarco Owner Gustave Fassin, noted Rochester scientist who won the Lillian Fairfield Memorial Award of 1936 in recognition of his striking design of this house.

MR. FASSIN WRITES: "I installed a Gilbarco unit in my home after expert test proved Gilbarco performance, both on the basis of economy and freedom from trouble, was the best of equipment investigated. It certainly gives me most heat per dollar."

There is no secret why Gilbarco "GIVES MOST HEAT PER DOLLAR"

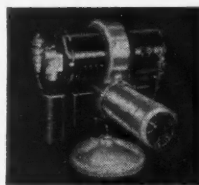
"s Econ-O-flex
CONTROLLED COMBUSTION

YOU don't have to be a scientist to appreciate the increased efficiency and resulting savings accomplished through this latest development in combustion . . . an exclusive Gilbarco feature.

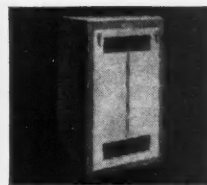
With its enviable background of experience over three quarters of a century, Gilbarco can point to a record of accomplishment in oil burner design and performance unequalled by any

other manufacturer. The many exclusive features found only in the Gilbarco Oil Burner make it the "World's Outstanding Burner Value."

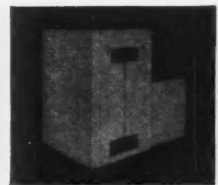
There are five models of Gilbarco Burners to meet the requirements of any home. They are supplied alone or as an integral part of one of the eight models of oil-fired Boiler Units or the nine models of Gilbarco Air Conditioning Units, which heat, clean, humidify and circulate a steady flow of healthful comfort. 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.



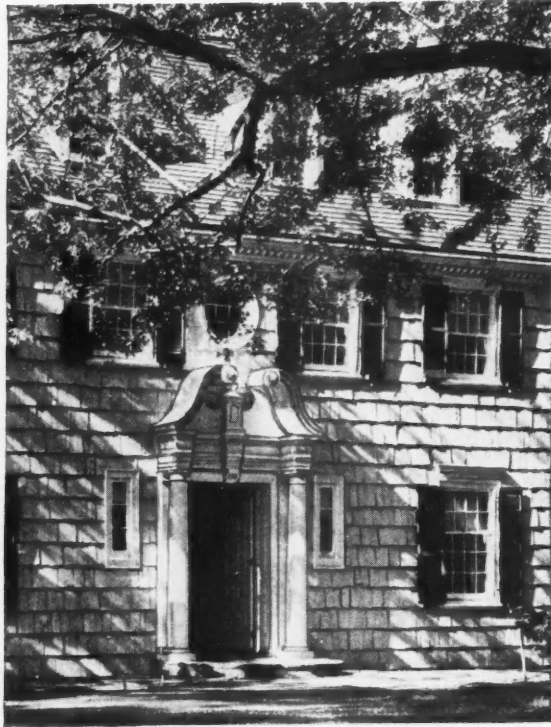
Gilbarco Conditioned Warm Air Unit. Heats, cleans, humidifies and circulates a continuous flow of perfect air. Nine models.

GILBERT & BARKER MFG. CO.
Springfield, Mass. — Toronto, Canada

MAIL THIS COUPON TODAY

GILBERT & BARKER MFG. CO. K1000
Springfield, Mass. (or Toronto, Canada)
Please send me your FREE booklet on Oil Heating.

Name.....
Address.....



Specify **Robert McNair**
 Old-fashioned, Hand-Split
Shakes
 —and Smooth-Sawn, Thick
Shingles

There is a double economy in the use of Robert McNair shakes and shingles. They cost no more than ordinary kinds lasting perhaps half the time—and they will neither warp, curl nor split.

The home that makes use of these shingles and shakes has a distinctive individuality all its own.

Architects and home builders will do well to specify Robert McNair Shakes and Shingles.

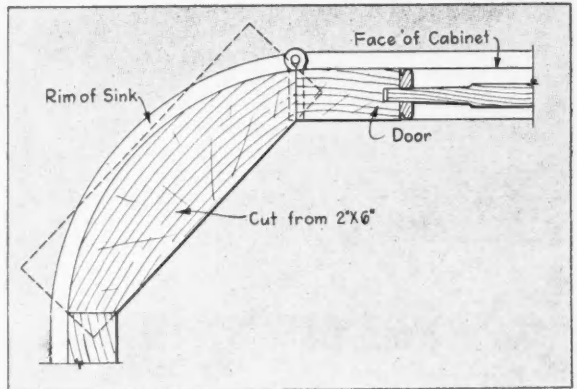
FEATURING PATENTED TAPERED TIP
 EXPOSED SIDE ROUGH HAND SPLIT—UNDER SIDE
 FLAT SAWN
 EXTRA LONG 25"—31" OR 37"
 WIDTHS 5" TO 18"
 THICKNESSES AT BUTTS 1/2" TO 3/4" OR 3/4"
 TO 1 1/4"

Send for Samples and Literature.

Stock carried by
**MANUFACTURERS RESERVE
 SUPPLY, INC.**
 Irvington, New Jersey

Cabinets Under Round Cornered Sinks

SO MANY mechanics build misfit square cornered cabinets under round cornered sinks that I am submitting a simple idea which I have found useful in getting a better job. The two vertical corner members are 2 x 6's; the inside curve of the rim corner is scribed on the ends of these pieces which are then dressed down so that they fit snugly under the rim. The corners are then beveled off, as shown in drawing, to take the front and sides of the cabinet.—FRANK MADDEN, Boulder, Colo.



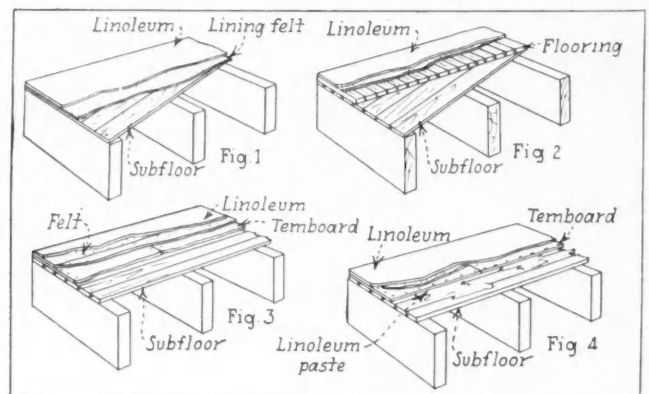
CABINET corners made from 2x6 fit sink perfectly.

**Suggestions for Installing Linoleum
 Over Wood Subfloors**

WHEN planning to build a new home where linoleum is to be used, the boards of the subfloor should be laid on the diagonal as seasonal expansion and contraction of the wood are less likely to split the linoleum (Fig. 1). Double floors are preferable. The top floor, whether single or double, should be constructed of kiln-dried, 7/8" tongue-and-groove boards. The underfloor may be rough tongue-and-groove sheathing (Fig. 2). If a top floor is not used, 1/4" Temboard or 1/8" Temwood may be firmly nailed to a 25/32" tongue-and-groove underfloor with 2d rosin-coated nails on 6" centers, with not more than 1/16" between boards. The lining felt is laid over Temwood or Temboard with seams in the felt at right angles to the joints in the board (Fig. 3).

Temwood and Temboard can also be used to level old wood floors. If the old floors are cupped, you can keep the finished floor from sounding "hollow" by spreading linoleum paste over the wood before the Temwood or Temboard is nailed down (Fig. 4).

When felt and linoleum are laid parallel with the boards in wood floors, 4" strips of 4-ounce canvas should be pasted to the lining felt directly under the seams in the linoleum. When the floor boards expand and contract from atmospheric changes, these strips retard movement in the top surface of the felt and thus tend to prevent these movements from pulling the seams apart.—ARMSTRONG NEWS BUREAU.

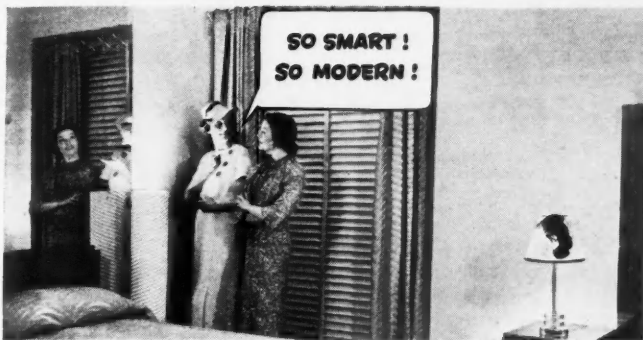


DETAILS showing good practice in laying linoleum.

**DO PEOPLE ENVY
YOUR CUSTOMERS?**



Mary and Ted have just moved into their new home. Every day people come to call — and admire. And every day Mary and Ted appreciate more and more the beautiful, unusual wall and ceiling effects their builder achieved with MASONITE.



In the three rooms shown here, notice the variety of interesting treatments which have been made possible with MASONITE TEMPERED PRESWOOD. The recessed fireplace and indirect lighting in the studio living-room (top) . . . the simple painted walls in the bedroom (center) . . . the restful, eye-appealing walls of the game-room (bottom).



Photos courtesy Spear & Co., New York

You save your customers money with MASONITE Products. They are convenient to buy — from lumber dealers everywhere. They cost little to install. They are easy to keep clean and fresh in appearance. And for remodeling, they may be applied directly over old wall and ceiling surfaces.

Why not be sure you know all the advantages and economies of Genuine MASONITE Products? Mail the coupon below for FREE samples and complete information.

MASONITE

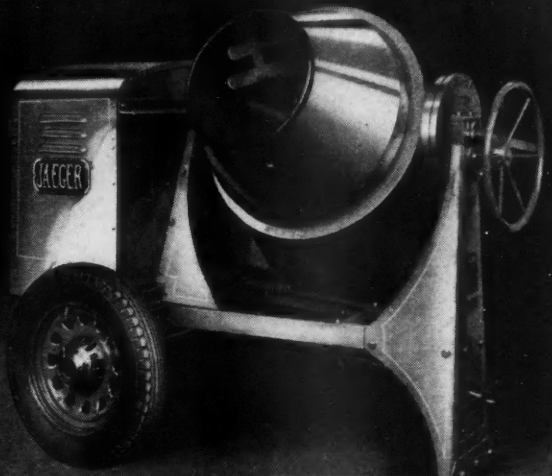
THE WONDER WOOD OF A THOUSAND USES
A MISSISSIPPI PRODUCT

MASONITE CORPORATION, Dept. AB-6
111 W. Washington St., Chicago, Ill.
Please send me FREE samples and complete details about Genuine MASONITE Products.

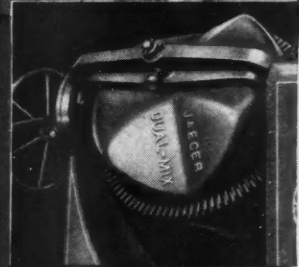
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Address _____
City _____ State _____



**THE BEST 1/2 BAG MIXER
BUY IS THE ONE THAT
OUTSELLS THEM ALL!!**



JAEGER
THE Trailer with
Timken Bearings,
Pneumatic Tires
and High Speed "Dual Mix" Drum



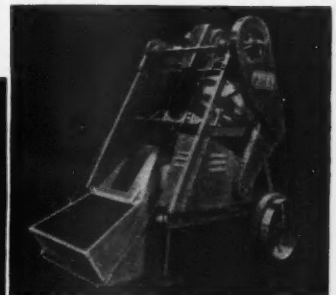
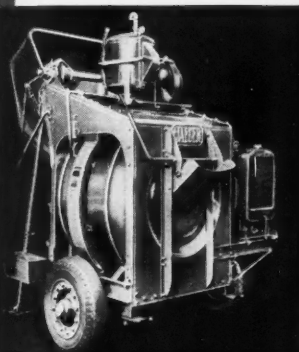
Don't be fooled by "streamlined" mixers that are no faster than five years ago.

The 1937 Jaeger gives you streamlined ACTION as well as looks—trails as fast as a new Ford V-8 on Timkens and Pneumatics—gives you double the mixing action and faster discharge with its patented "V" bottom Dual Mix Drum—will outwear any other type of tires, any previous model half-bag mixer we have ever built.

Get facts and prices before you buy. Use handy coupon.

Popular Price 5S End Discharge Trailer

Full one-bag capacity on most mixes. End discharge saves time, cuts costs.



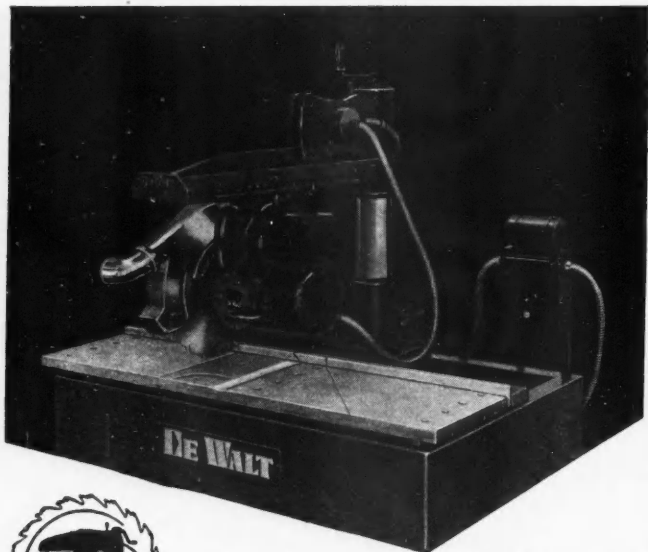
**7S and 10S SPEED KING
Pneumatic Tire Trailers**
Fastest mixers ever built.
End discharge advantages.

THE JAEGER MACHINE CO., 521 Dublin Ave., Columbus, O.

Send new Catalog, prices and terms on 1937 Model Jaeger Mixers for Concrete, Plaster, Mortar. Pumps Hoists

Name _____
Address _____

A New Woodworker designed for The Building Contractor



the new "FB" DEWALT

A popular-priced, all-purpose woodworking tool—designed primarily to meet needs of residence building contractors. Performs all operations of heavier type DE WALTs but built on lighter frame. Standard machine is without legs and easily carried right to the job. Provides time, labor, money-saving advantages too numerous to detail here.

6 Outstanding Improvements

METAL TABLE—rigid supporting frame.

ROLLER BEARING CARRIAGE equipped with eight smooth-running roller bearings sealed and lubricated for life of machine.

FLEXIBLE machine frame permits quick and easy change from one operation to another.

MANUAL STARTERS with thermal overload protection. Single phase starters have selector panels for connecting either 110 or 220 volts.

MECHANICAL ADJUSTMENTS on all flexible parts for maintaining accurate alignment.

LIGHT WEIGHT for easy portability.

Do This . . . Drop us a brief note or wire. We'll arrange an early date for a demonstration. That's the way to see the DE WALT at work and learn how it is saving money and increasing profits for hundreds of building contractors. Do this today . . . or, if you prefer, write for descriptive folder, specifications, etc. Address DE WALT PRODUCTS CORPORATION, 303 Fountain Avenue, Lancaster, Pennsylvania.

It talks through its teeth

Improved Products for Better Building

Millwork, Heating Devices, Contractor's Equipment Feature New Developments

MANUFACTURERS of millwork have been constantly improving their products to give them better utility, appearance, and ease of installation. One of the latest units to be presented is the new Silentite wood casement window of the Curtis Companies, Clinton, Ia.

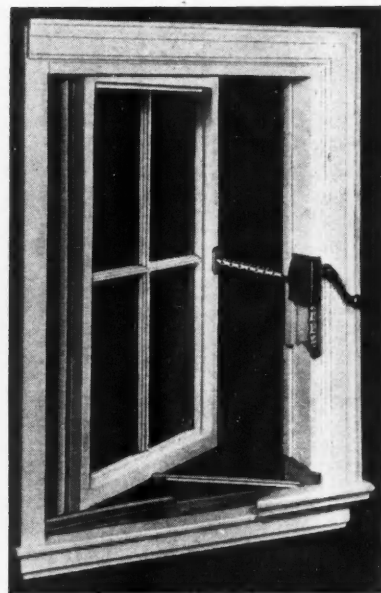
In developing this complete pre-fit casement unit which includes all operating hardware, screens, and insulating glass, they started from scratch to build an entirely new product to meet today's demand for beauty, utility, and economy. Probably the most important feature of the Silentite casement is its weather-tightness. The sash are weatherstripped on all four sides.

These sash may be used singly or in multiples of nearly any desired number, with or without transoms. There are four stock sash made—2, 4, 6, and 8 lights, all 2-lights wide—8" x 12" glass size. With such flexibility, the designer or architect may carry out any desired combination or treatment of sash openings to harmonize with the particular architecture of the home.

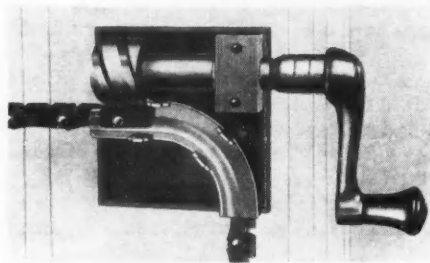
A 4-light Silentite casement is shown with part of the trim cut away to indicate how it operates. There are no hinges; it is a "floating sash." Sash may be opened to 45 degrees, which permits entrance for air equal to entire opening area. It is always locked in position in which it is placed so that it can't rattle, swing or vibrate.

The adjuster, below, with cover plate removed, shows compact and sturdy construction. The worm acts directly upon operating chain and positively eliminates rattling.

The adjustable brake insures that sash is locked in any position it is placed. Chain is guided to concealed position within frame. When adjuster is installed and trim applied, there is no projecting hardware except sash adjuster, which is removable, if desired. The sash adjuster is made of steel, finished in statuary bronze. The chain is made of steel, heavily cadmium plated.



ABOVE, new Silentite wood casement window.



LEFT, adjuster with cover removed to show worm and chain mechanism.

* * *

IN THE FIELD of kitchen equipment, a new unit which simplifies the beverage storage problem has been placed on the market by Kitchen Maid Corp., Andrews, Ind. This new

(Continued to page 120)

Standing Its Builder

Which of these Charming Homes Featured in "American Builder Guide to Better Homes" will Capture for you your Next New Client?

Well handled Cape Cod Cottage at Wilmette . . . Refreshingly modern Long Island Fire-Safe Bungalow . . . Unusually good Compact Colonial at Wantagh . . . Low Cost Demonstration Home near Washington with a cozy wood paneled dining nook . . . Attractive 5-room Cottage for Sloping Site . . . 5-room Provincial Country Homestead with knotty pine walls in living room . . . Trim Face-Brick Virginia Colonial with numerous quality features . . .

Modified Normandy Cottage, in the \$4,000 class, in Markham Village, just south of Chicago. The famous "Virginia Lee House." Well worth your study for its availability for you. Unusual are its convenient and economical floor plan, ample closet space, good ventilation, corner fireplace, dining room bay, etc. Pages 24 and 25 are devoted to it, with views, elevations and outline specifications.

Kelvinator "Package Homes," one of the big achievements of the year . . . Long Island French Provincial Charm, with circular breakfast nook, attached garage and fireplace niche . . . Rochester Low Cost Colonial, with many unusual touches that appeal . . . Ideal Cape Cod at Winnetka, with fine proportions and balance . . . Improved Masonry Home, with a long list of Specifications . . . "Apartment Type" Small Home at Fort Worth . . . New American Prize Winner at Oak Park . . . Kalamazoo's popular "Home of Tomorrow" . . . The First Five Purdue Test Houses . . . The \$15,000 Prize Westchester Model Home . . . Concrete "Efficiency Home" at Cleveland . . . Southern Pine House at Texas Centennial . . . Richmond's "Character" Home . . .

A homey looking French Provincial portrayed on pages 104 and 105. One of the 30 houses in Denver's East Side "Apple Orchard" project, whose rare combination of quality and artistic beauty render high pressure promotion methods unnecessary. "They sell themselves."

California-Monterey Style Electric Home . . . Brick House Built for Two on Staten Island . . . The interesting Riviera House at Miami Beach . . . Florida Spaciousness at Coral Gables . . . Insulated Demonstration Home at Minneapolis, radically cutting costs . . . The "Wilderness" 3-room Insulated Cottage . . . Modern Air Conditioned home, with view of heating, cooling and humidifying installation . . . Concrete Ashlar Lynbrook Home, featuring corner windows . . . Long Island Rambling Colonial in Brick . . . One-Level House at Greenwich, Conn. . . Birmingham Steel Clad Home . . . Buffalo Frameless Steel Home . . . Gross-Morton low cost Bungalows . . . "Small, but Oh, My!", clever planning puts a lot of usability and style into this 21½ x 31 foot House . . .

The above mentioned are a few of the 88 Modern Home Designs, selected by the editors of "American Builder Guide to Better Homes" as THE BEST OF THE YEAR, with more than 250 candidates to choose from. Each is a topnotcher in its class. Each thoroughly embodies the 1937 spirit. . . . Each will be still modern for a good many tomorrows . . . All of them together make the finest collection of Home Designs ever published.

Up here in the corner so easy to detach

AMERICAN BUILDER, New _____
30 Church Street, Renewal ____
New York.

For the enclosed \$_____ enter my
subscription for 1 year, \$2_____
2 years, \$3_____ 3 years, \$4_____

And include AT NO EXTRA COST
a copy of "AMERICAN BUILDER
GUIDE TO BETTER HOMES."

Name _____

Street _____

City _____

State _____

Occupation _____

*This offer good only in United States,
Possessions and Canada*

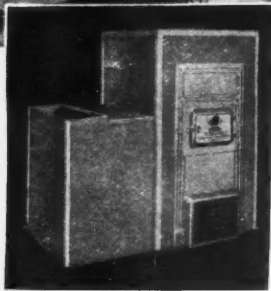
6-37

"American Builder
Guide to Better Homes"
is included FREE

With a paid \$2 for one year,
\$3 for two years or \$4 for three
years American Builder new or
renewal subscription order.

USE THE FORM ABOVE

Your copy of the Plan Book
will come to you by return
mail as our receipt for your
remittance.



**NOW
LOWER PRICED
HOMES CAN HAVE
*Automatic***

AIR CONDITIONING

LOW COST UNIT, FACTORY-ASSEMBLED, ASSURES QUICK AND EASY INSTALLATION...

With fifteen years' experience in oil burner manufacture we have perfected this oil-burning, air-conditioning furnace for small homes. Low in first cost. Low in installation cost. Low in operating cost. With it the builder can meet today's demand for the advantages of automatic oil heat and air-conditioning, heretofore available only in higher priced homes.

BURNER ASSEMBLY SHIPPED READY-BUILT

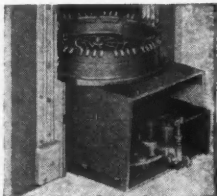
The Rotary Wall-Flame Burner and its supplementary equipment is factory assembled. Installation is completed in the home by simple steps that do not require previous burner experience.

SPECIAL OFFER TO BUILDERS

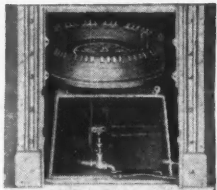
Toridheet equipment is priced to sell small homes quicker at greater profit. Ask for our "builder's proposition".



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

CLEVELAND STEEL PRODUCTS CORP. 7306 W. MADISON AVE. CLEVELAND

TORIDHEET
OIL-BURNING, AIR-CONDITIONING FURNACE

Tell me about your Special Offer to Builders...

NAME

ADDRESS

CITY STATE

(Continued from page 116)

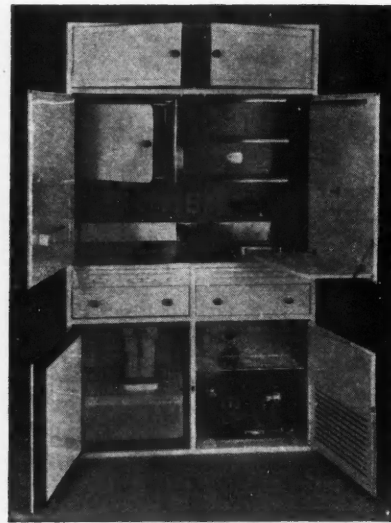
beverage base is ample for family needs; it holds 23 bottles and includes space for cocktail shakers, siphons, and other such necessities. Bottles cannot tip or break; they are recessed in a circular board which rotates for easy reach, and a honeycombed section at the top encases wines and cordials. The door locks securely. Above is a utility drawer for jiggers, muddlers, bottle openers; and a pullout board is an added convenience.

KITCHEN MAID beverage base for added convenience.



ALSO under kitchen cabinets and equipment, "The Kitchen of Today—and Tomorrow" is being offered by The Parsons Co. of Detroit, Mich. This Parsons Pureaire Kitchen is an all-steel cabinet with full-size stove, oven, sink, refrigerator and unit, and generous shelf and drawer space built in.

Occupying less than eight square feet of floor space and equipped with steel doors which blend readily into the wall, this Pureaire Kitchen has opened entirely new possibilities in remodeling operations and in plans for new apartments or small modern homes.



The kitchen also includes a patented ventilating feature by which all cooking odors and surplus heat are removed and kept from entering the room. They are shipped complete and ready for simple connection to gas, electricity, water, drain and air-vent.

COMPLETE kitchen occupies less than 8 sq. ft. of floor space.

New Models for Better Heating

THE research departments of companies which produce heating equipment, whether coal, gas or oil-fired, have been constantly devising new and better means of temperature control for homes. For example, Fairbanks, Morse & Co., Chicago, has added the Fire-Timer, improved control for automatic coal burner operation, and a shear pin alarm as new features of the Fairbanks-Morse stoker.

The new Fire-Timer prevents losing fire during even the mildest spring or fall weather, by automatically operating the stoker for brief periods at predetermined intervals. No matter for what temperature the thermostat regulator is set, the Fire-Timer assures frequent enough stoker operation to maintain a fire without overheating. It can be set to operate the burner at either hour or half-hour intervals and for any desired period of time.

Although independent of the thermostatic control, the Fire-Timer is co-ordinated with it to avoid excessive burning. Should

(Continued to page 122)



AZROCK is versatile and SMART, too!

Wherever Azrock Tile is laid—in a home room (like that above), in a theater or store, in offices or public buildings—this distinctive mastic tile adds to the smart modern appearance of its surroundings.

A variety of colors, which go through the thickness of tile for permanence, are available in plain or marbled texture and in a number of different sizes, thus allowing—in fact, encouraging the formation of original outstanding designs.

Azrock, durable for long life, resilient for quiet and comfort, is sanitary, moisture proof, fire resistant, and costs no more than many ordinary floor coverings. It's a smart step to specify this smart tile

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



OTHER AZROCK PRODUCTS:
AZROCK INDUSTRIAL TILE -- AZROCK PLANKTILE

Here, figure it for yourself!



Cost of Finishing Room with Common Kalsomine	Cost of Finishing Same Room with Reardon's Washable Kalsomine
1 pkq. wall size.....	1 pkq. R.W.K.....
Labor for Application of size.....	Labor for Application.....
Time Cost for Extra Trip.....	
2 pkqs. Common Kalsomine.....	
Labor for Application of Kalsomine.....	
Total \$	Total \$

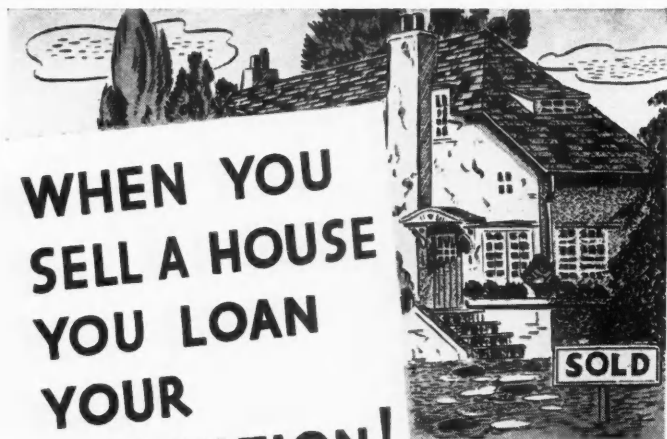
R.W.K.* Costs Less Than Ordinary Kalsomine (It Eliminates Sizing Entirely)

You only need a pencil to tell you pretty quick that the average job done with common Kalsomine runs almost twice as high in cost as R.W.K. and is still an ordinary Kalsomine finish.

Leaving the money out of it—R.W.K. is way ahead, because it's washable—because it has permanent beauty, because it can go on fresh or green plaster—wood, metal, wallpaper, and a score of other surfaces common Kalsomine can't touch and because it flows on smoothly, dries quickly, and has high light reflectivity. Yes, sir! any way you figure it, R.W.K. is the most effective, most economical modern type room finish available today.

For Color Cards and Complete Information Write
THE REARDON COMPANY
St. Louis • Chicago • Los Angeles

★ Reardon's Washable
KALSOMINE



**WHEN YOU
SELL A HOUSE
YOU LOAN
YOUR
REPUTATION!**

★ For almost a quarter of a century Payne Furnaces have been selling *builders* after houses have been sold—building reputations for the men who installed them.

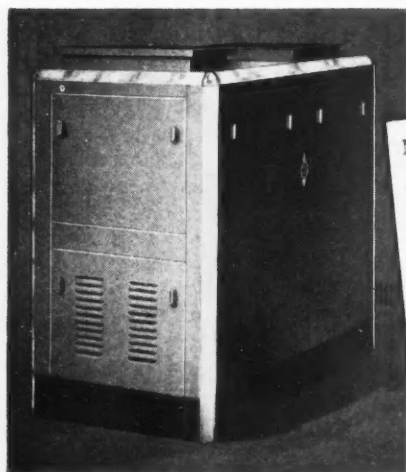
In every type of home—in every State of the Union—Payne Gas Furnaces are demonstrating their complete mastery over gas heating problems.

Payne manufactures GAS burning appliances exclusively—knows local gas conditions in every section of the country. Payne engineers have studied your problems.

All Payne appliances are rigidly tested in our own laboratory—have passed American Gas Association requirements with flying colors.

Our engineering staff will gladly review your plans and make *engineered* recommendations. Complete information gladly sent without obligation.

A Payne Gas-fired Appliance Will Answer every Home Heating Problem



- Modern Console Heaters
- FAU (Forced Air Unit) Furnaces
- Floor Furnaces
- Winter Air Conditioners
- Modernair (Blower-Filter) Units

PAYNE FURNACE & SUPPLY COMPANY, INC. . . . BEVERLY HILLS, CALIF.

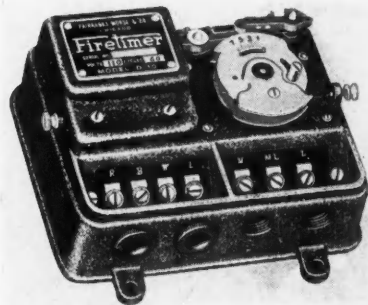
Payne

(Continued from page 120)

the Fire-Timer normally start the burner just following a period of operation controlled by the thermostat, this period is missed and the burner is not again started until the predetermined interval later.

This new device is compact and is completely enclosed in an attractive black metal case to protect the device.

The shear pin alarm gives suitable warning when some foreign object has been carried in with the coal and has caused the safety pin to shear before any damage has been done. The alarm is electrically operated and the warning may be in the form of a flashing light, a buzzer or bell.



FIRE-TIMER CONTROL.

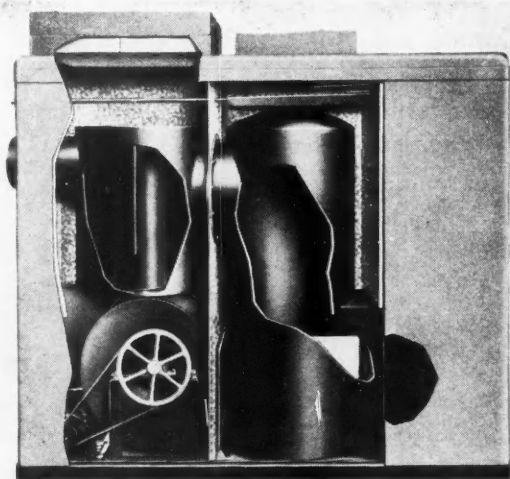
* * *

A MONCRIEF special oil-fire air conditioner has just been designed by The Henry Furnace & Foundry Company of Cleveland, O. It is of the capacity, size and price range which makes it particularly fitting for small home use. It is of sufficient capacity, however, to heat a six or seven room house with ease.

It will take any standard type burner and give the burner the opportunity to perform most efficiently. Special features include a pre-heater radiator over which the cold air first passes before entering the primary heating chamber. This makes for more efficient transfer of heat to the circulating air.

The pre-heater radiator and combustion drum are enclosed in entirely separate chambers which surround the two heating elements in such a way as to distribute the circulating air around them most efficiently.

The blower is of large capacity, slow speed. Filters are of the replaceable type and there is also an automatic humidifier of large capacity.



CUT AWAY view of new Moncrief conditioning unit.

* * *

THE Fox Furnace Company of Elyria, O., has developed a new low priced gas-fired furnace with steel heating element.

The steel heating element, of unique design, is constructed of an especially fine grade of 16 gauge steel having unusually high corrosion and rust resisting properties. Long fire travel is pro-

(Continued to page 124)

**BASEMENT
PLAYROOMS
Speed Up Sales**



Colorful Accotile floor in the recreation room of the New American Home, Kansas City, Mo. Rooms like this make houses easier to rent or sell.

**THEY'RE INEXPENSIVE TO BUILD
WHEN YOU USE ACCOTILE FLOORS**

WITH colorful Accotile flooring and a partition or two, you can add a basement game room that will make prospects eager to buy—at your price.

Accotile is a low-cost asphaltic tile. It is moisture-resistant and can be laid on concrete in direct contact with the ground.

Armstrong's new installation method—with asphalt sheeting—makes Accotile floors warmer, smoother, quieter, and more comfortable.

The picture above shows how Accotile dresses up a basement. There are 34 plain or marble colors. Three gauges— $\frac{1}{8}$ ", $\frac{3}{16}$ ", and $\frac{1}{4}$ "—provide a type for every purpose and every pocketbook.

Armstrong manufactures the *only* complete line of resilient floors—Accotile, Linotile, Reinforced Rubber Tile, Cork Tile, and Linoleum—and can offer unbiased suggestions on the best type for any purpose.

Accotile can be bought with convenient time payments through the Armstrong Finance Plan. Find out now how this inexpensive flooring can be used to make your properties more salable. 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.



ARMSTRONG'S *Linoleum*
and RESILIENT TILE FLOORS

LINOTILE · ACCOTILE · CORK TILE · RUBBER TILE · LINOWALL · ACOUSTICAL CEILINGS



Medusa-Lite
IS Best FOR

**RESTAURANTS
APARTMENTS
HOSPITALS
THEATERS
HOTELS**



HERE'S WHY

MEDUSA-LITE, the super-flat wall finish, is highly recommended for interior walls and ceilings in restaurants and small theaters as well as rooms in hotels, hospitals and apartment houses where speed and economy are essential.

Medusa-Lite dries to the touch in 40 minutes. Rooms can be painted and are ready for use in a few hours. One coat, brushed or sprayed on almost any interior surface, makes a beautiful finish. Medusa-Lite is thinned with water, hence leaves no objectionable odor in rooms. This finish cannot powder, peel or crack. It can be had in seven attractive pastel colors and white, the latter having 90% reflective value and does not turn yellow. Material and application costs are low.

SEND FOR THIS BOOK "How To Paint Concrete, Stucco, Masonry and Other Surfaces" gives further details about Medusa-Lite. It also tells how Medusa Floor Coating gives concrete floors a permanent, beautiful, abrasion resisting finish, and how interiors or exteriors of concrete, stucco or masonry can be painted with Medusa Portland Cement Paint. Send coupon for complimentary copy.

MEDUSA-LITE

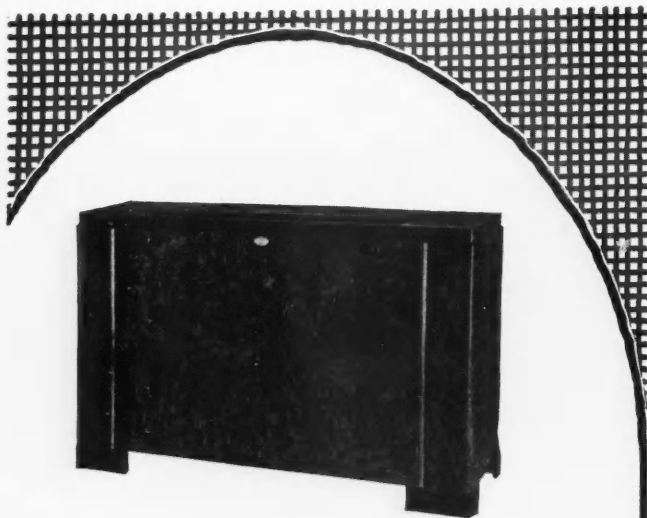
MEDUSA PRODUCTS COMPANY
Division of Medusa Portland Cement Co.
1002 Midland Building, Cleveland, Ohio

Gentlemen: Please send me a complimentary copy of the book, "How To Paint Concrete, Stucco, Masonry and Other Surfaces."

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Conditioner takes place of a radiator. It filter-cleans the air, warms it, humidifies it, then circulates it in the room. Cabinet beautifully finished in burl walnut and velvet black enamel, with just a touch of chromium.

None *Extras*
Of These
With the Burnham
Air Conditioning System

NO DUCTS cost. No tinsmithing cost. No basement equipment cost. No cutting of floors or walls for grilles or registers. No special skilled men to install it. Any heating man can do it.

It can just as easily be made a part of an old radiator heating system as a new one.

It's the *simplest* and the *lowest cost* air conditioning system on the market. Does everything any system does.

Conditioner takes the place of a radiator. Two are sufficient for average 7-room home.

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

BURNHAM BOILER CORPORATION
 Irvington, New York Zanesville, Ohio

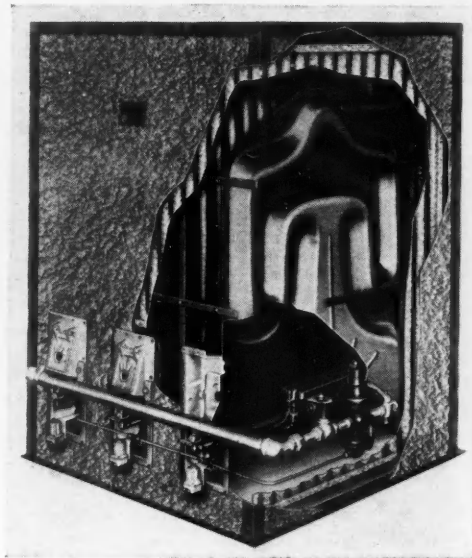
Export Department
 116 Broad St., New York

Burnham Boiler

(Continued from page 122)

vided by channels which convey the products of combustion over a large area of heating surface giving high efficiency for this unit.

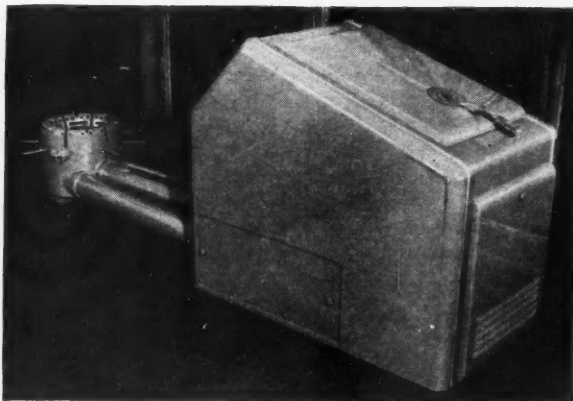
Casings are rectangular and are finished in green crystalline baked enamel with dark green trim. Capacities of the Series "O" range from 51,000 Btu per hour at register on the O-2 to 127,500 on the O-5.



SERIES "O"
 Fox gas-fired
 furnace with
 steel heating
 element.

* * *

TO ROUND out their line, De Luxe and Junior model Iron Fireman stokers, new additions to the line of domestic coal stokers manufactured by the Iron Fireman Mfg. Co., Cleveland, have been announced. These new models feature streamlined design and new motor units with planetary gears. Particular attention has been paid to styling the De Luxe and Junior Iron Fireman for use in basement space intended for recreation rooms.



NEW Styling has been given to Iron Fireman Stoker.

Contractors' Equipment Improved

THE improvement of contractors' equipment and supplementary materials is naturally as important to the builder as those products which are to be assembled. To facilitate better building, Skilsaw, Inc., of Chicago, has extended the completeness of its line of portable electric tools by the addition of two new models of Skilsaw 7-in. disc sanders—one for heavy duty and one for constant production service.

The smooth, trim, streamlined body design, the perfect balance and lighter weight of these tools make them much easier to use. Comfortable grip handles assure complete control under heavy sanding loads. An efficient airfilter protects the commutator and motor from abrasive dust and dirt. Straight-line ventilation assures a cool-running tool. Ventilating ports are located to

(Continued to page 126)

For Modern Doors Specify a Modern Hinge

Why spoil a beautiful, modernly designed doorway with unsightly, protruding butt type hinges?

There is now no need to thus handicap or limit your creative efforts, for the Improved SOSS Invisible Hinge (patented) is entirely hidden from view, thereby allowing you free scope in achieving those smooth flowing lines demanded in modern streamlined design.

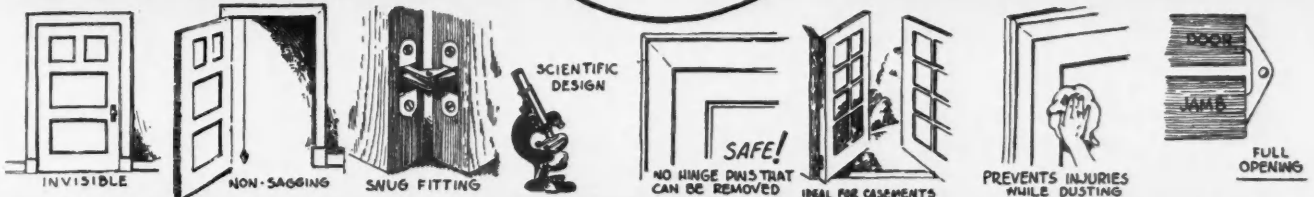
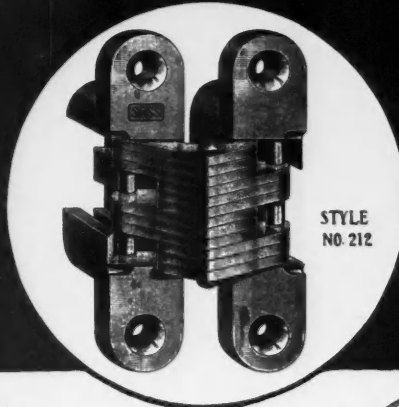
It is non-sagging, safer, more sanitary, smoother operating, and permits closer fit between door and frame. Made in sizes and styles for any weight door.

It means a new era in doorway design — be among the first to utilize and specify this MODERN hinge.

Write for new, illustrated catalog today.

SOSS MANUFACTURING CO.

654 East First Avenue
Roselle, N. J.



Improved SOSS INVISIBLE HINGES



Speed Magic with a Speedmatic

Do YOUR sawing with a tool that is saving time and money for hundreds of other contractors. The "SPEED-MATIC" SAW with its guaranteed cutting speed and all-around ruggedness will lick any job it tackles. Finger-tip adjustment for depth and bevel cutting. Balanced, safe and easy to operate. Built in three sizes.

(We also manufacture a complete line of floor sanding equipment and portable sanders for bench use)
WRITE FOR FREE COPY OF BUILDERS EQUIPMENT CATALOGUE

It shows how others are cutting sawing costs and saving time in house building and general contracting.

The PORTER-CABLE MACHINE COMPANY
SYRACUSE, N.Y.
1721-6 NORTH SALINA ST.

Build this Extra SALES VALUE into Every House



This FIREPLACE Will Not Smoke Circulates Heat

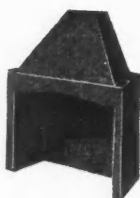
A HEATILATOR FIREPLACE will add a new sales feature to every house you build. It WILL NOT SMOKE; provides extra comfort and economy—features that are easy to explain and appealing to the prospect.

The Heatilator is a double-walled steel heating chamber around which any fireplace is easily built—a correctly-proportioned form for the masonry that guarantees a perfectly-operating fireplace on every job.

CIRCULATES HEAT—warms every corner of the room and even adjoining rooms. Saves the wasteful operation of furnace fires on cool spring and fall days. The only heating equipment required in mild climates. Solves the heating problem in basement recreation rooms; makes summer camps usable weeks longer. *Proved* successful in thousands of homes and camps.

EASIER TO BUILD—Complete from floor to flue—firebox, damper, smoke-dome and down-draft shelf are all built in parts. Saves labor and materials. NEW LOW PRICES make the cost but little more than ordinary construction. Sold by leading building-supply and lumber dealers everywhere.

MAIL the coupon today for new price list and complete details.



MAIL THIS COUPON TODAY

HEATILATOR COMPANY,
756 E. Brighton Ave.,
Syracuse, N. Y.

Please send complete Heatilator information and new low prices:

Name.....
Street.....
City.....

Heatilator Fireplace

(Continued from page 124)

blow the dust away from the operator and to prevent clogging. The motor has ample reserve power to insure a long life and provide faster sanding and grinding. Both models have aluminum alloy bodies, die-cast in a smooth, streamlined design.

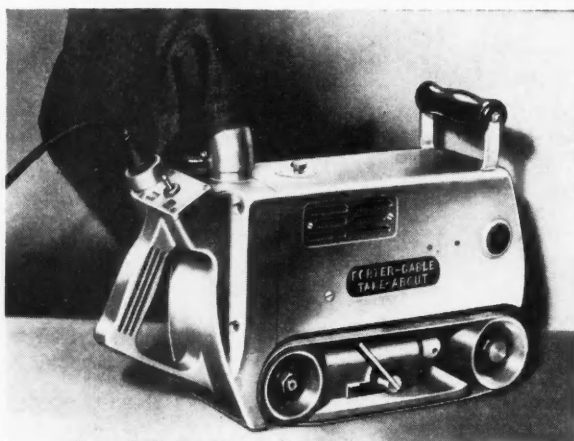


SKILSAW disc sander.

ALSO in the sanding line, a new four-inch, heavy duty, portable, dustless Take-About sander-grinder Type T-4V has just been announced by the Porter-Cable Machine Company of Syracuse, N.Y.

This machine was designed and built to perform heavy, constant sanding and grinding operations. It is equipped with a 1¼ horse power universal motor mounted parallel to the sanding belt shoe. The frame is made of aluminum alloy for lightness and portability. An ample motor cooling system is provided through a gridded intake at the front, a commodious air circulation chamber exhausting through a grid on each side at the rear.

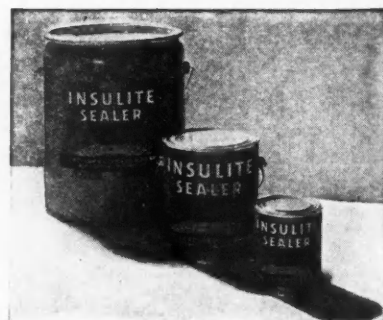
Between the rear end of the transmission and the guiding handle, a powerful vacuum dust collecting system is installed. The vacuum intake extends across the full four-inch width of the abrasive belt, drawing up the dust into a dust bag equipped with zipper opening for emptying. The abrasive belt operates flush with the right side of the frame to work right up to upright objects.



TAKE-ABOUT sander has dustless feature.

AFTER a year of intensive research, The Insulite Company, Minneapolis, Minn., has adopted a new type of sealer for use on Insulite products to prepare the surface of the board for decorating with various types of paint. Insulite Sealer is composed of emulsified oils combined with a chemically treated film substance. When the liquid is applied to the surface by ordinary brushing methods, it penetrates the surface and quickly forms a translucent, flexible film of great strength and density.

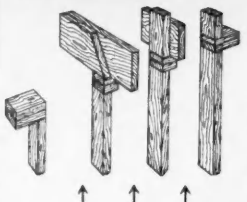
As this film dries, it subdues the surface fibres of the board forming a smooth, firm base for paint. Penetration is completely stopped and succeeding coats of paint or enamel are easily and smoothly applied with a good coverage; a satisfactory result may be secured over it with one coat of paint. The sealer is easy to apply and can be used on other porous surfaces, either inside or outside.



INSULITE SEALER

ADJUSTABLE BEARING PLATE and STUD-TIES

THE OLD WAY

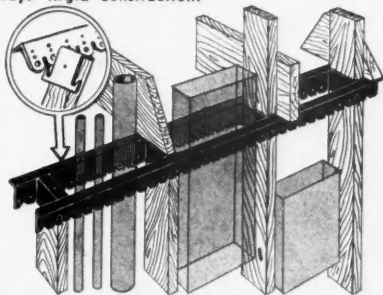


Notice how lateral tie is lost to permit passage of pipes and ducts. This method weakens construction.

This Improved Method **PAYS FOR ITSELF**

THE NEW WAY

Note how Adjustable Bearing Plate allows ducts and pipes to pass through reinforcing bands of steel. Securely locks studs in place. Prevents sway! Rigid construction!



ERECTED BY THE CARPENTER

Write or Wire for Full Information Installation Details, etc.

- Enclose openings cut for ducts and plumbing pipes with reinforcing bands of steel.
- A revolutionary improvement in construction of all buildings using wood framing. . . A low-cost method to avoid shrinkage and sway.
- Specify and install these products on your jobs. Assure sound construction at **NO EXTRA COST**—or just a slight increase, depending on layout.

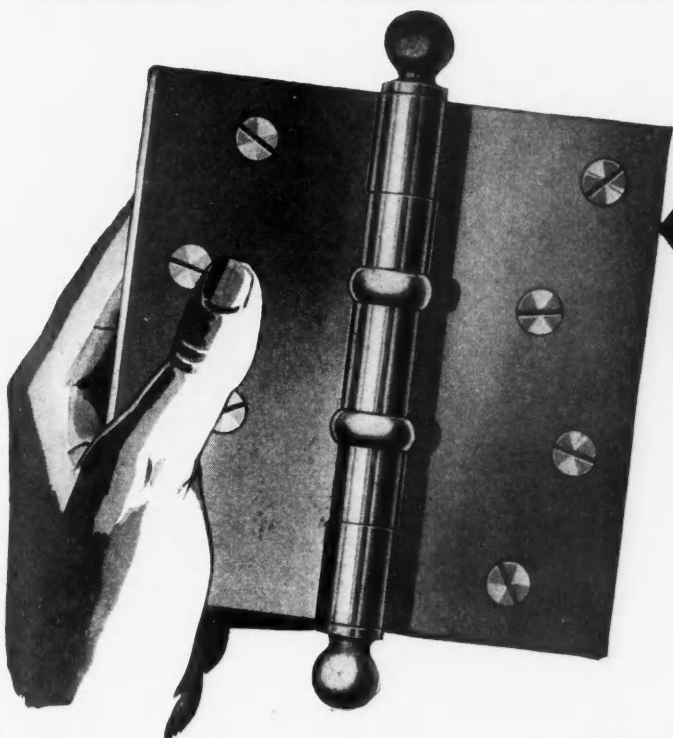
Distributors! Lumber Dealers! Building Material Dealers! Etc.!

Good territories are open to live-wire distributors to handle **ADJUSTABLE BEARING PLATE . . . STUD-TIES . . .** and **ADJUSTABLE BATH TUB HANGERS**. Get the franchise for your territory. Write or wire today.

STUD-TIES Serve same construction purpose as Adjustable Bearing Plate except they are designed for **SINGLE DUCT** or plumbing between two studs.

ADJUSTABLE BEARING PLATE CO.
11 Rutger Street

St. Louis, Mo.
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NEW!

The greatest improvement in butt hinge design in more than a decade! And all the advantages without a cent of added cost—

MCKINNEY Oilite Bearing BUTT HINGES

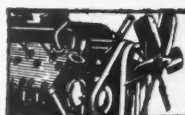
PATENT APPLIED FOR

Incorporating the same remarkable self-oiling Oilite bearing metal that is used in the vital high speed working parts of America's leading automobiles.

This is the ageless butt hinge you will want to install in school houses, churches, public buildings and residences you are building. Let us send you complete data and specifications.

MCKINNEY MANUFACTURING COMPANY
PITTSBURGH, PA.

DESIGNERS AND MANUFACTURERS OF GOOD HARDWARE FOR 72 YEARS



Water pumps can't wear it out. Heat . . . abrasion . . . speed cannot wear out Oilite Bearings.



Oilite Bearings prevent squeaks in automobile springs. Also at joints in McKinney Butt Hinges.



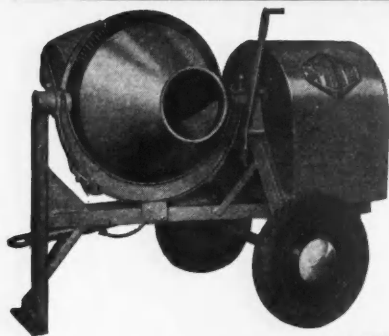
Clutch Bearings can't break it down. For the same reason Oilite bearings stand up in butts.



High frequency doors function twice as long with McKinney Oilite Bearing Butt Hinges.



Faster streamlined mixers

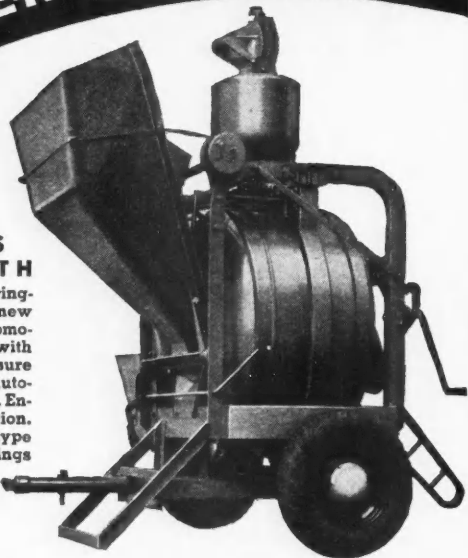


SMITH 3 1/2-S TILTER
Fast lightweight trailer with spring-mounted axle and new roller bearing automobile type wheels with oversize low pressure pneumatic tires. Handy wide feed chute. Famous End-to-Center mixing action.

FASTER TO THE JOB!
FASTER ON THE JOB!

7-S and 10-S TRAILS SMITH

Equipped with spring-mounted axle and new roller bearing automobile type wheels with oversize low pressure pneumatic tires. Automatic skip vibrator. Enclosed gear reduction. Vertical syphon type tank. Roller bearings throughout.



ENGINEERED LIKE YOUR MOTOR CAR — These new Smith Mixers are the "Tops." Modern in appearance — modern in design — modern in performance. So easy to move, yet husky brutes, able to take hard everyday punishment for years. Try a Smith on your next job. You'll appreciate its **PROFIT EARNING** ability. Write for literature.

THE T. L. SMITH COMPANY
2849 N. 32nd STREET MILWAUKEE, WISCONSIN

SMITH

MIXERS
THE BOULDER DAM MIXERS

News of the Month

Building Activities and Meetings

Truscon Announces New Housing Division

ANNOUNCEMENT has been made by Truscon Steel Company, Youngstown, O., of the appointment of Arthur C. Meyer as manager of the newly formed Housing Division.

While no complete information regarding the extent of Truscon's participation has been given, it is understood that the company is not interested in any plan that contemplates the complete prefabrication of houses.

Recognizing the problems existing in the field of residential construction and also the shortage in single occupancy dwelling units, Truscon plans to offer a steel frame or "chassis" for residential construction. It is said that this frame will be so versatile in its design features that it may be clothed with any interior or exterior treatment desired by the owner.

Truscon's entry into this field is significant, in view of its position in the building industry. In the residential field, Truscon has been active for over a quarter of a century, manufacturing and marketing steel building products through its national organization.

April Volume Largest Since May 1930

ACCORDING to F. W. Dodge Corporation, not since May 1930 has residential building been undertaken in such heavy volume as was reported in April of this year. The value of residential building operations started during April in the 37 states east of the Rocky Mountains amounted to \$108,204,400, marking a gain of 20 per cent over the March figure of \$90,167,600 and an increase of 61 per cent over the total of \$67,151,000 reported in the same area during April, 1936. The improvement over last April was generally shared by each of the 13 Dodge geographic districts; the most important quantitative gains occurred in the Metropolitan Area of New York and the Middle Atlantic States (Eastern Pennsylvania, Southern New Jersey, Delaware, Maryland, the District of Columbia and Virginia).

For the initial four months of 1937 the total volume of residential building started in the 37 Eastern States amounted to \$339,782,400; this represented an increase of 78 per cent over the figure of \$190,986,600 for the corresponding four months of 1936.

Total construction started in the 37 states during April (inclusive of both residential and all other types) amounted to \$270,125,200. This was a gain of about 17 per cent over the March figure and was about 16 per cent better than the figure for April, 1936. Incidentally, the April, 1937, total was the biggest monthly figure since that recorded for August, 1936. Besides residential building, the April, 1937, figure included \$96,179,300 for non-residential building and \$65,741,500 for heavy civil engineering projects, i. e., public works and public utilities.

Total construction started in the 37 Eastern States since Jan. 1 has amounted to \$932,455,400. This represents an increase of 18 per cent over the figure of \$788,605,400 reported during the initial four months of 1936.

Construction's Recovery Problems Discussed

RECOVERY problems of the construction industry were discussed from a number of important angles at the recent Washington meeting of the U. S. Chamber of Commerce. At a round table meeting under the chairmanship of Mr. A. P. Greensfelder of St. Louis, W. A. Klinger of Sioux City, Iowa, analyzed the factors retarding the industry's recovery, including "day labor in construction, particularly Works Progress Administration, the sudden cessation of federal government participation in the financing of structures by local tax units, and hesitancy of private capital." He offered the following suggestions for overcoming the wastes of the work-relief program:

"A. The government should adopt, as a substitute for WPA

(Continued to page 130)

Get Your "Master" Now!

Be Ready For The Greatest Building Year

The Master Woodworker

2-inch Capacity
\$290

4-inch Capacity
\$395

Without Jointer



Builders long in business know the "Master" is the world's leading UNIVERSAL WOODWORKER—For 20 years it has been constantly improved—It is strong, sturdy and reliable—Will give you years of dependable, trouble-free service—12 machines in 1—Joints,

Rips, Crosscuts, Bevels, Dadoes, Routs, Bores and many other operations at remarkable speed. Investigate the Master thoroughly and you will buy no other.

Six Sizes—

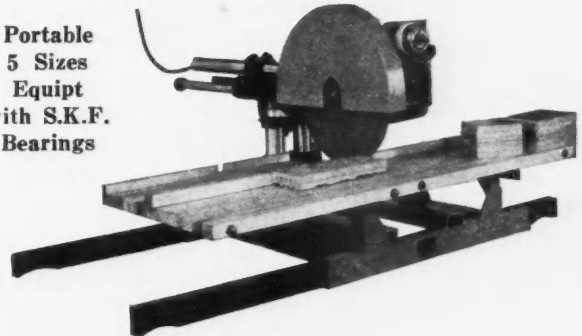
• Gasoline or Electric Drive—

• Equipt with S.K.F. Bearings—

• Overhead Crosscut Underslung Rip

The Sawmaster Jr.

Portable
5 Sizes
Equipt
with S.K.F.
Bearings



A DEPENDABLE UNIT—The Sawmaster, Jr., is an ideal machine for cutting Lumber, Tile, Brick, Steel Tubing, Terra Cotta, etc. Its portability and sturdy construction assure dependable performance.

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Some Open Territories Available
FOR LIVE DISTRIBUTORS

The MASTER WOODWORKER MFG. CO. Established 1917
CONGRESS & BRUSH STS. DETROIT, MICHIGAN

ONE BIG WEATHERSTRIP JOB WILL BUY THESE TOOLS..

AND EARN A NICE PROFIT

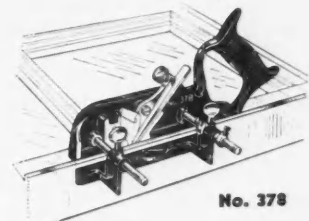
There's good money in installing metal weatherstrips if you have these Stanley Tools — because they do the work easier and better. One big job will easily pay for the tools — with a nice profit left over. Here is the equipment you need to cash in on this profitable field.

- Rabbet Plane No. 378 cuts the rabbets on sash "meeting rails" for the hook and flat weatherstrips.
- Groove Plane No. 248 cuts grooves

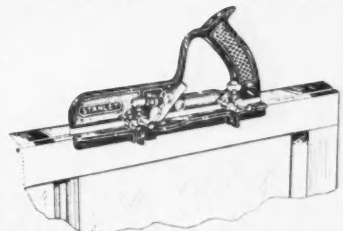
in the sash for the weatherstrip rib.
• Door Rabbet Plane No. 78W rabbets the lock jamb and the head of a door for weatherstrips. A detachable runner acts as a gauge for cutting rabbets $\frac{3}{8}$ " wide on either side without adjustment.

WRITE FOR CIRCULAR

Ask your dealer to show you these tools. They open the way to one of your most profitable fields. Descriptive circular on request.



No. 378



No. 248



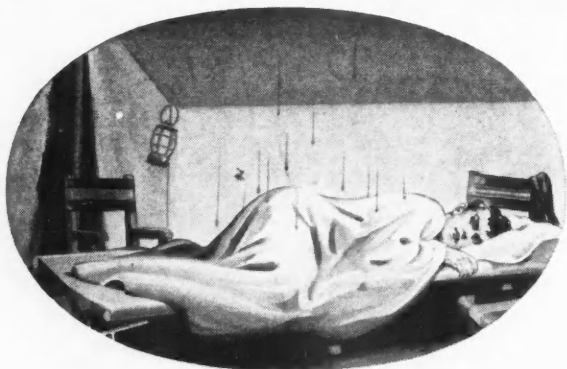
No. 78W



STANLEY TOOLS

NEW BRITAIN, CONNECTICUT





WET BLANKETS WON'T INSULATE

● The merest amateur knows that wet insulation doesn't insulate. There's a moral to this fact. People buy insulation because builders recommend it—for protection against extremes of temperature.

To give completely satisfactory service—to be impervious to the moisture of condensation within walls—insulation must be completely guarded from moisture. It must be shielded not just on one side, but on *all* sides. Then, and only then, can it promise satisfactory performance under all conditions.

Balsam-Wool is DOUBLE-SEALED against moisture. It is completely surrounded by a tough, waterproof coating, which also assures a positive method of application that leaves no loopholes for the wind to get through.

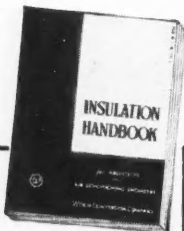
DOUBLE-SEALED Balsam-Wool is available in three thicknesses: 1/2", 1" and wall-thick meet every need for insulation. It offers moisture protection for every type of building in every climate and is particularly adapted to the needs of air conditioning. Write us for full details.

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Room 119, First National Bank Building, St. Paul, Minn.

EVERY BUILDER SHOULD HAVE THIS INSULATION HANDBOOK

—It contains valuable data—useful tables—specific information about various types of insulation. Mail the coupon for your free copy.



WOOD CONVERSION COMPANY,

Room 119, First National Bank Building, St. Paul, Minnesota.

Gentlemen: Please send me, without obligation, your new Insulation Handbook. (File A.I.A. 376-2)

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Address

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

BALSAM-WOOL



PRODUCT OF WEYERHAEUSER

(Continued from page 128)

and at the same or less cost, a regular program of genuinely useful public works—buildings, bridges, highways, flood protection, dams, etc.—perform this work under Mr. Ickes' Public Works Administration and other government agencies that let their jobs to private contractors. Let the contractors hire their own labor—no more, no less than they need. Let them get real work out of this labor. Let them restore the job of accomplishment once inherent in the American laboring men.

"B. Feed and shelter the balance of the unemployed on home relief. Let them look for whatever kind of work they can get. Encourage them to get off relief by making it easy to get back on relief when the job is finished.

"Such a program is in trend with recovery. It fits present economic conditions. It offers employment equal to the present setup, but it puts that payroll back in private industry where it belongs. It would wipe out the greatest single barrier to the recovery of the nation's second largest industry, the mis-named Works Progress Administration."

John McC. Mowbray of Baltimore discussed the need for clarification of the federal government's housing activity and the development of a positive national housing policy. He stated:

"Whatever that policy may come to be in detail, its core must be something positive, not something negative. Slum elimination is not enough. Elimination of sub-standard housing for low-income groups is not enough. The core should be decent housing for every family, with home ownership made possible to every family of reasonably stable income expectation, whether that income be large or small.

"This is the axis:

"In practice, the question of whether or not a family can undertake home ownership depends on the relation between the family's expected income and the total monthly or yearly carrying charge that would be entailed in buying the home. What matters is the amount of the monthly or yearly carrying charge they must meet, rather than the total amount of the capital investment involved.

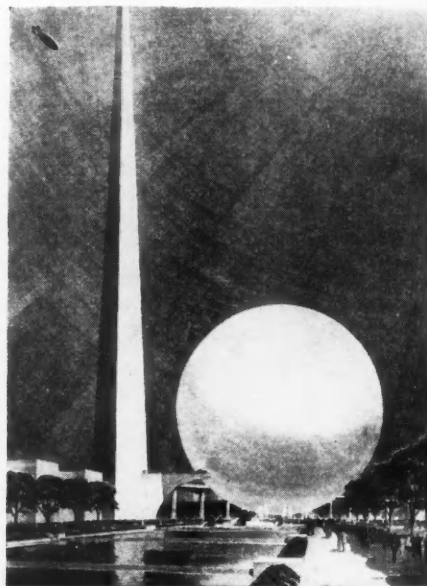
"The principal carrying charges are three: (1) Interest; (2) Amortization required; (3) Taxes.

"It follows that the most effective way to broaden the market for new dwellings is to cut down these carrying charges."

The need for immediate and vigorous attention to vocational and apprentice training on the part of both industry and public authorities was stressed by Mr. John H. Zink of Baltimore. After pointing out the inadequacy of vocational training programs in American cities as compared with those abroad, he stated: "The combined efforts of industry, labor, and the schools should be co-ordinated and directed to a well planned vocational education program that is adequate quantitatively and qualitatively to meet the needs of modern business and industry."

* * *

RIGHT: Artist's sketch discloses the 200-foot Perisphere within which visitors to the New York World's Fair of 1939 will view, from a revolving platform suspended in mid-air, a dramatization of the World of Tomorrow. Clusters of fountains will screen the piers supporting the Sphere. The 700-foot triangular Trylon at the left—a unique architectural form—will serve as a Fair beacon and broadcasting tower.

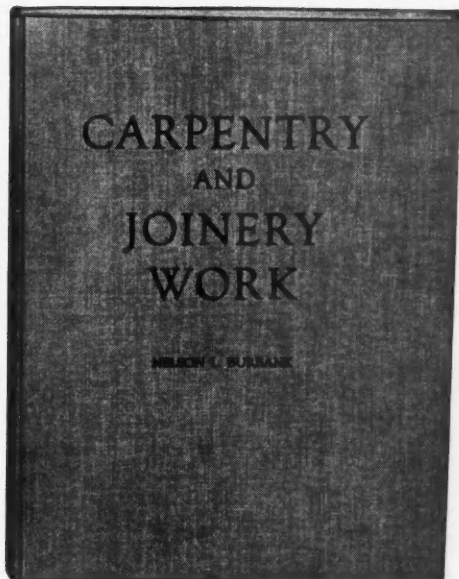


Second Edition

CARPENTRY and JOINERY WORK

By Nelson L. Burbank

Formerly Instructor, Building Vocational High School, Cincinnati, Ohio



The new edition has been thoroughly revised.

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

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

This book will be very useful to any man entering the home building field. Contractors can safely recommend it to apprentices and rough carpenters who wish to improve their knowledge of the work. The complete index makes it useful as a general reference book. Having a copy handy will help explain a piece of work.

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280 pages, illustrated, 8½ x 11 inches. Cloth Bound, \$3.00.

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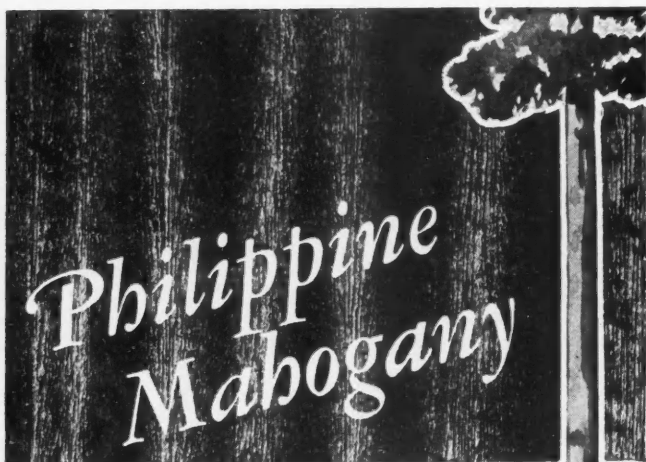
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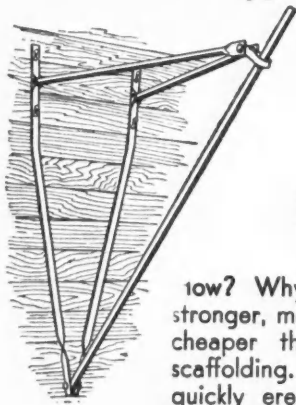
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Especially for TRIM, FIXTURES,
FURNITURE and BOATS.



Write for illustrated, descriptive booklet to the
Philippine Mahogany Manufacturers' Import Assn.,
111 West 7th Street . . . Los Angeles, Calif.



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

Knapp Elected Celotex Vice-President

HAROLD KNAPP, general sales manager of The Celotex Corporation, has been elected vice-president and general sales manager. This announcement comes on the heels of reports showing the strides the organization has made in the last year with preliminary figures on net earnings on common stock showing a decided increase over the corresponding period of last year.

In January, 1927, Mr. Knapp joined The Celotex Company as assistant general sales manager. By 1930, he had become general sales manager directly under the vice-president in charge of sales. At this time he was also treasurer of the Merchandising Council of the National Retail Lumber Dealers Association. In April, 1932, Mr. Knapp assumed the direction of all sales and distribution activities working directly with Mr. B. G. Dahlberg, president.

Due to his past experience in the lumber industry and then his many contacts with lumber dealers throughout the country, Mr. Knapp has acquired an intimate knowledge of merchandising building materials. As he travels extensively, he is well acquainted with dealers throughout the country.



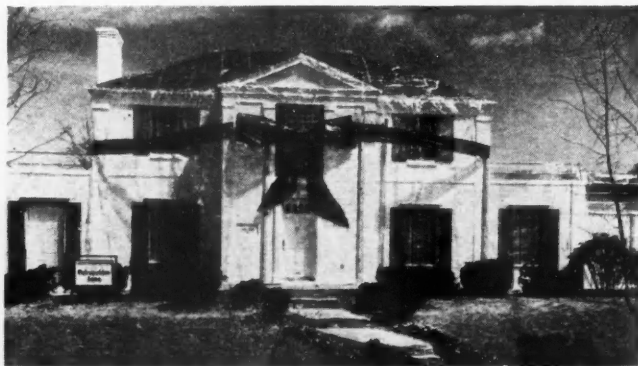
HAROLD KNAPP

Frigidaire to Enlarge Plant

THE erection of two new factory buildings together with enlargement and rearrangement of the Moraine City, O., manufacturing facilities of Frigidaire Division, General Motors Corporation, will be started within the next few weeks in preparation for 1938 production activities. The construction and plant layout program will involve an expenditure in excess of \$4,000,000.

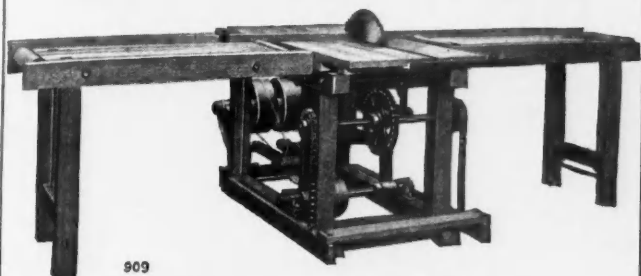
Model Home Wrapped in Cellophane

REPORTED to be the largest cellophane-wrapped unit in packaging history, the all G-E-equipped Metropolitan Home at Strathmore-at-Manhasset, Long Island, N.Y., was opened to public inspection on Sunday, Apr. 25, by Levitt and Sons, builders. The seven-room model house features among its standard equipment a complete General Electric kitchen, including dishwasher and waste disposal unit; air conditioning, and modern lighting. More than half a mile—4000 feet—of cellophane was used to encase the structure. A special crew of 25 men was sent from the du Pont plant in Delaware to handle the wrapping of white cellophane, which included a red cellophane ribbon, 3½ feet wide, culminating in a huge red bow at the entrance doorway. According to the builders, the announcements of the opening of the house in its unique wrapping attracted the largest crowds of visitors in their experience.



PULLING a zipper in cellophane wrapping opened model home.

"ON THE JOB"



909

For cutting off and ripping "on the job" there's nothing like this **HEAVY DUTY ♦ PORTABLE**

Combined Rip & Cut-Off MONARCH SAW BENCH

Extension tables and legs readily detachable for convenience in moving. Saw frame locks securely for ripping. Steel ripping guide standard equipment.

ECONOMICAL TO OPERATE. May be equipped with gasoline engine, electric motor or arranged for belt drive.

Complete catalog of MONARCH woodworking machinery on request. Our service includes helping you select the machines which best meet your requirements. Write.

Dealers everywhere

AMERICAN

SAW MILL MACHINERY CO.

60 Main St.,

Hackettstown, N. J.

Back Fence TALK ON "THE CENTURY"

"Oh yes, Jim had a grand time, too. He's in the club car spreading the Stevens Gospel—he's so enthused about the truly finer things..."

We're proud of our friends like Jim. On the extra fare trains you'll find them—the executive type who want more than average living yet know the real value of a dollar. They get it at The Stevens—and so they talk about it.

They tell about new services that smooth their busy days . . . food for virile appetites . . . restful nights that keep them fit . . . added conveniences increasing ease and comfort . . . a genuine interest that makes them feel at home.

The praise of busy men who know how to work and how to live has done much to make The Stevens Chicago's Outstanding Hotel.

OTTO K. EITEL, Managing Director

EDWARDS METAL SPANISH TILE



FOR DECORATIVE ROOF TREATMENTS

Not only for modern dwellings but also for commercial uses—garages, filling stations, country clubs, churches, overhung entries and the like, Edwards Metal Spanish Tile offers the progressive builder unusual profit opportunities. The massive effect of the field tile set off by the distinctive fittings requires no special reinforcement of the framing.

Write for Catalog No. 72. Send roof measurements with pitch and slope for estimate and let us help you land the business.

THE EDWARDS MANUFACTURING CO.

542-562 EGGLESTON AVENUE

CINCINNATI, OHIO

Install Tile-Tex



for
LASTING
BEAUTY AT
LOW COST

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.

Tile-Tex is a unit-laid wall tile that will not craze, crack, warp or mar. Can be applied right over plaster walls or wall board.

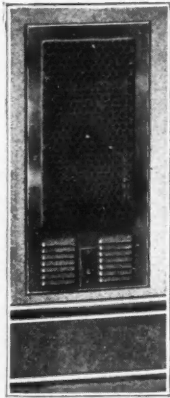
Write us today stating whether you are interested in a dealer proposition or if you want information for prospective home builders. Free literature will be sent promptly.

THE TILE-TEX COMPANY

1229 McKinley Avenue


Chicago Heights, Illinois

Decorative WALL TILE
TILE-TEX
Resilient FLOOR TILE



ELECTRIC QUIKHETER

Quick, Clean, Safe
ECONOMICAL

To add comfort and promote health by eliminating that chilly feeling in bathrooms, children's bedrooms, dressing rooms, etc. — on days when it doesn't pay to have the regular heating plant in operation — install the  Quikheter, flush type. It furnishes quick, safe, clean, economical heat by taking *cool air from the floor* and moving it up through and out of the heating chamber with a *velocity* necessary to circulate the warmed air *throughout* the room.

Furnished in small sizes of 1000, 1250, and 1500 watts, and large sizes of 1500, 2000, and 3000 watts capacity.

Frank Adam
—ELECTRIC COMPANY—
ST. LOUIS

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

Colean and McGehee Get New FHA Jobs

MILES L. COLEAN has been appointed FHA deputy administrator in charge of Large Scale Housing operations, and Charles C. McGehee deputy administrator in charge of relations with other government departments.

Mr. Colean has been director of the Technical Division since organization of the Federal Housing Administration. He was called to Washington in May, 1934, when the National Housing Act was being prepared for passage through Congress. He came to the Federal Housing Administration when it was first organized as director of the Technical Division, and subsequently also became director of the Low Cost Housing Division.

Mr. McGehee joined the Federal Housing Administration as deputy regional director stationed in Atlanta, in February, 1935. He was brought to Washington on Jan. 15, 1937, to serve as special assistant to the Administrator charged with contact work with other government agencies and the handling of legislative matters.

USG Names Babcock Advertising Manager

APPOINTMENT of Frank R. Babcock as advertising manager of the United States Gypsum Company has been announced. Mr. Babcock has been associated with The Nash Motors Company for seventeen years, the last eight as advertising manager.

An alumnus of the University of Illinois, Mr. Babcock's first job was in the building industry—on the staff of *American Builder*.

After serving in the army, he became affiliated with the advertising agency of The Green, Fulton, Cunningham Co., and served as the account principal on the Nash account.

In 1929 he was named advertising manager of The Nash Motors Company, and resigned this position to take his new post. He will assume his duties with the Gypsum company June 1.

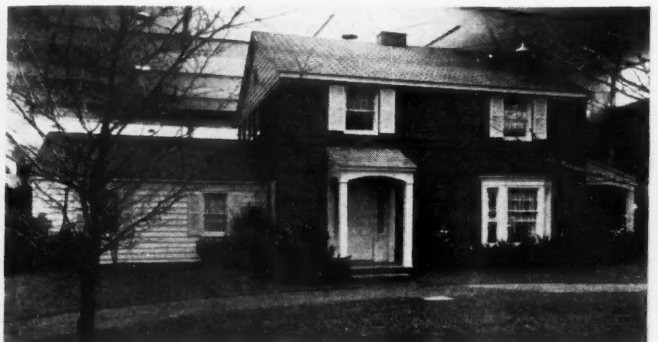
Great Lakes Buys Stran-Steel

PURCHASE by the Great Lakes Steel Corporation of the Stran-Steel Corporation, a subsidiary of Kelsey-Hayes Wheel Company, was announced by the Great Lakes management on Apr. 27.

Stran-Steel is the country's largest maker of light metal framing for home construction, having put more steel into new residences than the rest of the country combined. It will be known in the future as the Stran-Steel Division of the Great Lakes Steel Corporation, the latter being a unit of National Steel Corporation.

Great Lakes will not erect homes, but will confine its operations to producing and processing the steel, using the regular channels of the building industry for distribution. Metal frames for home construction as made by Stran-Steel are unusual in that they may be erected by carpenters experienced in building wood frame homes.

* * *



ABOVE: The 1937 House of the Indianapolis Home Show which was built from questionnaires sent to 1,000 Hoosier housewives. Forty-five per cent of them wanted an Early American home with three bedrooms, two baths upstairs, and one down. The house attracted 100,000 people to its door. The whole idea of the Indianapolis Exposition was built around the "90 Day Plan" of the Manufacturers' Housing Promotion Council, which is a 90 day build-up of the entire industry, in a community, prior to the presentation of the home show, or the home show being used as a focal point.

7-SE
Also avail-
able in 5
and 10 ft.
sizes.

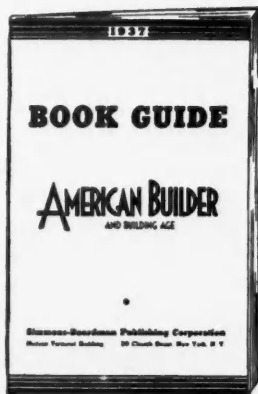


KNICKERBOCKER Trailer-Type Mixers

With low center of gravity, they tow easily, stand rigidly on the job. Large drum diameter means fast, thorough mixing. Large openings mean quick charging and discharging. Wide, steep leading skip eliminates skip shaking and pounding. Money-making machines on bridge, culvert, sidewalk and foundation work. Write for folder.

THE KNICKERBOCKER CO.
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A Guide to Plan Books



*The 1937
Book Guide
of the
American Builder
and Building Age*

◆ ◆
Free on Request

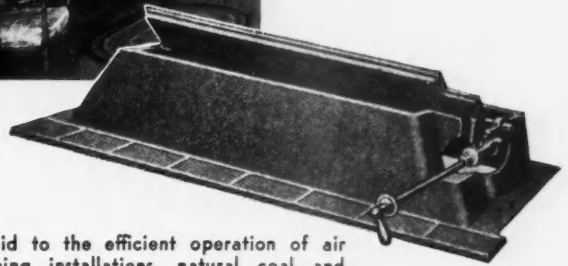
The new Book Guide contains full descriptions of 30 plan books of Low Cost Homes, 28 of Moderate Cost Homes and 4 of Fine Homes. Also 12 plan books of Summer Homes and Log Cabins, 8 of Farm Buildings and Structures, 3 of Multiple Dwellings and 3 of Garages. It also describes more than 400 other good books for Builders.

◆ ◆
BOOK SERVICE DEPARTMENT

American Builder and Building Age
30 CHURCH STREET NEW YORK, N. Y.

PEERLESS dampers

FOR AIR
CONDITIONED
HOMES



As an aid to the efficient operation of air conditioning installations, natural coal and wood-burning fireplaces must be equipped with the proper dampers. Peerless Dome Dampers give complete satisfaction. They seal the chimney flue when the fireplace is not in use. No heat loss—No back drafts. A proper burning fireplace guaranteed. Built for a lifetime of service. All standard sizes. Three models to choose from. Rotary Control—Poker Control—Chain Control—

*Write for
prices and
details*

OTHER PEERLESS PRODUCTS

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

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

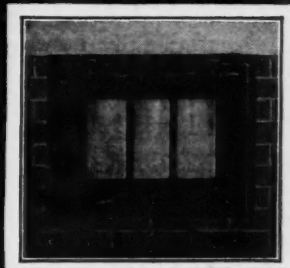
Majestic Coal Chutes



**GIVE PROTECTION
TO THAT NEW HOME
INVESTMENT**

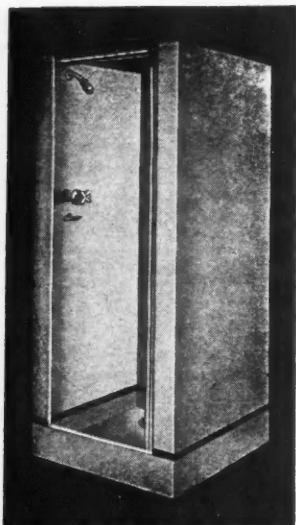
● For 25 years Majestic Coal Chutes have been "THE MARK OF A MODERN HOME." Guaranteed break-proof and rust-proof themselves—they protect the foundation and siding above, give convenience and safety to the home owner.

See that a Majestic Coal Chute is included in every job that you figure.



WRITE
*for our new 1937
catalogue on
building products
for homes of
character.*

THE MAJESTIC CO.
DEPT. H I
Huntington, Ind.



Modern Showers Save Money . . .

. . . In three important ways! BATHE-RITE Cabinets are built for life-time service. Quick, easy and economical one man installation. Available at prices no higher and usually lower than other equipment.

Smartly styled—to meet appearance expectations. Correctly designed—to fulfill cleanliness requirements. Roomy inside comfort—minimum outside compactness.

For healthful showers—BATHE-RITE Cabinets satisfy every popular preference—from beginning to end!

Practical models equipped with all accessories for residences, summer homes, camps, hotels, public buildings, priced at \$55.50 and up. Special leak-proof and waterproof construction. Instantly regulated, water saving shower head. Many other features. Your Master Plumber sells and installs BATHE-RITE Cabinets.



You'll Want This NEW CATALOG

—with specifications and full information on Modern Shower Cabinets, of great interest to owners, builders, architects. Mailed to you from our factory without cost or obligation.

MILWAUKEE STAMPING CO., MILWAUKEE, WIS.
New York City Office and Display Room
101 Park Avenue—Suite 515

BATHE-RITE SHOWER CABINETS



OFFERS NEW PROFIT OPPORTUNITIES

FOR
HOMES,
OFFICES,
HOSPITALS,
CHURCHES,
SCHOOLS,
PUBLIC
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

Westinghouse Advances Mahan and Bolin

S. D. MAHAN has been appointed general advertising manager of the Westinghouse Electric & Manufacturing Company, and Roger Bolin succeeds Mr. Mahan as merchandising advertising manager. Mr. Mahan in his new position will have general supervision over all advertising and sales promotion work of Westinghouse and its subsidiary companies. His headquarters will be in Mansfield, O., where the merchandising division of the Company is located.

Mr. Bolin also will make his headquarters in Mansfield. He joined the Westinghouse organization in 1925 at East Pittsburgh and since that time has been continuously associated with merchandising advertising and sales promotion activities of the Company.

Indiana Plant For Insulated Natural Stone

THE Instone Company of Hammond, Ind., recently licensed by the Insulated Natural Stone Co. of Milwaukee, is now manufacturing a new building material known by the patentee's name. This company is the third licensee of the process, the other two being the Cities Fuel and Supply Co., Milwaukee, Wis., and Insulated Natural Stone Co., Detroit, Mich.

Insulated Natural Stone consists of a thin facing of natural Briar Hill sandstone about an inch in thickness backed with an insulating concrete combining the attractiveness of stone and the insulating value of a light weight aggregate.

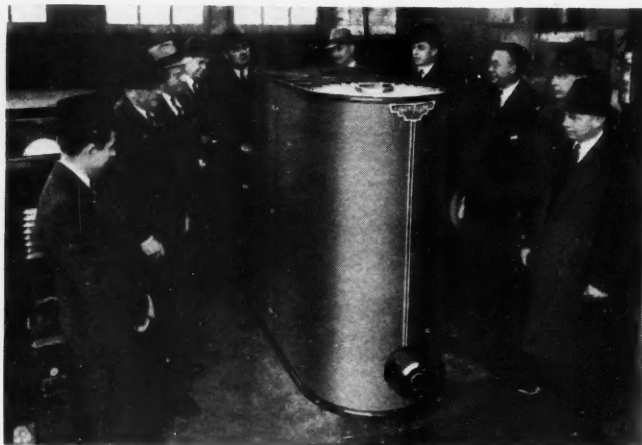
It is available in three types: Two inches thick for veneering over old buildings; four inches thick for standard veneering purposes; and eight inches thick (cored out) for solid wall construction, all in sizes to lay up a random ashlar wall.

The Instone Company has installed the latest type line production equipment, including a vibration system to give greater strength and a perfect bond between stone and concrete in the casting operation. A territory within a forty mile radius of Chicago will be served directly from the Hammond plant through building material dealers; carload shipments will be made to more distant points.

New Conditioning Unit for Small Homes

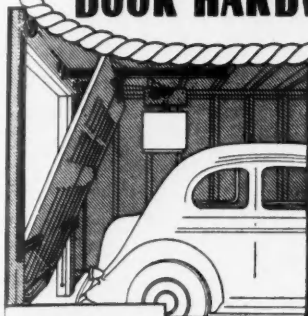
GAR WOOD Industries, Inc., will announce a new automatic heating and air conditioning system which will sell for a lower price than any previous model in the Company's history, and will be suitable for homes in the \$5,000 to \$7,000 bracket. The unit, which will be designated as the E. W. Model, will not supplant any present unit in the Gar Wood line.

The new E. W. unit will be sold as a complete system including all air ducts. It will provide automatic heating and air filtering, humidifying and circulating in the winter and air filtering and blower cooling in the summer.



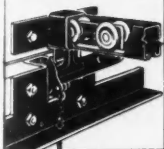
GAR WOOD salesmen getting the first glimpse in factory testing laboratory of the Model E. W. unit. Left to right: Robert Everett, Edward Wood, the designer and brother of Gar Wood, Robert B. Reid, Charles A. Butterfield, R. J. Bouschor, R. J. Owen, F. T. Pfeiffer, Arthur C. Bader, Joseph F. Pope, and Norman Saylor, Detroit branch manager, air conditioning division.

YOU CAN TIE-UP THE DOOR HARDWARE BUSINESS



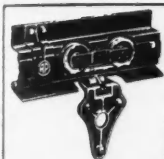
with the "50-50 Push-Over"

Over-head garage doors are popular...and here's the hardware that puts them in the rock-bottom price class so every builder can buy. Smooth, un-failing in action, durable, the ALLITH "50-50" is proving a sensational seller.



A SET FOR EVERY TYPE OF GARAGE or BARN DOOR

Over-head, straight sliding, around-a-corner, or folding-sliding hardware sets for doors of any size or weight. Complete assortment of tracks, hangers and door fittings. The ALLITH catalog is a convenient and authoritative guide to all types of door installations. Send for your copy.



10-10 Watershed

ALLITH-PROUTY, Inc. DANVILLE ILLINOIS



CAULK all Joints WITH PECORA COMPOUND FOR EFFECTIVE AIR CONDITIONING AND HEAT CONSERVATION

TEMPERATURE control is the vital factor in both air conditioning and heat conservation (fuel saving). Such control is materially aided when caulking is provided around all window and door frames and when all building joints are sealed.

The preferred caulking material is PECORA. It has been used by reliable contractors since 1908. It is impervious to heat, cold and moisture. Properly applied, it will not dry out, crack or chip.

This new type, high pressure Cartridge Caulking Gun (patent applied for) is a great time and material saver. Pecora Caulking Compound is specially packed for this gun in non-refillable metal cartridge of approximately one quart capacity. Ask about special offer.



Creators of Caulking Compound in Cartridges

Write for Folder and Prices

PECORA PAINT COMPANY, Inc.

Established 1862 by Smith Bowen

Fourth St. & Reading R. R. Philadelphia, Pa.

Member of Producers' Council, Inc.

SASH PUTTIES MORTAR STAINS FURNACE CEMENT SUCTION MASTIC for Structural Glass



SAMSON SPOT

sash cord

Samson Spot Sash Cord has never abused the confidence of an architect, builder, dealer or user. Known for more than 40 years as the most durable material for hanging windows. Made in one grade only from the finest 3-ply cotton yarn, spun in our own mills. Firmly braided and smoothly finished to resist wear and stretch. Always identified by the Colored Spots—our trademark.



In addition to Samson Spot, we manufacture other brands of sash cord to meet all requirements for quality and price; also braided cord of all kinds and sizes including awning line, mason's line, shade cord, venetian blind cord, etc. Samples gladly sent upon request.

SAMSON CORDAGE WORKS BOSTON, MASS.



This little FAN in the Kitchen Sold a \$12,000 Home

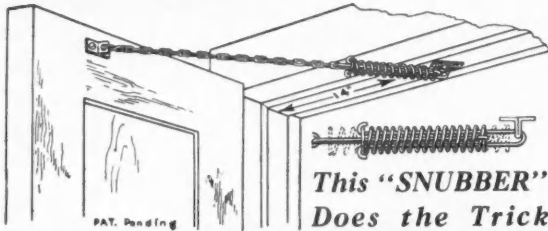
It's the little things that make a big difference sometimes, such as a "Buffalo" Home Ventilating Fan in the kitchen of a new home. These quiet, better-built fans make an instant hit with housewives because: They are easy to operate—easy to open and close—so efficient in removing cooking odors, greasy smoke and steam. Every modern home should have one. Fans are furnished complete with wall box ready to install.

Write today for literature and prices.

BUFFALO FORGE COMPANY 145 MORTIMER ST. BUFFALO, N. Y. Branch Engineering Offices in Principal Cities In Canada: Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

"Buffalo" HOME VENTILATING IFANS

Every DEALER Should GET
These NEW TWINS FREE
STOP-A-DOR Ends Outward Slams

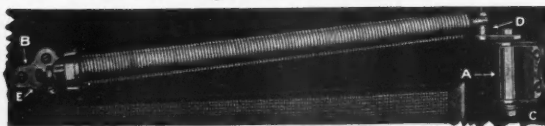


This "SNUBBER"
Does the Trick

Prevents **CRACKED DOOR FRAMES
BROKEN GLASS PANELS
ACCIDENTS FROM WIND**

Complete Ready to Install, Only 50c

EVER-WARE Hydraulic DOOR CLOSER



Silently CHECKS-CLOSES and LATCHES

Lowest price hydraulic closer on market.

Amazing performance—All metal parts—Fully Guaranteed—Fits
RIGHT or LEFT HAND DOORS.

No. 1. Complete—Ready to install (to open 90°) Only \$2.00

No. 2. Complete—Ready to install (to open 135°) Only \$3.50

Get all the facts of FREE OFFER NOW!
Install Demonstrators and Make Big Profits.

WARE BROS., 4403 W. Lake St., Chicago, Ill.

**BIG OPPORTUNITY
STUCCO SPRAYING**

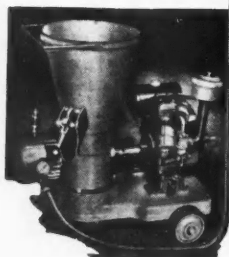


This new machine and process completely solves the problem of permanently surfacing new or resurfacing old masonry buildings, walls, etc. It fuses a waterproofed plastic mixture on any masonry. It fills all cracks and can be applied in any thickness desired and in 30 colors and shades. Fully proven by over twelve years actual use under all conditions and every climate.

LARGE WAITING MARKET

Owners everywhere want to enhance present values and make their buildings more attractive and livable. The better builders are striving for greater permanence, beauty and salability in their new construction. With COLORCRETE Stucco Spraying, you can supply this waiting market and can offer permanent, colorful surfacing at amazingly low cost. Operators report costs of 2c and up per sq. ft. and sell up to 7c. Some have paid for their equipment from first couple of jobs. Machine capacity up to 600 sq. ft. per hour. Get the facts. The new COLORCRETE Books tell the whole story. Write today. It may mean business independence for you.

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



**LETTERS from Readers
on All Subjects**

Facts, opinions and advice
welcomed here

Endorses April Lesson in Economics

Huntington, W. Va.

To the Editor:

The April issue of the *American Builder* reached me this morning. I want to say that the editorial, "Production Versus Destruction," by Samuel O. Dunn speaks my sentiments exactly.

C. A. ROACH, Realtor

Windows Without Inside Casings

Montgomery, Ala.

To the Editor:

Some years ago when I was a subscriber to your magazine I noticed in one number what I thought was a good idea in the construction and setting of door and window frames, i.e., in the construction of the frames where there is no inside casing to be used. As I remember the cut of this arrangement was instead of using the window jamb $\frac{3}{8}$ inch and the door jamb $1\frac{1}{8}$ inch thick, and of a width sufficient to strike face of plaster, then trimmed with a suitable mould planted on instead of casing. This would seem to me a very economical way of trimming the interior of a building provided, of course, the header and side mould were wide enough to take brackets for shades and curtains. If the header is wide enough, the brackets could be fastened onto this and the side mould be half round or some other design and make a good finish.

Kindly let me know if this plan is practical and if same has been used to any extent as I do some building and want to get away from the usual plan. This plan would be cheaper than the old way of using regular width casing. Am planning on using the "Pullman" sash balance. By using a straight studding on each side of the framed opening and the jamb $1\frac{1}{4}$ or 2 inches, a very substantial job can be had as the whole will be spiked together. As there are no weights used, the box type of frame is not needed, which will greatly lessen the cost of construction and also less material.

W. H. KEMPER

**Says Labor Is Opposed to
Carpentry Classes**

Batavia, Ill.

To the Editor:

I read with a great deal of interest your editorial, "Carpentry Instruction Urged for the Public Schools," published in the *American Builder* for May, 1937. I heartily agree with the main idea but I think you are wrong in supposing that school superintendents and teachers are not fully aware of the need of such instruction. Let me outline briefly the situation here in Batavia and ask your advice.

In 1934-35 we added a course in Building Trades to our high school curriculum, to meet Smith-Hughes requirements. Before adding this course I sent a letter to most of the contractors in this city telling of our plans and asking if they would object to our building one small building each year. Most of them answered that there would be no objection to this. In 1936-37 we built a small building—a Boy Scout cabin.

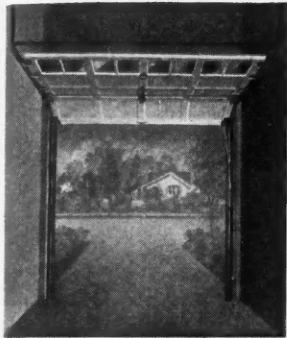
This year the local tradesmen brought enough pressure on the Board of Education so that we did not get to build. We will not get to build next year.

We feel that this is a narrow-minded, unfair point of view on the part of some of the local craftsmen. Many of them are strongly in favor of what we are doing, but the few who do object make enough noise so that our School Board feels we

(Continued to page 140)

WAGNER OVERHEAD DOORS

Builders prefer them because of ease of installation. Owners prefer them because of their smooth performance.



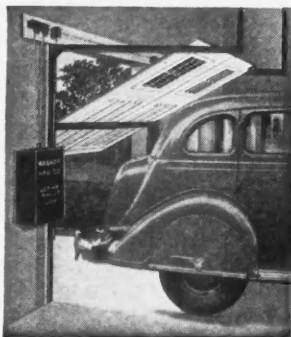
WAGNER CANOPY

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.

WAGNER MFG. COMPANY
DEPT. AB, CEDAR FALLS, IOWA

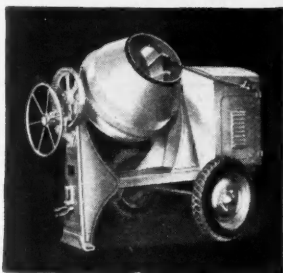
WAGNER GLIDE-OVER

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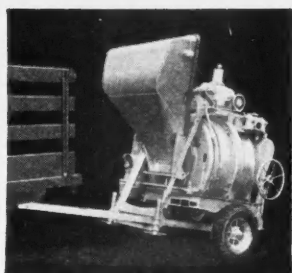


Speed

NEW CMC MIXERS

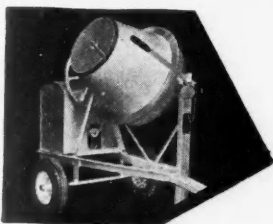


Wonder 3 1/2 New "Standard" Model—leader in the most complete array of half-bag trailers in the field.



CMC 5s-7s-10s Two Wheelers. The fastest moving—fastest working one and two-bag mixers ever developed.

FAST MIXING — FAST MOVING

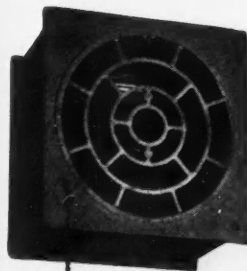


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See the new CMC Catalog for greatest equipment values ever offered by anyone any time—shows the full line of CMC Mixers . . . Wonder Tilters, Pneumatic Tired Carts, Hoists, Saw Rigs, Wheelbarrows. Copy mailed free.

CONSTRUCTION MCHY. CO., WATERLOO, IOWA



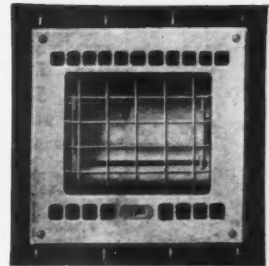
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WAPPAT Incorporated, Pittsburgh, Pennsylvania Division of Simonds Saw and Steel Company, will announce in next month's American Builder a NEW addition to their famous line of Electric Handsaws. New in design from stem to stern, it will provide maximum accuracy, safety, and power at minimum cost. New light weight—new cutting speed—new depth and angle adjustments. One of the minor refinements completely eliminates bothersome sawdust.

If you want advance information complete with specifications and price, clip the coupon. Printed matter will be ready soon.

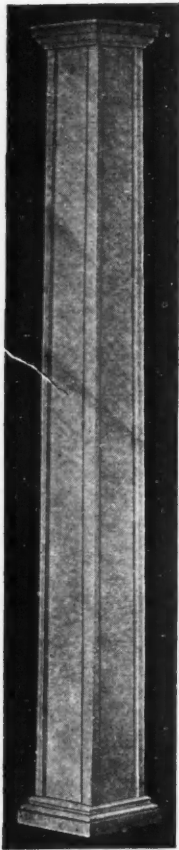
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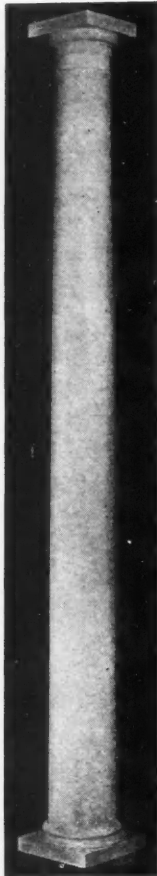
Our line of stock columns are obtainable in a wide range of sizes suitable for nearly every requirement. Ask your dealer to show you SAMSON COLUMNS. Note their sturdy construction and graceful design. If your dealer does not carry SAMSON COLUMNS, write us. We will mail you illustrated literature.

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We manufacture SAMSON COLUMNS, porch work, door frames, O. G. fir gutter and fir finish.

WASHINGTON MFG. CO.
Tacoma Wash.



LETTERS DEPT.

(Continued from page 138)

should not do any construction work that might take a day's work away from any local carpenter.

We can teach the theory, and some practice in the shop. Fortunately we have a large enough shop to allow us to build a small house full size inside. This is very well for the first year but the second year students should have an opportunity to go on a real construction job.

I think there are lots of places where the situation is the same as it is in Batavia. The school people see the need of such training but we are being held back by local craftsmen. What is there for us to do in this case?

R. L. READY, Building Trades Instructor
Batavia Public Schools

Insurance Against Mistakes

La Fayette, Ga.

To the Editor:

I am enclosing herewith my check for \$2.00 for 12 months of the *American Builder*.

I did not renew my subscription when it was out, as I have been taking your publication, getting up information to build a new home. I finally completed my home and did not think I need your magazine, but now feel I need it in advising people about new homes in connection with FHA loans which I handle in my office.

Incidentally, I remodeled an old house that was 150 years old into a modern classic colonial. I purchased it from a contractor and rolled it three blocks to my lot, and then rebuilt. I supervised the work, and your publication helped me a lot in modernizing this old place. I think that everyone who plans to build should read a publication like yours for twelve months prior to building and they will save a lot of errors which they would have regretted later on.

J. P. Stiles Agency

Favors "Fire-Safe" Materials

Stewart, Nev.

To the Editor:

I am enclosing a check for this latest book. If nothing unforeseen occurs, I will continue to subscribe to the *American Builder* as long as I live or it is published. I do wish, though, that there would be space devoted to the materials and plans which demand materials of "fire-safe" properties. The great majority of advertisers are for outmoded materials that have been proved combustible. Naturally your magazine devotes the most of its space to home plans which use these materials. But are you really rendering the best service to the people who read your magazine and build their homes from its plans and use the materials they see advertised in its pages? I firmly believe that while you may lose some valuable advertising patrons, you will serve the American nation and the home builders, therein, to a far greater degree, if you will take on new materials and the new "fire-safe" homes. Stone, concrete and reinforcing steel do not rot, burn or fall prey to termites. Painting, repairs and insurance of all kinds are at a minimum on "fire-safe" buildings.

Also, if the majority of the families in this country are ever to own their own homes, the cost thereof must be \$4,000 or less. The less the better. And most of the plans now offered in any magazine rarely fall as low as \$5,000.

V. S. LEWIS,
Carson Indian Agency

Useful to Resettlement Engineer

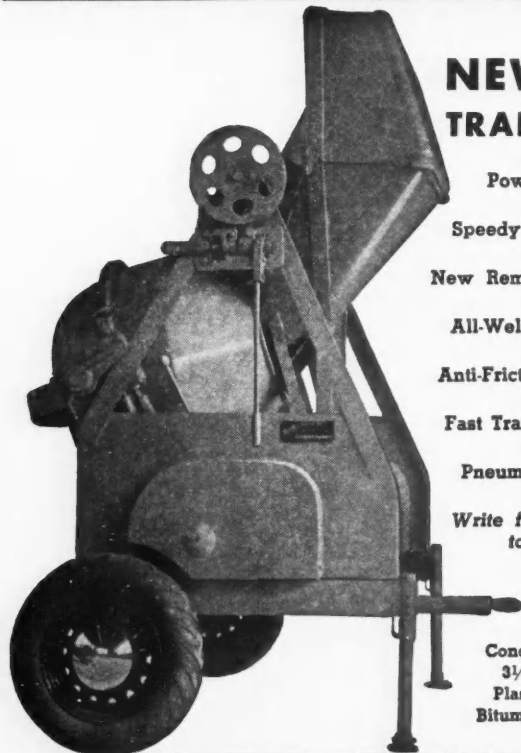
Black River Falls, Wis.

To the Editor:

Acting, more or less, in the capacity of planning and budgetary engineer for two Resettlement Administration projects located in central Wisconsin, I have found your catalog service to be very helpful, not only for making detailed estimates for construction work, but for design work as well. It has placed before the project engineers information that has been very difficult to get from any other source.

James C. Lyke

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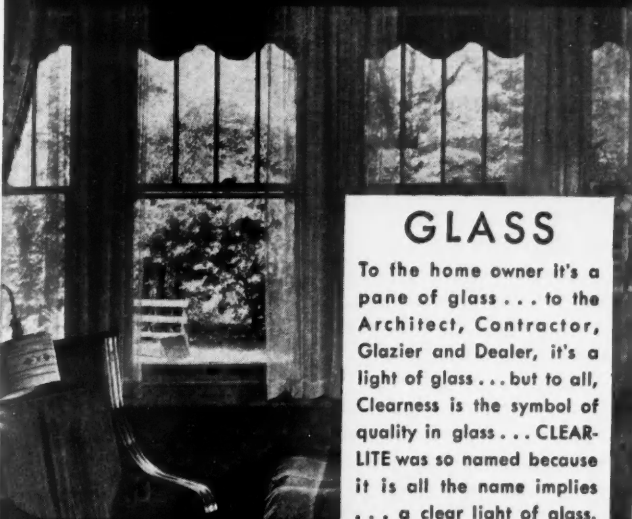
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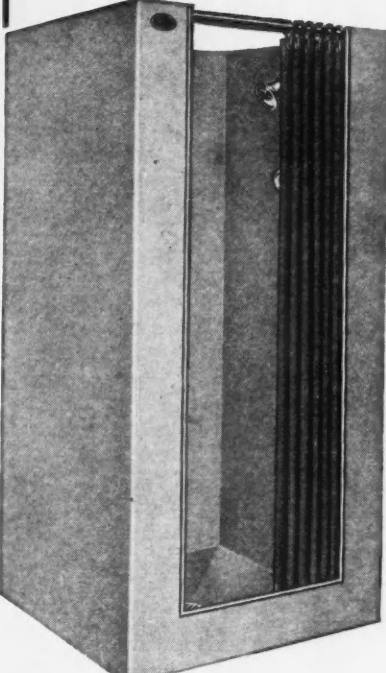
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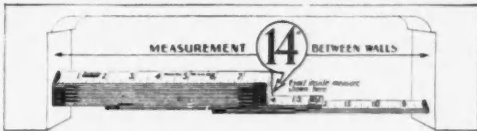
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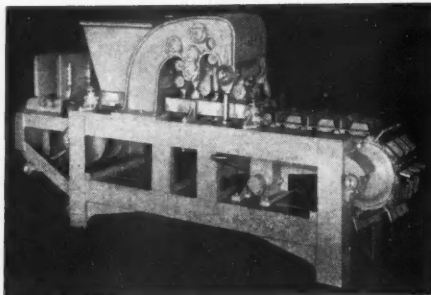
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Build your homes with **CONCRETE WALLS, FLOORS, ROOFS**

Sheathing with Plywood

By N. S. PERKINS,

Mgr., Eng'r'g Dept. Douglas Fir Plywood Association

FOR the past few years Douglas fir plywood has been used in increasing quantities for a variety of house construction items. Probably the most popular uses have been for cabinets and cupboard doors, interior wall paneling and ceilings, followed closely by plywood for "built-ins," and basement and attic modernization.

Less in evidence, but of considerable importance, is plywood subflooring under the conventional and enduring hardwood floors, as well as under the various composition floorings so popular for kitchens, baths, and other areas.

Recently, however, fir plywood sheathing has come into prominence, due largely to the interest stimulated by tests at the U. S. Forest Products Laboratory at Madison, Wisconsin. Plywood sheathing has been in use for a number of years—in fact, the official grading rules of the Douglas Fir Plywood Association provide for a standard "Sheathing Grade," manufactured in 5/16", 3/8", 5/8" thicknesses. And since plywood is available in stock panels up to 4 feet by 8 feet, it has proved popular as an easily handled and quickly erected material, with the same high insulating values as sawn lumber but with absolute imperviousness from air infiltration.

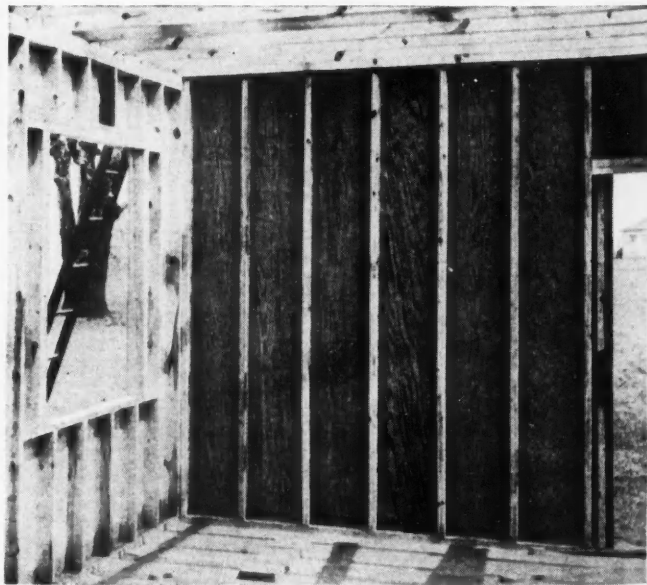
The tests at Madison established definitely the great rigidity and strength of a frame wall sheathed with even 1/4" fir plywood, using 6d nails on 5-inch and 10-inch centers. The rigidity of 1/4" fir plywood sheathing was found to be 40% higher than that of diagonal sheathing, previously recognized as the strongest method of sheathing; and if the plywood is glued to the studding, the already superior values are multiplied severalfold.

This led immediately to practical application by alert builders, who used the 5/16" thickness, whereas 5/8" plywood sheathing had been preferred before. Moreover, since 5/16" fir plywood seemed at first—and only "at first"—too thin for a nailing base, a method of stripping or furring over the plywood, at the studs was used. Conventional wood siding was then nailed through the furring and the studs, thus creating a double air space, and a warm exterior wall.

The economy of the 5/16" "sheathing" of Douglas fir plywood was evidenced not only in ease of handling and speed of erection, but in freedom from cutting and in the material saving in nailing.

It is conservatively estimated that 4 x 8 foot plywood panels can be erected as wall sheathing at a cost of 40 to 60 percent of diagonal sheathing. With plywood there is no cutting except at openings; there is no 30 percent allowance for waste and for actual versus nominal dimensions; and plywood is attached with fewer and smaller nails than needed with other types.

(Continued to page 144)



Plywood is coming into wide use as outside sheathing for house walls.

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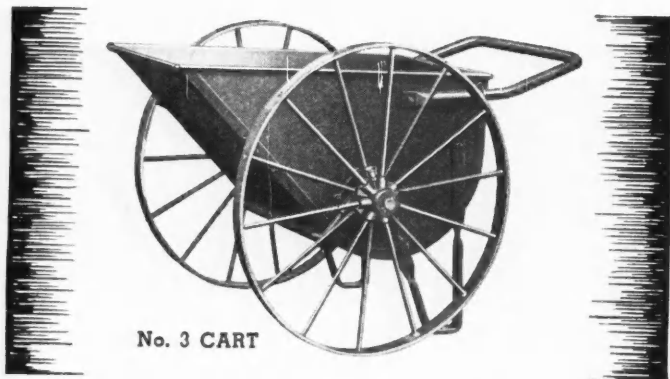
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Sheathing with Plywood

(Continued from page 142)

These factors, combined with rigidity and strength, high insulating values, and wind-proofing have brought fir plywood to the front in the present building spree.

But many people want shingle exteriors with their warmth, low cost, durability, and attractive variety. Accordingly, a series of tests was arranged and conducted at the Forest Products Laboratory of the University of Washington, to determine the minimum thickness of Douglas fir plywood as a suitable nailing base for shingles. Professor Bror Grondal of the University staff, and probably the leading shingle authority in the country, supervised the work. Various thicknesses of plywood (5/16", 3/8", and 3/4") were tested, as were several panels with 1" x 4" Douglas fir and Southern pine lumber for shingle strips. In each case, shingles were applied in accordance with the standard specifications of the Red Cedar Shingle Bureau and the load applied to an 8-inch wide shingle in the center of the panel.

The results, if somewhat surprising, were extremely gratifying. The official handbook of the Red Cedar Shingle Bureau, states—

"To lift a shingle 8 inches wide from a roof covered with No. 1, 16 inch shingles laid with a 5 inch exposure requires a pull of 85 pounds."

This had reference to a 1-inch lumber base. Yet the University of Washington tests showed that shingles nailed over 5/16" plywood "sheathing" developed a minimum pull of 85 pounds and a maximum of 115 pounds; and since an 85 pound pull on an 8-inch shingle with 5-inch exposure is equivalent to 300 pounds per square foot, the home owner need have no worry about shingles nailed to plywood. Even a cyclone doesn't exert half the lifting action which the shingles withstood during the tests.

One point should be emphasized here, perhaps, with respect to shingling over "tight decks." One still hears occasionally the ancient objection that shingles will rot if laid on a tight roof, yet there is no evidence to substantiate it. The caution from the Red Cedar Shingle Bureau is never to use a waterproof, saturated building paper under shingles, because such paper prevents "breathing," or the passage of water vapor. Rosin-sized paper is admissible as is a tight deck of either lumber or plywood. Ordinary fir plywood, although air-tight, does permit "breathing."

The significance of all this to the builder and the architect is that in 5/16" "sheathing" grade of Douglas fir plywood there is available a wall sheathing material which is low in first cost, rigid, cheap to handle and apply, proof against air infiltration, even in zero gales, and with excellent insulating properties. This material is suitable for covering with either wood siding or shingles, or a masonry veneer.

With such advantages established, there seems little doubt that sheathing with plywood will soon be the accepted practice.

* * *

Common Sense in Kitchen Planning

(Continued from page 83)

gloss paints that will resist soiling or steaming and will stand up under frequent cleaning.

ELECTRIC LIGHTING—Central fixture of 200 watts is recommended, plus a soffit light over the sink and over the range.

ELECTRIC WIRING—Increased electric load on the kitchen calls for several circuits in addition to the range power circuit. Outlets should be provided for the refrigerator, for the food and the cooking center as well as for a clock, fan and other electrical equipment. A telephone outlet in the kitchen is also recommended as well as call bells from front and rear doors and dining-room buzzer.

CABINETS AND WORK SURFACES—Continuous built-in work tops between the range, refrigerator and sink are recommended. This work area should be of battleship linoleum, tile, monel metal, stainless steel or well oiled hardwood. Height should be 36" from floor and depth 25". A backsplash of 3" to 6" should be provided. Average wood cabinets are 1' 3" and 1' 6" wide. Heights are 1' 6" for the one-shelf, 2' and 2' 4" for the two-shelf, and 2' 9" for the three-shelf cabinets.

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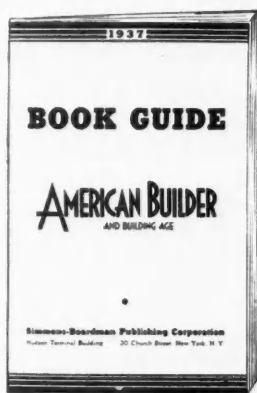
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The New
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BOOK GUIDE

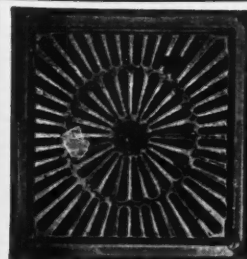
In the index of this 64-page, 6 x 9 catalog you will find listed the building books published or revised within the past 10 years. The Book Guide contains concise descriptions of 500 books, booklets and estimating forms. The latest plan books, up-to-date estimating books, concrete manuals, architectural handbooks and other building books of all kinds are fully described.

BOOK SERVICE DEPARTMENT

American Builder and Building Age

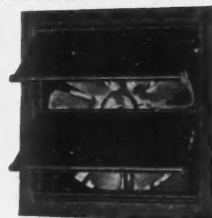
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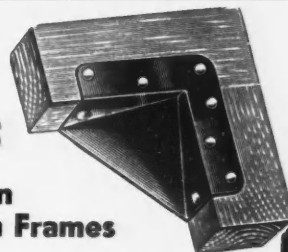
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W. J. DENNIS & CO.
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"Headwork" Quality

(Continued from page 56)

has eliminated it. The bathrooms are floored over the same as other rooms. Over the rough flooring is placed 1/4-in. fir plywood. A layer of 24-lb. asphalted paper is then put down, and upon this is laid heavy wire lath. This forms the base for a 1/2-in. layer of water-proof cement mortar in which the tile floor is laid. The surface of the tile floor is slightly higher than the other rooms but not objectionably so. This floor construction has been thoroughly tested and has been found more efficient and satisfactory, according to Levitt engineers, than the older methods.

LINOLEUM FLOORS—Where linoleum is laid in kitchens, dining rooms, halls, etc., a 1/4-in. layer of fir plywood is put down over the rough floor. Heavy felt linoleum base is cemented upon this and the linoleum cemented in place according to the best standard practice. The plywood provides a highly desirable smooth base for the linoleum.

BUILDING PAPER—The Levitt construction men believe that building paper is no place to economize. They make generous use of 25-lb. Carey asphalt-saturated felt. Around window and door openings and in other places Sisalkraft is extensively used. The 24-lb. felt is generously lapped and tightly tacked. To some observers the use of this building paper appears almost wasteful—wide laps at joints—extensive doubling in dormers and around projections and corners and extensive lapping. Great care is taken in the way the felt is tacked around openings, and it is evident that much importance is attached to proper use of building paper to keep out cold, wind and moisture.

TIGHT WINDOWS—Levitt has made an intensive study of steel windows and claims to have solved all problems of leakage. Wood surrounds are screwed to the steel frames and imbedded in special mastic. At the same time that the surround is imbedded in the mastic, a 6-in. strip of Sisalkraft building paper is inserted. When the steel windows with wood surrounds and projecting sheets of paper have been nailed in place, a black waterproof mastic, made by the Barrett Company, is generously applied at the junction of the surround and over the sheathing. The asphalt felt is then nailed down upon the mastic and the strip of Sisalkraft folded over on top of the asphalt paper and also nailed. This provides a triple-sealed window. In addition, a copper pan is set in at the base of the window under the finished sill, which catches any condensation that may form inside the window and carries it to outside of the exterior wall.

Southern Miracle

(Continued from page 73)

porches were all covered with a flat lock tin roof and painted. The whole roof was painted a dark bottle-green and the shutters likewise, the exterior of the house received three coats of white lead and oil.

With the owner's collection of fine old antique pieces, the house speaks of comfort and leisure, and, framed with old magnolias and elms, of renewed life for years to come. It is a picture we can all appreciate and enjoy.

The total cost of the work, including the Architect's fee amounted to \$3,001.00, and the general Contractor was a local man, Roy F. Norman. The work was completed August 1936.

SELECTED CATALOGS

**For the Service of Builders,
Contractors, Architects, Dealers**

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

EQUIPMENT FOR BUILDINGS

261—**Residential Lighting Fixtures**—“Miller Lighting Fixtures, Catalog No. 891,” a 24-page catalog showing five complete fixture lines, with 20 fixtures shown in full color. The Miller Better Sight Series of home lighting fixtures is included in this portfolio.—THE MILLER CO., Meriden, Conn.

262—**Distant Gas Lighter**—“Savutime Water Heater Control” is an interesting little folder illustrating how you can light your basement gas water heater from bathroom, kitchen or laundry. It is distant control merely by pushing an electric button.—SAVUTIME DEVICES, Inc., 88 Manhattan St., Rochester, N. Y.

263—**Toilet Flush Valves**—“Speakman Si-Flo Flush Valves” is a 48-page handbook presenting architectural specifications, roughing in and installation details, and a quantity of practical, scientific information on supply piping, etc., having to do with the use of flushing valves.—SPEAKMAN CO., Wilmington, Del.

264—**Hot Water Circulator**—“Kainer Circulating System,” a 12-page catalog on the Kainer system for hot water heating, including Kainer circulator, and circulation control. Explains how to lay out a modern hot water heating plant without expansion tank and with positive rapid flow circulation of hot water.—KAINER & CO., 761 W. Lexington St., Chicago, Ill.

265—**Rybolt Furnaces**—Two new folders are being distributed, one on the Rybolt Series 15 and the other on Series 600. These present mechanical specifications and illustrations of these well known heating plants.—RYBOLT HEATER CO., Ashland, O.

266—**Garage Doors**—“A Modern Door for a Modern Garage” is an illustrated folder showing the application of this all-steel upward-acting garage door to various types and styles of garages.—TILT-A-DOOR CORP., 502 Murphy Bldg., Highland Park, Mich.

267—**Allmetal Snap Lock Mouldings**—A new 8-page data sheet shows the complete line of snap-on metallic mouldings for modern interiors, including joint covers, cap mouldings, inside and outside corners, edgings, etc. Allmetal bindings, edgings and nosings, door sills and kick plates also included.—ALLMETAL WEATHER-STRIP CO., 229 W. Illinois St., Chicago.

268—**Mirrors and Cabinets**—“Miami Mirrors, Bathroom Cabinets, Accessories” is a well presented little catalog of 24 pages showing an extensive line of these popular and well designed products.—MIAMI CABINET DIV., The Philip Carey Co., Middletown, O.

269—**Residence Elevators**—“Five Types of Sedgwick Residence Elevator Equipment,” a small, illustrated catalog on residence elevators, including hand power and electric elevators, and Stairwell and Stair-Traveler models. New circular also available on Sedgwick dumb waiters, fuel lifts, trunk lifts, etc.—SEDGWICK MACHINE WORKS, 150 W. 15th St., New York City.

283—**Gas Heater, Adams Cheerfulator**—“Face Winter with a Smile—Install Cheerfulator Heating,” a 20-page illustrated booklet showing this efficient gas heater.—ADAMS BROS. MFG. CO., Inc., 1504 W. North Ave., Pittsburgh, Pa.

284—**The New Master Pembroke Tub**—“Standard” Presents the Master Pembroke” is a sprightly brochure in full color presenting the brand new “Standard” bath designed lower and flatter than earlier models. Smart modern design, roomier bathing space, convenient flat rim and flat bottom for added safety are special features.—STANDARD SANITARY MFG. CO., Pittsburgh, Pa.

286—**Concrete Plant Equipment**—“Manufacturing Leadership,” Catalog No. 67; 34 pages of practical information on concrete block and brick-making equipment, including molds, tampers, overhead mixers, transporting trucks and racks and Colorcreting equipment. Many of the pages in full color showing the concrete products being made and in use.—CONCRETE EQUIPMENT CO., Holland, Mich.

287—**Mortarless Tile Machine**—Four-page data sheet illustrating the Mortarless unit system of reinforced concrete construction, with details of the Mortarless concrete block machine on which these units are produced.—MORTARLESS TILE MACHINE CO., Inc., 3328 San Fernando Rd., Los Angeles, Calif.

288—**Skilsaw Heavy Duty Floor Sander**—A 4-page data sheet gives full information of the new floor sander by Skilsaw, Inc., leading manufacturers of electric hand saws. This Model “F” machine has a 7 in. drum and ¾ H.P. motor. “Surfaces right up to the baseboard.”—SKILSAW, Inc., 3310 Elston Ave., Chicago.

BUILDING MATERIALS

289—**Unlimited Electric Outlets**—“Your New Home Electrically Speaking!” is a new 28-page booklet all about the National Electric “Plug-In” strips which provide convenient outlets at intervals of 6 or 18 inches around the walls of any room, eliminating multiple plugs and dangerous extension wires. Ten systems of running electric circuits in a home are diagrammed. A glossary of electrical terms illustrated is a valuable feature.—NATIONAL ELECTRIC PRODUCTS CORP., Pittsburgh, Pa.

CONTRACTORS' EQUIPMENT

285—**Leveling and Surveying Instruments**—New folder describing the Universal level-transit; also booklet on the use and care of surveying instruments, with information and diagrams showing how to lay out building lots.—DAVID WHITE CO., Inc., 351 W. Court St., Milwaukee, Wis.

American Builder,
105 W. Adams St.,
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(June, 1937)

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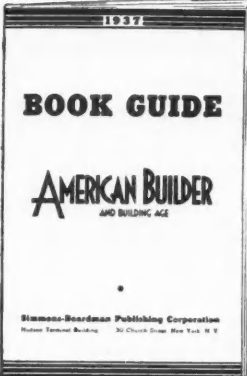
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