

AMERICAN BUILDER

AND
BUILDING
AGE

THE WORLD'S GREATEST BUILDING PAPER



EMERGENCY OF HAWAII, a con-
siderable interest today. This view
is a portion of George Yan-
n's residence at Kahala, Hon-
olulu. The open lanai, or veranda,
is a feature of Hawaiian houses.
The use of hollow tile walls, large
windows are features.

What Buyers Want in Homes

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Whether It's Hams, Haberdashery, or Home Cooking —



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(A Simmons-Boardman Publication)

AMERICAN BUILDER

and Building Age

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We take our text from another specialist...



RUSSELL shines shoes in the Rand Building in Buffalo, and the boys admit he does a swell job. Funny thing about Russell is that he sticks to shining shoes. He avoids sidelines, such as selling policy slips and candy bars. Figures if he branches out he wouldn't have time to give that super-shine which keeps 'em coming back!

Too few people in this day and age are content to stick to a line and become expert in it. Instead, they've got to get you coming and going.

Of course, you can argue that a "general store" business makes more money. But there is plenty of evidence to prove that a specialist gives his customers better service, and National is a shining example.

Aggressive *specialized* research, and the courage to put research findings into immediate production, have made National the pace-setter for the wall and ceiling industry. The first contribution was a revolutionary light-weight gypsum wallboard. It set new quality standards for wallboard processing to the benefit of all dealers and carpenters.

Recently, with the introduction of

the Gold Bond Floating Wall System, National took the first decisive step that has ever been made toward minimizing plaster cracking and reducing sound transmission. This, too, will stimulate the industry to greater efforts in the interest of the builder, dealer, and architect.

For large housing projects National has developed a unique 2" solid partition system that saves floor space, cost and time. These are but a few of National's contributions. There are many more.

The result is there's a Gold Bond product for every wall and ceiling job. The complete line includes every kind of gypsum plaster, wall-

board, lath, finish lime, metal lath, insulation, casein paint, and sound control material. A valuable plus is National's staff of more than 300 trained representatives who can help you select the best materials for any job and tell you how to use them for the best result.

Remember this when it comes to wall and ceiling materials—*it costs no more to use the specialist*, and you get the full value of National's research and product improvements, and you get it first! *Write for the 1941 Gold Bond Handbook describing new methods of wall and ceiling construction.* National Gypsum Company, Buffalo, N. Y.

Gold Bond

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PUBLISHER'S PAGE

Socialism, Threat to Home Ownership

INDIVIDUAL home ownership has long been regarded in this country as a fundamental right for every family, closely linked to our basic ideals of *freedom*.

The right to own a home and to be secure in it, enjoying its protection and profiting from its use, has for generations been one of the great constructive forces in this republic. But today the private ownership of homes is threatened.

Socialism—toward which many leaders of public opinion now seem to be drifting—is, at the core, a system of public ownership. In its development it substitutes the public ownership of property for private ownership; and, while its advocates first talk mostly of “nationalizing” the properties of the large public service corporations, nevertheless there is tied up inseparably in the socialist program, the public ownership of homes—“government housing.”

And already Uncle Sam has taken several long steps in that direction.

NOW, individual home ownership is the basis for a very large part of the nation's building activity. In 1940 more than 400,000 single family homes were privately financed and built. The men of the home building industry contributed 1½ billion dollars worth of labor and materials to create these additions to the taxable wealth of America. About half of these homes were built in communities of less than fifty thousand population.

The private building business of those communities was an important stimulant to all local business throughout the year. Employment and constructive activity for two million men depended on private home building in these far flung communities.

Government housing and public home ownership trends are a serious threat against this important, widely-distributed building business as carried on by the readers of this publication. The program of the public-housers is definitely a part of the movement toward state socialism; if continued, it may discourage and kill individual private home building and, for the great majority of communities, substitute nothing in its place.

This threat against the private home comes at a time when the defense of free America calls for loyalty and unity here at home as well as for strong barriers against aggression from without. And

nothing is quite so powerful to create love of home and love of country and to quiet unrest as widely distributed home ownership under fair and favorable terms.

Our government leaders—national, state and local—should be striving now to encourage home ownership, rather than to penalize it with excessive taxation and to compete with it through tax-exempt, subsidized government housing.

LOCAL taxing bodies are responsible for having started the breaking down process. The heavy tax burden which they have assessed against home properties has forced abandonment of many formerly desirable, centrally located districts. These have become “blighted neighborhoods,” their former residents moving where taxes are less.

Thus the first move in the socialistic program is accomplished; namely, excessive taxation of private property, making it unprofitable for continued private ownership. The next move follows automatically, slum conditions developing in those abandoned, blighted areas. And finally the federal agencies step in to complete the socialist program; they launch a “slum clearance project” of publicly owned housing for the benefit of one part of the population, subsidizing it by tax levies on and in competition with the other part.

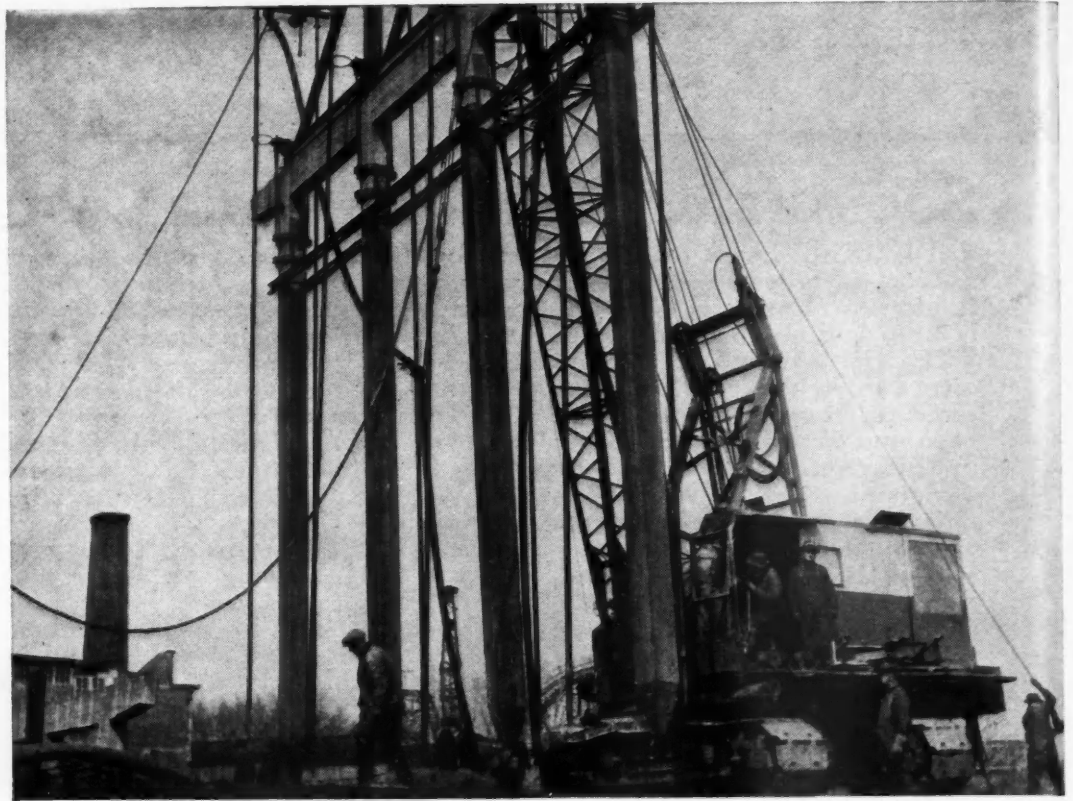
The size of this public housing program as visualized by its leading advocates staggers the imagination. It is a real threat to private home building and the private ownership of homes.

Nathan Straus, Administrator of the United States Housing Authority, addressing the A. F. of L. Annual Convention, on November 19 last, suggested a public housing program of 500,000 homes annually. He said, “I believe that the nationwide . . . program of the United States Housing Authority, calling into play all of the 500 Local Authorities as well as the Federal Government . . . is the best . . . single piece of machinery yet devised toward this end.”

That would indeed be “taking over the home building business,” as some of the Washington boys have been threatening—a complete fruition of the socialist plan!

Samuel O. Dunn,

SIMMONS-BOARDMAN PUBLISHING CORPORATION: SAMUEL O. DUNN, CHAIRMAN OF THE BOARD; HENRY LEE, PRESIDENT; BERNARD L. JOHNSON, ROBERT H. MORRIS, AND DELBERT W. SMITH, VICE-PRESIDENTS; ROY V. WRIGHT, SECRETARY; E. T. HOWSON, ASSISTANT SECRETARY; JOHN T. DE MOTT, TREASURER; EXECUTIVE AND EDITORIAL OFFICES: 105 WEST ADAMS STREET, CHICAGO; 30 CHURCH STREET, NEW YORK CITY.



CONEY'S BOARDWALK TAKES A RIDE

A 3880-FT. section of Coney Island's boardwalk was moved inland an average of 250 ft., to provide more bathing beach. Old concrete pile bents, consisting of four 14 x 14 in. piles averaging 28 ft. in length, joined at the top by a 40-ft. concrete beam, were moved as units and jettied into place.

Broken piles had to be replaced rapidly, to maintain job schedules. Using 'Incor' 24-Hour Cement, Massey Concrete Products Corporation's Newark, N. J. plant produced piles, 100 in all, as fast as needed. The job started in January, went forward at top speed, was completed in mid-May. 'Incor' helped Arthur A. Johnson Corp. & Necaro Co., Inc., New York, general contractors, keep the job on schedule. And strong, dense 'Incor' concrete assures necessary resistance to sea-water exposure.

In piles and pre-cast products, 'Incor' saves through quicker use of forms or pallets, reduced stock-pile requirements, faster capital turnover. In concrete construction, 'Incor'* cuts winter heat-protection expense—saves money through reduced form costs and lower job overhead, too. Write for copy of "Cutting Concrete Costs." Lone Star Cement Corporation, Room 2231, 342 Madison Avenue, New York.

*Reg. U. S. Pat. Off.



Photo, Fairchild Aerial Surveys, Inc.

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

AMERICAN BUILDER

AND BUILDING AGE

Needed FHA Amendments

A PROPOSED new Title VI for rental homes in defense areas, which would be added to the National Housing Act (FHA) by a bill now before Congress, would open an important new field of private activity. This proposed legislation would set up a special fund for FHA insurance of mortgages for defense housing separate from the insurance fund that backs up ordinary home mortgages of FHA. The measure, now before the committees on banking and currency of both Senate and House, would authorize mortgage insurance of loans to builders up to 90 per cent of the appraised value of the property where the principal obligation ranges from \$4,000 on a single-family dwelling to \$10,500 on a four-family apartment building. Mortgage insurance of this kind is now possible only where the dwelling is to be *owner-occupied*. This proposed new legislation would enable the builder to offer the structures either for rent or for sale.

Such a broadening of FHA at this time would make it possible for private building to take a more active part in providing needed defense housing, without direct government building and owning. So far as defense housing can be supplied through private effort, either by means of reconditioning existing structures or by means of new construction for rent or sale, rather than through direct government intervention (which has already been called upon to provide more than 54,000 units) it can be created with closer relationship to the normal urban development pattern and hence with less adverse effect on

other existing housing, and with greater salvage value. And it can employ normal construction forces.

Prompt action by Congress should also provide that in FHA insurance existing dwellings be continued on a parity with new construction and that Title I insurance of loans for construction of small homes be continued for another year.

Opportunity for Small Factories

AT A meeting of the Mid-West Defense conference in Kansas City recently, it was declared that bottlenecks in the defense program would be eliminated by calling into action the "small shops at the crossroads."

The *Shreveport (La.) Times*, commenting on this, points out that it should be emphasized that the burden of displaying initiative rests, not with the federal government or any defense board, but with the owners of small enterprises.

Any manufacturer who thinks that his production facilities might in any way be of assistance in the defense drive should at once get in touch with his local Chamber of Commerce and his nearest Federal Reserve Bank.

Many very small factories and shops which ordinarily manufacture items that seem wholly unrelated to defense are eligible for the sort of contracts and subcontracts which will be let by the government and by prime contractors during the months ahead, as the larger industries reach capacity and a search is made for additional plant facilities.

April "Builder" Theme to be "20-Year Low Cost"

It's not the first cost but the monthly cost that is important in this day of long-term home financing

THE April *American Builder* will present a new and powerful Theme for building industry operations in 1941. This Theme links up with the current long-term financing, which makes it possible, now for the first time, to figure home building costs on the basis of performance and *20-year cost* instead of on the short-sighted basis of *first cost*.

The editorial features of the April issue will cover the general background of this Theme, presenting an analysis of it from several different angles—all supported by authentic field reports, describing and illustrating the designs, methods and selling techniques of representative builders who are successfully using this thought: "The low cost of good construction when figured on a long term basis, amortized monthly."

This Theme will be developed throughout the mag-

azine both in the editorial features and in the advertising copy and announcements by leading building industry manufacturers, for the benefit of readers.

Since this entire issue is based on the popular, widely used, long-term mortgages established by FHA and the Savings and Loan Associations, these new attitudes toward quality and final cost, as opposed to the former thought of skimping the first cost regardless of upkeep and operation expenses, are coming into control in the 1941 home building program. Just as, in 1937, *American Builder* gave the building industry its slogan, "More House for the Money," which has been so powerful and effective, so now we offer in the April issue this new broad program of home planning, building and selling on the basis that "Quality Homes Cost Less on a 20-year Basis."—THE EDITORS.



THE MODEL HOME in George B. Hatley's "The Hamlet," Chevy Chase, Md., is modeled after the Governor's mansion in historic Williamsburg, Va. TruCost figures for this and other designs will be found elsewhere in this issue.

"Consensus House" Expresses Buyers' Ideas

Chevy Chase, Md., builder is guided by card index file of opinions of prospective purchasers in constructing Williamsburg model home

By Joseph B. Mason

GEORGE B. Hatley's Chevy Chase, Md., development, "The Hamlet," has been successful because of the smart merchandising ideas and methods employed. Hatley has a unique ability to understand public likes and dislikes, and is ably assisted by Mrs. Hatley, who takes charge of the decorating and the planning details of especial interest to the ladies.

One of Hatley's principal means of creating interest in "The Hamlet" is the opening of a model home about every sixty days. His latest idea is the "American Way Home" which has succeeded the "Consensus House," that particularly concerns us in this article.

The "Consensus House" was a model home project sponsored in co-operation with The Washington Post, and as described by Hatley, this house was "the consensus of opinion of the people of Washington as to what they want in a fine house."

For five years Hatley and his salesmen kept a record of the comments, opinions, likes and dislikes of visitors to their building projects. A card index file was established to record the opinions. In this way, Hatley built up a list of preferential items that the public wanted, based on the opinions of thousands of prospective buyers. These opinions were sifted and sorted and finally boiled down to a special list of "musts" which were used in the planning and building of the "Consensus House." The plans were drawn by the architectural firm of Kirkhuff & Bagley.

The unusual name and the interesting publicity and advertising accompanying the opening brought out thousands of visitors and resulted not only in the sale of this house but in a large number of others.

I asked George Hatley to list, for the benefit of *American Builder* readers, the important items in his card index which were included in the "Consensus House." Here

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DETAILS
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are the eighteen features most often requested:

1. **POPULAR DESIGN**—Williamsburg brick Colonial was found to be the most popular design, and the architects were instructed to model this house after the classic lines of the Governor's mansion in historic Williamsburg.

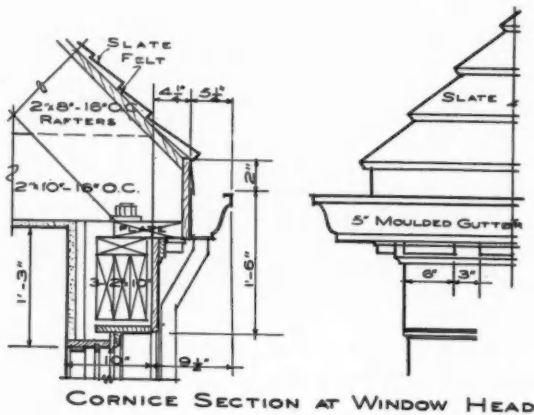
2. **IMPRESSIVE APPROACH AND ENTRANCE**—People want the approach to the house to be impressive. To achieve this effect a fine brick and picket wall was built leading up to the stately Colonial doorway.

3. **RECESSED ENTRANCE**—Most buyers want a covered or recessed entrance to protect them from the rain while opening the door. Practically all of "The Hamlet" houses now have a deep recessed entrance similar to the one shown on this plan.

(Continued to next page)



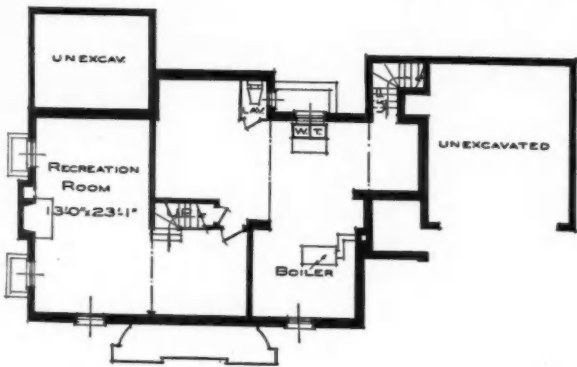
COLONIAL MANTEL is featured in the 13' 2" x 23' 4" living room.



CORNICE SECTION AT WINDOW HEAD



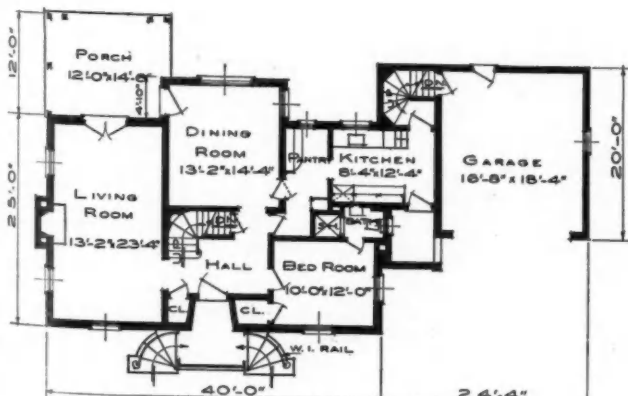
LEFT SIDE ELEVATION



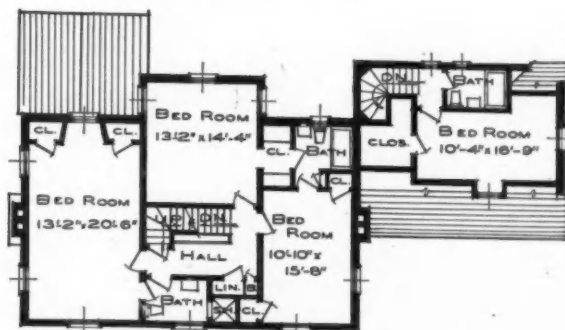
BASEMENT PLAN



FRONT ELEVATION



FIRST FLOOR PLAN



SECOND FLOOR PLAN

DETAILED PLANS of "Consensus House" model home show how buyers' desires were met. Note recessed entrance, private stairs to maid's room, porch at rear with access to dining room, well detailed cornice section. Kirkhuff & Bagley, architects.

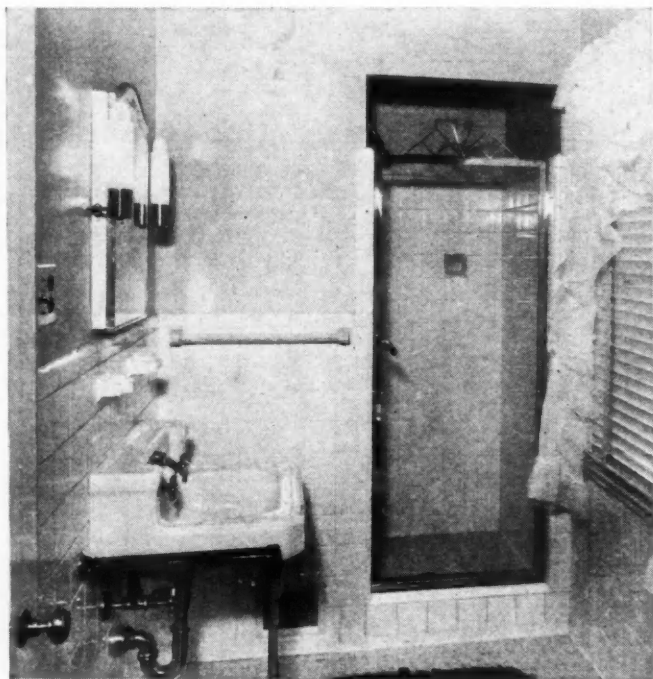


THE WOMAN'S touch is seen in the interior decorations of "Consensus House."

These are the kinds of interiors Chevy Chase home buyers wanted, as revealed by George B. Hatley's canvass of their likes and dislikes

IN opposite column: modern electric kitchen as installed in Hatley's "American Way Home" has electric dishwasher and garbage disposal, modern metal cabinets, electric range and efficient U-shape.

BATHROOM features latest in lighting and service outlets, glass shower door, electric wall heater, tile floors and walls.



"Consensus House"—

(Continued from preceding page)

4. IMPRESSIVE HALL AND STAIRS—A good-sized hall is provided with attractive winding stairs that create a good first impression inside.

5. SPACIOUS LIVING-ROOM—The house has a 13' 2" x 23' 4" living room, exposure on three sides, and an impressive Colonial mantel.

6. SCREENED PORCH AT REAR—People want a broad, livable porch screened in at the rear for privacy.

7. SERVANTS' QUARTERS—Private stairs should connect servants' quarters with kitchen.

8. MODERN DECOR—Colorful modern wallpapers and interior decorations are extremely important. They must be in good taste and should be worked out with a professional interior decorator.

9. ELECTRIC KITCHEN—Hatley found buyers demand the most modern kitchen equipment. The "Consensus House" was equipped with a General Electric range, refrigerator, garbage disposal and dishwashing sink. Hatley said the kitchen was the strongest selling feature of the house.

10. WINTER AIR CONDITIONING—The house was equipped with a Quiet May winter air conditioning unit that furnished filtered, humidified air.

11. BUTLER'S PANTRY—In this price class a well-equipped butler's pantry was considered important.

12. ATTIC STAIRS—Most buyers insisted on a stairway to the attic, and this was provided from the upstairs hall.

13. REACHING THE FRONT DOOR—People want a direct connection to the front door from the kitchen, without the necessity of going through either living room or dining room.

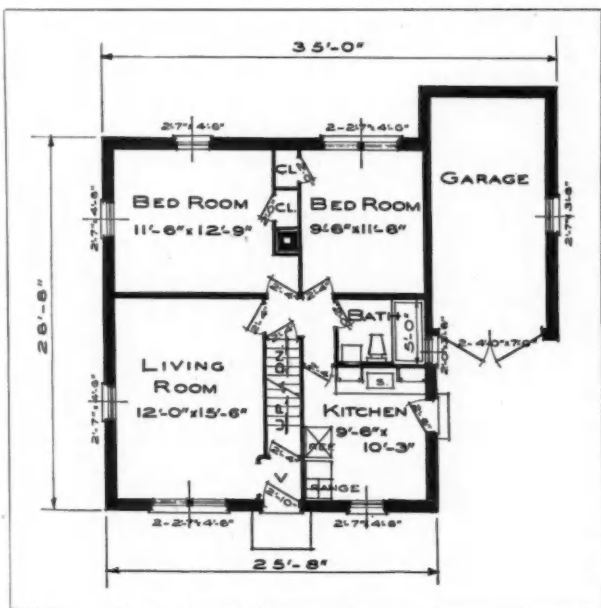
14. RECREATION ROOM—A cheerful, livable recreation room with fireplace was desired and provided.

(Continued to page 132)





FIRST PRIZE was awarded this insulated cottage built by William F. Chatlos in Colonial Colonies project at Dumont, N.J. Estimated fuel saving from full thick insulation—\$55.00. TruCost figures on page 142.



25' 8" x 28' 8" PLAN—2 bedrooms, attached garage.

"Houses We Prefer to Finance"

Savings and Loan Association contest shows preference for small, well insulated, well planned houses that are economical to own

By Wharton Clay

Secretary, National Mineral Wool Association

prospective buyer at the start, but continue to be economical to own, and that means economical to heat and to maintain.

The preferred house, at least for financing purposes, of savings and loan association executives throughout the country is a brick veneer, mineral wool insulated bungalow containing a large living room with fireplace, two bedrooms, dinette, kitchen and bath, and attached garage on the first floor, and with a laundry, hot water heater and furnace in the basement. Selling price: under \$5,000.

This house was first choice of savings and loan men when asked to select "The House You Would Prefer to Finance" from entries submitted by savings and loan associations in our contest.

The flood of entries received indicates a widespread belief in the value of thorough insulation in houses sell-

"WHAT kind of a house do you prefer to finance?" is a question many builders would like to have the loaning institutions they do business with answer in advance. It's a question they would have a hard time getting answered, but as a result of a contest recently sponsored by the National Mineral Wool Association we can present a pretty good picture of what loaning officials want.

Without further ado, it can be said that they want to finance houses that are not only within the budget of the



SECOND PRIZE WINNER built by Master Mechanics, Inc., Tompkinsville, N.Y. Estimated savings from insulation—\$68.30.

ing for less than \$5,000. The reason for this, in the opinion of building and loan association executives, is that insulated homes are easier for the home owner to buy and own, and for the builder to sell.

On homes selling for less than \$5,000 the savings on fuel effected by the use of full-thick mineral wool insulation are usually more than enough to cover a full monthly payment on the mortgage. Thus, in effect, the purchaser makes only 11 payments per year.

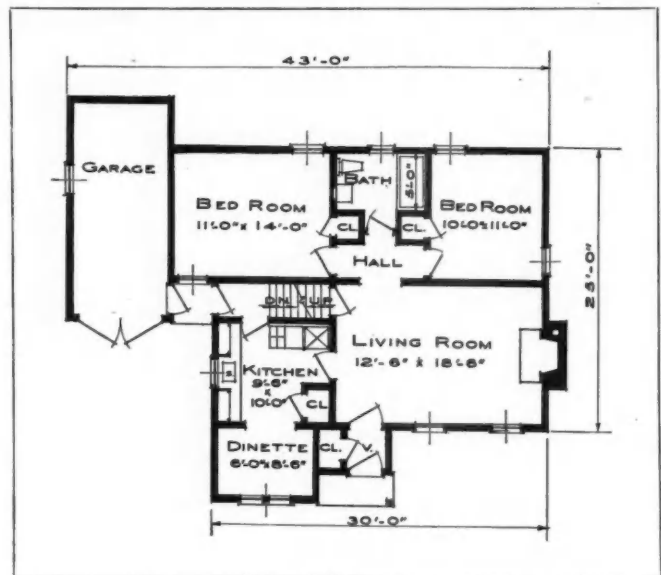
This saving, of course, increases the buyer's ability to meet his installments, and makes the insulated house a much better risk from the building and loan association's viewpoint than an uninsulated house.

The prize winning house, built by Colonial Colonies Corporation, Dumont, N. J., under the direction of William F. Chatlos, and financed by the Serial Federal Savings and Loan Association of New York, topped houses representing every geographical section of the United States except the deep South and the Southwest in the voting.

The savings effected in this house, located in northern New Jersey, by the use of full-thick mineral wool insulation can be easily estimated. For example, without insulation heat losses would amount to 67,307 B.t.u. per hour. Full-thick mineral wool insulation would reduce these losses to 28,295 B.t.u. per hour. In estimating these losses, it was assumed that the house had 7' 6" ceiling, and the wind velocity was 10 miles per hour.

Substituting these estimated heat loss figures in the standard formula for fuel consumption, we find in the case of an uninsulated house of the size and type of the prize winning home, it would require a total of 1,370 gallons of fuel oil annually to heat it. On the basis of 7c per gallon, the fuel bill for the year would be \$96.

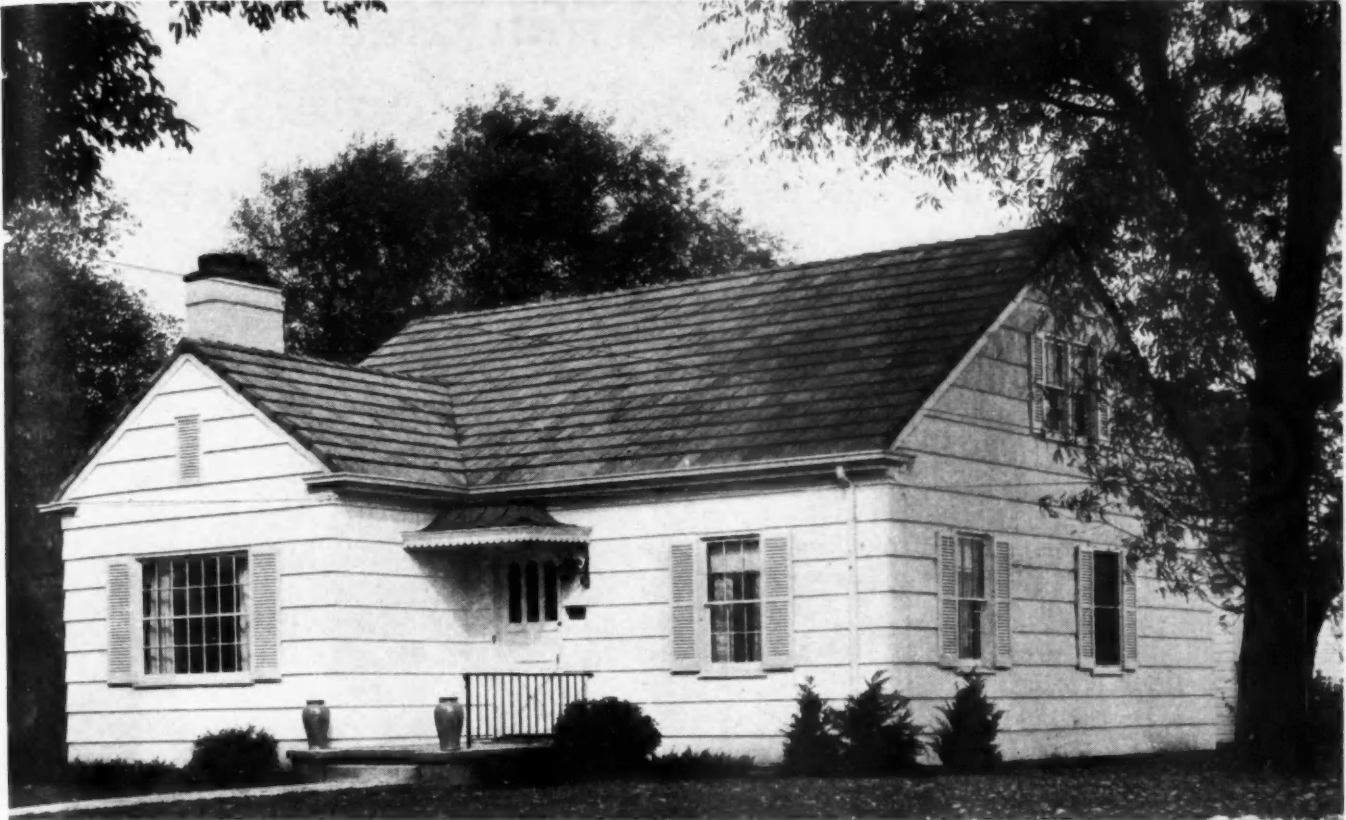
This same house insulated with full-thick mineral wool insulation, using the same formulae, would require only an estimated 578 gallons of fuel oil. At 7c per gallon this would amount to \$40.50, or a saving of \$55.50.



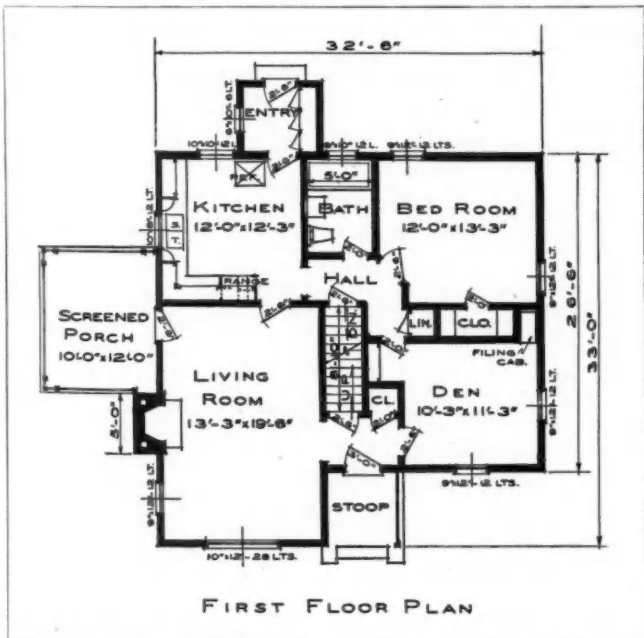
L-SHAPED PLAN with dinette and spacious living room.

TABLE OF ESTIMATED FUEL SAVINGS

House Built By	Fuel Cost Uninsulated	Fuel Cost Insulated	Yearly Savings	Monthly Mortgage Payments	No. of Payments Saved
Colonial Colonies Corp., Dumont, N. J. (First Prize)	\$96.00	\$40.50	\$55.50	\$33.00	\$ 1.78
Master Mechanics, Inc., Tompkinsville, N. Y. (Second Prize)	106.00	38.70	68.30	50.00	1.36
Guy Blair South Bend, Ind. (Third Prize)	160.00	70.00	90.00	29.54	3.00



THIRD PRIZE home built by Guy Blair, South Bend, Ind. Estimated fuel savings from insulation \$90 per year.



LIVABLE PLAN with screened porch, downstairs den.

Monthly payments on this house amount to only \$33, including interest, taxes, etc.; therefore, it can be easily seen that, even during the most severe winters, the fuel savings with mineral wool insulation should be ample to cover a full monthly installment.

Second choice of the savings and loan men was an L-shaped frame Colonial house built by Master Mechanics, Inc., of Tompkinsville, Staten Island, N.Y., and financed by the Richmond County Federal Savings and Loan Association, Tottenville, N.Y.

This house was one-story with asbestos shingle side-

walls, and consisted of two bedrooms, living room, dinette, kitchen and bath. As did the first prize house, it had a wood burning fireplace and attached garage.

In the case of the second prize house, the heat loss, if the house were uninsulated, is estimated at 74,230 B.t.u. per hour. Insulated with full-thick mineral wool insulation, the heat losses in this house would be cut to an estimated 27,141 B.t.u. per hour. Using the same formula as for estimating the fuel requirements of the first house, namely:

$$\frac{\text{B.t.u./hr.} \times 24 \times \text{degree days}}{\text{Td} \times \text{Calorific value of fuel} \times \text{Efficiency of heating system}}$$

we find that the house uninsulated would require an estimated 1,520 gallons of fuel oil. At 7c per gallon, this would mean a yearly fuel bill of \$106.00.

This house, insulated with full-thick mineral wool batts, however, would require only 554 gallons of fuel oil. At 7c per gallon this would amount to \$38.70, or a saving in fuel alone of \$68.30. This house was sold for \$6,500, cash. Had it been financed, the monthly payments on a \$5,200 mortgage would have been approximately \$50.00. This figure, higher than normal for a house of this type, is due to higher taxes prevailing in Staten Island.

In figuring the fuel requirements for both of these houses, the overall efficiency of the heating systems was taken at 60 per cent and the fuel used as oil, for the purposes of comparison.

In reality, the efficiency of the heating plants in both houses is considerably higher than 60 per cent. The prize winning house is heated by a Sunbeam gas fired air conditioning unit, manufactured by the American Radiator Company; the second prize house has a Petrol oil burner firing a steam heating system installed by the Weil-McLain Oil Burner Company.

The third prize house, also a frame Colonial, was built by Contractor Guy Blair, of South Bend, Ind., for his own

(Continued to page 131)

Big Defense Program Stimulates All Types of Hawaiian Home Building

Large or Small, Homes Have Basic Hospitality Plan; More Elaborate Type Shown Here

PRACTICE bombs and broadsides from Uncle Sam's fighting forces in Hawaii have rolled their echoes shoreward to merge with a building boom in Honolulu.

Unprecedented activity in Hawaii bolstering America's defense projects in the Pacific has had its reaction in real estate and building circles, as hundreds of service families are arriving in the city to establish residences. Besides the families directly associated with the actual defense forces have come the families of technical advisers, engineers and builders employed on the tremendous physical development of harbor and shore defense projects.

The greater part of the "rush" building work centers in the creation of housing centers where several small up-to-date one- and two-bedroom cottages make up an apartment and cottage courts to take care of smaller families. Some of this work is government financed, but in many instances private capital has invested to take advantage of the sudden housing requirement.

The builders and contractors have taken pages from the book of the Hawaiian sugar industry, which for years has engaged in the construction of practical, modern homes for employees on the plantations. The cottages are of thin construction, thanks to Hawaii's equable climate, have been equipped with all modern conveniences, possess the famous Hawaiian *lanais* or verandas, and are topped with roofs reminiscent of the ancient Hawaiian grass shacks.

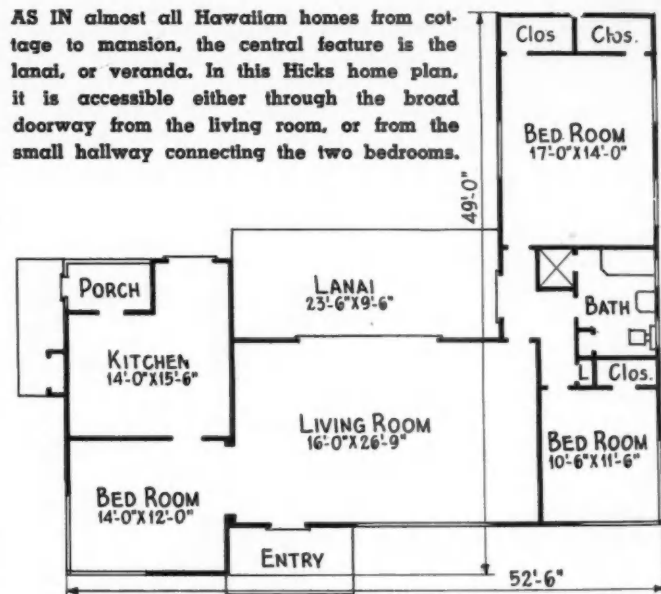
Building activity is not confined to those projects expressly constructed to house the service families. In all of Honolulu's residential areas, new homes are springing up to meet the demand of a rapidly increasing population. This activity is a natural outgrowth of a community which

finds itself becoming more and more identified with the national picture due to its importance as America's westernmost outpost of defense.

With such a concentration of men and materials, it follows that other business takes a spurt and each day finds an increase in investment which naturally makes itself felt in home construction.

In the flurry, Honolulu has not forgotten its traditional love of order and beauty. As residences spring up, the dreams and plans of local architects become realities. Gradually there has been developed an architecture typically Hawaiian. It has made itself evident during the past decade and is still being improved upon.

Briefly this architecture is a merging of Hawaiian hospitality, Polynesian beauty and American streamlining.



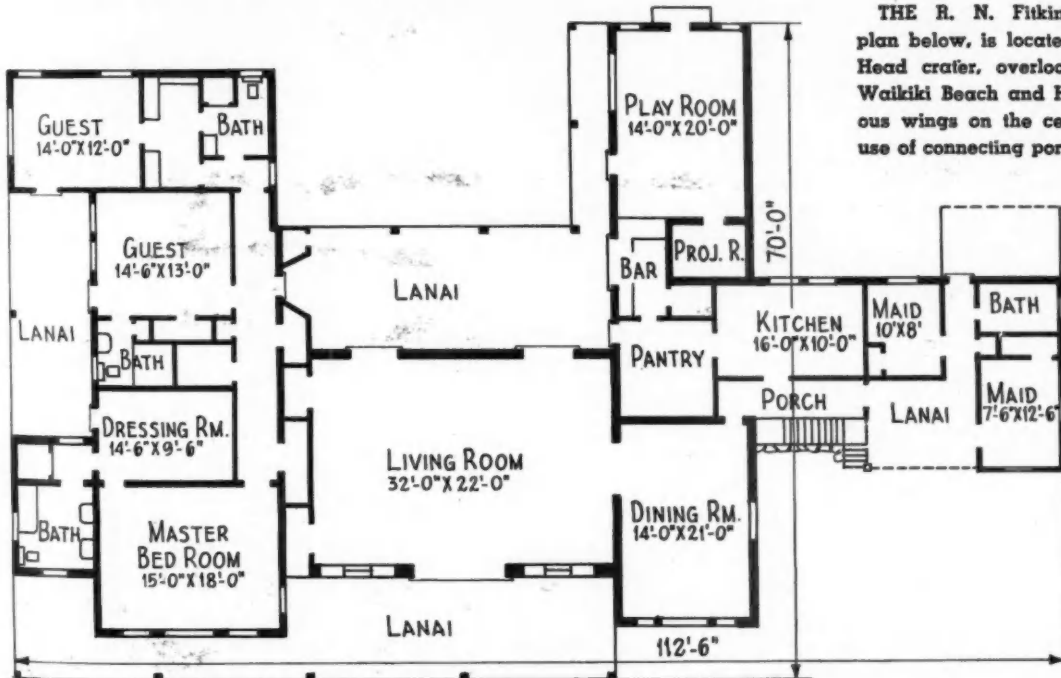
BELOW: The Hawaiian home of Leslie M. Hicks, Kahala, Honolulu, has typical low, sloping roof with wide shading overhang. Plan above indicates spread-out arrangement for three-bedroom house.





All photos by Pan Pacific Press

THE R. N. Fitkin home above, with floor plan below, is located on the slopes of Diamond Head crater, overlooking a wide panorama of Waikiki Beach and Honolulu Harbor. The numerous wings on the central H-type plan allow the use of connecting porches and lanais on all sides.



Honolulu, like any American city, never overlooks the latest in modern household appliances and ideas. But unlike any American city, it has its own style of beauty expressed in garden and traditional style of living.

Center of the Hawaiian home has always been the lanai, or veranda. From the simplest abodes to the palaces of Hawaii's former royalty, it has been the center of gracious living and hospitality. Whether a home is situated near a palm fringed beach or in the upper cattle raising country on the slopes of Hawaii's great mountains, the lanai is the most prominent part of a Hawaiian home.

Modern construction has streamlined it. It is generally

found on the protected side of the house, possesses a view over a seascape or garden, and generally is a merging of Hawaii's indoors and outdoors.

Modern Honolulu hostesses use it exclusively for entertainment. It is used for bridge and cocktail parties, for receptions and dancing. And in the more intimate confines of the family, it accommodates the before-dinner and other gatherings. Upon the lanai one generally finds the radio, bookcases and the magazine rack.

A requisite of a Hawaiian home is an expanse of yard and garden. No matter how small the property, Hawaii's

(Continued to page 131)

Plan Offered for Rebuilding Store Fronts

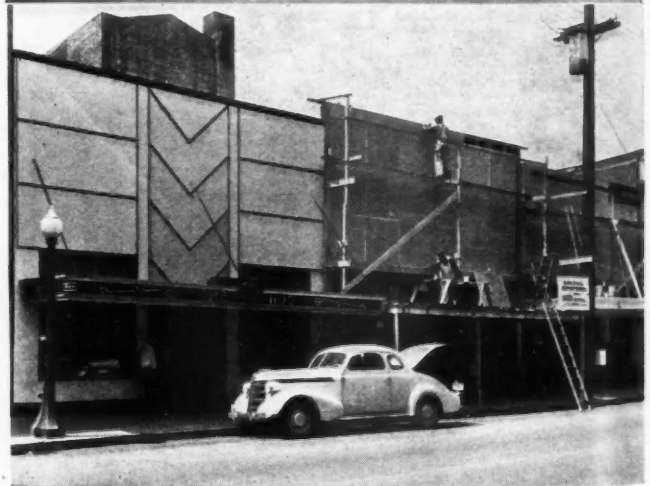
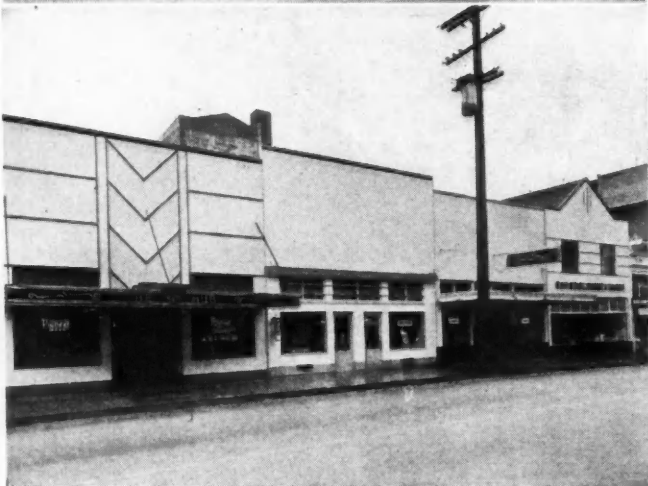
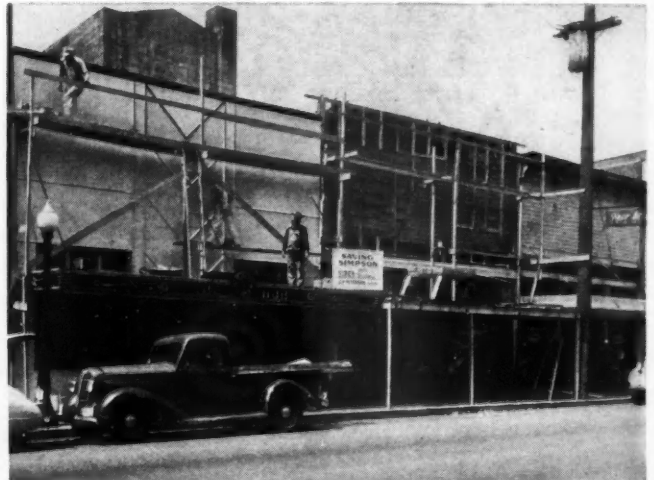
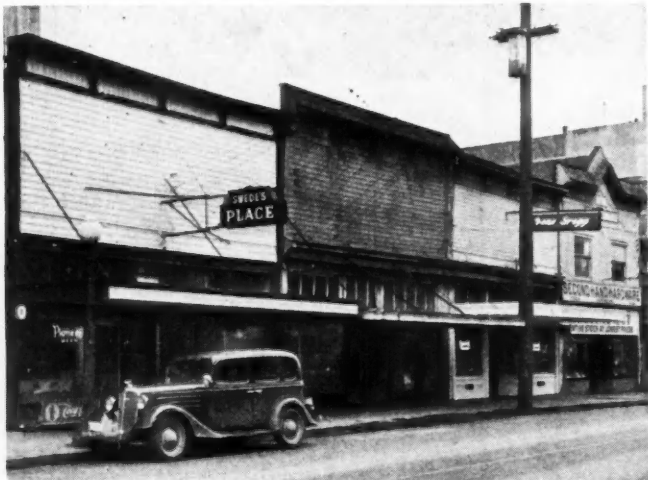
"Save Simpson Avenue—and Hoquiam" Campaign Demonstrates How Entire Business Streets, and Communities, Can Be Reclaimed

By M. S. Munson

A CIVIC modernizing movement, believed to be unique in its organization, is proving highly successful in Hoquiam, Washington. It is a movement created on an *idea* that may serve as a pattern for thousands of little cities similarly confronted with buildings and general atmosphere of pre-war-I days. The campaign, sponsored by the Hoquiam Chamber of Commerce, has long since passed the preliminary stage of wishful planning. The movement is now in the stage of successful conclusion. In addition to making store business better, it has provided construction contracts and material sales far beyond those originally drafted in the plan. As was hoped, the refurbishing idea took hold and snowballed throughout the entire community, building up jobs and



SALES KIT—This portfolio of "before" and "after" views, typical reconstruction details, and the plan of the campaign, with graphic sales appeal, was prepared in advance of job solicitation.



Rebirth of a Business Street—Simpson Ave., Hoquiam, Wash.

ABOVE, left, photographed Spring 1940. These old pioneer structures on Hoquiam's main street were a throw-back to another era—hardly conducive to modern merchandising; upper right, the old fronts were trued up with nailing strips and made ready for "Super-Harbor." One job followed another; lower right, line production methods were used. Crafts were at work simultaneously. The plywood was arranged in various patterns; lower left, job complete, Spring 1941. This block on Simpson Avenue, Hoquiam, is hardly recognizable to visitors and townfolks. The investment in modernizing has revitalized business.



JOHN P. PETERSON, general contractor, undertook the various jobs on a line production cost basis. He said, "I was able to keep the various crafts on one job or another, thereby eliminating costly individual scaffolding."

sales volume. Hundreds of apparently unrelated fix-up jobs, and scores of new structures, may be traced directly to the contagion of the movement.

The campaign was organized to re-do several blocks of the main street—Simpson Avenue. It was realized that the job had to be done as a whole; piecemeal effort would only tend to bog down in inconclusion. The movement was titled "Save Simpson Avenue—and Hoquiam."

After the decision was made to undertake the effort, the first move was to photograph each individual store building, and from the photos an architect prepared recommended elevations. This "before" and "after" material, with typical construction details, a working plan of action, and supporting arguments, was incorporated into a portfolio. This picture album constituted the sales kit.

Working with the architect, the Chamber of Commerce president called upon each merchant or landlord. General contractors and "subs" were called in, and estimates given.

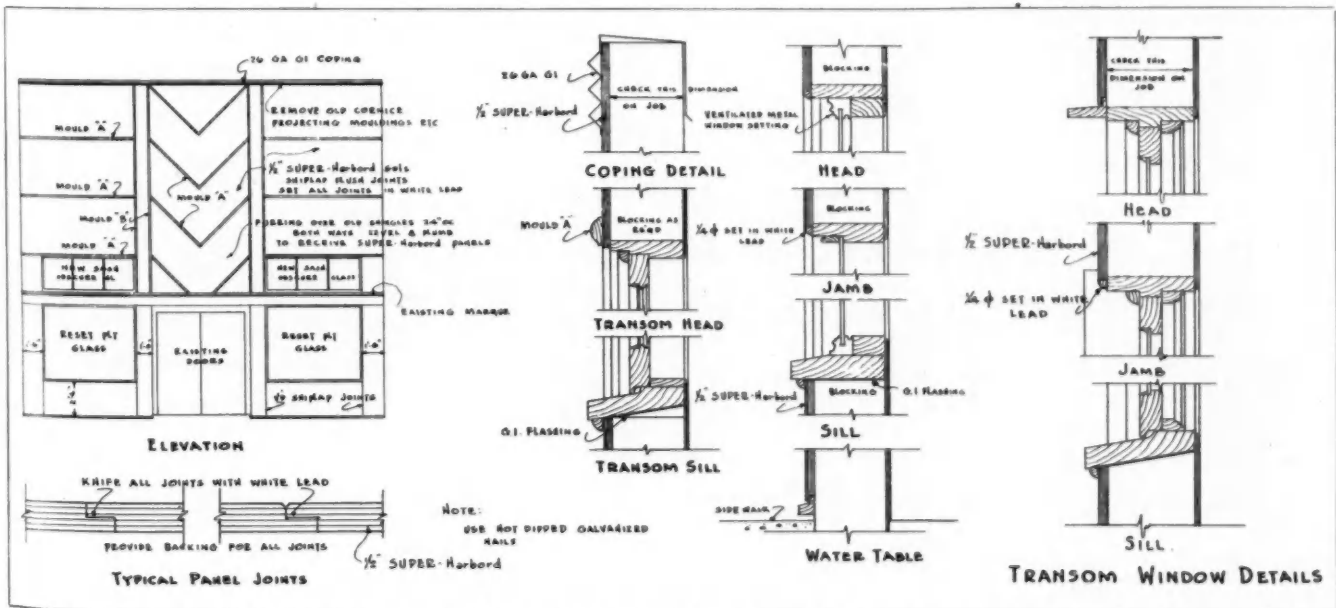
C. O. COOPER, Hoquiam Manufacturing Company, said, "The modernizing jobs required plenty of millwork, as did many new jobs inspired by the campaign."



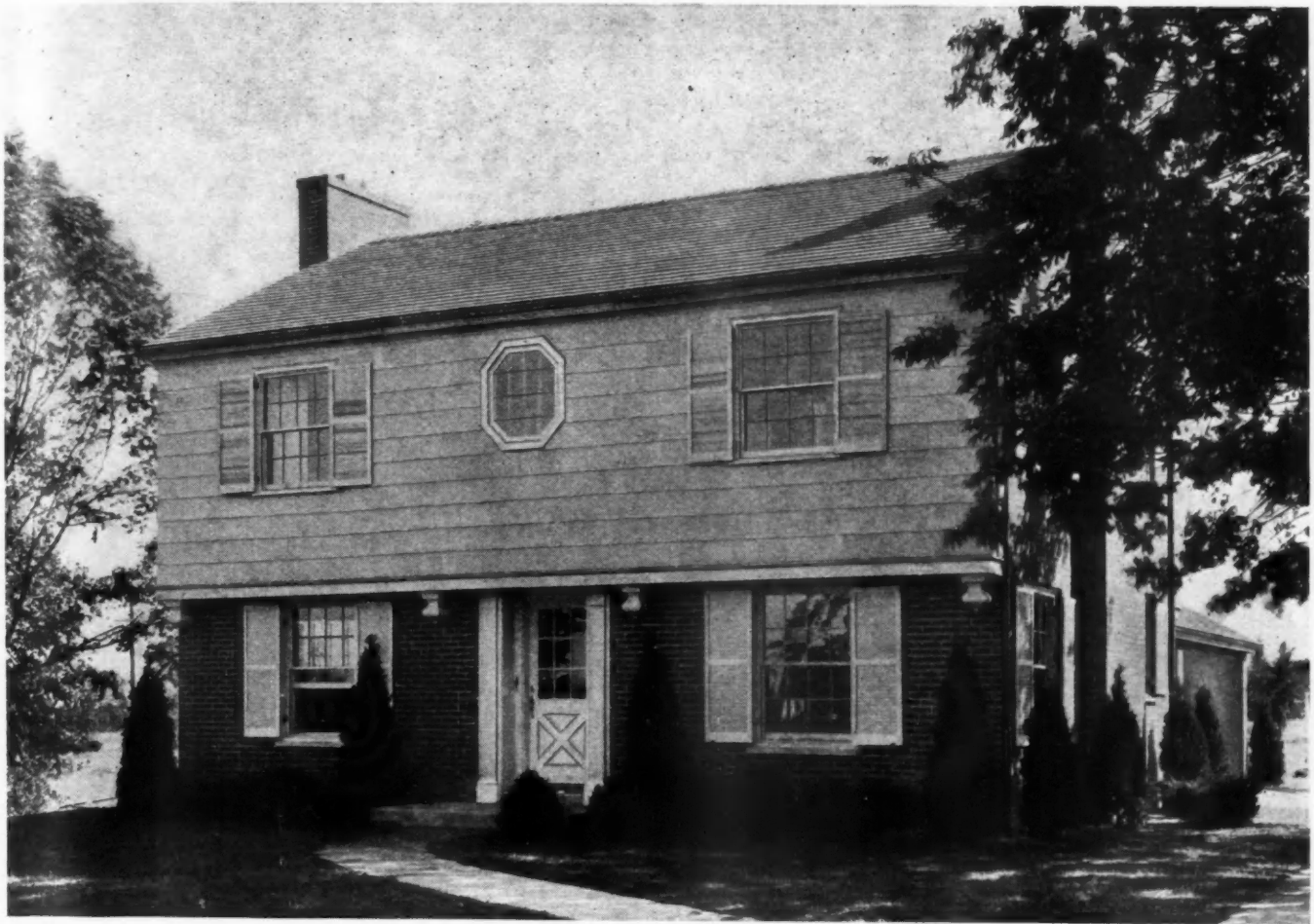
Each job, from the architectural aspect, was designed to correlate with the designs prepared for neighboring stores. Individual designs were so coordinated that not only were the separate buildings modernized, but the jobs so coalesced as to eliminate asymmetry which characterized the pioneer structures. One job sold another, so that "line production" methods of construction could be employed. Construction costs had to be held low.

The Harbor Plywood Corporation, naturally having a civic interest in its home town, assumed the responsibility for design, and supported the campaign from its inception. It was imperative that no individual job be economically impractical, that each be within the pocketbook range of its landlord, and that retail business be uninterrupted during remodeling, so "Super-Harbord" weatherproof plywood was the principal facing material used. Panels of 5-ply Sound 1 Side grade, sanded to $\frac{3}{8}$ " thickness, with edges shiplapped $\frac{1}{2}$ ", were used in differing tile-like arrangements. All edges were knifed with white lead paste, (Continued to page 134)

H. K. WILSON, architect, prepared and coordinated individual designs so that each harmonized with its neighbor. Said he: "Units of the entire project had to be brought within the pocketbook means of each landlord."

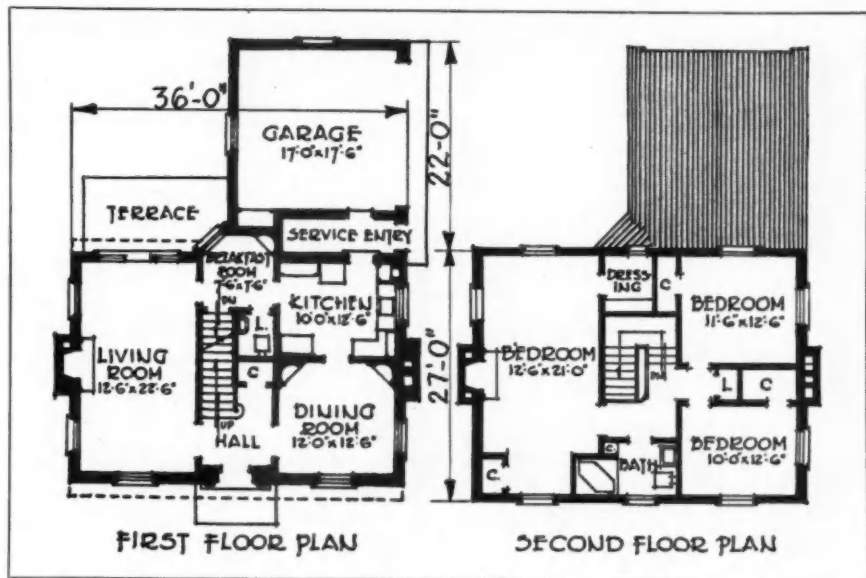


DETAILS of store front remodeling, showing how the waterproof exterior grade plywood was applied.



Convenience the Keynote

Triple Insulated house
in Dayton, Ohio, built
by F. D. McGurk. J. E.
Agenbrood, Architect



THE floor plan of this Dayton, Ohio, house is a standard, spacious center-hall Colonial plan, but Builder F. D. McGurk has amplified it with the large two-car garage and service wing at the rear. Materials were supplied by the Peter Kuntz Lumber Co. of Dayton.

Convenience is the keynote of the arrangement. An attractive breakfast nook has been provided at the rear, and adjacent to it is the downstairs lavatory, which has been tucked in beside the stairs. The living room is well proportioned, being 12' 6" x 22' 6", with doors leading to

an outdoor terrace at rear, sheltered by the garage.

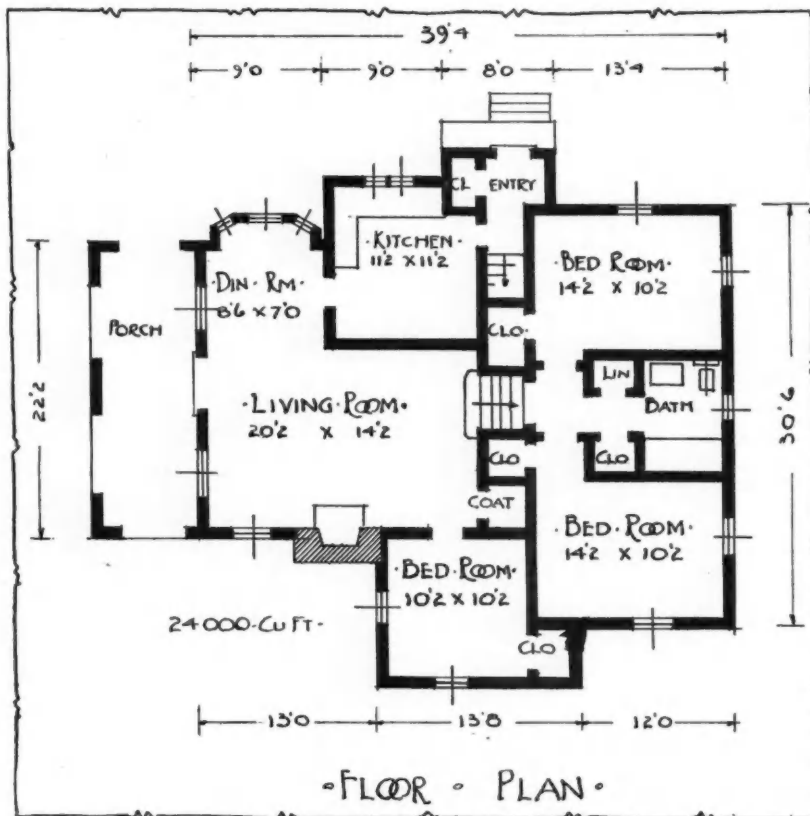
Bedrooms upstairs are large and well arranged, and the bathroom is also of spacious size, featuring the modern type of square bathtub. A large dressing room has been provided off the master bedroom, which could, if the owners desired, be transformed into an extra bathroom.

The house is of Triple Insulated construction featuring Johns-Manville asbestos shingles, mineral wool insulation and other J-M products.



Photo by Hiland Dale Holt

6-Room Colonial—Bedrooms $\frac{1}{2}$ Flight Up



Built by Garden Acres Company, Hartford, Conn.; Clifton C. West, Architect

TruCost figures on page 143.

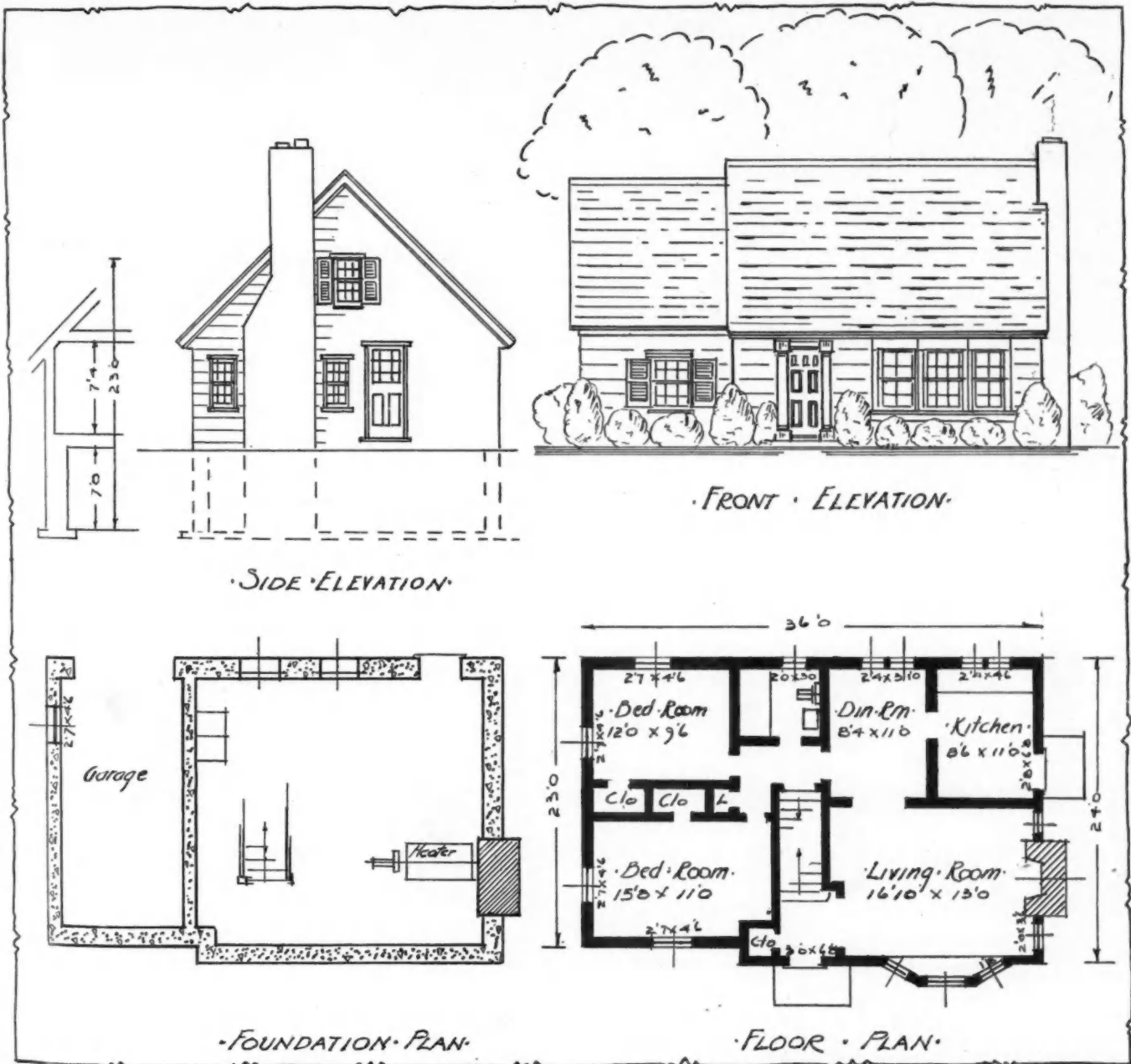
THIS is an unusually livable New England Colonial in the Rocky Hill section of Hartford. The outstanding feature is the fashion in which 2 of the 3 bedrooms are raised $\frac{1}{2}$ flight, providing space for 2-car garage below. House is of frame construction with large panels of Homasote building board for exterior sheathing. The open porch and dining bay are attractive features.

MATERIALS and equipment featured include oak floors, recessed radiators, red cedar shingle roof, Kohler plumbing fixtures, General Electric oil furnace with hot water system, narrow clapboard exterior, linoleum in kitchen, tile in bath.

24' x 36' Plan

5 Rooms

R. H. BELL was the builder and Morse Guilford the architect on this house in the Fernbel section of West Hartford, Conn. It has a well-thought-out plan with good cross ventilation in all rooms. Equipment includes a Fitzgibbons boiler with Capitol oil burner, Tile-Tex walls and floors in bath and Tile-Tex floor in kitchen, knotty pine on fireplace wall, Du Pont paint, picture window in dining room, red cedar shingles on walls and roof.





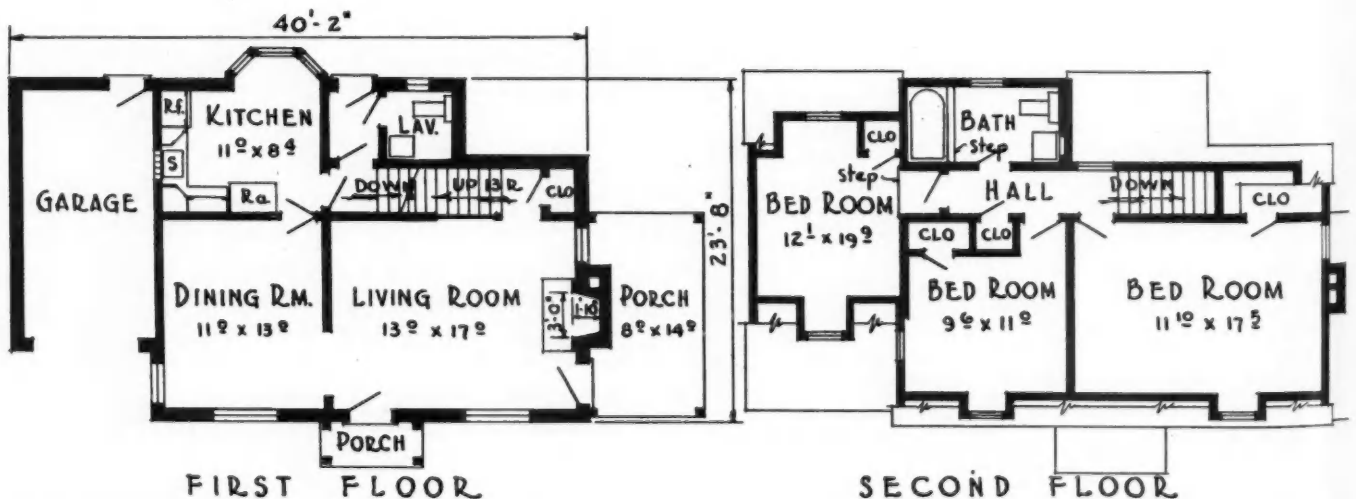
CALLAN BROTHERS stone and shingle six-room Colonial of type that sold rapidly at Greck Neck, N.Y. Maxmillian R. Johnke, architect.

Sold Out in Seven Weeks

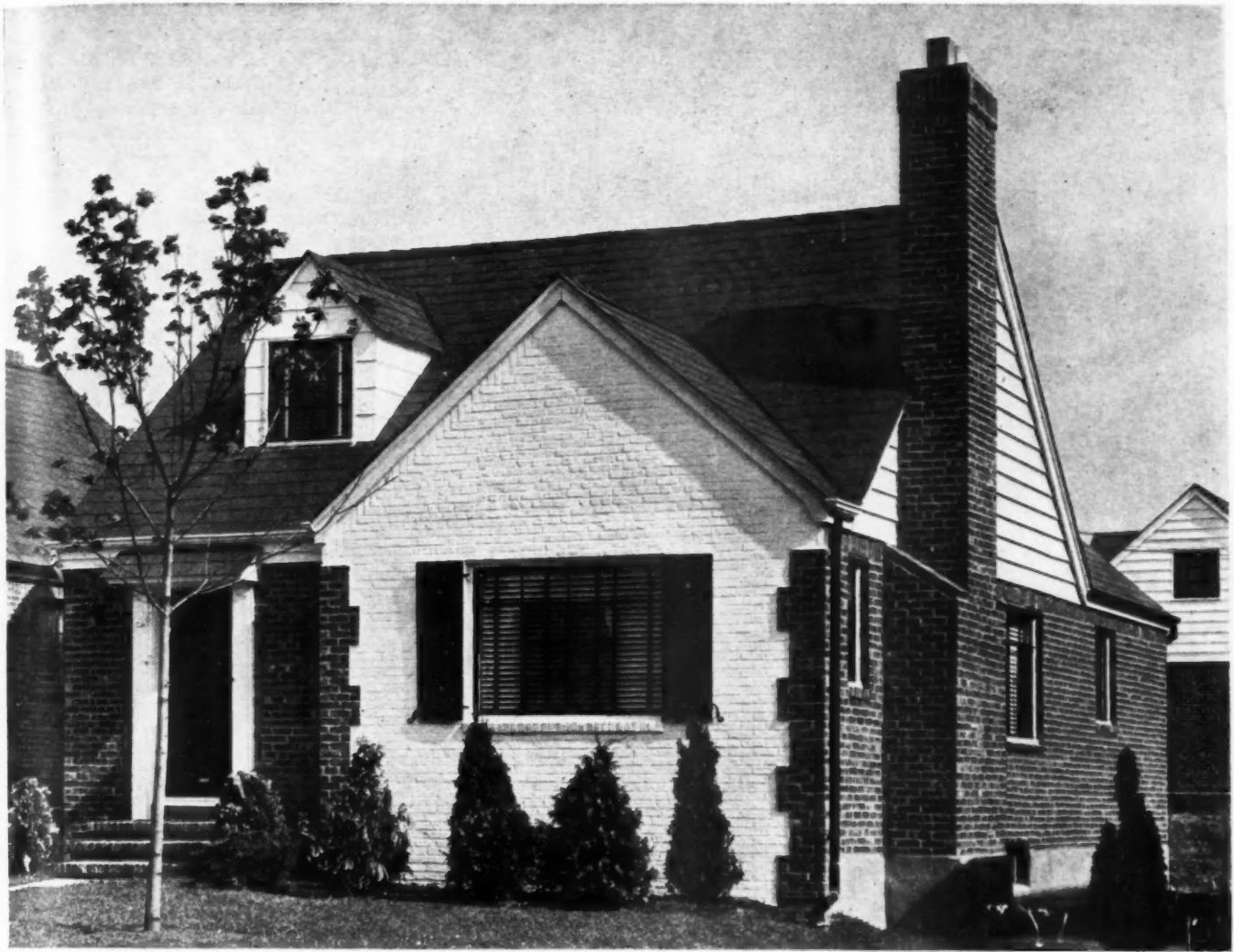
THIS Period Colonial has "what it takes" in sales appeal. It is one of ten that Callan Brothers sold in less than seven weeks in a small but attractive project near Great Neck, each on a quarter-acre plot. Callan Brothers had completed their large Wyngate project and had not yet started on their present Munsey Park Estates community of several hundred homes, and they filled in with this little ten-home community. The

houses were designed by Maxmillian R. Johnke of Hempstead, N. Y. The latest trend in houses of this price class is toward the quarter to half-acre plots with wooded surroundings. The floor plan below takes good advantage of the space and presents a broad expanse to the street.

Materials and equipment include a G-E oil burning furnace with Monel Metal hot water tank, Fenestra casements, Celotex insulation, Chase copper pipe and fittings, Thibaut wallpapers. Exterior and interior trim of No. 1 white pine, oak floors laid over 24-lb. felt, Armstrong linoleum. Although the plan gives an appearance of considerable size, the actual floor area is compact and economical. The 17' x 13' living room is spacious.



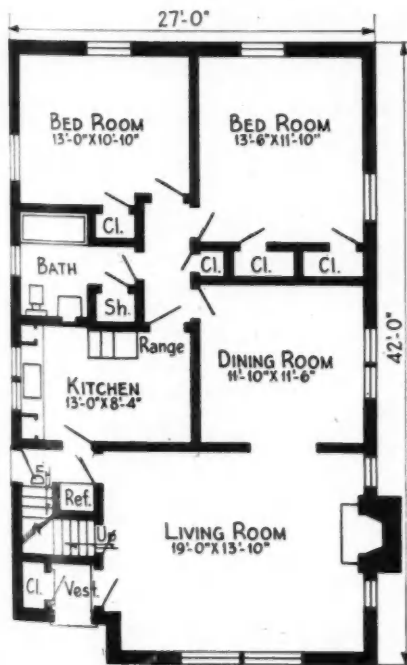
QUARTER-ACRE PLOTS make possible this broad plan in keeping with newest development trend. Kitchen has attractive dining bay.



GROSS-MORTON'S economical 27 foot bungalow nicely fits a 40 foot lot, is ideal for family of three or four; nine exterior variations.

Bungalow Prize Winner

Gross-Morton house gets 1940 plaque for "excellence in design and construction." Arthur E. Allen, architect



FLOOR PLAN

CLEVER VESTIBULE, stair and side entrance arrangement. Space upstairs for two additional bedrooms and bath.

LAST year some 10,000 houses were built in Queens County, Long Island, and at the end of the year the County's Chamber of Commerce, taking note of the work done by the County's builders, awarded a bronze plaque to the small bungalow above. This is one of the most popular of the houses in the Gross-Morton development at Union Turnpike, North of Jamaica, comprising some 850 homes. It was designed by Architect Arthur E. Allen of 9004 161st St., Jamaica, L. I.

The plan, according to the judges, is ideal for a small family and by finishing off the second floor with two additional bedrooms and a bath, can accommodate a much larger family. The rooms are of reasonable size, with the living room 13' 10" x 19'.

An important feature of the plan is the fashion in which the front vestibule, clothes closet, stairs and side entrance are grouped in one corner. Kitchen and bath plumbing fixtures are economically back to back.

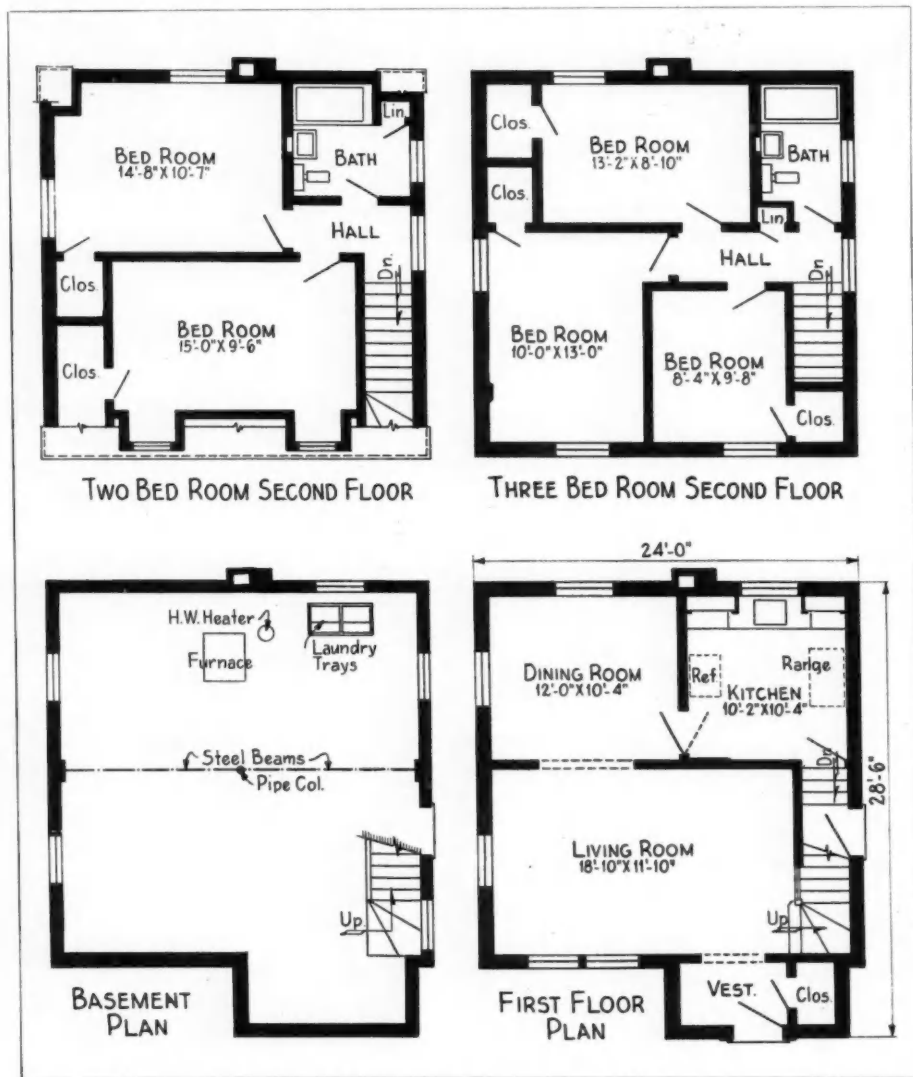
Gross-Morton, who are advertised as "America's largest home builders," feature the following equipment: Fenestra steel windows by Detroit Steel Products Co., Red King boilers by Thatcher Boiler Co., Delco oil burners by General Motors, Kohler plumbing fixtures, Armstrong linoleum, Celotex Vapor-seal sheathing by Celotex Corp., Boro Wood Products Co. kitchen cabinets and counter tops, U. S. G. Rocklath plaster base, G. M. Ketcham Co. glass shower stalls.



LEFT: Two of Builder Harry M. Quinn's basic 24' x 28' 6" six-room houses, with detail variations, built on 35-foot Chicago lots. Below, alternate style with same first floor and two bedrooms above as shown in the floor plans below.



Chicago Builder Features Economy and Versatility



DURING the past year, Harry M. Quinn, Inc., a newcomer among Chicago building firms, stepped out and showed what can be done with a streamlined urban home program. Without fanfare, large advertising program or sales force, this firm sold and built to order upwards of 200 homes in a limited area of the city. Low overhead, volume construction and simplified design contributed to this success.

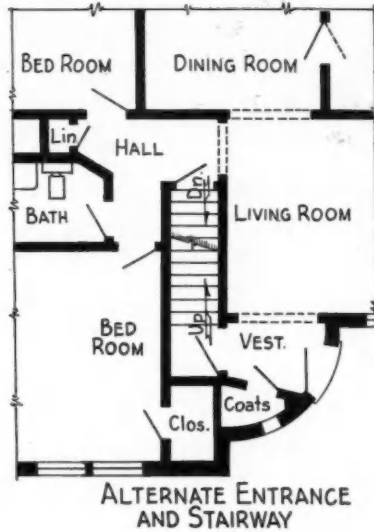
The houses shown on these two pages accounted for the bulk of this volume, and with the variations possible, were found to be readily adaptable to the needs of Quinn's prospects. The standard, compact, six-room, two-story style on this page is also offered as a five-room Dutch type, but the three-bedroom design frames and builds so economically that the smaller one was found to actually cost \$90 more to build.

The five-room bungalow type requiring more frontage and usually placed on corner lots is most versatile since it can be offered as a five-room one-story house and from one to three bedrooms can be added later upstairs. Also, a change in the entrance and stairs makes it possible to rent the second floor, or a door added between the vestibule and front bedroom allows use of this space for a professional office.

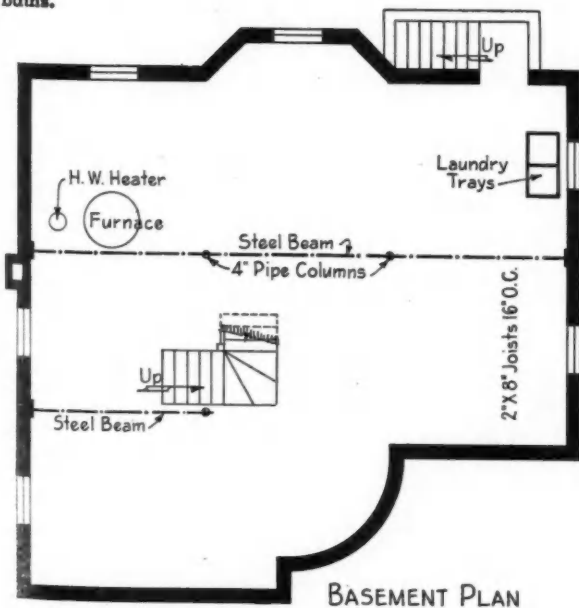
ANOTHER popular design by Harry M. Quinn, Inc., Chicago, appealing because of its adaptability ranging from five to eight room size, and alternate entrance for two families. Construction includes poured concrete foundation, 8-inch brick and cinder block walls, furred and finished with plaster on Metallated Rocklath, USG asphalt shingles, oak floors except tile floor and walls in bath, arched recess bathtub, and built-in kitchen cabinets and work tops.



THIS alternate arrangement of front entrance and second floor stairway allows separation of second floor space if archway to living room is replaced with doors.

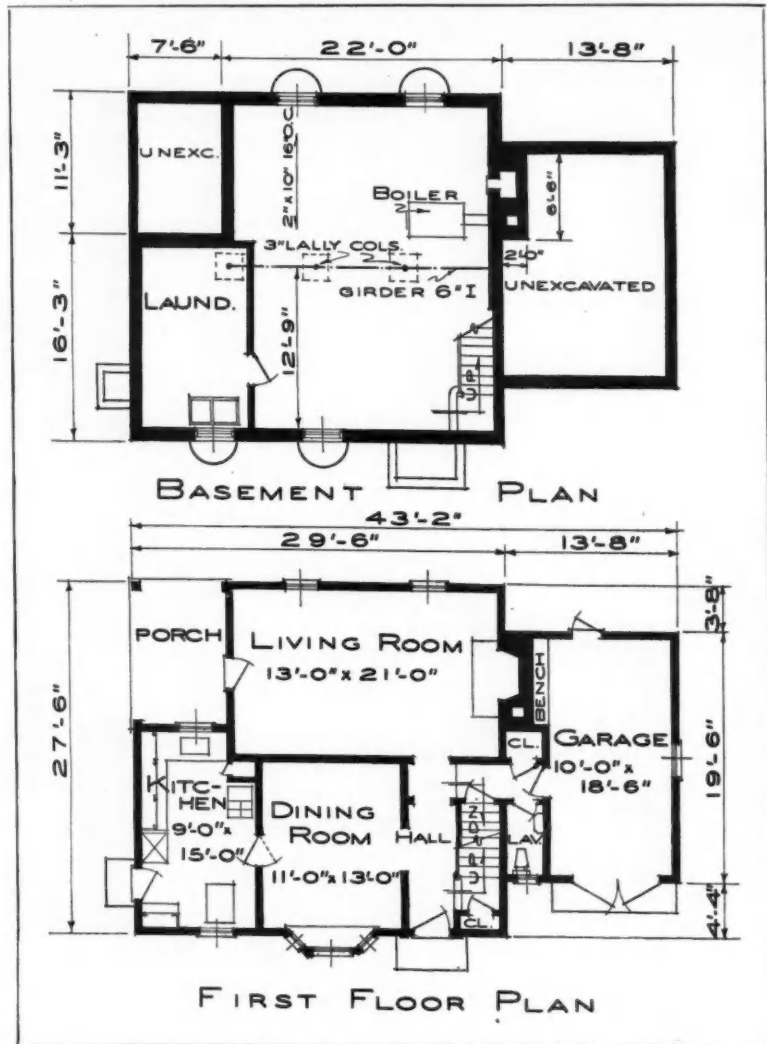


STANDARD plan of basement, first floor and second floor for the house shown above provides seven rooms and two baths.





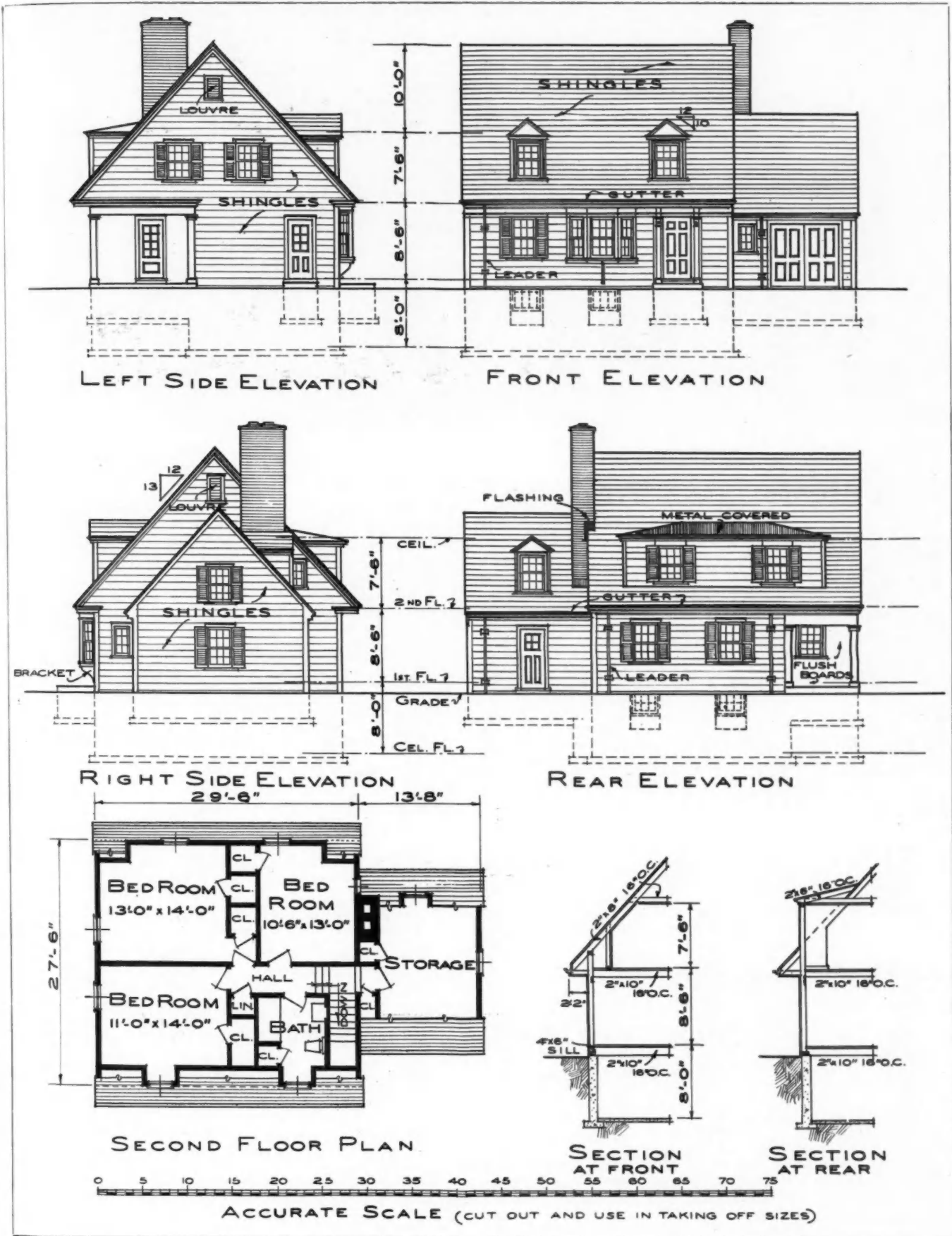
UNIVERSAL APPEAL is found in the design of this W. Hartford, Conn., home built by George Wall, Inc.



"7 Reasons Why Buyers Like It"

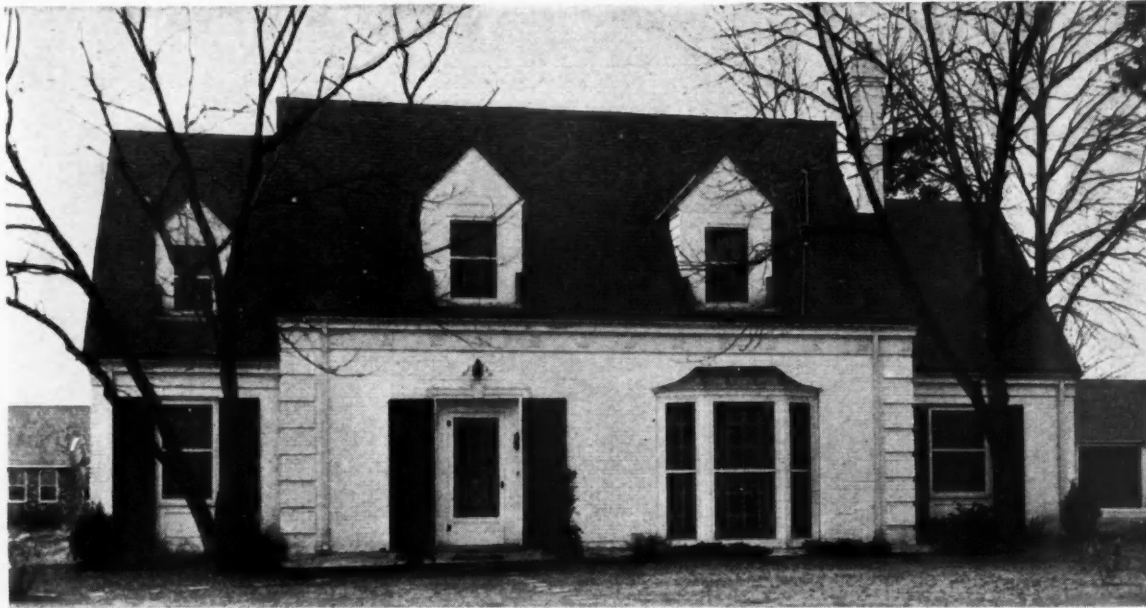
THERE are seven sound reasons why this house built by George Wall, Inc., of West Hartford, Conn., has buyer appeal. Also because it was built by a practical, successful builder with many years experience, it is well constructed and reasonably economical. The 7 super-selling features include:

1. It has a universal architectural appeal—a Colonial style that makes it fit its New England location, but is also appreciated in the west and northwest as well as the south.
 2. It has a spacious 13' x 21' living room placed at rear away from traffic and opening on a delightful porch.
 3. It has a large, well arranged kitchen with space for a dining table; also, 11' x 13' dining room.
 4. It has a fine center hall and stair arrangement providing good circulation and easy access to basement and garage.
 5. It has a downstairs lavatory well located in relation to the entrance, garage and living room, yet not too conspicuous.
 6. It has a 10' x 18' 6" garage with work bench and convenient inside entrance.
 7. It has well-proportioned rooms, ample closets, a fine large extra storage room over garage and little waste space.
- In fact this is a house and floor plan that, for a moderate price, provides just about everything the average family could want.



Complete detail drawings
of 7 super-feature house

GOOD detailing and an unusually successful floor plan are included in the above complete detailed drawings by Architect Raymond J. Percival of Hartford, Conn. Cubic contents are about 26,000. Dimensions of main proportion of house are 29'6" x 27'6".



Actually for Two Families

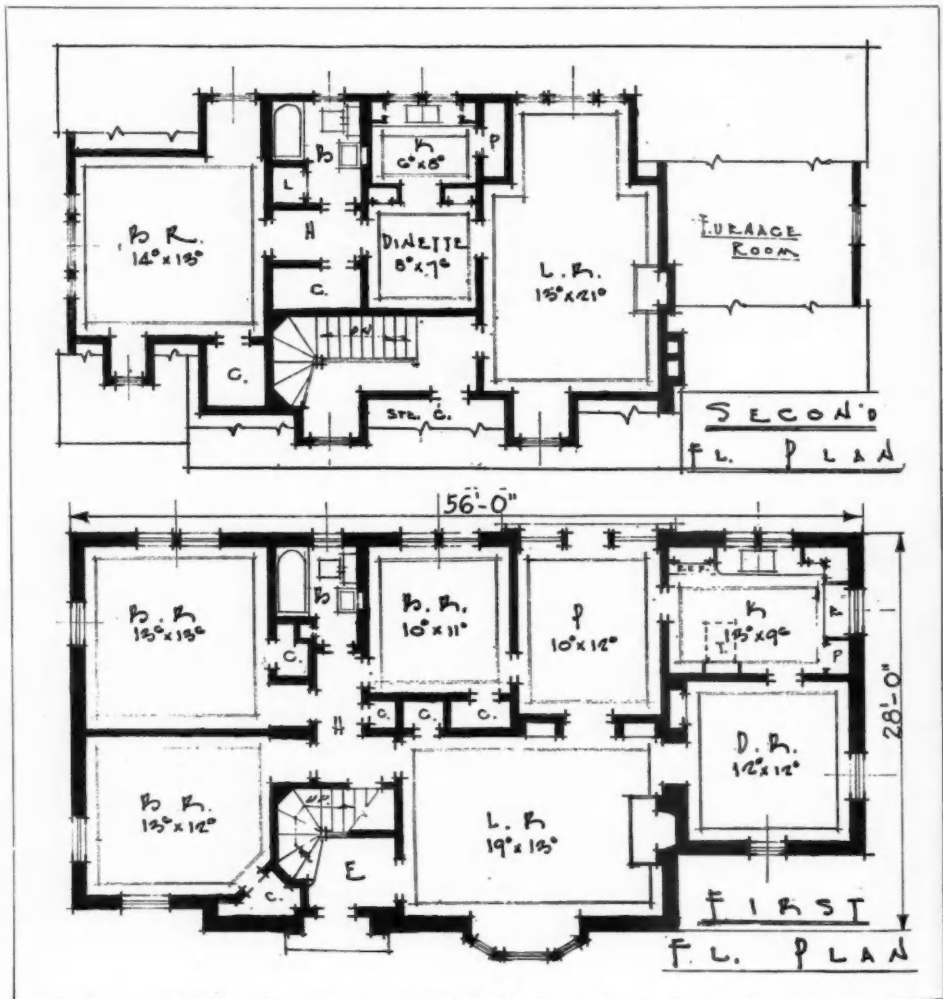
FAR sighted planning was involved in the design and construction of this residence in Montgomery, Ala. The architect was Richard J. Adams and the builder, J. G. Beale, both of that city.

The owner desired a house which would be big enough for his anticipated family needs in the future, yet so arranged that the surplus space could be rented out until such time as needed. Hence, the second floor was arranged as a separate apartment which now rents for \$37.50 per month, almost paying the owner's installments on the house. Cost of the house was \$7,500.

The owner not only looked forward to the time when he might need all the space for his increasing family, but even beyond that point when most of his children would be married and gone. At that time he figured he could again rent the upstairs apartment to good

effect. The house seems to "hug the ground," made feasible by the concrete floor slab construction.

Another feature of this house is the location of the gas-fired warm air heating plant in the attic. Warm air is discharged at baseboard level in the living room and dining room on the first floor, and at ceiling level in other rooms on this floor. The exterior is painted brick veneer on frame.



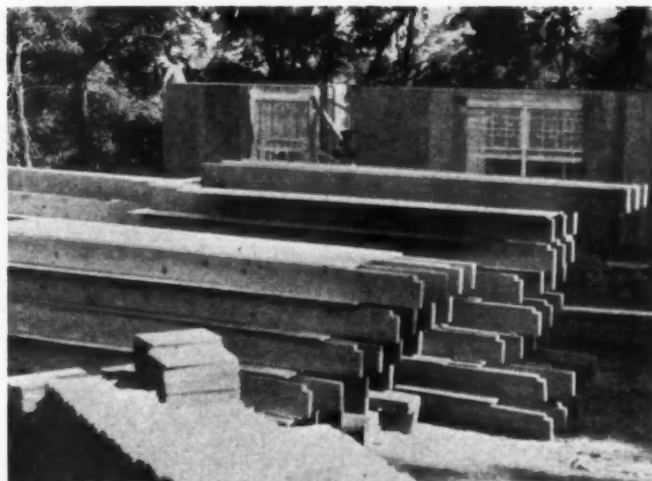
THE floor plans at the right reveal that the above one and a half story house in Montgomery, Ala., is really planned as a two-flat structure, although the exterior does not in the least reveal this fact; such a unit would not be objectionable in many single-family sections. Gas-fired winter conditioning, Briggs Beautyware, Bruce select oak floors, and asbestos shingles are among construction materials.

Building Cottage Apartments to Rent—Part II

Standardized Sections Built in Shop and Nailed Together on Job. Windows and Doors Installed in Shop

THE construction system used in building the River Glen cottage apartments at Hastings, N.Y., consists of standard wood frame and plywood sections built in a shop at Kearny, N.J., delivered by truck to the site of the project and nailed in place by regular union carpenters. The investment and design features of these apartments were described in the February *American Builder*.

Contractor Arthur Olson, who built the River Glen apartments, uses the American Houses, Inc., system of construction. Operating in thoroughly unionized Westchester County, New York, he made an agreement with the local unions to handle the shop-built wall and floor



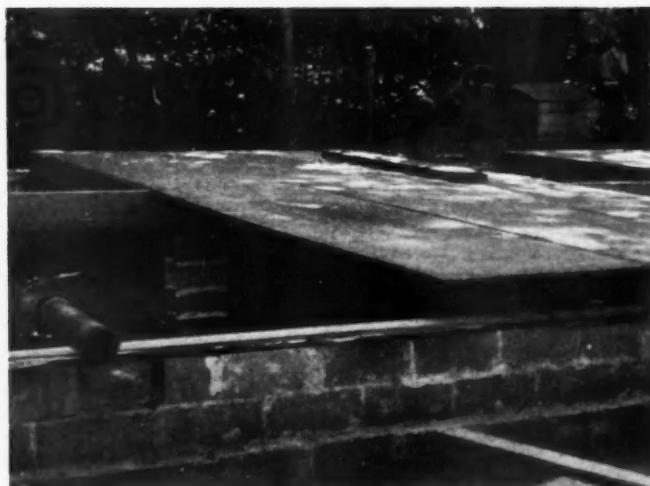
3—PILE of floor sections just unloaded. Typical section has $\frac{3}{8}$ " plywood nailed to three 2 x 8's.

sections, and the job went ahead without delays from this quarter. Olson is a man of considerable experience in construction work, having been for 16 years associated with the Fred F. French Company in New York.

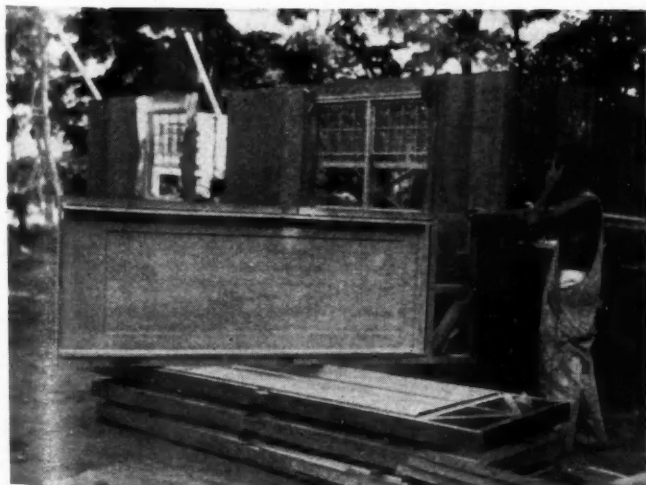
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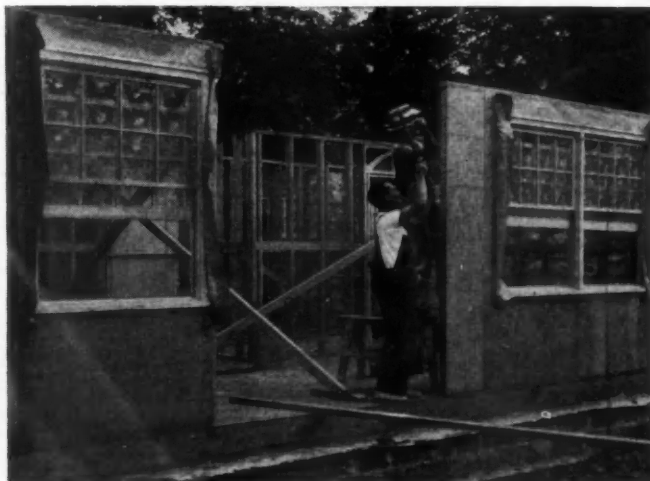
1—HUGE trailer truck delivers one complete story of apartment, including all floor and wall sections.



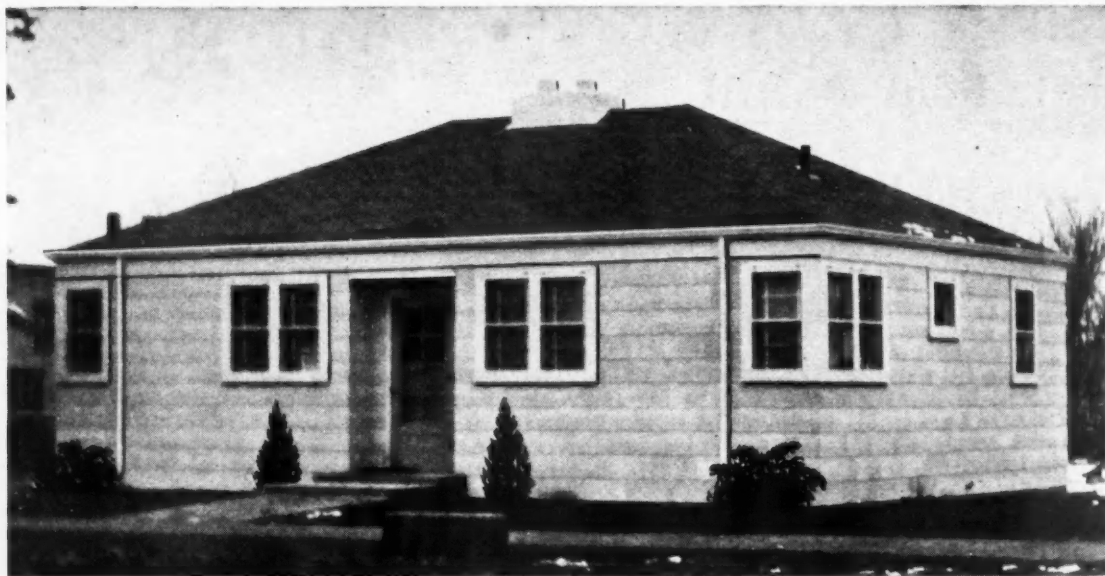
4—FLOOR SECTIONS are set quickly in place on prepared foundation. Note copper termite shields.



2—DOOR SECTION is delivered to job with door hung and lock fitted. Knob and key are enclosed in package attached.



5—WALL SECTIONS containing shop-installed windows completely flashed and weatherstripped are quickly spiked into place.



RECENTLY completed doctor's office at Spearfish, S.D.; K. Pyle, designer; Martin Thompson, builder.

Soundproofing a Doctor's Office

THE trend toward detached professional office buildings in residential or semi-residential sections so popular a number of years ago has continued. The advantages of better light, air, nearness of practice and general convenience of arrangement are some of the reasons why one sees so many of this type of structure throughout the country.

The attractive one pictured above was recently completed in Spearfish, S.D.; it was designed by K. Pyle, and built by Martin Thompson.

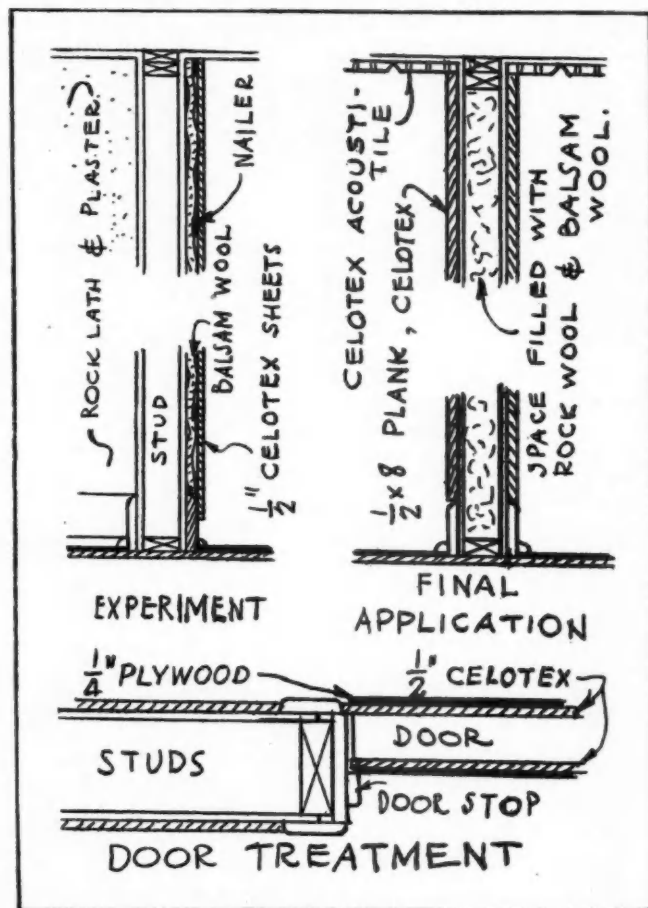
The office is of frame construction, having a poured concrete foundation and basement, with office space arranged on one floor; there are facilities for both a doctor and a dentist. The structure is framed and finished with Ponderosa pine, and has J-M square-cut asbestos shingles on exterior, blue-blend combination 3-in-1 strip shingles on the roof, and rocklath and plaster on inside walls. Balsam-Wool insulation is used in side walls, and 3½-inch rock wool batts between ceiling joists. Huttig hollow-core flush doors, Huttig "Seal-tight" windows equipped with Unique sash balances, and a Sunbeam gas-fired air conditioner are other items.

The arrangement of the rooms, as on opposite page, is typical of this kind of building. In this connection, an interesting construction problem arose, one that has occurred quite frequently in such structures. It has been found that there is very apt to be soundproofing difficulty in regard to the partitions surrounding the reception room where consultation rooms are adjacent.

Regarding this problem, Mr. Pyle states: "The most troublesome feature of this building was the annoying transmission of noise. In fact, the walls appeared to act as loud speakers, actually amplifying sounds rather than dampening them. The explanation for this may have been the almost cubic shape of practically all the rooms; the fact that the rocklath plaster base was nailed directly to the studs instead of being fastened with resilient clips; a fine job of plastering which made the partition walls almost perfect "sound boards"; linoleum on the floors; tubular steel furniture and no drapes at the windows, nor anything to absorb any of the sound (these items being purposely omitted for sanitary reasons). Also, the doors

all being hollow-core, flush surface, seemed to accentuate all sounds, no matter where they originated.

"Never having been confronted with such a problem, it became necessary to make a complete study of the entire



METHODS of soundproofing the doctor's office illustrated at top of the page are shown above; the experiment was to determine source of trouble before final application and door treatment were applied.

situation. The doctor's office appeared to be the principal offender, and of course was the one place in the building where conversations should be kept inside the four walls. Aside from your very fine letter, we had letters from two other sound experts. After putting all our information together, we evolved the following scheme:

"All authorities agreed that it would be necessary to subdue the sound at its source, namely, the doctor's office. All agreed that the ceiling should be covered with acoustic tile. The most satisfactory scheme was offered by the *American Builder*, Dec. 1939, Fig. 4, page 67. First we experimented in the doctor's office by covering his side of the partition with one-inch Balsam-Wool and Celotex sheets. This dampened the noise appreciably.

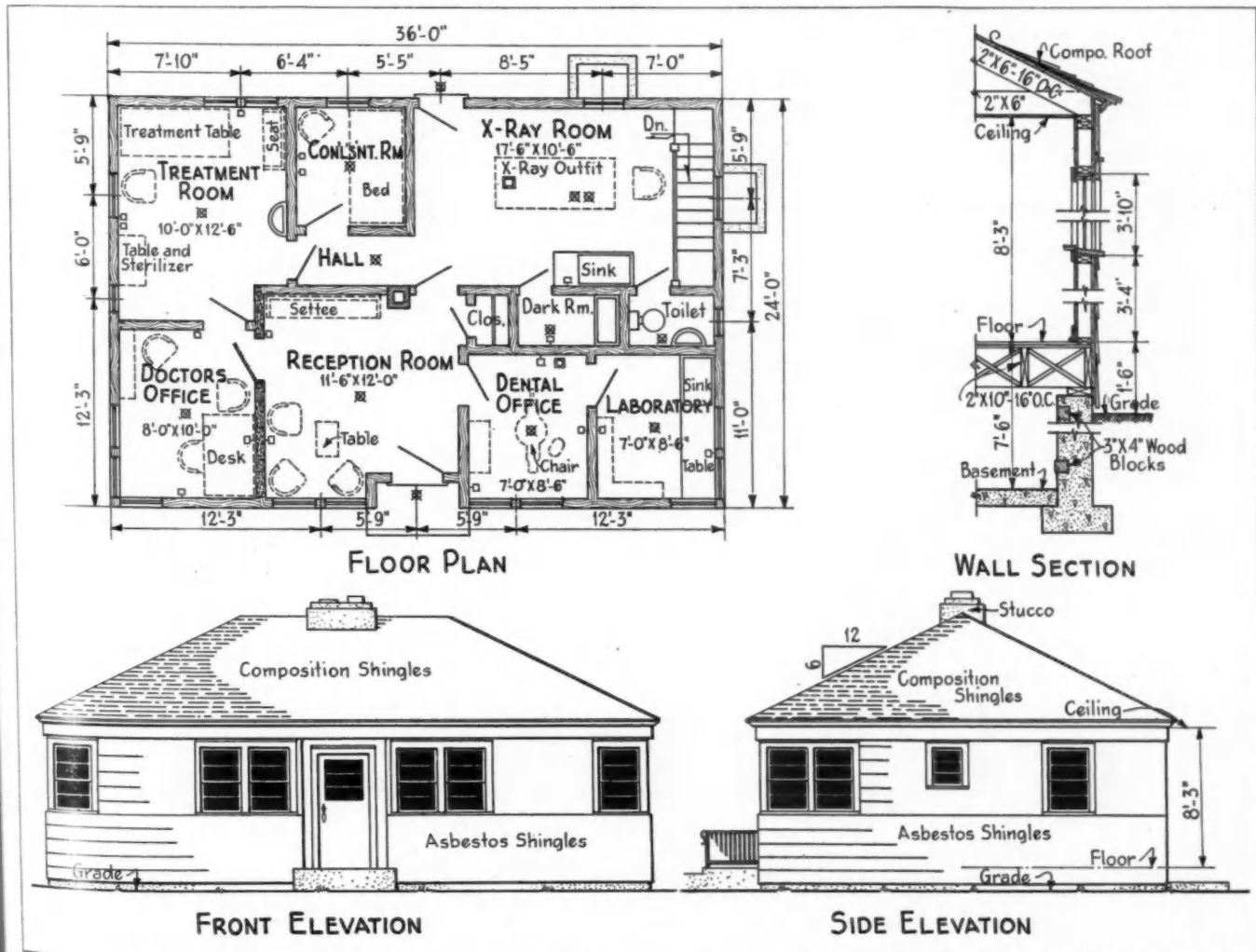
"Next, we covered the three remaining walls with Celotex sheets. This work was all temporary, nothing being nailed securely into place. Then the same thing was done to the reception room. This helped matters so much that we were able to plan a method of procedure. It was agreed to cover the ceilings of both the doctor's office and the reception room with C1 Celotex acousti-tile RI, 1/2" thick and 12" x 12", sticking it to the plaster with heavy 'Clinco' cement. All four side walls of the reception room were covered with 1/2" x 8" Celotex No. 53 natural sanded plank, stuck to the plaster with heavy 'Clinco' cement.

"This practically isolated the reception room and greatly helped the doctor's office. Then, instead of hanging the

Balsam-Wool on the partition wall, as shown in the sketch as experiment, we decided to take a chance and fill the space between the studs with a mixture of rock wool and torn-up Balsam-Wool. The carpenter cut small slots (about 4" x 12") through the plaster and the rocklath, close to the ceiling line, and filled each space between the studs with the mixture. Then all four walls of the doctor's office were treated like the walls in the reception room. The flush face of the hollow-core door was covered with a sheet of 1/2" Celotex, the edges of which were allowed to project about 1/4" all around. This projecting edge of the Celotex sheet closed the space right up to the existing doorstop, making the closure complete. The face of the superimposed Celotex sheet was covered with a sheet of 1/4" plywood. The above procedure has effectively soundproofed these two rooms, and has subdued noises throughout the entire building.

"We all admit that the method known as 'staggered stud construction,' as shown in Fig. 2, page 67, Dec. 1939 issue of *American Builder*, would have been the only proper way to build the partitions in this little office; but since we had to do the best we could without sacrificing any more space than was absolutely necessary, and without inconveniencing the doctor too much, the method as just described has accomplished what we set out to do in an entirely satisfactory manner, namely, isolating the undesirable sound."

FLOOR PLAN, wall section, and front and side elevations of doctor's office building in Spearfish, S.D., are shown below. This neat little structure was first noted to have a soundproofing problem in the wall and door (shown dotted) between the doctor's office and reception room. The difficulty was remedied as described in the accompanying text and illustrated in the sketch opposite.



Reflecting Curbs Make Safer Highways

By William Van Breeman

Engineer, New Jersey State Highway Dept.

NEW JERSEY State Highway engineers have developed a new curbing for paved highways that cuts down accidents by greatly improving visibility by day and on both dry and wet nights. It is a white reflecting curb, and is based on the simple fact that the eye sees only light rays, either reflected or direct from a source—that the night driver sees a curb only when it reflects his headlight rays back to his eyes.

Along many miles of its important highways, New Jersey is taking the danger out of night driving with white reflecting curb, scientifically designed to catch headlight rays and reflect them back to the driver. Under headlights only—with no other illumination—this reflecting curb becomes a ribbon of light which serves as a guide far ahead of the speeding cars. Most remarkable feature of reflecting curb is that on rainy nights—when road visibility usually dims to the vanishing point—this new curb becomes even brighter, can be seen even farther ahead.

While all surfaces reflect more or less light, there is considerable variation in the manner in which they reflect it. The direction that the reflected light rays will take depends upon the formation of the surface. When a beam of light strikes a flat, polished surface, such as a mirror, practically all of it is reflected in a definite direction. On the other hand, when a beam of light strikes a fairly smooth, dry concrete surface, the reflected light is scattered in many directions. The manner in which the reflected light behaves when the concrete surface is wet is such that most of the light from an automobile's head-

lamps is reflected from it in a definite forward direction. Practically none of the light is reflected back toward the source and eyes of the driver; and so in this wet condition the surface has acquired, to a great extent, the critical properties of a true mirror. Almost all the reflected light leaves the surface in a definite forward direction. Practically none of the reflected light reaches the driver's eyes and, as a result, the wet curb surface appears almost totally black to him. When wet, ordinary finish concrete surfaces waste almost all the light that comes from the headlamps, and entirely destroy the value of the white concrete materials. These surfaces must be corrected if the best advantage is to be obtained from the light and the materials.

The upper diagram in Figure B shows in an exaggerated manner how a surface may be constructed so as to eliminate this great waste of reflected light. Notice that it is scored vertically so as to present a series of narrow right angle faces to the light beams from an approaching car. A surface of this type directs practically all of the reflected light back toward the driver's eyes. Wet or dry, a concrete surface constructed in this manner is very much more visible than a smooth one. This type of surface consists of a series of reflecting faces lying approximately perpendicular to the headlamp rays. These reflecting faces direct the greater part of the reflected light back toward the vehicle. When light strikes them, it is diffused to some extent; that is, it is reflected back over a considerable area. The angular change that takes place

(Continued to page 140)

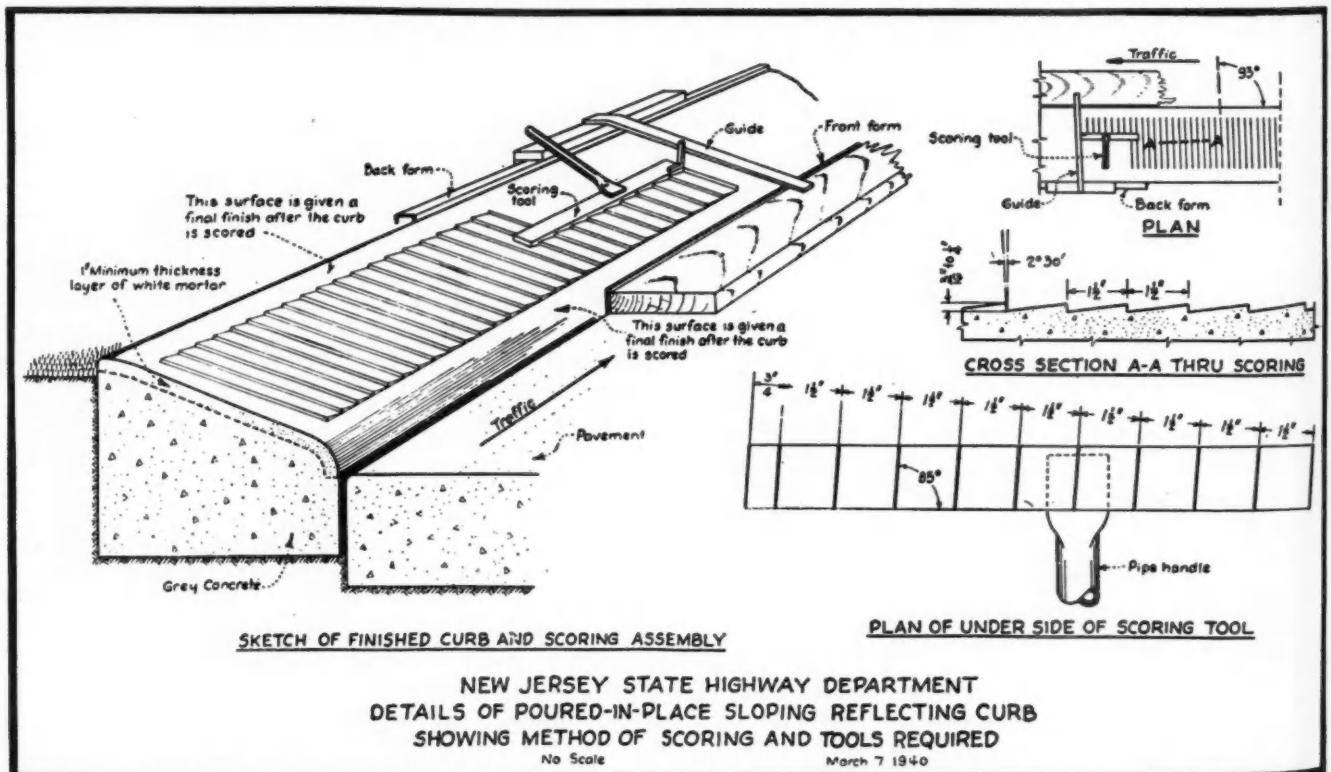


Fig. A. Construction details of white reflecting curb, with simple scoring tool for finishing the surface.

SHOPCRAFTER'S Corner

Things To Build for Profit or Pleasure

Winter Building for the Spring Garden

FOR a large, useful project to fill in the long winter evenings, this garden lath house or "umbrarium" can be built in the average shop in sections and assembled next spring outside. It is designed with the definite purpose of relieving the severity of the familiar, rectangular structure knocked together in a hurry for utility rather than appearance. The more pleasing lines are achieved solely by the curved roof; the rest of the construction is conventional and no problems are involved beyond the ability to handle tools. A certain amount of work on a bandsaw is required for the gable ends and spacers, and this can be done at the mill if none is owned.

Sink stones or concrete blocks for the sills to rest upon at the corners and build up the framing, as shown. Spacers and curved gable ends hold the three roof-beams in relative positions and when installed the slats or battens can be put on. For the wings, which require a smaller radius than the center section, it may be necessary to soak the battens forty-eight hours or so before bending over the top. This can be done in a fish pond or in a ten-foot length of eaves-trough. The battens for the wings, by the way, should be nine and one-half feet long, and if easily bent spruce is not available use Oregon pine of the size given. No soaking should be necessary for the wide curve of the center section; for this the battens are fifteen feet, nine inches long, or two pieces half that length joined on the top roof beam.

Space the battens their own width apart and when the roof is entirely covered start at the sides. Note that the latter are laid vertically and should never be horizontal. Also, as the plan indicates, the long dimension of the structure should lie east and west. This is so that the plants will receive equal amounts of light and shadow as the sun passes from east to west. Of course it would be simpler to install the roof battens east-to-west but the light-and-shade alternation would not be as effective as curved over the top. The roof slats should always be north-and-south.

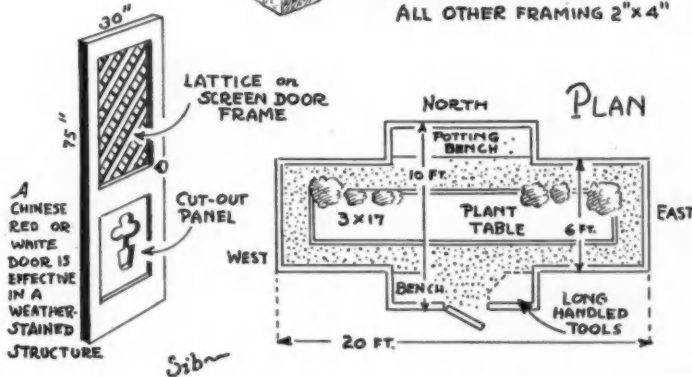
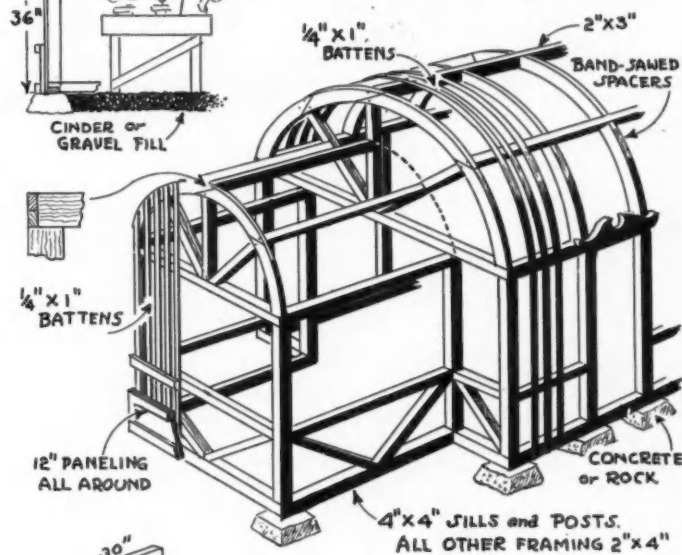
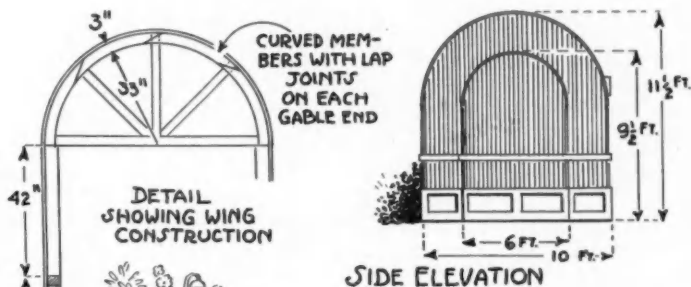
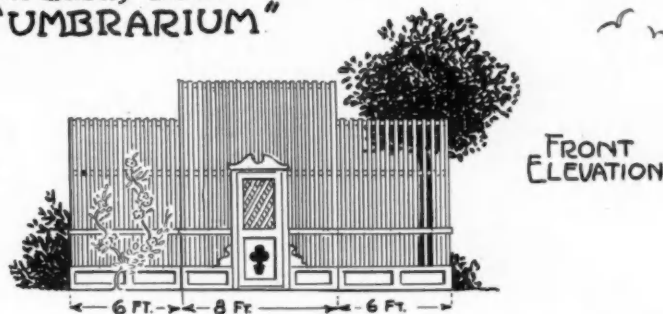
For the door, select an inexpensive screen door, removing the screen and substituting lattice. If there is a large enough panel, a cut-out similar to that illustrated will enhance its appearance. The door may be hung on spring hinges.

The interior can be arranged in several ways; a suggestion is a long, single table through the center, giving access to it from all sides. Shelves for potted plants can be located well up on the walls where they will not interfere with sunlight for plants below. A potting bench can be installed in one bay and a place for tools in the other near the door. A water tap above the bench is almost indispensable, and the floor should be filled in with cinders or gravel to absorb moisture.

A weathered stain, natural or artificial, is about the most attractive among the greenery surrounding the house. If the door is done in a Chinese red lacquer, or a white the contrast will be pleasing. This umbrarium, by the way, is so designed that it can be added to at the ends without damaging the symmetry and with no alteration other than removing the lath at this point.

PLAN, elevations, and construction details for building this garden house indicate a fairly simple, though impressive, project.

An Easily-Built "UMBRARIUM"



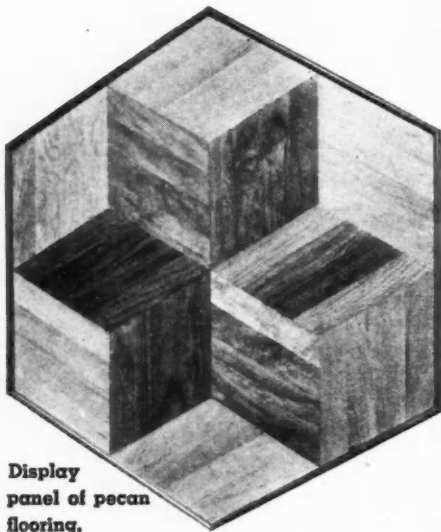
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WHAT'S NEW IN BUILDING MATERIALS

AB391 Pecan flooring introduced and popularized by the Perfection Oak Flooring Company, Inc., Shreveport, La., is paying its way in private homes and public buildings. Superior in hardness and toughness to stand wear



Display panel of pecan flooring.

and give lasting satisfaction, the beauty of grain and finish of this truly hardwood floor is giving Louisiana pecan a preferred rating. "Pecan Flooring for Permanence, Economy and Beauty" is an 8 page brochure in natural colors giving grading rules, methods of finish and numerous examples of use.

AB392 "The ABC's of Plastering" is an extremely helpful handbook and guide to real plastering skills prepared by the Gypsum Association, 211 W. Wacker Drive, Chicago. It puts the best recommendations of the gypsum industry into clear, easily understood terms for the benefit of builders and plasterers.

AB393 An 8 page broadside on "Tiny-Bilt" miniature lumber and millwork has been issued by the Architectural Decorating Co., 1600 So. Jefferson St., Chicago. These are furnished to a scale 1/2" equals 1' and cover more than 50 different items, including entrances, doors, shutters, windows, mouldings, sidings, roofings, etc. Doll houses are also made out of this attractive miniature mill-work.

AB394 "We Are Going to Build Our New Home of Wood" is a 24 page illustrated booklet prepared by the National Lumber Manufacturers Association and distributed by a number of the regional lumber associations, among them the West Coast Lumbermen's Association, Stuart Bldg., Seattle, Wash. A number of attractive home designs are illustrated and the advantages of using lumber for home building and remodeling are clearly set forth.

AB395 Check-Mate, a sealer and primer for wood to prevent grain raising and wood checking, is described in an interesting data sheet from Wilbur & Williams Co., Park Square Bldg., Boston, Mass. Check-Mate is a clear synthetic resin to control the finishing of all types of wood.

AB396 Case studies on Nu-Wood Sta-Lite are offered by Wood Conversion Co., St. Paul, each consisting of a detailed field survey of performance on a definite building of a definite type, mostly commercial. For instance, case study No. 1 reports on the performance of Nu-Wood Sta-Lite on the walls and ceiling of a sales room.

AB397 "Mule-Hide Cold Process Built-Up Roofing" is a 20 page handbook on roofing materials, specifications and methods of application for all types of roofs and roof conditions. Detail drawings show clearly best recommended practice for flashing and weathering. Cost estimating is also included.—Lehon Co., Chicago.

AB398 A new "Saferized" flame-proof process for treating the Redwood bark fibres from which Palco Wool insulation is made has been announced by The Pacific Lumber Co., San Francisco. The new process, augments the inherent fire-resistant qualities



Blow-torch tests of Palco insulation.

of the bark of the redwoods. It is expected to meet the most exacting requirements for flame-proof materials. The installation of Palco Wool as a fill insulation has been greatly facilitated by the developments in mechanical application.

AB399 Celotex interior finishes in homes are illustrated in a beautiful 8 page brochure entitled, "Beauty, Comfort and Quiet." This book contains four color reproductions of rooms which were designed for the Celotex Co., Chicago, by the editors of Better Homes & Gardens, American Home, House Beautiful and House & Gardens.

AB400 In NuTone chimes catalog you will see Notre Dame—a handsome 3-tube door chime with noteworthy features. Remarkable resonance, beauty of design in its plastic cover, new Repeat-a-Tone, and the fact that it is the lowest priced chime in the United States with a night light for added beauty and illumination. Write NuTone, Cincinnati, for catalog 4023.

AB401 "What to Expect From White Lead Paint" is an impressive 24 page and covers handbook from Lead Industries Assn., 420 Lexington Ave., New York City. It tells all about white lead as a quality paint material both for white paint and in colors. Specifications are given, together with a "Simplified White Lead Painting Guide."

AB402 The Eagle-Picher Lead Co., Cincinnati, O., offers a tinting and mixing guide for the painter and decorator using Eagle White Lead, entitled, "Key to Color Harmony." It is a handy heavy-paper folded "color chip" display that goes into a durable pocket size case or envelope container. Formulas presented cover both two-coat work and three-coat work.

AB403 Wood finishes and paint specialties, offered by Breinig Bros., Inc., Hoboken, N. J., are presented compactly in a 4 page data sheet. Collier's "The House of Ideas," recently exhibited at Rockefeller Center, New York City, is illustrated.

AB404 "Carey Elastite Asphalt Tile" is the subject of a new 12 page brochure from The Philip Carey Co., Lockland, Cincinnati, O., it tells all about Carey Elastite asphalt tile and gives specifications and installing directions for use over wood and concrete.

Readers Service Department Continued to Page 86

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 90

If You Are in the Market for Garage Doors GET THIS!

Ro-Way OVERHEAD TYPE DOORS

Give You 5

EXTRA VALUES AT NO EXTRA COST

- 1 "Crow's Foot" Outer Bearing Support**
Rigidly holds the chain sheave wheel in permanent alignment. No twist . . . no sag to cause friction.
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A powerful Floating Torsion Spring (used on some models), gives perfect balanced lifting power, and ends side-drift and binding.
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Used on Ro-Way Doors having Twin Torsion Spring Power. Permits instant easy adjustment of spring tension.
- 4 "Tailor Made" Spring**
Each spring is individually made for the Ro-Way Door on which it is used. Each is power-metered to the weight of the door.
- 5 Parkerized and Painted Hardware**
Ro-Way Hardware and Tracks are given this well known protection against rust and corrosion.

Each of these Five Features represents a plus value which shows up in smoother, more trouble-free operation, and in added years of service. Yet Ro-Way Overhead Type Doors cost you no more.



Residential Three Car Garage equipped with Ro-Way Overhead Type Doors.



Modernistic Service Station. Note the slender vertical lines with horizontal lines emphasized to conform to architect's requirements.



Bus Station, Terre Haute, Indiana, using 12 Ro-Way Doors. Miller & Yeager, Terre Haute, Ind., Architects.

More and more builders and contractors are choosing these Doors that are modernized and improved to keep pace with the finer engineering of today's cars . . . Doors that by their construction, recognize the constant use such equipment gets in residences, commercial and industrial buildings.

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WHAT'S NEW IN BUILDING MATERIALS

AB405 Kolor-Fast Nu-Wood, recently announced by the Wood Conversion Co., St. Paul, as a new fade-proof wall and ceiling treatment, has succeeded in retaining its high acoustical value by a new, exclusive coating process. Individual surface fibres are coated with a special light-fast, pigmented coating



Color fast Nu-Wood for living room walls.

which leaves surface voids unfilled. This assures a sufficiently porous surface to achieve a high degree of sound absorption. Application with invisible nailing is made possible by the new tongue and groove joint and the new clip application system.

AB406 All Douglas Fir Plywood data in compact form has been prepared by the Association, Tacoma, Wash., for the 1941 edition of Sweet's Catalog. Reprints are now available for distribution separately—16 pages fully illustrated, two color covers.

AB407 The Tile-Tex Co., Chicago Heights, Ill., offers three new color brochures illustrating the uses of Tile-Tex. One has to do with decorative walls, another with floors and the third presents "Flexachrome," a new plastic resilient floor tile. These brochures are of 12, 8 and 4 pages, respectively. They carry a wealth of practical and decorative suggestions.

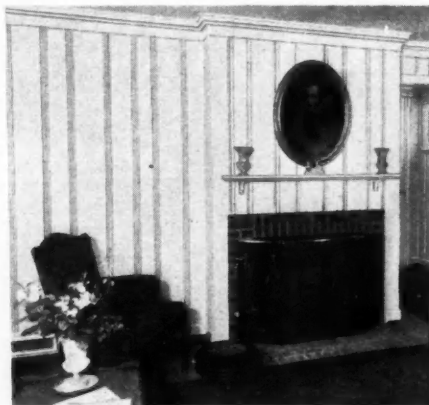
AB408 Barclay tileboard and panelboard, a modern plastic surfacing material in sheet form for finishing walls, ceilings and many types of flat surfaces, is presented by the Barclay Mfg. Co., Inc., 385 Gerard Ave., Bronx, New York City, in a 12 page brochure nicely illustrated in black and white and in colors. Application details and numerous installation photographs are included.

AB409 AllMetal weatherstrip and its uses are presented in a new 10 page portfolio from the AllMetal Weatherstrip Co., Chicago. A clever system of diagrams makes clear the exact model and type of weatherstrip and how it is installed for each of 24 windows and doors.

AB410 The new Caldwell sash balances are presented in a 6 page folder from the Caldwell Mfg. Co., Rochester, N. Y. The three types, 150, 154 and 142, are illustrated and fully detailed.

AB411 Kinnear rolling doors are presented in a 40 page handbook from the Kinnear Mfg. Co., Columbus, O. These steel rolling doors are specified for many commercial and industrial buildings. Kinnear steel rolling fire shutters, rolling grilles and Rol-Top garage doors of either steel or wood are included in this catalog.

AB412 The Appalachian Hardwood Manufacturers, Cincinnati, announce a standardized and packaged type of hardwood wall paneling which is low in cost and economical to erect. It is made in several hardwood species and consists of random width, tongued and grooved V jointed panel boards machine sanded to approximately $\frac{3}{4}$ " thickness. It is supplied in several standard lengths and interesting panel effects in both horizontal and vertical designs. All paneling stock is packaged in dust and moisture resisting cartons. The necessary mouldings and other material are supplied to erect attractive wood paneled installations.



Vertical paneling of Appalachian hardwood.

AB413 Deco shingles in four attractive colors for roofs and side walls made of durable steel are offered by the Cincinnati Sheet Metal & Roofing Co., Cincinnati, O. New circulars and data sheets are ready illustrating these Ajax brand shingles and showing how to apply them.

AB414 Wayne Wooster metal mouldings, edgings, nosings, etc., are presented in a new catalog No. 39 from Wooster Products, Inc., Wooster, O. These are offered as, "Modern Mouldings for Modern Wall Boards" and are being widely used by architects and builders in connection with the popular present day panel materials.

AB415 Veos porcelain enamel wall tile in ten colors is presented in a new 12 page brochure from the Davidson Enamel Co., Clyde, O. Veos steel tiles have been on the market for a number of years and are well known as a very successful and popular remodeling material for bathrooms, kitchens, basement rooms, restaurants, etc.

AB416 "Mesker standardized sectional steel buildings" are presented in new catalog B, a 12 page handbook on these popular "packaged" buildings. Structures illustrated that have been successfully built with these Mesker units range all the way from small tool sheds to large hangers and industrial buildings.

AB417 Armco Stainless Steel for Gutter, Conductor Pipe and Accessories is featured in a new 8 page data sheet under this title from the American Rolling Mill Co., Middletown, O. Stainless steel for roof drainage equipment is a comer in the quality permanent building field and this new piece of literature gives all necessary information.

AB418 "Protection Against Termites with Copper Shields" is a handbook, now in its second edition, compiled by the Copper & Brass Research Assn., New York City. Of 16 pages and covers, it presents many useful details of construction and shows how to cope with the spreading menace of termites.

AB419 "Fabrication of Allegheny Stainless Steels" is a new 28 page data book from Allegheny Ludlum Steel Corp., Pittsburgh. It discusses authoritatively such subjects as welding, drawing and blanking, machining, spinning, upsetting and forging, riveting, shearing, soldering and brazing, annealing and heat treatment, grinding, polishing and buffing, and surface treatment of Allegheny stainless steels.

AB420 The Lucke leak proof tub hanger is effectively presented in a new 12 page brochure from William B. Lucke, Wilmette, Ill. This gives 5 reasons why every bath tub should have a Lucke leak proof bath tub hanger.

Readers Service Department Continued to Page 88

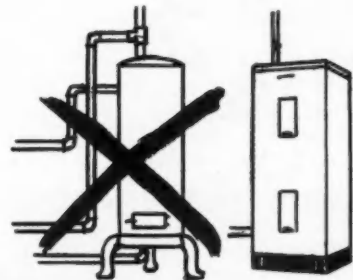
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WOULD YOU BELIEVE IT?

THE ROMAN BATH WAS CALLED THERMA, MEANING HEAT, FROM WHICH WE GET THERMOS-THERMOS BOTTLE!

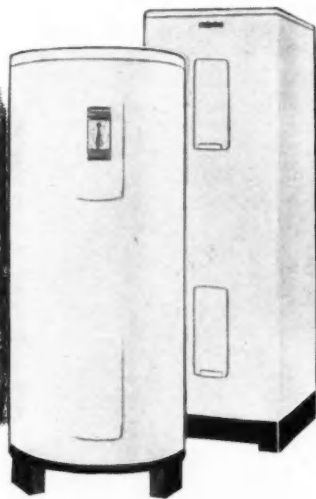


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NEW MODELS, POWER EQUIPMENT & TOOLS

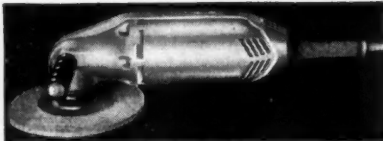
AB421 The Tennant Model K floor machine, developed by the G. H. Tennant Co., Minneapolis, is a powerful sander for reconditioning old floors or sanding new ones. It is equipped with a 16" expanding-type drum for sandpaper sleeves, steel wool roll or steel wire brush.

Equipped with the steel wire brush, it is an efficient cleaning machine, a power vacuum and collector pan picking up the dirt, so that once over leaves the floor clean eliminating further scrapings and sweeping.



Tennant Model K floor sander and industrial floor cleaner.

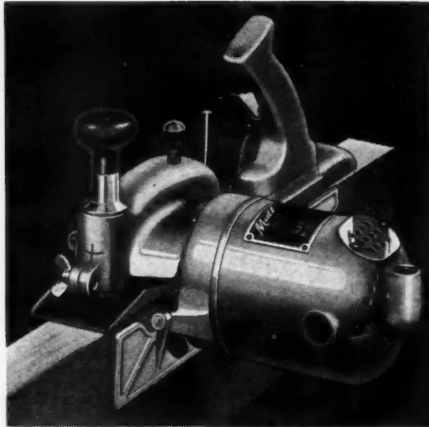
AB422 A new disc sander, Model H2, is announced by Skil-saw, Inc., Chicago. It is a 2-speed heavy duty sander. A 9" disc is first used at a speed of 2,700 r.p.m. then, when the outer



New Skil-saw disc sander Model H2.

edge of the disc becomes worn, it is resized to a 7" diameter using a special disc trimmer which is provided with this sander. The smaller disc is then mounted on the alternate 7" pad and is used at a speed of 4,200 r.p.m. Eight heavy duty ball bearings mounted on all shafts give this tool greater efficiency and longer life.

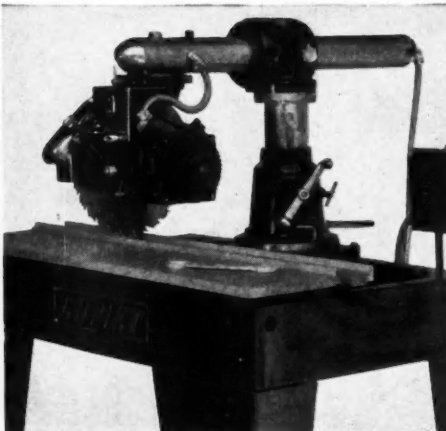
AB423 Mall saws are available from Mall Tool Co., Chicago, with cutting capacities of from 1 7/8" to 4 5/8", with blade sizes 6 1/2" to 12". Many outstanding features are incorporated, notably large extra powered heavy duty universal motors, swiveling bases which are adjustable for angle cuts up to 45 degrees, large gears and pinions enclosed in a large grease chamber for continuous



A Mall door planer.

lubrication and smooth operation, ruggedly constructed lightweight housings built to withstand abuse and breakage, switches built in the operating handles and the Mall patented approved automatic safety guard which opens as the saw is pushed into the material.

AB424 The Comet radial power saw is offered by the Consolidated Machinery and Supply Co., Ltd., Los Angeles, Calif. It is mounted on a bench as illustrated, or by removing the legs, goes on to a portable trailer for use out on the job. All cutting is easy for the Comet. Adjustments for compound mitre cuts are quickly made. Ripping is safe, fast and accurate. Motor swivels into all positions through 360 degrees for dadoing, tenoning, ploughing, shaping, etc.



Comet radial power saw.

AB425 Multiplex concrete block machines, power tampers and other products plant equipment are fully illustrated and described in catalog No. 29 from The Multiplex Concrete Machinery Co., Elmore, O. This is a 42 page, loose-leaf portfolio covering the present extensive Multiplex line, a leader in this field since 1906.

AB426 Besser products plant equipment, developed by Besser Mfg. Co., Alpena, Mich., was a prominent feature of the recent concrete contractors show at their annual convention and exhibit at the Sherman Hotel, Chicago. The remarkable growth of the concrete products business during the past three decades is well reflected in the completeness and diversity of this Besser equipment. Block and brick machines, power tampers, mixers and products handling equipment were shown. Illustrated literature on each item of the Besser line is available.

AB427 "Kwik-Mix Mixers" for concrete, mortar, plaster and bituminous materials are illustrated in a new 20 page data sheet from the Kwik-Mix Concrete Mixer Co., Port Washington, Wis., a division of the Koehring Co., Milwaukee. More than 65 illustrations show the interesting features of the 1941 line.

AB428 "Delta Production Tools," industrial catalog No. 7, from The Delta Mfg. Co., Milwaukee, was issued January 1 and is a 52 page handbook on this subject. Power woodworkers of small size, but great versatility, are prominently featured in this book.

AB429 Aluminum ladders have come onto the market in a big way, introduced by the Aluminum Ladder Co., Tarentum, Pa. A new 44 page catalog has just been issued illustrating this interesting development. It is a book of 44 pages.

AB430 CMC Construction Equipment, offered by the Construction Machinery Co., Waterloo, Ia., is presented in a new catalog, divided in 7 sections. These cover big job mixers, small job mixers, hoe-type mixers for plaster, mortar, etc., batching and placing equipment, hoists, pumps, and power saws.

AB431 A new series of data sheets has been prepared by the DeWalt Products Corp., Lancaster, Pa., illustrating and describing the several models of DeWalt power woodworkers. Types GL, GS, GK, GE and GP are covered, so far, in these sheets. Each illustrates effectively the design presented and then gives a detail mechanical specification together with a tabulation of dimensions and cutting capacities.

EDITOR'S NOTE—To save man power and speed production, power equipment for contractors and builders is now in growing demand. Write American Builder Reader Service for particulars.

Readers Service Department Continued to Page 90

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 90



Such Exclusive Charm is yours
ONLY with NU-WOOD Kolor-Fast

● For making homes more attractive and appealing at low cost, only Nu-Wood Kolor-Fast—among all insulating interior finishes—gives you so much exclusive charm, so many advantages.

Only Nu-Wood Kolor-Fast gives you fadeproof colors—a light, fast, pigmented coating, applied in a manner which coats individual fibers, but leaves surface voids unfilled, thus maintaining high acoustical properties.

Only Nu-Wood gives you a special, more refined tongue and groove joint, which produces a cleaner, higher qual-

ity decorative effect.

Only Nu-Wood gives you Nu-Wood colors and textures . . . Kolor-Trim predecorated wood moldings to enhance charm and complete the decorative effect.

Only Nu-Wood gives you Sta-Lite—a new, light-reflecting interior finish with the amazingly high light reflecting factor of 76% . . . a material that actually grows lighter with exposure.

Again in 1941, Nu-Wood leads the insulating interior finish parade. Get complete facts—they are yours for the asking!

Nu-Wood
Kolor-Fast

WOOD CONVERSION COMPANY
Dept. 119-3, First National Bank Bldg.,
St. Paul, Minn.

Gentlemen: Please send me complete information on Nu-Wood Kolor-Fast interior finish.

Name.....

Address.....

City.....

State.....

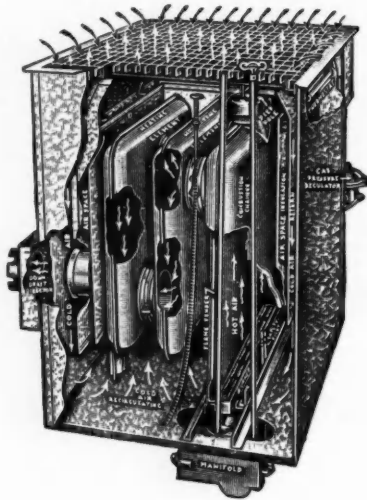
INSULATING INTERIOR FINISH

SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on this page for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.

EQUIPMENT ITEMS FOR MODERN BUILDINGS

AB432 The Peerless Mfg. Corp., Louisville, Ky., has added to its extensive line of gas fired floor furnaces one that is quite narrow, as illustrated, that can be used in many rooms, hallways, or other locations where rugs or other fixtures would not permit installing of the standard width of floor furnace. It is fully



New "Peerless" hallway floor furnace.

automatic and does not require basements or brick chimneys, thus saving a minimum of \$300.00 in low cost residences. All "Peerless" floor furnaces have a heavy, close mesh steel grille. They are guaranteed for ten years, and complete literature can be had on request.

AB433 "Answers to Your Kitchen Planning Questions" is an extremely interesting 20-page handbook prepared by the General Electric Co., Bridgeport, Conn. It explains the much talked of "planned work centers," analyzes typical floor plans, demonstrates the latest ideas in kitchen cabinets and kitchen equipment and offers several new decorative schemes that will appeal to the ladies.

AB434 The Steel Kitchen Cabinet Institute, 1621 Euclid Ave., Cleveland, has prepared some interesting studies for architects and builders on up-to-date efficiency kitchens with special reference to the design and construction of steel kitchen cabinets.

AB435 "Miami Bathroom Cabinets, Mirrors, Accessories" is a decidedly deluxe 44 page brochure "glorifying the American bathroom" from the Miami Cabinet Division of The Philip Carey Co., Middletown, O. This new line for 1941 reflects the architectural trends to more beautifully and completely equipped bathrooms. It presents two new lines of cabinets, one in all stainless steel and the other in Alumilite aluminum units. The book also introduces improved tubular and fluorescent lighting fixtures.

AB436 "The Story of Chicago 'Alumilite' Venetian Blinds" is a readable little booklet from the Chicago Venetian Blind Co., Michigan Ave., at 39th St., Chicago. Wood slats, steel slats and Alumilite slats are included in the Chicago Venetian Blind line.

AB437 "A New Kind of Kitchen Cabinetry" is a clever little 8 page booklet from the Kitchen Maid Corp., Andrews, Ind. It looks like something that would appeal mightily to the housewife as it is written in her language and will build consumer acceptance for builders and remodelers.

AB438 Delco water systems for rural and far suburban homes are featured in one of a series of new data sheets from the Delco Appliance Division, Rochester, N.Y. Other new literature presents the new Delco quick-action automatic storage water heater, the Delco quick-action winter air conditioner and the Delco oil-burning boiler.

AB439 "Youngstown Pressed Steel Kitchens" are presented in a new two-color 8 page brochure from the Youngstown Pressed Steel Co., Warren, O. A number of cabinet sinks, wall and base cabinets and counter tops are included, from which practically an unlimited assortment of complete kitchens effects can be made up.

AB440 Hall-Mack seamless medicine cabinets as produced by Hallenscheid & McDonald, 1344 W. Washington Blvd., Los Angeles, are presented in a 16 page folder in two colors. Well styled mirrors and well built cases characterize this line.

AB441 "Superfex Book of Facts on Low Cost Heating" an illustrated discussion of 48 pages has been presented by the Perfection Stove Co., Cleveland, O. The question, "How much does it cost to heat a house?" is answered some 30 times in this combined catalog and case history booklet. Specific homes with floor plans given are analyzed and actual costs are stated. The homes selected are from Iowa and Minnesota through to the Atlantic seaboard.

AB442 Weisway receptors of vitreous porcelain for shower stalls, "A Beauty Spot for Any Bathroom," are featured in a 4 page data sheet from Henry Weis Mfg. Co., Inc., Elkhart, Ind. These receptors come in five sizes, 32 x 32" to 42 x 42" and have a decorative pattern against the choice of four colored backgrounds. Blueprinted details show how these receptors are installed for built-in stall showers.

AB443 Calesco all-copper hot water systems, perfected by Calesco Corp., Lynn, Mass., are illustrated and described in a new 6 page technical letter. These systems function as a hot water heating plant and as a hot water supply system.

AB444 K-V adjustable shelf supports for book shelves, a new item in the line of the Knappe & Vogt Mfg. Co., Grand Rapids, Mich., are presented in a new folder of interest to architects and builders. Pressed metal standards, either flush or surface type, are screwed to the case ends and little steel brackets fit in the slots, adjustable every half inch.

CLIP AND MAIL TO CHICAGO

Reader Service Department,
American Builder,
105 W. Adams St., Chicago, Ill.

(Mar. 1941)

Please send me additional information on the following product items, or the catalogs, listed in this department:

Numbers.....

Name.....

Street.....

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

OCCUPATION*.....

*Please note that occupation must be stated if full service is to be given



Home-buyers are beginning to realize that high fuel bills are, in effect, a "2nd Mortgage" on the new home. They appreciate the added value of a home that is built for *low operating costs*.

Don't Saddle New Homes With High Fuel Costs

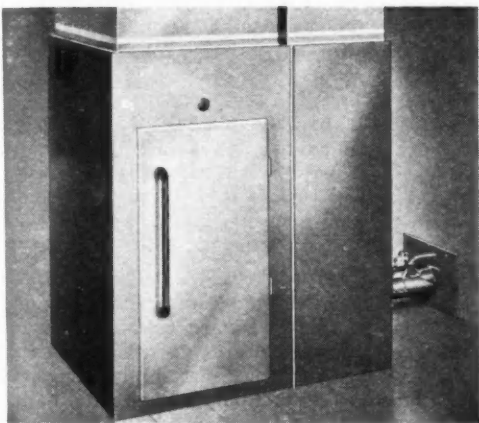
SAVE . . . with IRON FIREMAN modern Automatic Coal Heat

You can sell "more house" to your customers when you build for *low operating cost*. For example, if you can install equipment that cuts operating costs \$5 a month, then the family can add this \$5 to its FHA payments . . . and get an *extra \$850 to pay you* for a bigger, better-equipped house.

The biggest reduction in operating costs, in most areas, can be made by installing Iron Fireman automatic coal heating instead of burners that use more costly fuels.

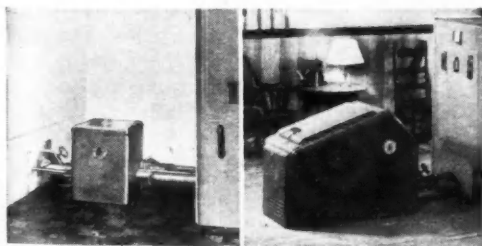
National Advertising Tells Value of "Low-Operating-Cost" Home

The public is responding to builders who provide for low operating costs. National advertising is steadily increasing public acceptance. See the Iron Fireman advertisements in the *Saturday Evening Post*, *Better Homes & Gardens*, *American Home*, and other leading publications. Send for free copies of consumer folder, "How to Build or Buy a Home for Low Operating Costs." Use this folder in talking to prospective customers and clients.



Complete AUTOMATIC Winter Airconditioner . . . \$389.50*

Feeds coal from bin! Contains built-in Iron Fireman stoker; steel furnace; filters; humidifier; forced circulator. Low first cost; low operating cost. The ideal installation for the modern, small home.



Coal Flow \$226* up Standard \$179.50*

No coal handling. The famous Iron Fireman Coal Flow stoker "pipes" coal from enclosed bin at left. Many exclusive features. Can be installed in any standard solid-fuel furnace or boiler.

Adds only about \$1.25 to \$1.50 a mo. on average FHA terms! Features include: long-wearing feed worm of cold-wrapped steel; self-cleaning "carburetor" air jets; continuous feed transmission.

*All prices include automatic controls. Plus freight and installation. All models available for both bituminous and anthracite firing. (Prices slightly higher in Canada).

IRON FIREMAN Automatic Coal Stokers



FREE . . . copies of Folder for Your Customers.

IRON FIREMAN MANUFACTURING CO. Portland, Ore.; Cleveland; Toronto.
Mail to: 3130 W. 106th Street, Cleveland.

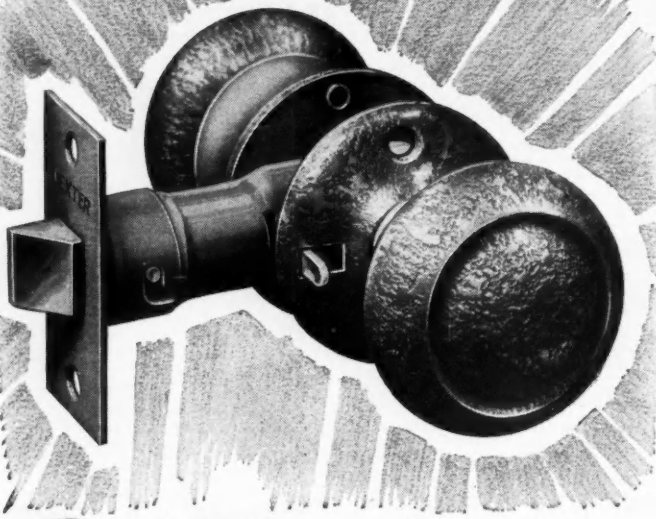
- Send me _____ copies of "How to Build or Buy a Home for Low Operating Costs."—No obligation.
- Send data on Iron Fireman stokers for new homes.

Name _____

Address _____

City _____

DEXTER-TUBULAR LOCKS & LATCHES



Extra Sales Appeal

IN THE HOUSE YOU BUILD

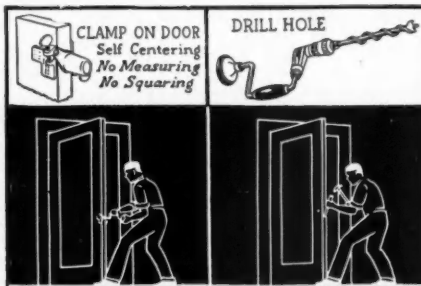


Lifetime Warranty is more than factual evidence of quality hardware. There's real sales appeal in showing customers that the hardware is factory guaranteed to give them satisfactory service.

Saves Labor

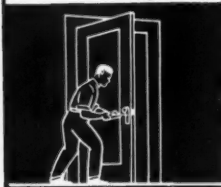
IN BUILDING YOUR HOUSE

9 cubic inches of wood are removed in mortising for ordinary locks. 2½ cubic inches "Drill-Holed" for Dexter-Tubular. That's 2/3 less wood removed, 1/3 the labor—it's easier and faster to bore a round hole—doubly fast using Dexter Bit-Guide.



When installation costs are reduced to one-third, there is no need to put second grade hardware in a house to keep down the price. The savings made in labor thru "Drill-Hole" installation of Dexter-Tubular will more than pay the difference. Let us send you complete information—shows how Warranty helps win buyers' confidence. No Obligation. See your dealer or write.

INSTALL
Like a bullet
in a gun.



National Brass Company, Mfrs.
GRAND RAPIDS, MICHIGAN

Certified

Builders Hardware
Cabinet Hardware
Screen Door Hardware

ON & OFF the RECORD

Views and Comments

by *Structor*

DINNER PAIL DISCOURSE—"Everybody gives the boss hell," Joe said to Harry as he pried the cover off the dinner pail and reached in for a sandwich.

"Because he's the builder he's the one that has to do all the guessing; he takes all the chances—yet to hear people talk, he's the world's worst.

"I notice the loan people don't take any chances—their money is insured by Uncle Sam. Besides that they take a mortgage on your gold teeth.

"The material men call the builder a lot of names—but I notice that they get their price and get paid while the boss has to take a chance on his. Getting the last payment from the owner is tough.

"The architects call the boss all sorts of names too—and look down their noses at him. But I notice when they really want to know what something costs or how to do a job that they can be sure is right, they have to get it from a builder—and he knows because he has to guarantee the job. Did you ever hear of an architect making good on one of his mistakes?

"As for wages, it's a wonder he keeps us working as steady as he does when you realize the troubles he has with rising costs on one hand and the FHA trying to force down the price of houses on the other. The builder takes all the chances, gets all the grief, meets all the payrolls, pays the bills, has to satisfy the most unreasonable housewife and take the rap if anything goes wrong.

"Harry, I guess we're pretty well off."

BUILDING QUOTAS?—Harvard Economist O. M. W. Sprague is said to have advocated establishment of building quotas, thereby limiting private construction "to necessary work to not cause competition with the government or increase the price of materials." That would put the building industry in a fine dither, and I believe it would do far more harm than good, just like some of the rent control legislations that have been discussed recently.

Home building and construction are not only highly important to the national economy, but are necessary to the morale and strength of the nation. Even Mrs. Roosevelt subscribes to this view for in a recent address she said, "In the long run all housing is defense housing because if we get right down to fundamentals, if we are willing to defend our country, it is because we feel that the life we live is worth defending."

The federal government is tackling the defense housing problem in what I believe is an aggressive and intelligent attack on a very tough problem. Even if they succeed beyond expectation and get 50,000 or 60,000 houses erected this year, that will be only a drop in the bucket compared to the total need of the nation for new small homes. The private building industry in the long run will provide the answers to home shortages and that means not just a few big concerns in a few big cities, but thousands of builders working from thousands of distribution points scattered throughout the country.

SEPTUPLE EQUITY—Roy Wenzlick, doughty real estate analyst, has been making some striking statements in his recent addresses. One, for example, was that a \$500 equity invested now in a \$5,000 house may multiply five, six or even seven times in the next few years. He advised buying a home now because there is "no other investment with so little risk or greater opportunity for appreciation in value."

Wenzlick believes that wages, materials, rents, interest and the price of houses will all rise sharply in the next few years. He said a 95 per cent or even a 100 per cent long-term amortized mortgage is safe if made now because the equity will be built up by increases in home values.

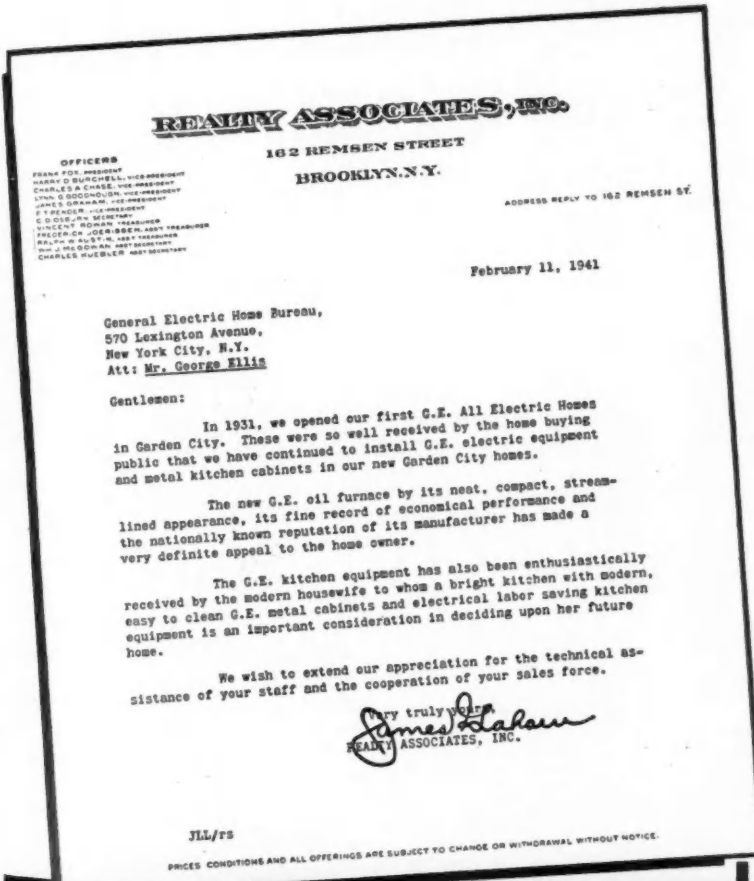
But here's the catch: between 1946 and 1950, watch out! At that time his charts show a sharp depression tendency and that

(Continued to page 94)

Here's More Proof of Public Preference for G-E All Electric Homes!



Ten Years' Experience With G-E Prompted This Letter From Realty Associates, Inc., Prominent Builders On Highly Competitive Long Island. Read What They Say!



Realty Associates, Inc., with an enviable sales record based on their strict policy of offering well-built, well-equipped houses at fair prices, have long since learned the value of public acceptance for G-E home equipment. Their experience is typical of that of other builders who feature G-E heating plants, wiring systems, and all-electric kitchens in their homes.

Women like the beauty and convenience of G-E equipment; men like its economy and low maintenance cost. And you'll like the assistance the G-E Home Bureau can supply—an architectural engineering service, and advertising and promotional help. Why not mail the coupon for complete information?

General Electric Home Bureau
Dept. AB-413, 1285 Boston Ave., Bridgeport, Conn.
Please send me information on your House Merchandising Plan.

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

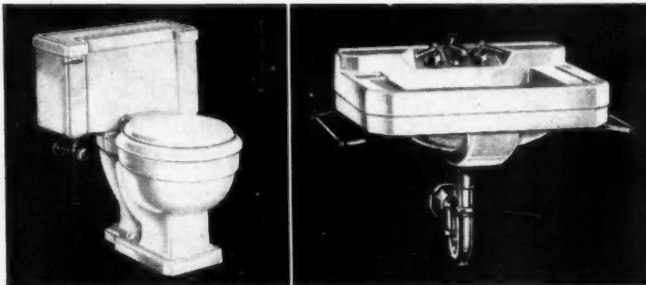


LOOKING FOR EXTRA

B.A.* VALUE?



Then consider the bathroom—your prospects certainly will. Often their opinion of the entire house is based on the beauty and quality of its bathroom fixtures. Your prospects associate Case *twice-fired vitreous china* fixtures with the finest homes in America. They are assured that its "brand-new" beauty is permanently resistant to acids and discoloration, easy to clean, trouble-free. For the "Buyer Appeal" that makes sales, use Case bathroom fixtures—in 60 colors.



The DE LUXE is only 27 inches high. Quiet, efficient, and a real water saver.

Two space-saving sizes make the COSMETTE especially adaptable to your plans. (Patented).

***BUYER APPEAL.** Year after year, Case national advertising has familiarized your prospects with Case *quality*. Distributed nationally by plumbing supply wholesalers—Write for nearest name and address and for interesting literature—to Dept. L-31, W. A. Case & Son Manufacturing Company, Buffalo, New York.

CASE

DISTINCTIVE PLUMBING FIXTURES

On & Off the Record—

(Continued from page 92)

will be heightened by the probable petering out of the armament boom. Even a 60 per cent loan made then would probably be unsafe, he said. That depression in the late '40's "will make 1932 look like a boom," he prophesied.

Wenzlick pointed out that stocks will not increase in value because of high taxes on profits. He said he felt the government would deliberately attempt to discourage investments in stocks in order to improve the government bond market.

That makes investment in a home all the more attractive.

LADIES AND LITTLE THINGS—"It's the little things about a house that give charm and individuality," Irene Constance of Oklahoma City told the realtors in New Orleans. She has been an operative builder herself and thinks women are pretty important. Here is a list of some of the things the ladies like:

1. Clever window details such as corner windows, picture windows, bay or studio windows with style.
2. Two closets in the master bedroom—even if you have to cut off the corners. Also lots of shelves.
3. Window shelves or a wide stool on south and east windows for plants. "These never fail to delight," she said.
4. A motto over the fireplace, or a gay bit of Dutch tile in the kitchen—a spice cabinet over the stove—gayly painted screen moulding run horizontally around the room for decoration.
5. Gayly papered closets and beautiful ceilings. "Women always look at ceilings," she said, "why—I don't know! They like plain wallpaper, but they love borders—large and showy ones."
6. A screened summerhouse in the backyard with a fireplace.
7. Lots of mirrors—they create an impression of space. Use them to cover the mullions on twin windows, to mirror shelves in the dressing room, on bedroom doors and a large one in the living room—especially if the room is small.

DEPARTMENT OF GADGETS—This new automatic electric blanket of G-E's may have a far-reaching effect on heating of bedrooms. You just set the thermostat at whatever temperature you want, then crawl in under one light, woolly blanket which weighs less than five pounds. Fine strands of well insulated wire are woven into it, and they radiate just the amount of heat desired regardless of changes in room temperature.

R. J. Cochran, manager of the G-E automatic blanket sales, has just shipped a carload to Texas, where he says people are especially enthusiastic about it because many of the homes are not centrally heated and because there is a sharp contrast in day and night temperatures.

(Continued to page 96)



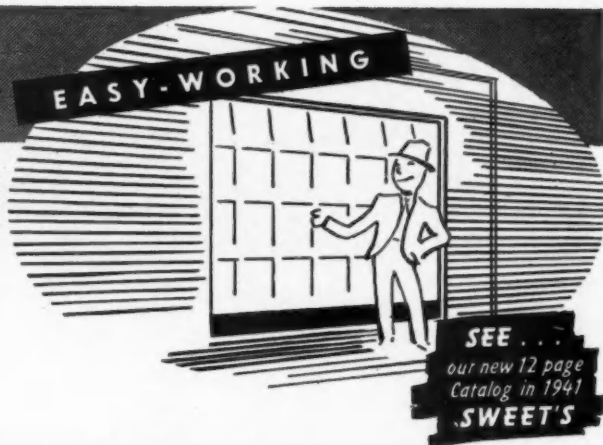
WARMED electrically.

Barcol OVERdoor

EASY-WORKING

Opens and Closes EASILY!

There's no stress, no strain, no struggle to get a Barcol OVERdoor open . . . or closed. And good reason, too. Tailored twin-torsion coil springs counterbalance the weight of the door accurately at every point of its travel. Direct-connected airplane cable lifts (no sheaves), and ball bearing rollers reduce friction to a minimum. Crank-action rollers eliminate sticking at the stop strips. It's EASY to operate a Barcol OVERdoor!



WEATHERTIGHT



NO RATTLE when closed!

First, close a Barcol OVERdoor . . . then, TRY and rattle it! The exclusive roller crank closing action sets the entire door firmly against the stop strips in the last few inches of travel. That's why a Barcol OVERdoor keeps out dirt, cuts off drafts, and CAN'T RATTLE. For a clean draftless garage, use the Barcol OVERdoor!



LOOK FOR THIS MARK OF QUALITY

ELECTRIC OPERATORS

Motor-driven Operators are available for swinging, sliding, overhead, and steel rolling doors, and for swinging and sliding gates. Write for further information.

RADIO CONTROL

For greatest convenience and safety, use the Radio Control . . . to open and close garage doors by simply pressing a button in the car. Complete information on request.

REPRESENTED IN PRINCIPAL CITIES

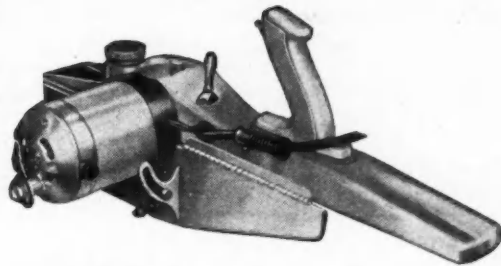
BARBER-COLMAN COMPANY
104 MILL ST., ROCKFORD, ILLINOIS

IN CANADA
A. B. Ormsby Co.
Toronto

THREE OF THEM CAN'T KEEP UP WITH THE MAN USING A CARTER J-4!



CARTER J-4 POWER PLANE will plane any edge up to 2⁵/₁₆" wide—doors, sash, transoms, etc.—either straight or bevel cut—and do it 3 to 5 times faster than by hand! High speed (18,000 r.p.m.) special cutter makes smooth cuts with or across the grain without splintering the edges. Quickly adjusted for paper thin or heavy cuts. Sharpens its own cutter. Write today for demonstration or catalog! R. L. Carter Div., The Stanley Works, 133 Elm St., New Britain, Connecticut.



LIGHT, STRONG, aluminum alloy castings give the J-4 extra ruggedness. Weighs only 11½ lbs. Motor is full ¾ h.p. Single, simple adjustment for depth of cut. Sharpens its own cutters.



JOINTER, tool By setting up the J-4 in the Bench bracket supplied, you have a high-speed tool that handles all kinds of light shaping and jointing jobs.

CARTER MONEY MAKING TOOLS

TELL THE "INSIDE STORY"



WITH TILE-TEX

If you are building homes to sell, you know how important it is to make the interior of the home attractive and appealing to women. It is an accepted fact that women control the purchase of most homes, and to women interiors are vitally important.

Here, in Tile-Tex, is a material for both floors and walls that can be used to build modern, attractive interiors in the key rooms of today's home—the bathroom, the kitchen, and the basement playroom. And, in using Tile-Tex, you make important savings against outmoded and conventional materials.

Tile-Tex floors are low in first cost, easy to maintain, long-wearing, and eye-appealing. Kitchens, bathrooms, and recreation rooms are "natural" areas for this new, resilient flooring.

Tile-Tex walls are currently the sensation of the residential home building industry. Low initial cost, speed of installation, attractive color styling—all of these factors are making it the choice of progressive builders seeking to satisfy the public taste for a wall treatment that meets all present day requirements.

There is an approved Tile-Tex contractor near you who can show you Tile-Tex products now in service—show you how little they cost—and demonstrate how they can help you sell new homes. Write today for his address and for free copies of the new Tile-Tex booklets on floors and walls.

TILE-TEX Company CHICAGO HEIGHTS ILLINOIS

The Tile-Tex Company
Chicago Heights, Illinois

Send me complete literature on the following:

- "Floors That Endure" by Tile-Tex
- "Decorative Walls" by Tile-Tex
- "Flexachrome," an Exclusive Tile-Tex Product

Name

Address

A-3

On & Off the Record—

(Continued from page 94)

ENGLISH WORKERS' 1c RAISE—Wages of building mechanics in England have been increased one cent, bringing the average payment to skilled building workers to 40-45 cents an hour for a 44-hour week. "News and Opinion," journal of the New York Building Trades Employers' Association, in commenting on this, says:

"We can express only amazement in contrasting our hourly wage increases, and our \$100 to \$200 weekly wages (with overtime). An offer here by a 'National Joint Council' such as they have in England, of a one cent an hour increase for war-time work would be laughed out of every union office as a huge joke.

"The English summer hour schedule of forty-four hours a week for building trades is now extended to winter hours. The 'dinner' period is but one-half hour in order to let workmen get home before 'blackout.'

"Among other new regulations is one calling for a 'fire watcher' on all jobs employing thirty men. We learn incidentally that employers in England are required to deduct employee's income tax from wages, but in the case of building workers on an hourly basis, such men are termed casual labor outside the tax deduction scheme."

STRANGE INCONSISTENCY—Some of the most vociferous complaints about housing shortages in defense areas have recently come from high union officials. They complain about the inconvenience that their men are put to in driving a long distance to work, and complain about high rents and the difficulty of finding inexpensive houses. Certainly the problem is severe in places like Camden, San Diego, Hartford and Quincy, Mass., but the last ones to be sounding off about it ought to be the unions whose obstructive tactics and unreasonable demands have done more than any other thing to make housing expensive and difficult to provide.

PALMER'S PROBLEMS—One of the toughest jobs in the country is that of defense housing coordinator, C. F. Palmer. There's no denying the pressing need for additional housing in industrial areas where thousands of new employees have suddenly been pumped into the community to engage in national defense work, also for housing for Army and Navy employees around Navy bases, air ports and huge new government defense operations.

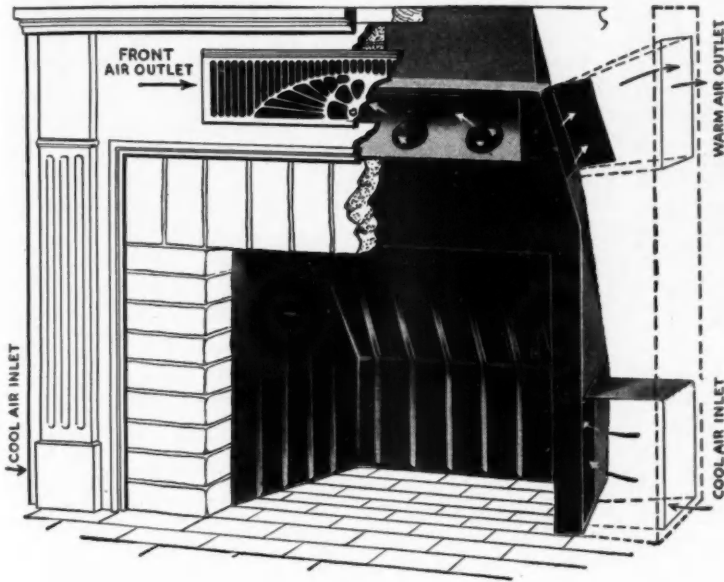
These are Army and Navy defense requirements and there is no argument about them—they have to be rushed, yet Palmer has to consider the effect on private industry and on the community of the building of hundreds, and in some cases of thousands, of new houses that may be abandoned after the emergency. In some cases demountable houses are being built. But even that is only part of the story because people require more than houses to make up a community. They have to have schools, stores, streets, sewage disposals, water-works and all the expensive utilities and services of a modern society. Even though the houses are temporary no one has yet proposed a "demountable" sewage or water-works system.

I believe the answer is that the cost of these public improvements as well as the housing must be written off as part of the national defense cost. Certainly the local communities which in many cases would prefer not to have these mushroom developments that will go sour after the emergency shouldn't be asked to carry the burden.

Agree or Disagree?—Say So

"On and Off the Record" is a column of opinion and personal comment. Readers of *American Builder* may agree or disagree with the views expressed — and if you do, SAY SO. Or if you wish to enlarge on any of these ideas, send your letters to *American Builder*, care of "On and Off the Record." A limited number of comments will be published.

Announcing... DIE-PRESSED RIBBED BOILERPLATE FIREBOX



an important improvement
in construction of
SUPERIOR
FIREPLACE CIRCULATORS

The die-pressed ribs add strength and help prevent warpage, thus giving longer years of service. The streamlined effect is pleasing to the eye.

Start the New Year Right.

Join the hundreds of leading Building Supply Dealers who are now profitably serving their customers by displaying and selling Superior Fireplace Circulators. Nationally advertised - many thousands in use. No. 34D Model "A" is the popular selling size.

Order your floor sample today.

Immediate shipments from warehouses or Distributor's stock at convenient points.

Send for courtesy copy of 1941 edition of 11" x 8 1/2" 36-page Superior Fireplace Book of designs and complete Superior Fireplace information mailed on request to Dealers, Architects and contractors.

A complete form (firebox, throat and damper) around which it is easy to build any design fireplace. It uniformly circulates warm air throughout the room and adjoining rooms, saves fuel and eliminates smoke troubles.

Manufacturers of Superior Fireplace Circulators, Glo-gas Fireplace Circulators, Form & Blade Dampers, Wood, Coal & Gas Fireplace Grates, Stay-put Ash Dumps and Cleanout Doors.

**SUPERIOR FIREPLACE COMPANY • 1046 South Olive Street
LOS ANGELES, CALIFORNIA**

Here's the best news about Windows in years



Announcing the new Bilt-Well "Superior" Window—a complete wood unit window designed to cut building costs and be of greater benefit to builders. Eliminates all trouble of sticking, leaking and rattling. Important to builders because there are no "call backs" to adjust windows.

Difficulties vanish with the "Superior" with its special expansion weatherstrip that compensates for shrinking and swelling sash.

The cushion-type spring weather strip offers Superior insulation and long-life wear.

Both the upper and lower sash can be installed or removed without taking off or loosening any of the weatherstrip. Sash can be removed, if desired, while new buildings are being plastered, a definite advantage to Contractor, that prevents damage and saves expense of cleaning off "splatters" of plaster.

Architect, Dealer, and Builder agree that installation costs are less

**BILT WELL
WOOD WORK**

Write us today for a list of stock sizes. Just clip the coupon below. Use "Superior" Windows on your next job.

CARR, ADAMS & COLLIER CO., Dept. AB-3
Dubuque, Iowa

Please send me, without cost or obligation, literature and information on BILT-WELL "SUPERIOR" WINDOWS
I am a BUILDER DEALER ARCHITECT

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

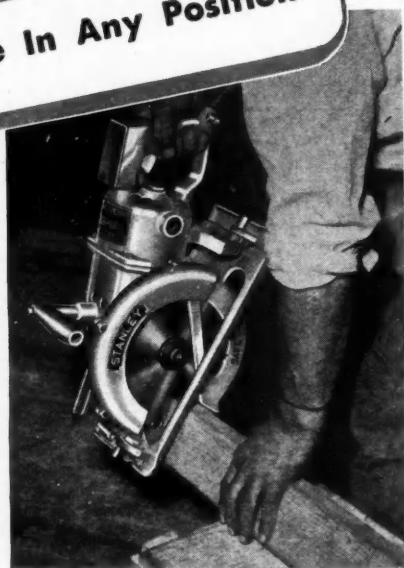
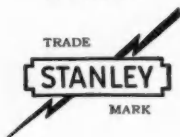
CARR, ADAMS & COLLIER COMPANY
Dubuque, Iowa

POWER
For The Big Jobs



BALANCED
For Use In Any Position

STANLEY
W9
ELECTRIC
SAW



W9 Safety Saw cuts full 3 $\frac{1}{4}$ " deep — plenty of power. Well-balanced for light work too. It's practically a jack-of-all-trades for any sawing on the job. Knocks hours from slow, expensive hand sawing. Can be driven from a small portable generator, or plugged in any light socket. Ask your Stanley distributor for demonstration, or write for literature. Stanley Electric Tool Division, The Stanley Works, 133 Elm Street, New Britain, Connecticut.

STANLEY ELECTRIC TOOLS

"Cost Less Per Year"

REVIEW of the NEWS

Statistics, Associations, Agencies

Big City Home Builders Confer at Washington

REPRESENTATIVES of large city home building associations met in Washington, February 5 and 6, to complete organization of a National Home Builders' Association and press for legislation permitting 95 per cent FHA mortgages on small homes.

Although originally announced as a convention, the meeting resolved into an organization conference, adopted a Constitution and By-laws and a legislative program. Some 30 persons attended, representing builders' associations in Detroit, Philadelphia, San Francisco, Long Island, Pittsburgh and Harrisburg. Officers elected included Edward A. Kerr of Philadelphia, president; Edmund Kuhlman of Detroit, executive vice president; and Milton W. Morris of San Francisco, executive secretary. A part time office is to be maintained in Washington.

First business of the meeting was a red-hot discussion of an offer of affiliation from the newly formed Home Builders' Institute, a division of the National Association of Real Estate Boards. The Conference summarily rejected the offer.

The Constitution adopted at the Conference provides for membership through local associations of home builders affiliated with the National, membership dues \$5.00 per member per year; also, individual memberships at \$10.00 per year from builders operating in localities where there is no affiliated local association.

The Constitution adopted sets up the following objectives and purposes for the National Home Builders' Association:

"(a) To co-operate for the improvement of conditions in the home building industry;

"(b) To study, and so far as possible, solve co-operatively and collectively, the problems of the home building industry;

"(c) To study, advise and recommend the enactment of constructive legislation in the interest of the home-buying public, the construction worker, and the home-building industry;

"(d) To oppose all legislation which is discriminatory and injurious to the home-building industry;

"(e) To protect the interests of private industry and to oppose legislation and/or regulations that would destroy or threaten that interest;

"(f) To act as an educational medium for its members and a fact finding institution for the home-building industry to the end that the American home may be produced on a sound and ethical basis;

"(g) To encourage and promote home ownership, to constantly seek to provide better values, so that an ever greater share of our people may enjoy the benefits and enjoyment which home ownership provides;

"(h) To perform any and all services, permitted by law, in the interests of the Home Building Industry and the American home owner."

Home Builders Institute Launched

THE Home Builders Institute of America, reorganization of the old Home Builders and Land Developers Division of the realtor boards was launched late in January at the New Orleans annual meeting of the National Association of Real Estate Boards. Steps were taken to correlate the Institute activity with the existing structure of 466 local real estate boards, so that members of the Institute will be individually affiliated in some way with local real estate boards in all cases. Dues in the Institute range from \$25 to \$100 per year, based on the number of homes built each year, with a minimum fee of \$25 for those who in the previous year have built ten homes or less.

The new president of the Home Builders Institute is David D. Bohannon of San Francisco, Officers and directors elected to serve for the balance of 1941 include: vice presidents, Fritz B. Burns, Los Angeles; Waverly Taylor, Washington, D. C.; E. L. Crain, Houston; E. B. Busbee, St. Petersburg; directors, elected for one year, Albert Balch, Seattle; John W. Coyle, Oklahoma

(Continued to page 100)

PROFIT BY READING SMITH'S LETTER

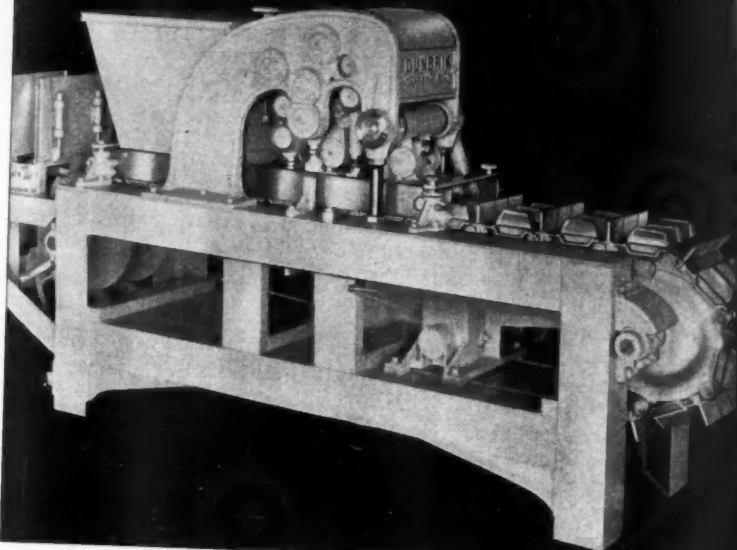
and learning about scores of other successful Dunbrik Manufacturers — how they dominate the brick business in their protected territory.

Write today for free book "4 Keys to Success" and see how easily you too can own a profitable business.

W. E. DUNN MFG. CO.

450 WEST 24TH ST.

HOLLAND, MICH.



STONE AGGREGATES
PRODUCER

CONCRETE PRODUCTS
MANUFACTURER

ROCKLEDGE PRODUCTS COMPANY
PHONE 342-J
PORTLAND, INDIANA

BRICK
BLOCKS
DRAIN TILE

STATE SIZES
COAL POCKETS
TANKS

August 27, 1940

W. E. Dunn Mfg. Co.,
Holland, Michigan,

Gentlemen:

You perhaps are quite well acquainted with the extensive line of cement products we manufacture.

We quite frequently make a thorough check to determine what line gives the most all round satisfaction, from the standpoint of manufacturing, public acceptance, and last, but not least, net profit.

We find in the operation of the various machines for producing concrete units, the variation of the human element controls the output, and of course regulates production and ultimately governs the profit.

Our several checks have always brought us around to brick, made on your brick machine.

The automatic principle of feeding, palleting, and the straight line production principle, reduces the human element to a known quantity, we know absolutely what a brick or a dozen brick cost, and we don't mind telling you that our costs are low enough that we are able to compete with any brick on the market, insure ourselves a legitimate profit and give the customer a better brick.

Pardon the commercial, but it is the bald-headed truth.

We are yours respectfully,

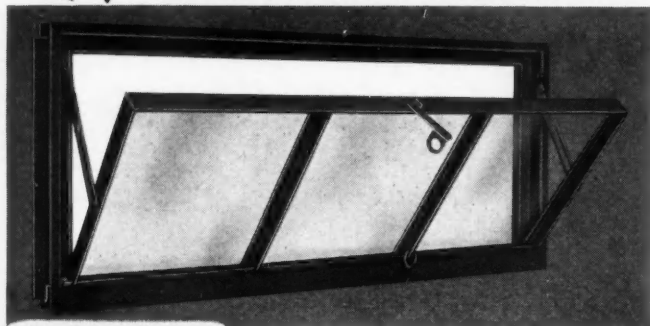
Wm R Smith
ROCKLEDGE PRODUCTS CO.

Your local telephone company will be glad to have you use its "Architects' and Builders' Service." Call your nearest Bell Telephone Business Office and find out about this time-saving service.

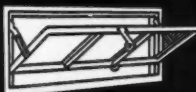


TODAY'S HOME BUYERS APPRECIATE THE IMPORTANCE OF TELEPHONE OUTLETS. THEY'RE SALES FEATURES THAT COST YOU VERY LITTLE IF INCLUDED WHILE CONSTRUCTION IS IN PROGRESS. WITH PROVISION FOR CONCEALING TELEPHONE WIRES IN THE WALLS, YOU CAN ASSURE YOUR PROSPECTS THAT EXPOSED WIRES WILL NOT BE NECESSARY.

You'll Please 'em All with
VENTO CHAMPION
 Basement Windows



Normal indirect ventilation provided by simply unlocking and pulling forward.



Any degree of ventilation may be obtained by slight downward pull on ventilator.



Ventilator is perfectly balanced and always works easily.



Window opens from either top or bottom. Ventilator may also be quickly and easily removed.

Heavy double channel, pressed steel frame. All welded construction. Furnished for either putty or puttyless glazing.

We have yet to discover a prospective home owner who, after a two minute demonstration of the convenience features and superior construction of the Vento Champion Basement window, was not genuinely pleased by the idea of having them in his or her home. Simply show your prospects that the CHAMPION affords normal, indirect and draftless ventilation by merely opening from the top; that any degree of ventilation may be had by an easy, effortless downward pull on the ventilator; that the ventilator may be swung to a full opening just like a top hinged window, if desired; that the sash may be quickly and easily removed for glazing or other purposes. Then point out the features that assure greater weather-tightness, the superior type of puttyless glazing, the positive cam lock and the solid all welded construction that assures long life and perfect operation at all times. It all takes less than two minutes. But it registers big as one of the things that makes the home you are offering more desirable—a better value. VENTO CHAMPIONS cost no more than the common variety of basement windows. Why be satisfied with less. See your dealer or write for complete details.

VENTO manufactures a complete line of top-notch windows for every type of building. All backed by a concern with an enviable reputation for dealer cooperation. Write for catalog and prices.

VENTO STEEL PRODUCTS COMPANY
MUSKEGON, MICHIGAN

Review of the News—

(Continued from page 98)

City; Jesse L. Schroeder, Omaha; Charles E. Joern, Chicago; George F. Nixon, Chicago; A. K. Muhleman, Richmond; Aug. H. Gerling, St. Louis; Robert P. Gerholz, Flint; Grover King, Los Angeles; John H. McClatchy, Philadelphia; Hugh Prather, Jr., Dallas; Hugh Potter, Houston; John McC. Mowbray, Baltimore; Wm. T. Richardson, Los Angeles; John C. Taylor, Kansas City; Cyrus Crane Willmore, St. Louis; and Charles S. Wanless, Springfield, Ill.

The home builders have in common with all of those engaged in real estate activities tremendous problems in local taxation, mortgage financing, and city planning. The lack of a national association through which they could take action on these matters has long been a handicap to the home builders. The new Institute, along with the newly organized National Home Builders' Association, now step forward and expect to be welcomed, not only by home builders but also by public officials, architects and others having an interest in housing problems.

First Half of February Continues Residential Building Gain

ACCORDING to F. W. Dodge figures for the first half of February, residential building in 37 eastern states amounted to \$61,625,000, as compared to \$36,301,000 for the same period in 1940. This also showed a substantial gain over residential building for the first fifteen days of January, 1941, which amounted to \$50,286,000.

Statistics for the four classes of construction are as follows:

	37 Eastern States Feb. 1-15, 1941	Feb. 1-15, 1940	January, 1941
Residential	\$ 61,625,000	\$36,301,000	\$111,306,000
Non-residential	44,427,000	29,406,000	118,757,000
Public Works.....	19,242,000	25,107,000	59,622,000
Utilities	13,231,000	6,074,000	15,520,000
Total	\$138,525,000	\$96,888,000	\$305,205,000

Census Shows Increase in "Fabricated" Houses

PORTABLE and ready-cut houses valued at \$8,461,853 were produced in independent planing mills of the U. S. in 1939 compared with a total of \$4,130,862 in 1937, according to figures in a preliminary report on planing mill products made public by Director William Lane Austin of the Bureau of the Census.

The 1939 value of production for portable and ready-cut houses is the highest reported in the biennial Census of Manufactures since 1929, when the total was \$11,569,252. The highest total value ever reported, however, was in the 1935 Census of Manufactures, \$15,192,737, the first Census in which details on planing mill products by kinds were assembled.

Figures for production of portable and ready-cut houses in independent planing mills (totals for a small amount of production in planing mills operated in connection with sawmills not included) were:

1939	\$8,461,853	1931	\$ 3,717,733
1937	\$4,130,862	1929	\$11,569,252
1935	\$4,065,669	1927	\$14,224,988
1933	\$1,639,879	1925	\$15,192,737

Aggregate value of all planing mill products in 1939 was \$614,153,963, a moderate increase over 1937 when the value reported was \$593,374,933.

Production of planing mill products in establishments operated independently of sawmills was valued at \$282,309,839. Planing mill products fashioned in establishments operated in connection with sawmills had a value of \$325,592,769. In addition, other industries turned out planing mill products as secondary products valued at \$6,251,375.

Among listed planing mill products and their quantity and value were:

Dressed lumber, 15,435,432 M feet, b.m., \$375,623,386.
 Doors for general construction, 13,082,633 in number, \$32,467,784. Other doors, number not reported, \$11,044,694.
 Sash, 34,992,700 in number, valued at \$24,480,972.
 Window and door frames, number 8,367,316, value, \$21,388,216.

Other items included \$4,303,848 worth of battery separators, \$4,171,725 worth of tanks and vats, and \$792,425 worth of silo stock.

Hardwood small dimension stock produced from rough lumber amounted to 220,438 M feet, b.m., valued at \$12,966,133, and from slabs, edgings, and millwaste, 28,114 M feet, b.m., valued at \$1,187,832.

Miscellaneous millwork and millwork not reported by kind, including moulding, inside trim, and general millwork, was valued at \$117,265,115.

Industrial Advertisers to Meet in Toronto

TORONTO has been chosen by the National Industrial Advertisers Association as the city in which its nineteenth annual conference, to take place in September, will be held, according to a statement just released by Richard P. Dodds, president of the Association, and advertising manager of Truscon Steel Co., Youngstown, Ohio.

The Conference will be sponsored by the Industrial Advertisers Association of Ontario, the Toronto Chapter of N.I.A.A. This chapter has a membership of 50, headed by John A. M. Galilee, assistant advertising manager, Canadian Westinghouse Co., Ltd., of Hamilton, Ontario. The Montreal chapter of N.I.A.A. will co-operate in putting on the conference.

The Royal York Hotel, Toronto, will be headquarters for the thousand or more members and guests of N.I.A.A. who are expected to attend the conference from the 20 chapters throughout the United States and Canada. Total membership of the Association is now over 1,500.

Survey Shows About 10% Higher Single-Family House Rents Expected in 1941

RENTS for single-family houses will rise this year, according to the majority opinion of mortgage men in 77 cities who have recently been polled by the Mortgage Bankers Association of America. The study shows that single-family house rents in 57 of the 77 cities will increase in 1941. In 45 of these 77 principal cities, the average increase is estimated to be 9.6 per cent over the recent level prevailing in 1940. Property management and the future trend of rents will be one of the five general classifications of discussion at the second 1941 Mortgage Clinic of the Association to be held in Chicago Feb. 15.

Strongest opinion for rent increases this year in single-family houses was noted in 14 eastern cities where 85.7 per cent of the mortgage bankers polled expect a gain. In 12 of these cities the average expected increase was shown as 8.9 per cent. In 10 far western and mountain cities, 70 per cent of those polled look for an increase, and in 7 of these cities the average rise is estimated at 9 per cent. In 18 southern cities, 44.5 per cent expect a gain and in 8 of these cities the average rise is set at 10 per cent. In 35 middle western cities, 48.6 per cent look for higher single family house rentals and in 18 of these cities the average expected gain is 10.6 per cent.

Defense Housing Status

A SHARP rise in the number of dwelling units for which public funds have been allocated, sustained activity by private industry as reflected by insuring operations of the Federal Housing Administration, and the assignment by the Federal Works Administrator of 13,200 units to be built under the Lanham Act were highlights during the week ending February 8th in the Defense Housing Program, C. F. Palmer, Coordinator, has announced. He revealed that the new units programmed by the Division of Defense Housing Coordination the first week in Feb. brought the total number of dwelling units for which public funds have now been allocated to 68,432, an increase of 14,349 over the total number which had been planned up until February 1. An additional 200 units were put under construction contract during the week and 369 were completed, he said.

The Coordinator announced that 13,060 of the total dwelling units for which funds were allocated last week were to house civilian industrial workers while 12,289 were to be for married enlisted personnel of the Army and Navy.

(Continued to page 102)



HIGH SPEED

Machines will make YOU MORE MONEY



1. AMERICAN FLOOR SANDER

Be your own boss and make big money with an American Floor Sanding Machine. As much as \$25.00 a day is not an unusual amount for the floor surfacing contractor to make. When "New Building" activity is slow, there are always hundreds of floors in older homes to be resurfaced and finished.

With the many outstanding time and money-saving features, American machines for years have been the favorites of floor surfacing men. Investigate the wonderful possibilities of this work today.

2. AMERICAN SPINNER EDGER

Here's a real money-maker and time-saver—the American Spinner for edging and matching the borders with the body of floor work. This is also an excellent machine for stair treads, halls, closets, landings, display windows and other hard-to-get-at places. The patented design and construction of this disc type edger makes it a favorite with the professional floor trade.





3. AMERICAN PORTABLE SAW

Slow hand methods on many jobs can be replaced by this speedy, electric portable American Saw. Labor saved by this saw will run into hundreds of dollars yearly.

SEND COUPON NOW

If you are at all interested in getting into something for yourself and getting out of the "old rut" or if you want to increase your profits in your present business, sign and send in the coupon below. There is no cost or obligation to you. Be sure to check the kind of machine you are most interested in on the coupon below.

THE AMERICAN

FLOOR SURFACING MACHINE COMPANY

511 So. St. Clair Street • Toledo, Ohio

Gentlemen:

Without cost or obligation send complete prices on the following:

American Floor Surfacing Machines.

American Spinner Edger Machine.

American Portable Saw.

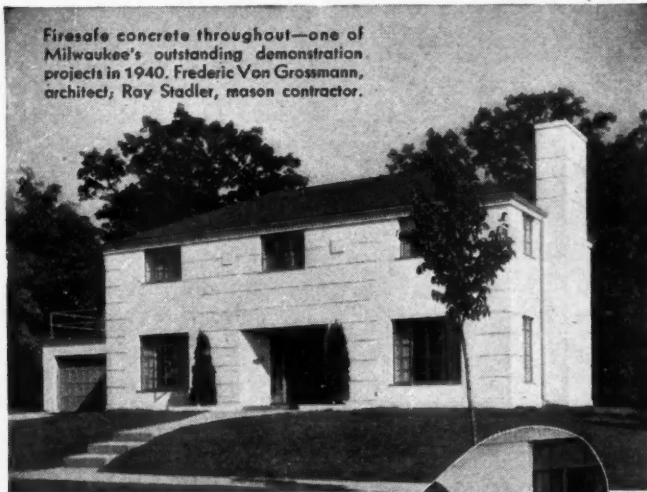
I want to get into something for myself.

I already own one, quote trade in value (make and years old).....

Name

Street

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



Firesafe concrete throughout—one of Milwaukee's outstanding demonstration projects in 1940. Frederic Von Grossmann, architect; Ray Stadler, mason contractor.

*Sell 'em
in 1941*

**by showing them a
CONCRETE DEMONSTRATION HOME**

In scores of cities this fact has been proved again and again: *a firesafe concrete demonstration home opens people's eyes to a new level of home values and gives its builder a real boost.*

New distinctive beauty that wins friends on sight... choice of many interesting colors and finishes... strong floors that can be jumped on without shaking... protection against termites, decay... assurance of low maintenance and higher resale value. Selling points like these are yours with concrete.

Thousands of New Concrete Homes

Concrete is climbing fast in popularity among home buyers as this Association continues its national advertising of concrete homes. These ads are seen by your prospects. This is *your* opportunity! Why not establish yourself as a leader by featuring fire-safe concrete in the homes you build.

Write us for suggested specifications and construction details, free on request in U. S. or Canada.

PORTLAND CEMENT ASSOCIATION
Dept. A3-3, 33 W. Grand Ave., Chicago, Ill.

A national organization to improve and extend the uses of concrete... through scientific research and engineering field work

Review of the News—

(Continued from page 101)

A summation of the work of each agency in the Defense Housing program showed:

Navy. As of the end of last week 16,935 units being constructed by the Navy were nearing completion. These units will be for families of enlisted personnel and civilian workers in industrial plants.

Federal Works Agency. Federal Works Agency reported the letting of contracts for an additional 605 units bringing to a total of 20,032 the number of units now under contract by FWA. Construction costs of the new units amounted to \$3,873,510 making a total of \$62,673,692 now under contract.

A contract was also being negotiated for the purchase of a USHA-financed slum clearance project in Boston which will be used to house industrial workers in that locality. Negotiations are being conducted with the Boston Housing Authority.

United States Housing Authority. The United States Housing Authority has a total of 45 defense projects under its jurisdiction. It was announced that 2 of these have been completed; 17 are under construction; sites have been approved for 11, and sites are being selected for the remaining 15. Ground was broken on projects in Hartford, Conn., and Pensacola, Fla., the first week in February.

Federal Housing Administration. Federal Housing Administrator Abner H. Ferguson, announced that home construction in general is showing gains up to 50% over last week prompted partly, he said, by housing needs in defense industrial areas. He announced that for the week ending February 8th, new homes started under FHA inspection totaled 2,755 compared with 2,363 the previous week, and that new home mortgages selected for appraisal amounted to 3,835 as against 3,669 the week before.

It was also announced that participation of private lending institutions in the FHA program continued to broaden during 1940 with a total of 8,239 holding FHA insured home mortgages in investment portfolios at the end of the year.

Status of Construction under the Lanham Act, Public 671, and special authorization for week ending February 8, 1941

Location	Establishment	No. of Units	Estimated Construction Cost	Contractor
ALABAMA				
Birmingham	Defense Indus.	300	1,174,844	Algernon Blair, Montgomery, Ala.
Gadsden	Ord. Plant	150		
Florence	Defense Indus.	250		
Mobile	Ship yards	500		
Montgomery	Maxwell Field	424		
Selma	Army Air Field	200	542,667	D. T. Underwood, Birmingham, Ala.
ARIZONA				
Ft. Huachuca	Fort Huachuca	30	94,000	M. M. Sundt Const. Co. Tucson, Ariz.
Tucson	Municipal Airport	135	394,000	E. W. Womack Const. Co. Phoenix, Ariz.
CALIFORNIA				
Benicia	Benicia Arsenal	50	172,000	Fred J. Early, Jr., Co., San Francisco, Calif.
Fort Ord	Fort Ord	250	2,243,418	Barrett and Hill, San Francisco, Calif.
Fresno	Municipal Airport	150		
Mare Island	Navy Yard	600		
Riverside	March Field	150	498,000	Harvey A. Nichols, Los Angeles, Calif.
San Diego	San Diego	3,000	9,070,000	McNeil Const. Co. and Zoss Const. Co., Los Angeles, Calif.
San Rafael	Hamilton Field	175	521,000	Carl N. Swenson Co., San Jose, Calif.
Stockton	Municipal Airport	100	481,000	Fred J. Early, Jr., Co., San Francisco, Calif.
Sunnyvale	Moffett Field	150		
Vallejo	Mare Island	950		
COLORADO				
Denver	Fort Logan	50	172,000	F. J. Kirchhof Const. Co. Denver, Colo.
Lowry Field	Lowry Field	125	372,000	F. J. Kirchhof Const. Co. Denver, Colo.
CONNECTICUT				
Bridgeport	Defense Indus.	600	1,600	
New Britain	Defense Indus.	300		
Waterbury	Defense Indus.	300		
Hartford	Defense Indus.	300		
New London	Elec. Boat Co.	300		
DELAWARE				
Delaware City	Fort Dupont	20	67,000	J. George Bessel Co., Baltimore, Md.
FLORIDA				
Jacksonville	Navy Air Station	300	511,600	Dyson & Company, Pensacola, Fla.
Orlando	Municipal Airport	100		
Pensacola	Navy Air Base	200		
Pensacola	Navy Air Base	100		

Location	Establishment	No. of Units	Estimated Construction Cost	Contractor
Tallahassee	Municipal Airport	100	308,000	Dyson & Company, Pensacola, Fla.
Tampa	MacDill Field	300	816,000	Paul Smith Const. Co., Tampa, Fla.
W. Palm Beach	Municipal Airport	150	475,000	Algernon Blair, Montgomery, Ala., and Paul Miller, Leesburg, Fla.
GEORGIA				
Augusta	Municipal Airport	75		
Columbus	Fort Benning	350	1,035,500	Murphey Pound, Columbus, Ga.
Columbus	Fort Benning	612	1,704,833	A. Farnell Blair, Decatur, Ga.
Hinesville	Camp Stewart	100		
Rossville	Fort Oglethorpe	50		
Savannah	Municipal Airport	250		
IDAHO				
Boise	Municipal Airport	100	325,300	J. O. Jordan & Son Boise, Idaho
ILLINOIS				
Alton-E. Alton	Defense Indus.	150		
Bellefonte	Scott Field	100		
East Moline	Rock Island Arsenal	97	374,590	T. S. Wills, Janesville, Wis.
Moline	Rock Island Arsenal	200		
Rantoul	Chanute Field	100	372,543	Thorp-Rogoff Co., Chicago, Ill.
Rantoul	Chanute Field	200	690,000	Kuhns-Simmons Cons. Ass., Rantoul, Ill.
Rantoul	Chanute Field	100		
Rock Island	Rock Island Arsenal	305	1,067,789	Lovering Const. Co., St. Paul, Minn.
Savanna	Savanna Prov. Gr.	200		
INDIANA				
Charleston	Powder Plant	300		
South Bend	Defense Indus.	500		
KANSAS				
Fort Riley	Fort Riley	125	404,900	Bushoom & Rauh, Salina, Kans.
Wichita	Defense Indus.	400		
KENTUCKY				
Fort Knox	Fort Knox	700	1,985,000	Fleisher Eng. & Const. Co., Lexington, Ky.
MAINE				
Bangor	Municipal Airport	150		
MARYLAND				
Aberdeen	Aberdeen Prov. Gr.	270		
Baltimore	Aircraft Plant	1,000		
Baltimore	Defense Indus.	1,000		
Greenbelt	Defense Indus.	1,000		
Baltimore	Halabird QM Depot	85		
Edgewood	Edgewood Arsenal	200	671,000	Nelson Fedley, Inc., Philadelphia, Pa.
Havre De Grace	Aberdeen Prov. Gr.	530		
Indian Head	Edgewood Arsenal	650		
Odenton	Powder Plant	115	376,000	George Hyman Const. Co., Washington, D. C.
MASSACHUSETTS				
Boston	Navy Air Base and Navy Indus.	1,050		
Chicopee	Westover Field	200	641,000	Casper Ranger Const. Co., Holyoke, Mass.
Fort Devens	Fort Devens	300	1,003,000	C. J. Maney, Inc., Somerville, Mass.
MICHIGAN				
Battle Creek	Fort Custer	250	772,000	A. W. Kutsche Co., Detroit, Mich.
Mt. Clemens	Selfridge Field	130	407,000	Walbridge-Aldinger Co., Detroit, Mich.
MISSISSIPPI				
Jackson	Municipal Airport	50	148,500	Dye & Mullings, Inc., Columbia, Miss.
NEW HAMPSHIRE				
Portsmouth	Navy Yard	600	1,944,065	J. Sletnik Co., Boston, Mass.
Portsmouth	Portsmouth	500		
NEW JERSEY				
Fort Dix	Fort Dix	100	300,000	Cauldwell-Wingate Const. Co., New York City
Camden	N. Y. Ship Yards	500	1,400,000	Wheeler Eng. Co., New York City
Long Branch	Fort Monmouth	265		
Paterson-Passaic	Defense Indus.	500		
Pedricktown	Ord. Depot	100		
Harrison-Newark	Defense Indus.	300		
Harrison-Kearney	Defense Indus.	700		
NEW MEXICO				
Albuquerque	Municipal Airport	100	285,000	Lembke Const. Co., Albuquerque, N. M.
NEW YORK				
Brooklyn	Navy Yard	200		
Fishers Island	Fl. H. G. Wright	20		
Village Hempstead, L. I.	Mitchel Field	200	717,000	H. R. H. Const. Corp., New York, N. Y.
Elmira	Defense Indus.	200		
Buffalo	Defense Indus.	1,000		
NORTH CAROLINA				
Fayetteville	Fort Bragg	550	1,543,000	G. W. Kane, Durham, N. C.
OHIO				
Canton	Navy Ordnance	300		
Ravenna	Defense Indus.	200		
OKLAHOMA				
Fort Sill	Fort Sill	150	465,500	Chas. M. Dunning Con. Co., Oklahoma City, Okla.
PENNSYLVANIA				
Erie	Defense Indus.	500		

(Continued to page 104)

a Guarantee THAT HELPS SELL HOUSES



Here is a potent and powerful sales aid whose use will generate customer confidence in the homes you build. It's the BETTER HOMES & GARDENS Guarantee that tells its readers that every product advertised in that magazine is exactly as represented in that advertising.

TO PUT THIS GUARANTEE INTO ACTION

BETTER HOMES & GARDENS has prepared this practical portfolio of sales helps for operative builders and home building contractors—ideas that pave the way for *quicker sales and larger profits.*



IT'S *free* TO YOU! Get your portfolio of "Ideas That Sell Homes" today and put its "ideas" to work on your sales staff. The coupon below will bring it to you.

Better Homes & Gardens

—the magazine voted "most useful" by 3 out of 5 families who built new homes in 1940.

BETTER HOMES & GARDENS
Dept. AB 3-41,
Des Moines, Iowa

Send me, free of charge, your big new portfolio of "Ideas That Sell Homes."

To assist us in keeping our records please check: I am an operative builder (), contractor (), architect (), building material dealer ().

Name.....

Address.....

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

KEEP BUYERS HAPPY!

Install garage doors that NEVER...

...Bang shut like this ...Get snowbound ...Or are hard to open



Use the popular overhead-type

CRAW-FIR-DOR



THIS ATTRACTIVE 8-PANEL DESIGN
RETAILS FOR ONLY \$29 ANY U.S.A. JOBBING CENTER
 OTHER MODELS SLIGHTLY HIGHER

● Craw-Fir-Dors on the garages of the houses you build or modernize will help speed your sales . . . and keep your customers satisfied. For the Craw-Fir-Dor is a tested, approved, overhead-type garage door with extra strength hardware and automobile trunk-type lock. This door glides up or down so easily that even a small child can open or close it without effort.

Any carpenter can install a Craw-Fir-Dor in less than half a day by following the simple instructions. The Craw-Fir-Dor comes pre-fitted for a 8' x 7' opening and weather-stripped. Only 2" headroom and sideroom are needed.

Made in Four Designs

With all these advantages, the Craw-Fir-Dor is truly economical. The 8-panel design retails for only \$29 in any U.S.A. jobbing center. The flush-type, which is reversible and comes with a bundle of moulding that can be applied in any desired pattern, is only a dollar higher. The two 16-panel designs are also popular. Your dealer handles Craw-Fir-Dors or can get them for you quickly. SEND FOR FREE BOOKLETS. Fir Door Institute, Tacoma, Washington.

Now nationally advertised in American Home and Better Homes & Gardens



For special residential or industrial installations, write Crawford Door Co., Detroit, Mich., who make a complete line of sectional overhead-type doors.

Review of the News—

(Continued from page 103)

Location	Establishment	No. of Units	Estimated Construction Cost	Contractor
Philadelphia	Navy Yard	500		
Elwood City	Defense Indus.	100		
Titusville	Defense Indus.	200		
Williamsport	Aircraft Plant	250		
Allentown				
Bethlehem	Defense Indus.	500		
Beaver Co.	Defense Indus.	500		
Philadelphia	Navy Yard	500		
RHODE ISLAND				
Newport	Naval Estabs.	262	945,975	E. Turgeon, Providence, R. I.
Newport	Naval Station	538		
Quonset Point	Naval Air Station	262		
SOUTH CAROLINA				
Charleston	Navy Yard	600		
Charleston	Army Ordnance Dep.	350		
Charleston	Navy Yard	400	1,181,273	Long Const. Co., Charleston, S. C.
Columbia	Fort Jackson	350		
SOUTH DAKOTA				
Fort Meade	Fort Meade	35	121,500	Henry Carlson Co., Sioux Falls, S. C.
TENNESSEE				
Nashville	Defense Indus.	300		
TEXAS				
Corpus Christi	Naval Air Station	500		
Corpus Christi	Naval Air Station	250	812,402	Thomas Bate & Sons, Houston, Texas
El Paso	Fort Bliss	200	612,000	H. T. Ponsford & Sons El Paso, Texas
Fort Clark	Fort Clark	50	163,500	Taylor & Bryne, Fort Worth, Texas
Houston	Ellington Field	200	588,000	Tellepen Const. Co., Houston, Texas
Orange	Naval Construction	100		
Orange	Naval Construction	100		
San Angelo	Advanced Flying Field	100	296,000	Templeton & Cannon, San Angelo, Texas
San Antonio	Brooks and Kelly Fields	300	814,000	McKenzie Const. Co., San Antonio, Texas
San Antonio	Fort Sam Houston	200	548,000	E. L. Martin, Dallas, Texas
Dallas	Aircraft Plant	300		
Dumas	Zinc Plant	50		
UTAH				
Ogden	Defense Indus.	150		
VIRGINIA				
Arlington	Arlington Cantonment	35		
Langley Field	Langley Field	350	1,126,000	James Baird Co., Washington, D. C.
Newport News	Navy Yard	352	1,115,980	V. P. Loftis, Charlotte, N. C.
Newport News	Navy Yard	148	480,959	Woodcrest Const. Co., Inc., and Rosoff Bros., Inc., New York City
Norfolk	Navy Yard	500	1,712,054	Ralph S. Herzog, Philadelphia, Pa.
Phoebus	Fort Monroe	90	284,000	Ross Engineering Co., Washington, D. C.
Portsmouth	Navy Yard	300	922,840	Wm. Muirhead Const. Co. Inc., Durham, N. C.
Portsmouth	Navy Yard	210	764,490	Wm. Muirhead Const. Co. Inc., Durham, N. C.
Portsmouth	Navy Yard	565		
Radford	Homes for workers	200		
St. Julien's Creek	Munition Depot	100		
Virginia Beach	Fort Story	50	163,000	Walter T. Gregory, Norfolk, Va.
WASHINGTON				
Bremerton	Navy Yard	600	1,851,510	West Coast Const. Co. and Western Const. Co., Seattle, Wash.
Bremerton	Navy Yard	240		
Bremerton	Navy Yard	560		
Fort Lewis	Fort Lewis	250		
So. Tacoma	McChord Field	100		
Seattle	Navy Air Station	150	479,450	Henrickson-Alstrom Const. Co. and Thomas W. Anderson, Seattle, Wash.
Spokane	Sunset Airport	160		
WISCONSIN				
Manitowec	Ship Yards	400		
TERRITORY OF HAWAII				
Honolulu	Air Station	500	1,613,400	Hawaii Dredging Co. and Associates, Honolulu, Hawaii
Honolulu	Air Station	800	2,584,000	Hawaii Dredging Co. and Associates, Honolulu, Hawaii
Oahu Island	Fort Kamehameha & Hickman Field	550	1,717,000	E. E. Black, Ltd., Honolulu, Hawaii
Oahu	Navy Base	1,000	3,500,000	Hawaii Dredging Co. and Associates, Honolulu, Hawaii
Oahu	Schofield Barracks	342		
Oahu Island	Fort Kamehameha	43		
Cahu	Honolulu	127		
PUERTO RICO				
Cayey	Henry Barracks	30	108,300	Hillyer & Lovan, Jacksonville, Fla.
San Juan	Fort Buchanan	112	368,500	Hillyer & Lovan, Jacksonville, Fla.
Aguadilla	Borinquen Field	300	1,082,000	Hillyer & Lovan, Jacksonville, Fla.
Ponce	Juan Diaz Air Base	200		
San Juan	Fort Buchanan	88		

LETTERS from Readers on All Subjects

Facts, Opinion and Advice Welcomed Here

An Appeal for Warm Clothing

New York, N.Y.

To the Editor:

To go into a lengthy discourse on the merits of helping our friends in England defend democracy and the hardships which they are undergoing, would be taking advantage of your good nature.

I have just received an urgent plea from a dear friend of mine in England, in which he has literally asked me to "beg, borrow or steal" clothing of every description, particularly woolen sweaters, to be used by their Civil Defense Personnel. He has informed me that worn as well as new clothing of every description will be deeply appreciated.

I am therefore asking you, as a personal favor to me, and in the spirit of helping our brothers in England during these trying times, to contact all of your acquaintances and get together as much clothing as you possibly can, particularly woolen sweaters. All wearing apparel for men, women and children that is warm, clean and in good repair will be appreciated. They need it NOW.

Please send your contributions to—Lou Obstfeld—HELP ENGLAND DRIVE, 200 Hudson Street, New York, N.Y. By doing something in this direction you will be rewarded by the very action you take and its result, apart from anything else.

LOU OBSTFELD,
Markwell Mfg. Co., Inc.

To "Settle a Bet"

Akron, O.

To the Editor:

The answer to this question may settle an argument. What is it that causes the streaked discoloration on lath and plaster walls?

A lath and plaster wall eventually shows where the lath is and where the space between the lath is. This is most conspicuous on an outside wall. In the case of an inner partition this appearance is much less noticeable—often times none at all. What is the explanation?

R. D. CRAWFORD, Sales Engineer.

ANSWER:

It is generally agreed that the lath streaks on plaster are caused by a difference in the surface temperature over the wood lath and between the lath. Wood, being a better insulator than plaster, the inter-lath spaces are cooler and so more inclined to cause condensation of moisture. This slightly moistened condition causes dust to collect on these inter-lath spaces to a greater extent than on the lath strips. The result, over a period of time, is the streaked appearance which is so characteristic. The fact that these markings are not prominent on outside walls further confirms the above, since it is the outside walls that are cool from the escape of heat to the outside air. Inside partitions are generally uniform in temperature and the marking does not appear because there is comparatively little heat loss through them.—EDITOR.

We Help Another Student

New Albany, Ind.

To the Editor:

I want to thank you for the booklets you sent me. These booklets help me a lot as I am studying concrete engineering, and they answer a lot of problems that are not covered in text books.

I am a constant reader of the *American Builder* and think it is the best building paper I have read yet.

K. S. MYERS, Cement Finisher.

Realizes Socialism Menace

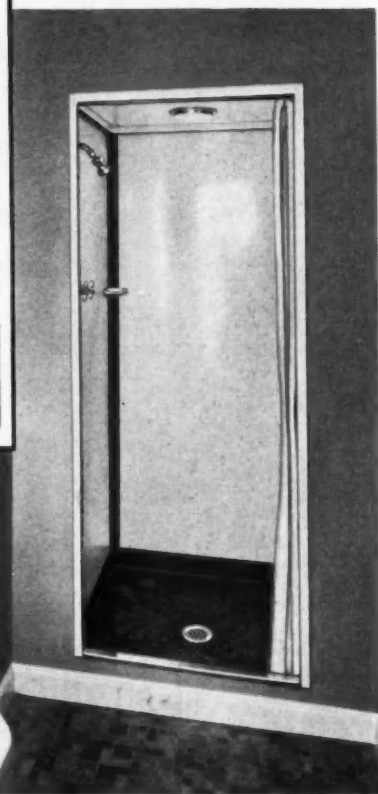
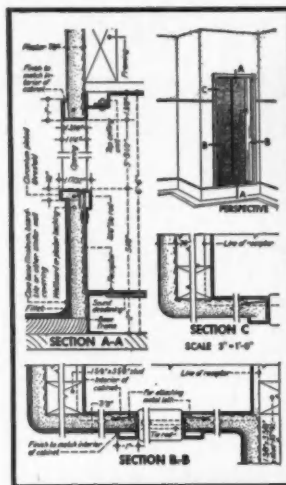
Washington, D.C.

To the Editor:

Permit me to compliment you on your article in the *American Builder* for February, anent Socialism, etc.

One is impressed more by the plain thoughtful truth of your brief statement than by the volumes of rotten propoganda with
(Continued to page 106)

How to Build WEISWAYS INTO WALLS with Entrance Adapters



● Weisway's *guaranteed leakproof* construction may easily be combined with genuine "built-in" beauty by the use of the Weisway Entrance Adapter Cabinet Shower. (Standard model illustrated.) The stiles are an integral part of the cabinet sidewalls, and with the header are finished in high temperature baked enamel to match interior of the cabinet. Concealed surfaces treated with durable, effective sound-deadening material. May be used with glass door, or curtain, as preferred.

While thus giving the attractive appearance of a built-in installation the Weisway structure itself is not affected by settling or shrinkage of surrounding wall and floor materials. With the Foot-Grip, No-Slip floor of vitreous porcelain, in attractive sea-shell pattern, Weisways are the most practical and dependable as well as the most effective solution of the shower bath problem in homes, clubs, institutions or industrial buildings.

Mail coupon for
catalog and detail
drawings.

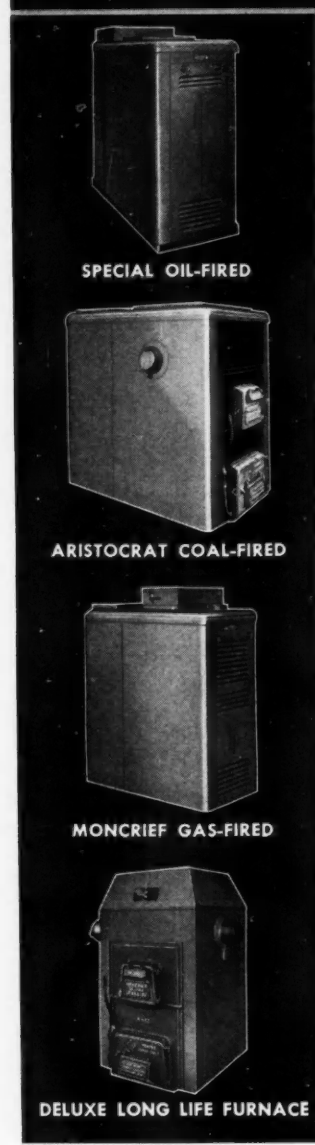


HENRY WEIS MFG.
CO. (Est. 1876)
301 Oak St., Elkhart, Ind.

Without obligation please send details and specifications on Weisway Entrance Adapter Model Cabinet Showers.

Name _____
Street _____
City _____ State _____

Big Values in **MONCRIEF** Winter Air Conditioners



*for
Low Cost
Homes*

ASK YOUR MONCRIEF DEALER

● He can show you a complete line of winter air conditioners, designed particularly for low cost homes and for utility rooms of basementless homes. Specially adapted for burning oil, gas or coal, units that are compact, styled right up to date, and including everything that produces high efficiency, built for durability, and priced to give more comfort and service than you will find otherwise for the money. The Moncrief line is so complete that you are bound to find just the right unit for jobs of any size, at the right price. Also, we make the Aristocrat line of winter air conditioners, ultra modern and the most finely styled on the market.

Complete Line of Furnaces, too.

The widest range of types, sizes, styles and prices you will find anywhere—cast and steel heating units, round and square casings; also Long Life, with the 20-year guarantee. Be sure to investigate the great values you get in Moncrief.

Send for Literature

Do not hesitate to write for circulars illustrating the units in which you may be interested.



THE HENRY FURNACE & FOUNDRY CO.
3479 E. 49th STREET, CLEVELAND, OHIO

Letters—

(Continued from page 105)

which the public is today being bombarded. The inferences to be drawn from your article should aid in awakening our people from their lethargic state of mind, were it but possible to bring such thoughts to the general public.

The slogan "Tomorrow may be too late" is indeed true, but it is being used on behalf of the very forces which represent the true danger.

Were it not that I, like many other government employees, work under the club of dismissal, I would like to be of some use to the real American cause.

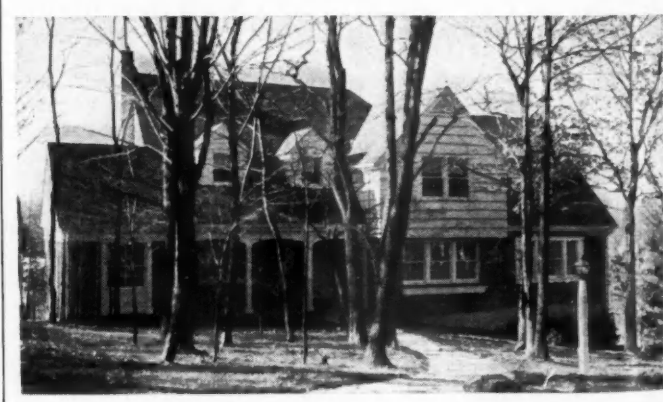
(Name withheld—Editor)

A Good Design "Marches On"

Bluefield, W. Va.

To the Editor:

In your June, 1935, issue you published working plans of National Plan Service design No. 755-B. They were seen by Mr. Douglas Cameron, connected with the E. M. Cameron Lumber Corporation of Albany, New York. In your February, 1938, issue you published a picture of his home built with only minor variations from the house as originally published.



Home Built from Design Published in American Builder as Shown.

We saw the picture of Mr. Cameron's home, and went to Albany where we were graciously received by him and his good wife, although we had not previously been acquainted. We looked over the house and found it every bit as nice as the picture indicated.

We then took the plans, made a few changes, and built our home accordingly. Here is a picture in which we think you may be interested. Apparently this plan appeals to lumber people.

C. I. CHEYNEY, Pres.-Gen. Mgr.
Bailey Lumber Company.

Porcelain Enamel Sheets for Sidewalls

Pittsburgh, Pa.

To the Editor:

I have enclosed a photograph of a new warehouse recently erected by our concern, finished with the new modern method of porcelain enamel application called the Hommelaya Process.

This process is the result of years of extensive research in our own laboratories and those of the internationally famous Mellon Institute of Industrial Research. Although the process is porcelain enamel, it differs from the more ancient porcelain enameling process by eliminating certain unnecessary extra enamel applica-



Example of Use of Enamel Siding.

tions and firing operations. Naturally the omission of these costly repeat operations renders the Hommelaya Process decidedly less expensive than ordinary porcelain enamel.

Developed especially for the type of construction shown in the enclosed photo, the Hommelaya Process of vitreous enameling produces the customary desirable porcelain enamel "Lifetime Finish," which has even greater adhesion qualities than more expensive porcelain enamel, is rust proof, fire proof, may be produced in any shade of color desired and, what is even more important, can be produced at a price competitive with inferior finishes.

A. J. MITTELHAUSER, Advertising Manager
The O. Hommel Company.

Has Put Security Campaign to Work

La Jolla, Calif.

To the Editor:

Congratulations on "Build NOW for Security!"

Enclosed are tear sheets of our first two weeks effort toward a building page, marked with the results of your campaign assistance. Notice how we have played up your 14 Reasons for Building Now.

- "1. You protect yourself against increasing rents.
- "2. Prices are right—may go higher.
- "3. Interest rates and financing charges are lowest in history.
- "4. You make low monthly payments like rent—but instead of going to the landlord, they pay for your own homes.
- "5. A home is your best protection against inflation.
- "6. Under the long-term FHA insured mortgage, or savings and loan plan, your monthly payments are guaranteed not to increase, no matter how much rents or living costs go up.
- "7. A home is a safe investment which will always have some market value, and can be lived in and USED.
- "8. A home continues to provide SHELTER and SECURITY no matter what happens to political or economic conditions.
- "9. Men with families are least likely to be drafted.
- "10. Interest and real estate taxes paid on a home are DEDUCTIBLE items from Federal and state income taxes.
- "11. A home of your own provides the kind of environment you want for your children.
- "12. Rent is an out and out expense, but payments on a home are like money in the bank, an investment in the future.
- "13. You get a better home and higher value for your money

(Continued to page 108)



CLASSIC "3"

Unbreakable ivory or walnut plastic cover. Long tarnish-proof brass tubes. 4 1/2". \$5.95

KITCHENEER

KS395. Short tube model in baked enamel. Kitchen or breakfast nook. 12 1/2". \$3.95

NOTRE DAME "3"

Unbreakable plastic cover. Brass tubes. Repeata-Tone. Interior light. 43 1/2 inches. \$9.95

There's no mystery about why many leading architects and builders choose NuTone Chimes instead of ordinary doorbells, for the houses they're putting up.

These Chimes are designed to beautify the wall of any room in the home. They're constructed for utmost resonance in the musical tones they sound. Two notes for the front door, one for the rear. They're easily installed, with no extra wiring needed. And priced for all incomes. You'll find NuTones as low as \$1.95, as high as \$29.50. An old house or apartment without a NuTone Chime is a pity. But a beautiful new house without one should be unthinkable! Send for Catalog 4023 D for complete line.



FRONT
DOOR



BACK
DOOR

NU TONE CHIMES, Inc.

CINCINNATI, OHIO

NEW YORK, 1150 BROADWAY • CHICAGO, MERCHANDISE MART
LOS ANGELES, 837 TRACTION AVE. • SEATTLE, TERMINAL SALES BLDG.

SPEED UP WORK
Mix 40% to 50% More

NEW CMC 3 1/2 NON-TILT!

Power Loader speed without its cost!



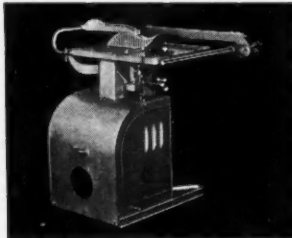
Waste no time—load while mixing. New, more compact design—lower charging height. Choice of power—optional husky air or water cooled engine. 100% Timken equipped. The best SMALL non-tilt mixer buy today.

The most complete line of small job mixers in the industry. Many models to choose from. A Mixer for EVERY job and pocket book. See new catalog.

NEW SPEED
NEW ACCURACY

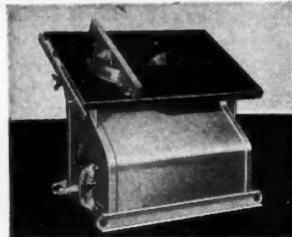
KOST KUTTER POWER SAWS

Take Work Shop Advantages Right to the Job!



KOST KUTTER JR.!

A precision tool. Built to fill the long-felt need among builders for a 10" precision circular saw. Speeds up work. Has 20"x27" tilting table—powerful 3.6-H.P. 4-cycle engine—many new conveniences.



KOST KUTTER SR.!

Unequaled for accurate high-speed sawing. Big 30"x48" tilt top table. All-steel welded streamlined—saw dust proofed construction. Powerful 6-H.P. air-cooled engine or electric motor. 1 1/2" saw. Also available, the big CMC Power Sawyer with 18" blade.

The new and bigger CMC line is shown in latest catalog. Mixers all sizes up to 28S, Hoe-type Mixers, Bin Batchers, Pumps, Hoists, Power Saws, Carts and Barrows. Write for FREE copy.

CONSTRUCTION MACHINERY COMPANY
Waterloo, Iowa

Letters—

(Continued from page 107)

than ever before. Home ownership costs, including low interest and low upkeep, are lowest in history.

"14. You protect your standard of living and fortify your future by building now."

Last summer you put out two publicity stories—"Peg Rental Costs through Home Ownership" and "Avoid Rent Boosts by Buying Now." They have been invaluable to me in writing publicity and advertising copy. Won't you send some more? Now, particularly, do we need them. Any suggestions you can make as to how we may better serve our community will be welcome.

JOSEPH BERTHELET, Advertising Manager,
"La Jolla Light."

Will Feature Kitchen Ideas

Oklahoma City, Okla.

To the Editor:

We happen to be one of your enthusiastic subscribers and readers, and naturally you were one of the first whom we would think of in connection with our latest brain child.

After talking with a great number of our local merchants, we have decided to give over three of our large display rooms to the exclusive use of displaying "Ideas for Kitchens." We plan to start an extensive radio advertising campaign by March 1st, inviting all the women of Oklahoma to come to our display rooms for kitchen ideas—whether they have in mind to redecorate, remodel or build a new home. We will have on display several different types of kitchen cabinets, innumerable gadgets and clever decorative ideas, time-saving devices and a large assortment of magazines, books and literature—suggesting kitchen floor plans and all the other ideas for kitchens we can learn about.

In other words, we hope to make the women of Oklahoma "kitchen conscious," and thereby create more business for all of us and a lot of good will for our firm in particular. We would greatly appreciate all the help you could give us on this idea, and we will give you full recognition in our display rooms for your co-operation.

W. P. ATKINSON,
"Builds Good Homes."

Reader Service Department Will Help

Anniston, Ala.

To the Editor:

Please advise me how I can secure plans for one of the homes shown in the December issue of *American Builder*. The home I am interested in is shown on page 33.

If you have a service whereby literature from manufacturers can be mailed, I would like very much to have anything pertaining to building a new home—plumbing, roofing, inside trim, etc.

Each issue of the *American Builder* is worn ragged in our home from the many trips we make from cover to cover looking for ideas.

CHAS. O'RORKE.

To Pass Along Constructive Facts

Chicago, Ill.

To the Editor:

You have on page 31, Sept., 1940, "Build Now for Security—10 Answers to Questions of Prospective Buyers Who Hesitate." We would like to have your permission to reprint this for mailing to our client list. Is this agreeable to you so to do? We shall of course give credit to you as the source for this material.

BENJAMIN F. BILLS, Chairman,
The Bills Realty, Inc.

Politics in Business?

Waseca, Minn.

To the Editor:

Exclude politics from a building book meant for *builders*, not *politicians*. We do not care for the opinions expressed by your editorial staff against increasing building under New Deal advancements.

FRANK CLASEN, Contractor.

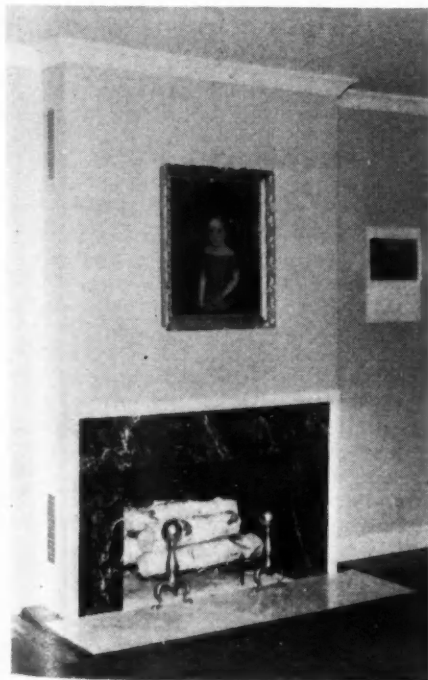


Prize Winning Fireplaces

A UNIQUE merchandising plan for stimulating interest in fireplace designs and for securing attractive photographs for advertising purposes is represented in the contest that was conducted by The Majestic Company of Huntington, Ind., during 1940. A contest form accompanied each Majestic Circulator Fireplace Unit that was shipped during the year, which offered a prize for the best photograph of a fireplace incorporating a Majestic Circulator Unit. All photographs were to be submitted by Dec. 1, 1940, the winner being selected at that time by a jury of architects, contractors, and members of the Majestic organization.

The photograph selected for the first prize was submitted by Harry F. Brown, an attorney of Guthrie, Okla. His fireplace was installed in his basement living room and was built up mostly of petrified stone, which he stated was gathered near Ada, Okla., and mixed with a number of other kinds of rock obtained from Colorado, New Mexico, Missouri, Arkansas, and California.

The contest attracted so many photographs of excellent fireplace design that the company decided to award a second prize to George A. Chatterton of Maple Bluff, Madison, Wis. His fireplace was of more formal type with a mantel and hearth of green and white marble salvaged from a discarded soda fountain and picked up at a second hand store. The trim is Curtis millwork Regency. The walls are grey-green with a ceiling of J-M panel board, and dark oak floor.



AT top of page: Fireplace of petrified stone from Oklahoma which won first prize in Majestic contest. To left: Second prize winning fireplace design came from Madison, Wisconsin.

BEST BY EVERY TEST

GRAND RAPIDS
Invisible
SASH BALANCE

STILL GOING STRONG
After 300 Year Test

"GRAND RAPIDS INVISIBLE" sash balances tested at Michigan State College Testing Laboratories, "operated smoothly, quietly, and easily, and held the sash in any desired position satisfactorily" after 108,644 cycles of operation . . . the equivalent of opening and closing a window once a day for 300 years. At the end of the test the balances "appeared to be good for a great many more cycles."

EASIER TO INSTALL
Unconditionally Guaranteed

Dependable performance is just one feature of the great new "GRAND RAPIDS INVISIBLE" sash balance. It's so easy to install — frames require no machining . . . no cuts in sash except stile grooves . . . no blocks to fasten on jambs. Sash open full length . . . balances are actually invisible. Unconditionally guaranteed when simple illustrated installation instructions on each carton are followed.



BACKED BY A COMPLETE PROGRAM

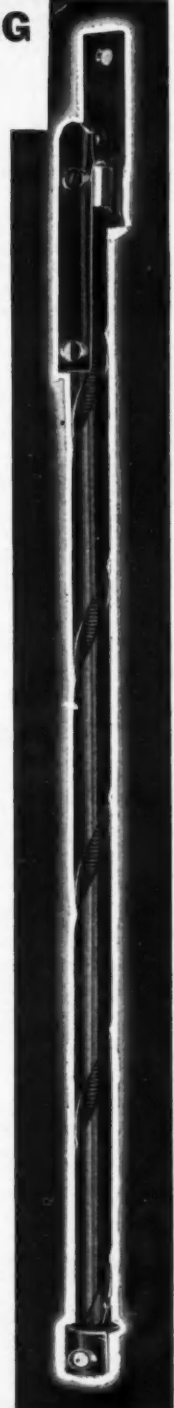
This year the "GRAND RAPIDS INVISIBLE" is being backed by the biggest advertising and merchandising program in "GRAND RAPIDS" history; a program that not only reaches architects, carpenters, contractors, and dealers through leading trade publications, but that includes carefully planned publicity, direct mail, and outstanding convention displays.

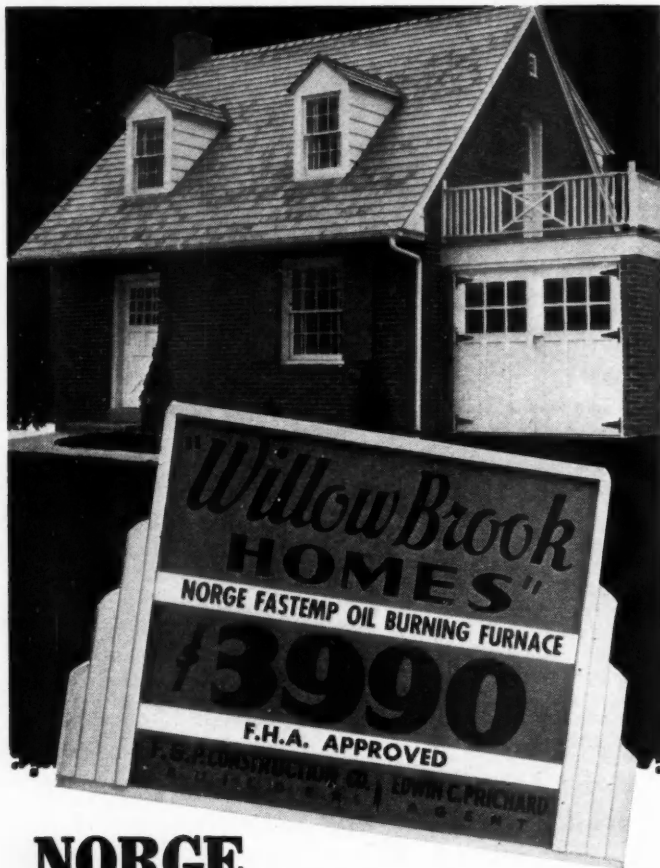
Send for new "GRAND RAPIDS INVISIBLE" catalog section 41-SB-1, with detail drawings of window installations with and without weather-stripping.

New and complete "GRAND RAPIDS" Sash pulley catalog "K" featuring narrow trim, standard and heavy duty sash pulleys also available.

GRAND RAPIDS HARDWARE CO.
GRAND RAPIDS, MICH.

"GRAND RAPIDS"
The Standard for 40 Years





NORGE FASTEMP FURNACES HELP SELL HOUSES!

Home owner prospects *know* the name Norge. They see it in national magazines, billboards, local newspapers; hear it on the radio. It stands for economy and reliability in over a million and a half homes.

And when F. G. P. Construction Co. and other builders install and advertise Norge heating equipment, they are cashing in on a good name that has great sales value.

Hundreds of project houses are being heated this winter with Norge Fastemp Oil-Burning Furnaces which compare in cost with heat circulators and old style furnaces, but are compact, handsome, amazingly efficient, absolutely reliable.

Send for booklet giving complete story of the great Norge heating line. It will show you how to have better heating, better house values and better profits.

☆ *Norge smaller furnaces come set-up, ready to place and connect.* ☆ *Excellent design features give compactness and installation economy.*

See NORGE before you buy!

NORGE HEATING AND CONDITIONING DIVISION
BORG-WARNER CORPORATION
12345 KERCHEVAL AVE., DETROIT, MICHIGAN

NORGE

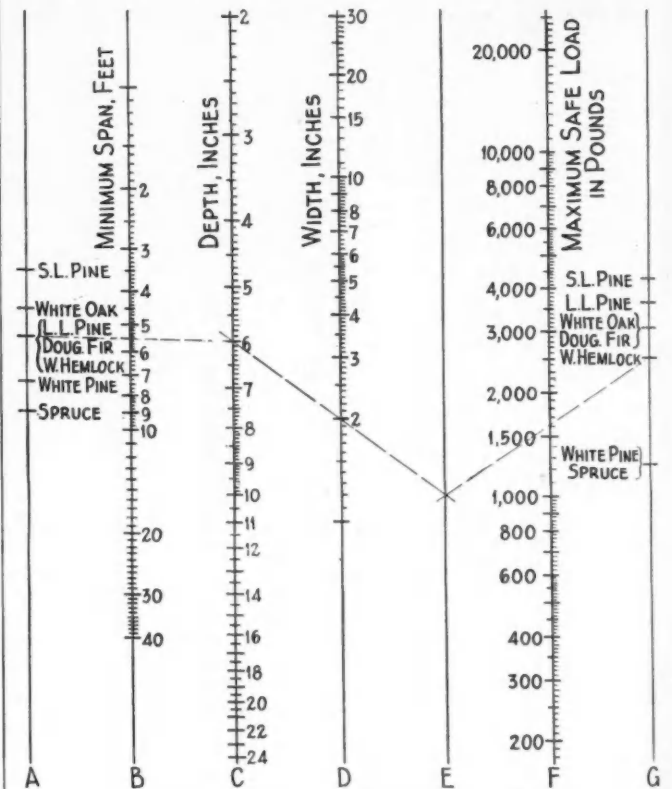
OIL-BURNING
FASTEMP FURNACES AND
WINTER AIR CONDITIONERS

PRACTICAL JOB POINTERS AND BUILDING DATA

Chart for Safe Strength of Wooden Beams

HERE is a chart that will be found useful by many readers for quickly selecting safe beams made of the ordinary woods such as shortleaf pine, white oak, longleaf pine, Douglas fir, western hemlock, white pine and spruce. The chart is based on data adopted by the American Railway Engineering Association for safe uniformly loaded rectangular wooden beams.

To use the chart, simply zigzag a straightedge across three times, or stretch a thread across three times, as indicated by the zigzag dotted line, and the problem is solved.



For example, it is desired to hold 200 lb. per ft. on a wooden beam of 2 in. by 6 in. western hemlock over a span of 5 ft. Will the beam be safe?

Run a straight line from the point in column A opposite "western hemlock" over to the depth 6 in. column C. The intersection with column B shows the minimum span to be 5.5 ft. The beam will therefore be safe as regards span.

Then from the depth 6 in. column C run a straight line through the width 2 in. column D and locate the intersection in column E. Then from that point of intersection run a straight line over to the point in column A opposite "western hemlock." The answer is found at the intersection with col. F, 1600 lbs.

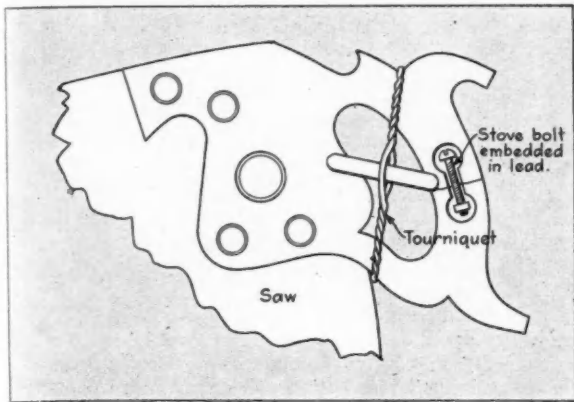
Since it is desired to hold only 5 x 200 or 1000 lb. on the beam, and since the beam will actually hold 1600 lb., it certainly is amply safe. In fact, the chart shows that a beam made of white pine or spruce would be safe under the load.

Inversely the chart may be used for finding any unknown factor or factors. If the kind of wood and the span are known, the first straight line through columns A, B and C gives the minimum depth of beam which must be used. If the width of beam is unknown, the line through the columns E, F, G is located next and lastly, the line through columns C, D, E gives the minimum width of beam in column D.

The width of the beam itself is included in the safe load given in column F.—W. F. SCHAPHORST, Newark, N.J.

Effective Saw Handle Repair

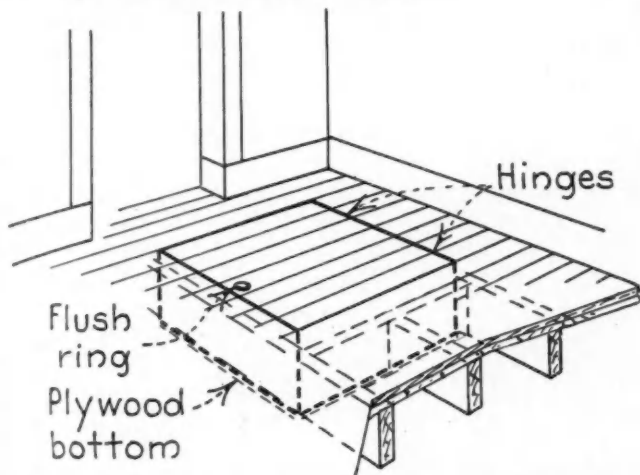
A SPLIT or broken handle on a hand or rip saw can be made as good as new by the following method. Carefully bore a half-inch hole on each side of the break and rout a connecting slot about 5/16-inch wide between them. Clamp the handle with a tourniquet, closing the break firmly. Run a nut on the lower threads of a 1/4-inch stove bolt and place it in the



BOLT imbedded in lead holds split saw handle.

cavity, the head in one hole and the nut in the other. Then, using a paper or clay dam at the bottom, fill the remaining space with melted solder or lead. After the metal hardens, it may be filed and sanded even with the surface of the wood, resulting in an extremely neat and efficient repair.—W. C. WILHITE, Carlinville, Ill.

Storage Under Closet Floor



IN EITHER new or old houses, a built in floor box will save space in closet for storage of rubbers and overshoes. The drawing shows how easily this can be done; it is not necessary to cut a joist if a divider in the compartment is all right or it can occupy space between only two joists.—JOHN LEE, Quinnesec, Mich.

* * *

Annual Sales Meeting of Wood Conversion Co.

ALL salesmen of the Wood Conversion Company recently attended the 18th annual sales meeting in Chicago, at which the company's sales plans for 1941 were presented, and many important phases in construction and selling of Balsam-Wool and Nu-Wood were presented and discussed. P. A. Ward, vice president and general sales manager, reviewed the past year and stated the volume was highest in the history of the company. One of the highlights of the meeting was a graphic presentation by C. C. Heritage showing the manufacture of Balsam-Wool. It was stated that the Balsam-Wool Campaign for 1941 will emphasize the Double Values theme, which will feature the importance of Double Sealing, Double Moisture Barrier, Double Wind Barrier, Double Bonding and Double Nailing.

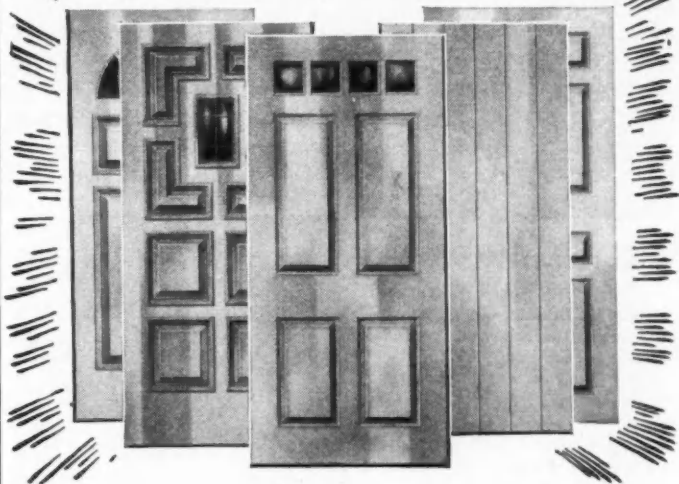
NOW IN EFFECT!

A U.S. Commercial

Standard for

TRU-FIT

Durable Douglas Fir Entrance Doors



The Fir Door Institute is the **FIRST** and **ONLY** door industry to establish U.S. Commercial Standards for its doors:

CS91-41 for Tru-Fit (Factory Fitted) Douglas Fir Entrance Doors and CS73-38 for Douglas Fir Stock Doors

● These U. S. Commercial Standards assure beautifully designed, well made, well finished doors of kiln-dried old-growth Douglas fir, *the wood that lasts longer!* Be sure to specify the Fir Door Institute "grade trade-marks" when you order. They are your guarantee of unsurpassed service and satisfaction.

Tru-Fit Durable Douglas Fir Entrance Doors come factory-fitted, scuff-stripped, packaged and trade-marked. They're ready to hang without excessive sawing and fitting. One of the 27 designs is exactly right for every home, large or small. See them today or write for free catalog!

* You can order all stock Douglas Fir doors pre-fitted at slight extra cost and grade-marked.

SEND FOR FREE COLOR CATALOG

FIR DOOR INSTITUTE, Tacoma Building, Tacoma, Washington

Please send me your free 4-color catalog of Douglas Fir Doors. (Check here _____ if you would also like a copy of U. S. Commercial Standard CS91-41.)

Name _____

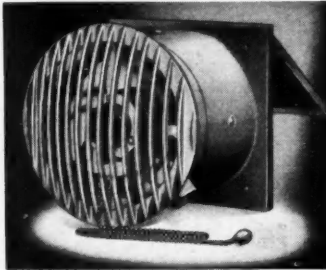
Address _____

City _____ State _____

NOW YOU CAN
End the "Grime Wave"
IN EVERY HOME!



... with a genuine ILG "Built-In" Kitchen Ventilating Fan—now available in complete range of sizes and prices.

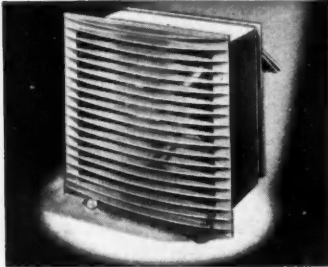
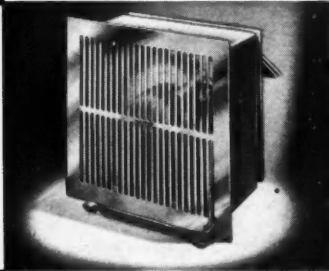


◀ **ILGVENT...350 C.F.M.**

... newest addition to ILG line—modestly priced—plenty of capacity for compact kitchens in modern homes. Telescopic cabinet... weatherproof construction... handsome streamlined styling... quiet, trouble-free operation.

ILGETTE...500 C.F.M. ▶

... for medium-size kitchens. Telescopic cabinet and all other ILG features including self-cooled miracle motor that "breathes"—never "gums-up" from contact with foul air. Like all ILG "Built-In" models, unit becomes permanent, integral part of kitchen wall.



◀ **ILGAIR...1000 C.F.M.**

... for larger kitchens. Note new horizontal line treatment of mirror-finish aluminum grille, which, after installation, conceals fan mechanism. Either Ilgair or Ilgette may be equipped with auxiliary motor in place of pull chain for complete automatic operation by electrical wall switch.

Nationally Advertised to able-to-buy families throughout America. Write today—get details on ILG's new price schedule (F. A-1040) and 1941 program that helps you make money.



ILG ELECTRIC VENTILATING CO.
 2852 N. CRAWFORD AVENUE, CHICAGO, ILL.
 Offices in 43 Principal Cities



Vitalized
VENTILATION
AND AIR CONDITIONING

* AIR CHANGE...NOT JUST AIR MOVEMENT!

Demountable House Demonstrated

ONE of the recently added requirements for adequate housing of the "men behind the men behind the guns" is the feature of *demountability*. While preparing for war, our hope is the restoration of peace, and when that hope is realized it is easy to visualize "ghost" towns around some of our present day chemical and munitions plants.

To meet this situation the U. S. Coordinator of Defense Housing has asked that production efforts be pointed in the direction of houses that after the period of national emergency might be economically removed to seashore or countryside for other years of peaceful service.

A convincing demonstration of the practicability of this type of construction was recently staged in suburban Washington before a large group of officials including representatives from every important Government agency interested in the subject of housing.

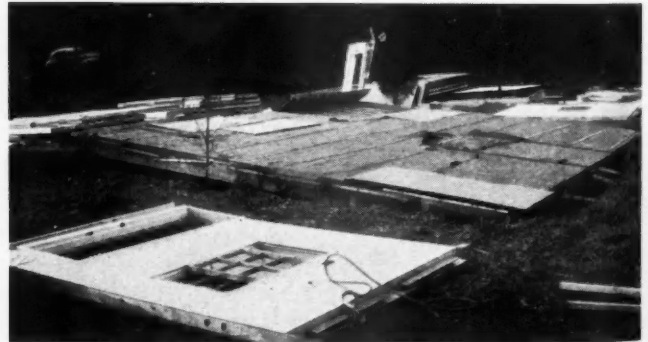
Built and erected by Jacques Willis, of the Willis-Way Construction Company, Chicago, the house consists of prefabricated floor, sidewalls, ceiling, and roof, all in panel form, that are erected within a working day to produce a house that is strong, warm, and pleasing in appearance.

Besides the speed of erection, its chief asset is complete absence from dampness, making possible the immediate occupancy of the house. As a matter of interest, the living room of this demonstration house was completely papered within six hours after the erection process began.

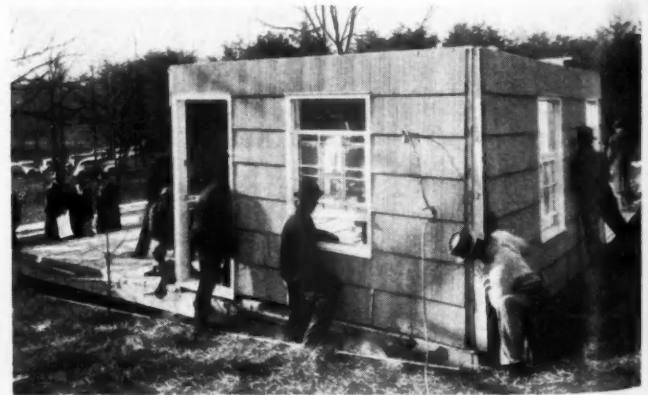
The light studs are bonded with waterproof glue to the inner walls of Douglas fir plywood wallboard and to the outer layer of plywood sheathing, forming full length wall sections that are in reality a series of box beams of phenomenal strength—yet they are light in weight, so they can be readily handled by a crew of four men.

A better idea of this "sun up to sun down" house is portrayed in the accompanying series of photographs:

9:30: Precut sills and floor joist were set the previous day and covered with floor panels of prefinished, "V" jointed T & G oak flooring, all of which is protected during erection process by heavy building paper. One unsecured floor panel is visible in far corner showing the plywood subflooring and the 1 x 3 strips to which the flooring is nailed, and which in turn are nailed to the floor joist. End joints of floor panels appear only under partitions and



THE START: 9:30 a.m.; sills and joist set previous day.



9:50: Wall panels going up.



10:10; Partitions are added.

joints parallel to the direction of the flooring are indiscernible. In the foreground can be seen the linoleum covered plywood panel which is to become the kitchen floor.

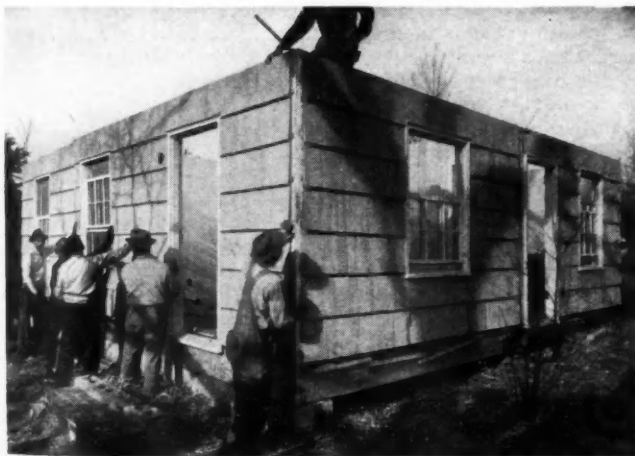
Complete wall and partition sections are ready for assembly and in the background ceilings and roof panels are visible.

The hole in the center of the floor is provided for the furnace. 9:50: The kitchen walls are being "dovetailed" together by the aid of a plywood spline which provides a strong, rigid corner, yet when secured with double headed nails it becomes readily demountable.

The pot type oil burning pipeless furnace was slipped into the space provided during this interval and connected to the oil supply.

10:10: Twenty minutes later half the outside walls and more than half the partitions were in place. The plumber can be observed through the doorway preparing to set his fixtures and make con-

(Continued to page 114)



10:30 and 10:50; Enclosed and ceiled.



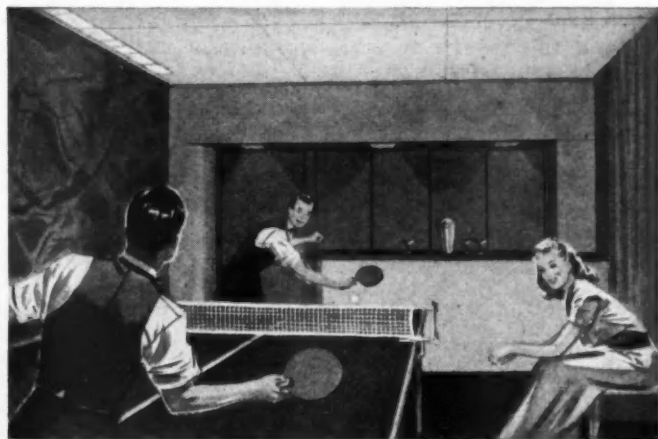
AN ARCHITECT DESIGNS
ONE MASONITE ROOM...

To do the work of two!

JERROLD LOEBL, Architect, Loebel & Schlossman, Chicago



When Jerrold Loebel, President of the A.I.A. Chicago Chapter, designed this dining room, he took advantage of the unusual versatility of Tempered Presdwood,* the Masonite* wood-fibre hardboard. Walls, ceiling and built-in furniture are fashioned from this remarkable material. The above view shows the walls of Tempered Presdwood painted a cool pastel green and curved to frame a panel of the same material upon which prints are mounted. Tempered Presdwood is a permanent board . . . grainless . . . with a marble-smooth surface that can be painted or enameled.



About face, and the dining room becomes a game room, complete with bar. On one wall is a photo-mural mounted on De Luxe Quartrboard,* another Masonite product. These boards are moisture-resisting. Properly applied, they will not warp, chip, split or crack. They can be cut or sawed to any size or shape. The bar is entirely Tempered Presdwood, its curved front painted. Folding waxed Tempered Presdwood doors conceal the back bar.



MASONITE
TEMPERED PRESWOOD

The Wonder Wood of a Thousand Uses • Sold by lumber dealers everywhere

*TRADE-MARK REG. U. S. PAT. OFF. "MASONITE" IDENTIFIES ALL PRODUCTS MARKETED BY MASONITE CORPORATION. COPYRIGHT 1941, MASONITE CORP.

MASONITE CORPORATION, Dept. AB-3, 111 W. Washington St., Chicago, Illinois
Please send FREE samples and full information about Masonite Tempered Presdwood.

Name _____
Address _____
City _____ State _____
(If you live in Canada, write Masonite Company of Canada, Ltd., Gatineau, Quebec)

The right sink helps you sell the house

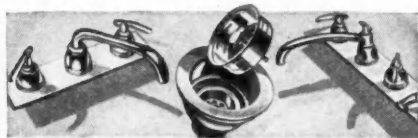


• The kitchen is an important room to a woman. And the builder who has installed a well-styled sink of FORMED IRON, porcelain enameled in immaculate white or a pleasing pastel color, has a *strong selling point!*

• You can tell prospects that the high-luster porcelain enamel cleans as easily as glass, yet it is so hard that a knife cannot readily scratch it. And it is acid-resisting *at no extra cost.*

• When these modern fixtures are porcelain enameled on ARMCO Ingot Iron, you have something else to talk about. For twenty-seven years the good qualities of this "world's standard porcelain enameling iron" have been nationally advertised to millions of people.

• Consider Formed Iron Ware for your next house. We'll be glad to see that you get specifications and prices. The American Rolling Mill Company, 671 Curtis Street, Middletown, Ohio.



SINK FITTINGS made of ARMCO Stainless Steel are bright, solid metal throughout. With no plating to wear off, they give lifetime satisfaction.



ARMCO INGOT IRON

Demountable House

(Continued from page 113)



11:50; Gable-end panels placed.

nections to the pipes which he installed in the wall section at the assembly plant.

The wall construction employs the structural and insulating value of the plywood and consists of "Plywall" grade of Douglas fir plywood on the inside and "Plyscord" or sheathing grade on the outer side. The plywood is securely bonded and nailed to the kiln dried studs which are placed 12 in. o.c. The outside walls are double coursed with red cedar shingles for additional warmth and minimum maintenance. The plywood, both sheathing and wall-board, is coated on both sides with aluminum paint providing a 3 fold advantage: (1) Its reflectivity definitely increases the insulating value of this already warm, wind resistant wall; (2) it provides a superior vapor barrier; and (3) acts as an excellent priming for paint, plastic finish or wallpaper.

10:30: A perfect closure without the use of saw or sledge. The two sections constituting the sides of the house are drawn tightly together by the use of a pipe clamp that is visible in the foreground and shown in use in the next picture. Shingles are readily slipped in place and secured to provide an unbroken wall surface.

10:50: With sidewalls and partitions in place, the next operation is the installation of ceilings—large plywood panels, glued and nailed to 1 x 3 strips which are put on like a lid on a box. Accurately fabricated in a jig, the 16 in. spacing of the strips serves as an excellent guide for the placing of the pre-cut ceiling joists (see next picture), to which they are subsequently nailed.

11:50: Ceiling joists have been secured and the next operation is the erection of gable ends which are handled in two sections, fastened together in a horizontal position and raised as a single unit.

12:50: Roofing panels prefabricated under shop conditions are lifted into place and secured. In the shop application of the shingles, those occurring at a panel joint were not nailed but



12:50; Roof panels go on.



Completed Willis-Way home as erected in one day at Bethesda, Md.

slipped out and kept in proper rotation so as to facilitate their application in the field.

The roof was virtually completed by five o'clock and the performance time would have unquestionably been even better if it had not been for the numerous visitors who inadvertently impeded the progress of workmen.

Kitchen cabinets, sink and plumbing equipment were immediately installed—and the single piece of linoleum floor offered no fitting and cutting problems because it was shop applied onto one large plywood panel.

The aluminum primed plywood walls may be painted or enameled to present a straight, continuous wall for the panels have been joined together by the use of a phenolic resin into virtually a single sheet.

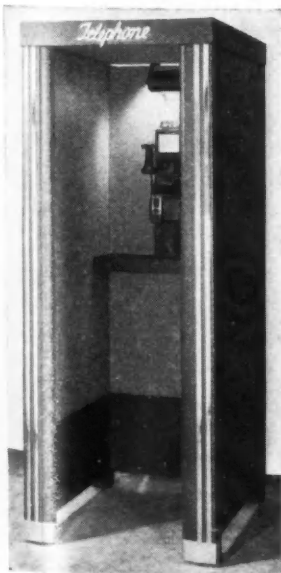
Finishing touches were added the following day—including the prefabricated entrance way, blinds, downspouts and gutters, corner trim, etc., and the finished effect surely speaks its own story—a strong, warm, dry house, with the added feature of demountability yet conventional in appearance—a distinct asset to any countryside and an important link in our program of housing for national defense.

* * *

Acoustical Telephone Booth

A NEW acoustical telephone booth, especially adapted for use in hotels, banks, stores, and other public telephone installations, has been added to the line of Acousti-Booths offered by the Burgess Battery Company, Chicago. Like previous models, the new one has no doors, yet gives complete quiet and privacy. The walls and ceiling of the booth are designed like modern auditoriums and radio stations—acoustically lined to blot up stray noise and create a "zone of quiet" within the booth.

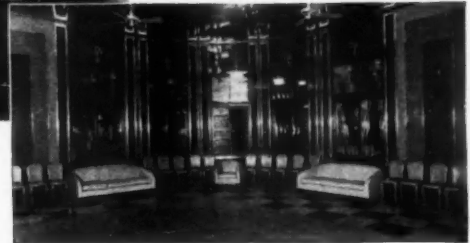
This new Model 205 is wrinkle-finished and trimmed in chromium stripes, and harmonizes with paneled interiors and straightline backgrounds. A companion model, No. 206, introduced at the same time, presents a streamlined appearance, with rounded corners, and with the front and side in one piece. The booths are available in several attractive color combinations and include shelves, electric light fixtures, and telephone mounting panels. Over-all dimensions are: height 79 $\frac{3}{4}$ " ; width 31" ; depth 38" ; net weight approximately 275 lbs.



New Burgess Acoustical Phone Booth.



Miracle
Walls
by
TYLAC



to

SPEED UP SALES

The smart, modern appearance of TYLAC walls appeals to every customer. In new building or remodeling, whether it is a small home in the suburbs or an enterprising business on Main Street—TYLAC offers the correct color combinations and designs to suit your customers' own particular tastes.

TYLAC is in full panel* sheets—plain panels—horizontal and vertical scored designs—tile patterns... a wide array of lustrous colors... colorful trims in 3 basic patterns... stainless, non-corrosive metal mouldings. The TYLAC LINE is the COMPLETE LINE.

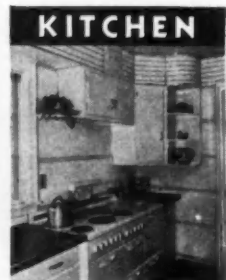
You, as a TYLAC dealer, have a complete choice of products for every interior wall covering need... bathrooms, kitchens, breakfast nooks, powder rooms, and recreation rooms of the proud home owner. Customer-inviting beauty for stores, offices, lobbies, lounges, refreshment centers, bakeries, theaters.

Send coupon today for samples and full information on "Opening the Door to More Sales with TYLAC."

* TYLAC has no salvage edges to be trimmed on the job.



THEATRE



KITCHEN

TYLAC COMPANY, Dept. B-3, Monticello, Illinois
Without obligation, I should like further information about TYLAC. I am a Dealer Contractor

Name.....

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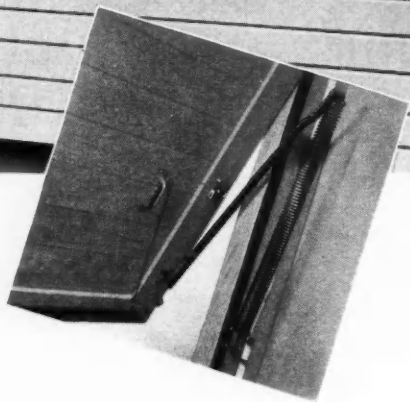
Junior

"OVER-THE-TOP"

LIGHT DOOR EQUIPMENT



Lifts vertical doors, up overhead in 3 seconds.



1. MADE FOR THE MASS MARKET
2. REDUCES SALES RESISTANCE
3. LOW COST INSTALLATION
4. LIGHT, STURDY CONSTRUCTION

Here is garage door equipment priced to meet the requirements of modest pocket-books . . . designed to give efficient overhead operation for lighter garage doors (weighing up to 150 pounds). Easily adapted to new or old folding-type doors that come under this weight limit. "Junior" equipment brings the simplicity and convenience of "Over-the-Top" Door Equipment within the reach of the mass market. Recommend "Junior" on your next home. Write for facts.

FRANTZ MANUFACTURING COMPANY
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FRANTZ

Guaranteed BUILDWARE

PRODUCERS TELL US—

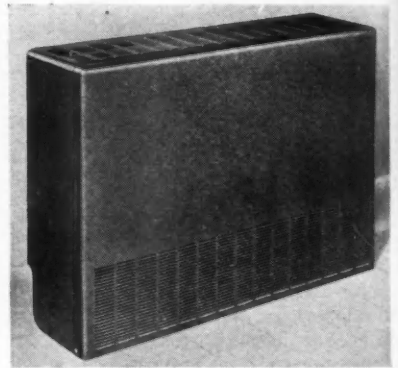
About Products, Personnel, Plants

Cabinet Unit Heater

A HEATER which incorporates quiet blower fans, motor and heating coil in one unit, to be used in conjunction with a steam or hot water system, is being made by the Modine Manufacturing Co., Racine, Wis. This new cabinet unit heater is designed for the heating of offices, lobbies, stores, showrooms, corridors—wherever quick distribution of heat combined with quiet operation is required.

Enclosures are stamped from 18 ga. furniture steel and sprayed on the interior with a heavy coating of sound-deadening acoustical-mastic. For rust protection, cabinets are factory bonderized after fabrication, and before application of the tobacco-brown wrinkle-finish. The heaters are made in five types of enclosures—floor, wall, inverted wall, ceiling, and recessed types—and in three capacities ranging from 105 to 450 square feet of radiation.

Cold air is drawn into the unit through the air inlet grille by the blower fans, is heated by the heating coil, and then is distributed into the room. Circulation of heated air kills cold drafts, breaks up air stratification, and provides uniform heating comfort.



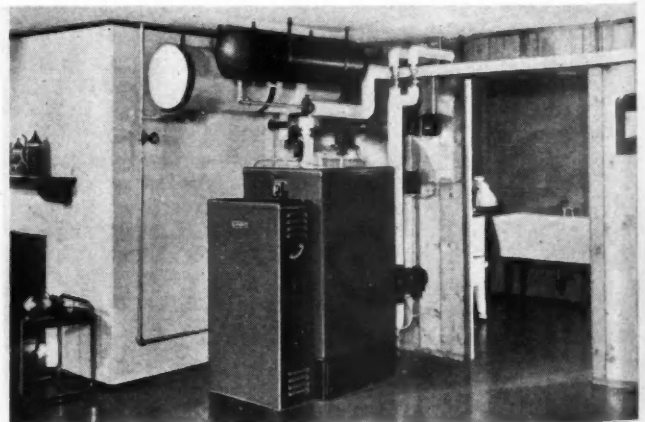
New Modine Cabinet Heater.

Small Home Boiler Burner Unit

DESIGNED especially for the new home in the low cost bracket or for the replacement market where dollars count, the "Conservoil Heating Unit" made by Crane Co., Chicago, offers efficient automatic heat on an extremely reasonable basis.

The burner which is furnished with the unit is mounted on a flange at the front of the boiler. It possesses the floating flame feature which enables the boiler heating surfaces to absorb the maximum heat by keeping the flame in suspension.

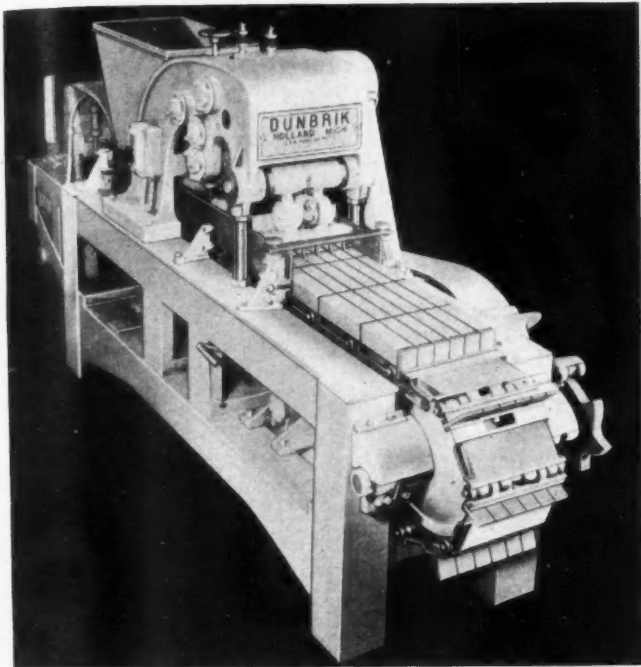
The boiler is compact in size and is provided with controls which give fully automatic heating and assure the maximum efficiency from intermittent firing. These controls include a room thermostat, a boiler limit control (pressure or temperature) and flame control or stack switch. An ample supply of hot water for domestic use is assured by a 66 gallon trombone type coil heater which is furnished with the boiler.



Crane Co. New Boiler Burner Unit for Small Homes.

Improved Dunbrik Model

FOLLOWING its usual policy of designing equipment for versatility and usefulness, the W. E. Dunn Manufacturing Company, Holland, Mich., announces another forward step in the Dunbrik machine. This latest improvement enables the users of this



Improved Dunbrik machine.

machine to make veneering brick at a production speed of 24,000 per day. Thus it is now possible to manufacture a total of 18 sizes, besides the U. S. Standard size Dunbrik, on this machine.

Rock Wool Blankets with Vapor Barrier

THE Philip Carey Company, Lockland, Cincinnati, Ohio, has recently added a new product to complete its line of rock wool insulation—sealed blankets with approved vapor barrier on one side to resist condensation, and crepe kraft on the other side, completely enclosing them. They are available in three thicknesses—thick, medium, and thin—to meet all requirements of the trade.

The thick Carey blanket (approximately 3 inches) is 15 inches wide and 41 1/2 feet long, packed one roll to carton containing 50 square feet, the average carton weight being 60 lbs. The medium blanket (approximately 2 inches thick) is 15 inches wide and 62 feet long, and is packed one roll to carton of 75 square feet, the average carton weight being 70 lbs. The thin blanket (approximately 1 inch thick) is 15 inches wide and 103 1/2 feet long, packed one roll to a carton of 125 square feet, weight 80 lbs.

These blankets have the advantage of efficiency of insulation and easy, rapid installation. Because they have strong tacking flanges and are tailored to exact fit, they insure a job that will stay in place and will give maximum temperature control. They are applied with the vapor barrier to the room side and the crepe surface to the sheathing. The thin and medium blankets provide two air spaces in sidewall construction.

Other features of this product are permanence of application, complete sealing against vapor passage, fewer joints, more square footage per carton, less warehouse space required, crepe kraft breathing membrane support on cool or outside of blanket, ease of application, and prefabrication.



Stapling sealed blanket between joists before lath is applied.

(Continued to page 118)

You'd grab it quick-

IF WE OFFERED YOU THE EQUIVALENT OF THIS BOOK IN COLD CASH!

No. 41 CATALOG
just off the press
Write for your free copy now!

Get acquainted with the complete 1941 Hotstream line of Water Heaters, and give the homes you build or own that **EXTRA APPEAL** that means higher rents or faster sales. The Hotstream Illustrated Price Catalog is the **MOST COMPLETE BOOK OF INFORMATION** available—describing the most complete line of water heaters! It is **WORTH MONEY** to every **ARCHITECT, BUILDER, CONTRACTOR, REAL ESTATE OPERATOR** or **BUILDING SUPPLY DEALER** as an authentic, up-to-date reference on the science of water heating.

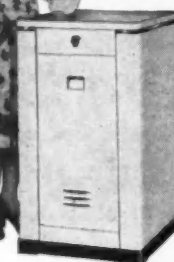
GAS-FIRED . . . 55 Styles and Sizes

In the Hotstream line you can find exactly the heater you want—capacities to meet any requirements—at the right prices. Performances guaranteed 5 to 20 years.



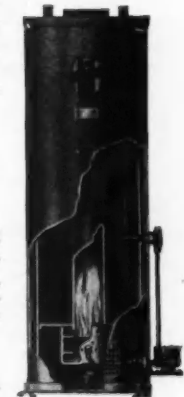
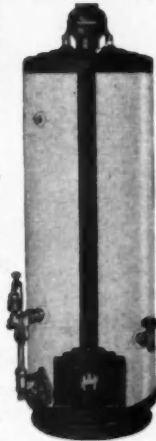
ELECTRIC . . . 23 Styles and Sizes

Designed for the modern home — Heavy insulation for greatest economy. Listed as standard with Underwriters' Laboratory, approved by TVA, REA, EH and FA, and the Utilities.



OIL FIRED . . . 2 Sizes

Gravity feed model that requires no electrical connections. Most economical way



to heat water . . . provides 1531 gallons (80° rise in temperature) for \$1.00.

Fill out and mail this coupon today to be sure you receive this valuable book.



THE HOTSTREAM HEATER COMPANY
8007 Grand Avenue, Cleveland, Ohio

Gentlemen:

Send me a free copy of the new 1941 Hotstream Illustrated Price Catalog, loaded with profit building suggestions and information, needed to sell every job right.

Name

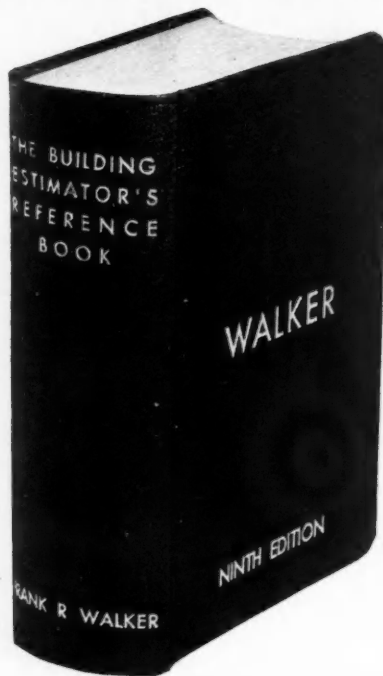
Address

City State

The Building Estimator's Reference Book

Will Help You

1. Increase Your Profits
2. Stop Your Losses
3. Prepare More Accurate Estimates
4. Save Your Estimator's Time
5. Perform Your Work at the Lowest Possible Cost



This New Guide contains just the information you need to prepare your estimates quickly and accurately. It gives the correct method of measuring and listing quantities from the plans, together with accurate material quantities and the labor hours necessary to complete any class of work.

Regardless of whether you do alteration, remodeling or repair work; or whether you build houses, apartments, commercial or industrial buildings—large or small—it contains just the information you require to prepare money-making estimates in the shortest possible time and with the least possible effort.

1,678 pages, illustrated, index, 4½ x 6½, flexible, \$10.00.



Vest-Pocket Estimator

Size 2½ x 5 Inches—Flexibly Bound

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This popular little book (not sold separately) contains 220 pages of up-to-the-minute estimating and cost data in condensed tabular form for ready reference. Fits right in the vest pocket and is always with you on the job or in the office ready to help you with your daily problems: Worth its weight in gold to every contractor and estimator.

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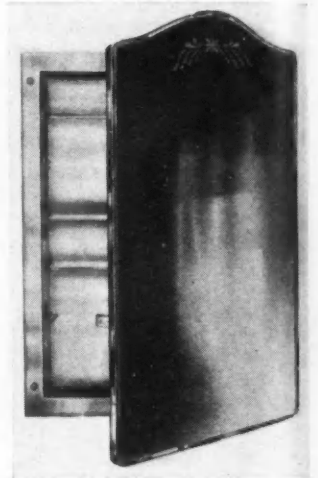
Producers Tell Us—

(Continued from page 117)

Bathroom Cabinets with Alumilite Finish

THE Miami Cabinet Division of The Philip Carey Company, Middletown, Ohio, in addition to its all-stainless-steel bathroom cabinet, is now offering a new line of cabinets in aluminum with lifetime "alumilite" finish. This gives a lustrous brilliance and corundum-like hardness which is highly resistant to abrasion.

These aluminum cabinets, with the new finish, will not chip, crack, craze or discolor, and the impervious surface prevents ingraining of dust and other foreign matter. There are four different models—two, with mirrors framed in polished, stainless steel, and two models having all-mirror fronts. All models have the improved lighting effects, including both tubular and fluorescent lighting fixtures, as well as an interior and night light which not only illuminates the inside of the cabinet, but also serves as a bathroom night light.



ALUMINUM cabinets with Alumilite finish.

Complete Unit Wood Window

A NEW complete unit wood window, designed to cut building costs and be of greater benefit to builders, is the Bilt-Well Superior unit window announced by Carr, Adams & Collier Company, Dubuque, Iowa. The frames are completely set up, and the windows factory-fitted and installed, with weatherstripping applied at the factory.

Featured in this window are the cushion-type spring weatherstrip offering superior insulation and long-life wear; snug contact between sash and weatherstrip eliminating infiltration so that there are no drafts or dust; easy, year-round operation because sash swelling and shrinking will not affect the smooth, easy sliding; permanent counterbalancing permitting windows to stay in position when opened little or much.

Both upper and lower sash can be installed and removed without taking off or loosening any of the weatherstrip. Since the windows are counterbalanced with positive acting overhead spring balances built into the frame, and due to the free, easy sliding sash, balances are required on one side only except on larger or extreme sizes. All wood parts are put through a special toxic treating and moisture retarding process.

The windows are manufactured of clear western Ponderosa pine, thoroughly kiln dried and accurately machined, and come in a wide range of stock sizes. Twins, triples and large multiple openings are formed out of single units without ordering them special. A choice is offered between a plain casing or a plain casing with attached mould.



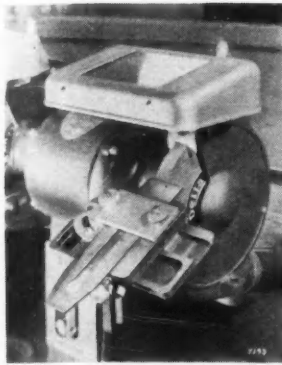
GROUP inspecting new C.A.C. unit window installation.

New Grinding Attachments

TWO new attachments for the widely used Delta grinders are offered by Delta, Milwaukee. They are a drill grinding attachment to handle the sharpening of drills $\frac{1}{8}$ " to $\frac{3}{8}$ " size, and a plane bit grinding attachment, illustrated. With this, the carriage table, which is readily clamped to the adjustable arm on the grinder, tilts so that the desired angle is obtained. This table is fully machined and on it rides the plane bit holder and clamp.

The plane bit is clamped as shown; an adjustable quadrant is located on the left side, which permits the accurate grinding of angle knives as well as assuring an accurate right angle position for straight knives.

A knurled nut below gives hair-like adjustment for the amount of the "cut" when grinding. The entire carriage and clamp may be lifted off the table, thus providing a convenient and accurate table for other grinding without the necessity of replacing the regular tool rest. Distance between clamp screws is $3\text{-}\frac{3}{16}$ ", affording ample space for wide knives as well as scrapers.



Delta attachment for plane knives.

Stripper Block Machine

THE new Korpak stripper block machine, offered by the Concrete Equipment Company of Holland, Mich., is an entirely self-contained unit consisting of mold box, power driven feeder and oscillating cores. It is easy to operate and maintain, and a change of sizes is quickly accomplished by merely hanging in a new mold box and cores.

The machine produces true, accurate tops by automatically troweling them, this feature also permitting the use of a wetter

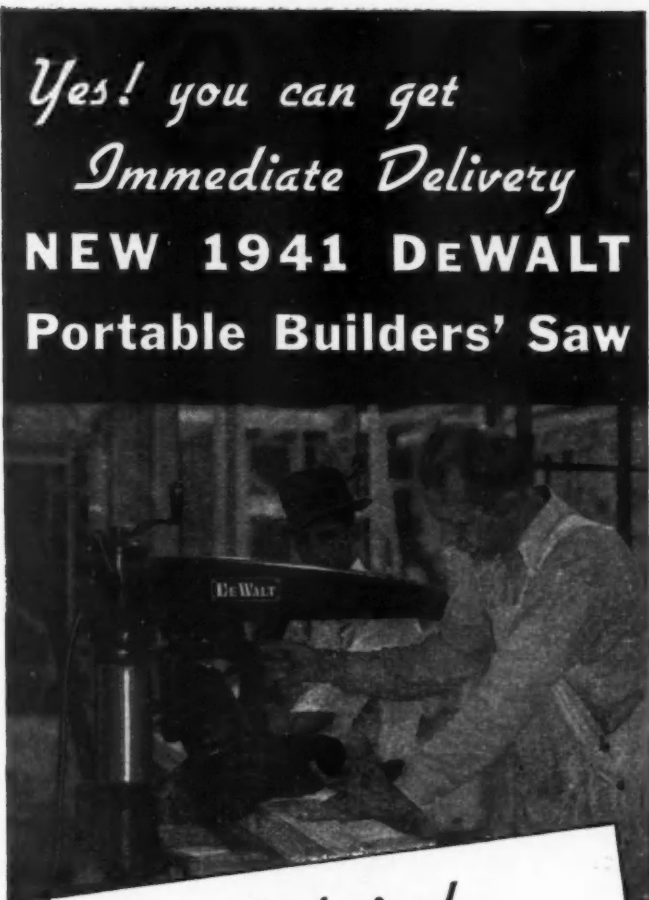


New self-contained stripper block machine.

mix than average. The principle of internal packing by the high speed oscillating movement of the cores produces block of high quality with all known aggregates.

The illustration shows a machine with finished block removed and feeder, hopper and troweller ready to return forward for making the next block. The only power requirement is a 2 horsepower electric motor installed in the frame of the machine.

(Continued to page 120)



Yes! you can get
Immediate Delivery
NEW 1941 DEWALT
Portable Builders' Saw

- Exclusive!**
- ★ FIBERGLAS MOTOR INSULATION does not "burn" . . . gives double protection
 - ★ SEALED GREASE-PACKED MOTOR BEARINGS . . . need no lubrication on the job
 - ★ BRUSHLESS DIRECT DRIVE MOTOR . . . no armature or gears to worry about
 - ★ BALL BEARING ROLLER HEAD for tireless operation . . . gets more work done
 - ★ BALANCED POWER on every cutting operation . . . fast and accurate

Try this new 1941 DeWalt and you'll get a portable builders' power saw which surpasses all previous levels of performance in the lower-priced field. It gives you the fastest . . . most accurate . . . and lowest cost method of cutting material on your job!

Let us help you earn greater profits! Call in your local DeWalt dealer for a demonstration on your job . . . make a thorough test of the finest builders' saw we ever built . . . give it a real trial on your work without obligation. Write, wire or 'phone . . .

DEWALT PRODUCTS CORPORATION
442 FOUNTAIN AVE., LANCASTER, PA., U.S.A.

Please send more information on the 1941 DeWalt Builder's Saw.

Name _____

Address _____

RYBOLT

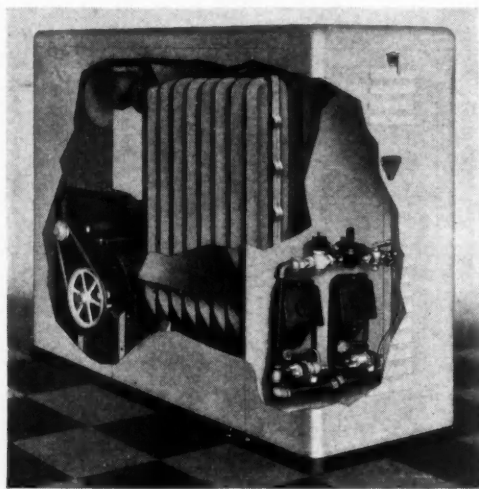
Even the Low Cost Home can have



Automatic Heating

● Modern automatic winter air conditioners are now so reasonable in price and so simple to install that they are well within the limits of the low cost home budget. Besides, through the FHA or on dealers' deferred payment plans such equipment can be bought on remarkably easy terms.

RYBOLT automatic heating units are available in a wide range of designs in cast iron or steel, with coal, gas or oil as choice of fuel. Their efficiency and convenience are matched by their low operating cost. For homes in still lower price brackets RYBOLT gravity furnaces, fired by coal, gas or oil, will give dependable and economical heating performance.



RYBOLT CAST IRON GAS-FIRED Winter Air Conditioner . . . Series CG

Completely new in design this RYBOLT cast iron gas-fired Winter Air Conditioner has many modern features which contribute high efficiency. Combustion chamber of durable gray iron castings of uniform thickness. Special flu economizer and scientific baffling promote economy of operation. Cabinet of smooth gray Hammerloid finish is inner-lined with a sheet metal baffle. Sturdy, simple and accessible to service. Compact neat design. 5 sizes.

Write for "The Complete Line" Folder



TRADE MARK

THE RYBOLT HEATER COMPANY

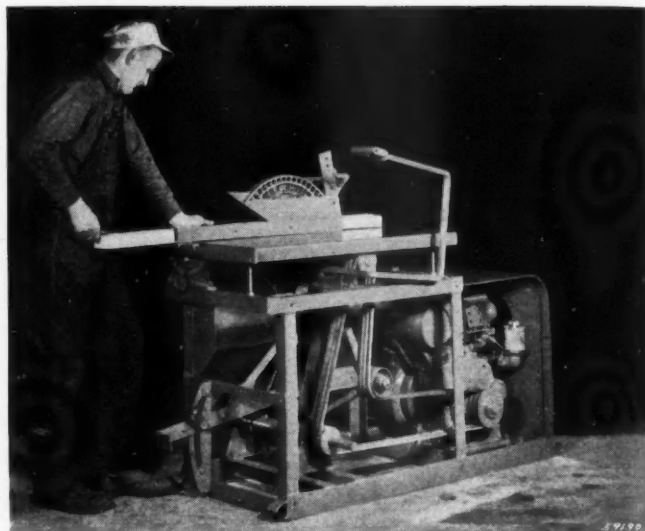
619 MILLER STREET . . . ASHLAND, OHIO

Producers Tell Us—

(Continued from page 119)

New All Steel Saw Rig

THE C. H. & E. Manufacturing Company, Milwaukee, has developed a portable power saw rig (design No. 31) of all-steel welded construction, weighing, complete with 5 horse power air-cooled engine or electric motor, approximately 575 pounds. The maximum diameter saw is 14", cross cutting capacity up to 1 x 16" lumber or 4 x 12" dimension. The table tilts to a 45 degree angle. Safety guard and power unit shield are standard equipment. The drive is by endless V belt. Arbor and counter shaft run on ball bearings.



New C. H. & E. All Steel Saw Rig.

Table size is 26 x 38", floor space required 28 x 59". Saw height is adjustable for thickness of ripping. Speed of arbor is 2700 r.p.m. Swinging arbor has foot and hand control. Additional attachments are offered to make this rig a 14" band saw or a 6" jointer.

Tells How British Celotex Keeps Running Amid Bombs

HOW the manufacture of building materials goes on in England almost without interruption despite the fury of Germany's aerial Blitzkrieg was graphically described recently by Colonel Angus McDonnell, vice-chairman of Celotex Limited, British Subsidiary of The Celotex Corporation, at a dinner given in his honor in Chicago by Bror Dahlberg, president of The Celotex Corporation and chairman of the English company.

Celotex Limited's London plant, hit by bombs eleven times since intensive air warfare began last summer, has continued to run 24 hours a day, reported Colonel McDonnell. The eleven direct hits and other interruptions from air raids caused a total operating time loss of only 22½ hours. Although several of the bombs which struck the plant turned out to be duds, others were incendiary bombs which would have caused serious damage had it not been for quick work of the plant's own fire squad. The plant also has a corps of 75 home guardsmen armed with rifles and machine guns.

"This is typical of hundreds of other English plants," said Colonel McDonnell. "Workers in all vital plants no longer flee to shelters at the first indication of bombing raids, but they stick to their posts until watchers on their roofs indicate that the bombing is getting rather 'thick' in that particular locality. During the day, life in England is practically normal because the average worker has extreme confidence that the English fighters can best the Jerries if they can see them. As far as night raids are concerned, they have lost the terror they first had; the attackers have to fly at high altitudes in order to avoid anti-aircraft fire, and their indiscriminate bombing has resulted in the comparatively low figure of 30,000 civilians killed in a population of 44,000,000."

The uninterrupted volume of Celotex board flowing from the

London plant has played its part in the Battle of Britain and has also been used in the construction of field hospitals and hutments in the Egyptian campaign, according to Colonel McDonnell. Because of its insulating value it affords protection against the intense heat of the desert. There is also heavy demand for the board in England because of its use by the government for army huts and lining air raid shelters, and for the quick repair of damaged buildings. In fact, except for special orders, Celotex is now reserved exclusively to repair air raid damages.

"Selling fibre board in England is no longer a question of salesmanship," he said, "but a matter of priorities." Most English plants, which formerly obtained wood pulp from the Scandinavian countries, have turned to Canada and the United States for raw materials. Celotex Limited has always obtained its raw material, sugar cane fibre, from this country.

Big, bluff, Colonel McDonnell recently came to the United States from London on a mission in connection with other war-time manufacturing. He came to Chicago to confer with Mr. Dahlberg on plans for expanding the Celotex plant in London.

Colonel McDonnell is no stranger to America. He came from England to Texas in 1900. After two years of cattle-punching, he worked on railway surveying and construction as axeman, foreman, and finally as a sub-contractor in Virginia, West Virginia, and Kentucky. He then moved to Canada where he became managing partner of a firm of railroad contractors, which, among other things, built the Canadian Pacific's irrigation system in Alberta, the harbor at Victoria, British Columbia, and several hundred miles of railway for the Canadian Pacific and Canadian Northern railways. After serving in the World War as second in command of Canadian Railway Engineers, he entered business in London and was a member of Parliament from 1924 to 1929.

At the dinner for Colonel McDonnell in Chicago were several men associated with the founding of Celotex 20 years ago, including Carl G. Muench, one of the founders and a vice-president; Oscar Reum, president of the Zander-Reum Company and the third Celotex Stockholder, and John Irwin, formerly of Irwin Brothers, both of whom played an important part in the early financial history of the company.

Former Universal Atlas President Honored

AT its 37th Annual Dinner in Washington on Feb. 19, the American Concrete Institute awarded a certificate of honorary membership to B. F. Affleck, retired, former president of Universal Atlas Cement Company. In the long history of the Institute, only twelve people have previously been selected for honorary membership which, according to the by-laws, is conferred upon "a person of eminence in the field of the Institute's interest or one who has performed extraordinary meritorious service to the Institute."

Mr. Affleck attended the Institute's first convention in Indianapolis in 1905, has taken a continuous active interest since then, and served two terms on the Board of Direction.

Ralph Winslow New Advertising and Publicity Director for L-O-F

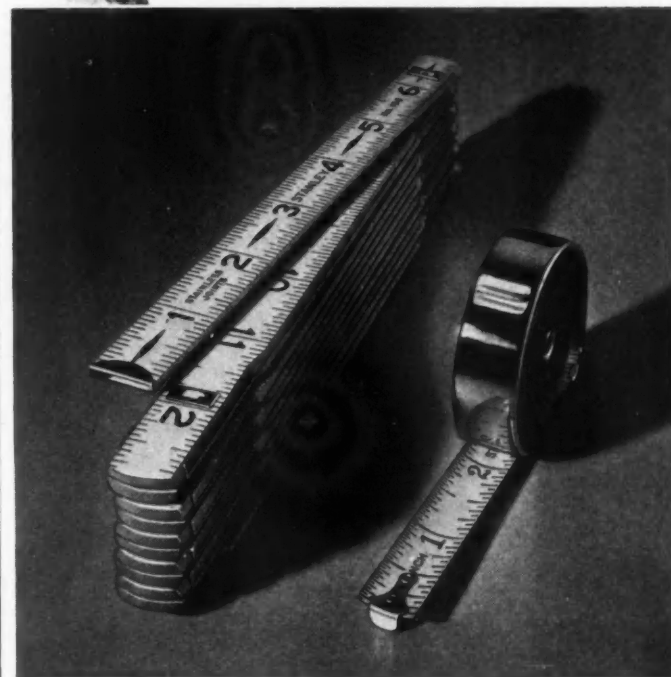
THE Libbey-Owens-Ford Glass Company, Toledo, Ohio, has announced that Ralph Winslow, former assistant advertising manager of the Armstrong Cork Company, Lancaster, Pa., has accepted the position of director of advertising and publicity. Mr. Winslow fills a vacancy created by the resignation of C. K. Matson, public relations director, who is leaving for New York City where he will continue public relations counsel activities.

After graduating from Indiana University, Mr. Winslow did newspaper work, followed by publicity work with First National Pictures, Inc., and then with Ketchum, Inc., for whom he handled public relations activities in Pittsburgh and other parts of the country until 1930. He then was placed in charge of advertising for the Insulation division of Armstrong Cork at Lancaster, and seven years later was promoted to assistant advertising manager of the entire company.

In this work Mr. Winslow obtained a broad contact with the building materials, packaging and general industrial fields, and wide experience in general consumer advertising, radio and dealer service in the building materials field. This provided an ideal background for the type of advertising experience required by Libbey-Owens-Ford, the Armstrong Cork Company having a diversity of products that enabled Mr. Winslow to work in every branch of advertising activity.



GIVE ME A
STANLEY RULE
EVERY TIME!



No. 106 "Green End" ZIG ZAG RULE

New worthwhile improvements! Large, easy-to-read Gothic figures, stainless joints, improved finish! New Stanley white lacquer provides a protective coating that makes any measurement easy to read. 6 foot length, graduated all edges for convenience and accuracy. Also made with figures 1, 2, 3, etc., beginning on inside of rule—No. 106F.



No. 6386 Direct Reading PULL-PUSH RULE

Direct reading feature is handy for inside measurements; red indicator on case points to exact measurement when case and blade butt against work. No chance for error. Flexible-rigid for straight measurements, circumferences and irregular shapes. 6 foot black and white steel blade, nickel plated watch size case.

SIXTY-FIVE YEARS of rule-making are behind every Stanley rule. The approval of generations of skilled craftsmen proves that these Stanley Rules of today have the quality you want in an accurate, long-wearing rule. See them at your hardware store, and write for Catalog 34, which describes the complete line of Stanley Tools.

STANLEY TOOLS

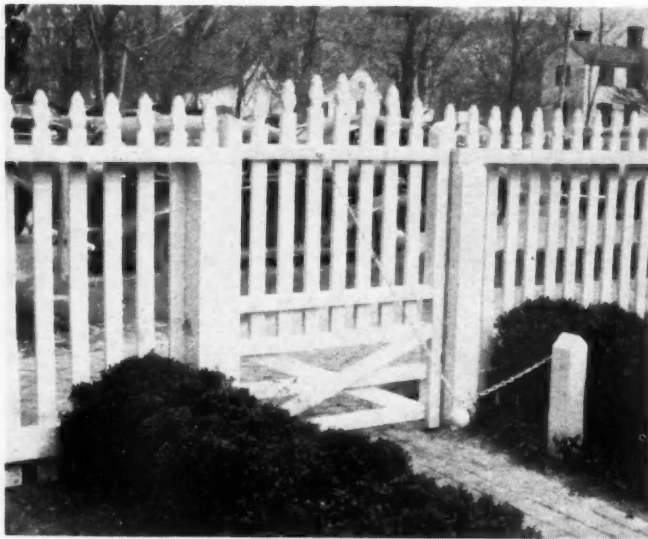
Division of The Stanley Works, 133 Elm St., New Britain, Conn.

THE TOOL BOX OF THE WORLD

Williamsburg Fences

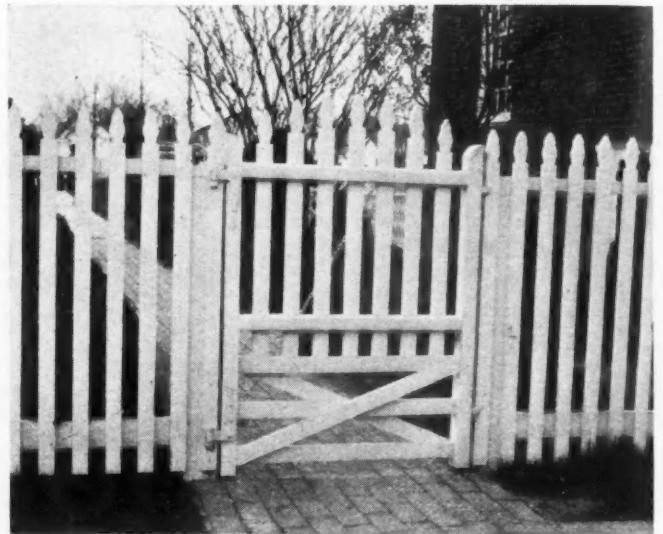
Photographs and Measured Drawings Present These Graceful Home Accessories

THE restored Colonial city of Williamsburg, Va., is famous for its authentic and beautiful Colonial homes, public buildings and other structures. These have been extensively illustrated in this and in other pub-



THE WYTHE HOUSE FENCE above would grace any American home.

lications of architectural and building interest. But little mentioned are the fences, trellises, lampposts and other details that contribute so much to the beauty of the community. As in women's dress, so is it also in things architectural; it is the accessories quite as much as the larger features that build up the effective ensemble. Lawn and garden structures of a decorative character are the accessories that complete the home picture. *American Builder* has obtained a special series of photographs and detailed drawings of many of the most attractive Williamsburg fences, the first of which—the front picket fence of the Wythe house, where George Washington made his headquarters before the siege of Yorktown—is shown here.



Pickets are 2 3/8" wide, 4' 3" long and are spaced 2 1/2" apart.

EVERY BUILDER CAN SAVE MONEY with this Tool



DELTA MFG. CO.
INDUSTRIAL DIVISION
656 E. VIENNA AVENUE, MILWAUKEE, WIS.

It cuts 3/4" stock—rips to center of 50" panel and joints 1/2"x6" wide. It will save time, money and labor in your shop

or out on the job—enable you to handle special millwork and quickly pay for itself.

OFFERS YOU MANY ADVANTAGES

Here are some of the features that make this the outstanding combination unit on the market: *No interference* between saw and jointer. Either machines may be used singly, or both may be used together, by one man or two, with ease and facility. *Compactness*—both machines in our combinations are driven from below BY THE SAME MOTOR. *Lower Power Cost*—Since both machines are driven from the same motor, not only is the cost of an additional motor saved, but the running cost is generally lower than with two separate motors. *Portability*—In spite of its large capacity, this combination unit is so compact that it is used as portable power unit for many outside jobs, as well as being used anywhere in the shop where it will best suit the job. Many contractors load it on a truck and take them right to the job. *Maximum Efficiency*—Users who own these combination units claim that they can perform 80% of all common woodworking operations on their machines, and at savings from 25% to 50% in time.

SEND FOR CATALOG

It gives prices and descriptions on the full line of Delta band saws, circular saws, sanders, jointers, shapers, mortisers, and scroll saws. Tells you how to take advantage of low-cost power tools to increase your profits.

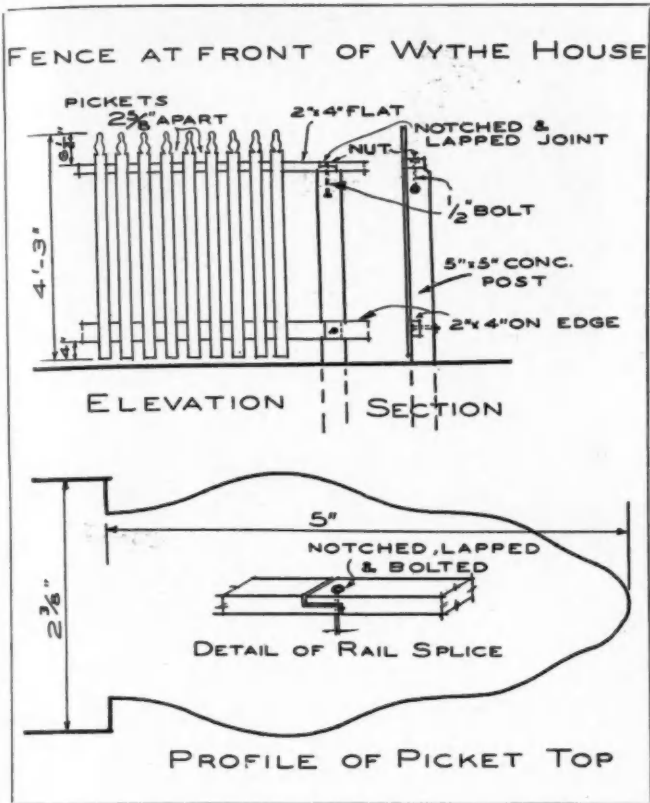
Delta Mfg. Co. (Industrial Division)
656 E. Vienna Ave., Milwaukee, Wis.

Gentlemen: Please send me the new 1941 Delta Catalog giving full details on the Delta Tilting Arbor Saw and other Delta low-cost tools.

Name

Address

City State

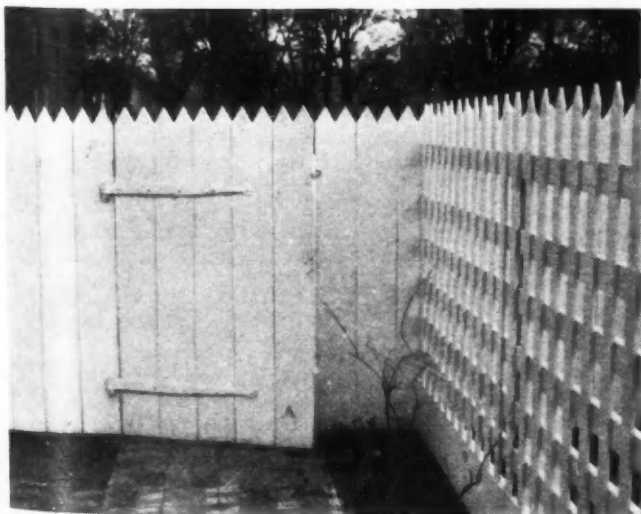


TWO BY FOUR STRINGERS are notched, lapped and bolted to 5" x 5" concrete posts. Williamsburg fences are not only in finest Colonial tradition but are very substantially built.

It should be noted that the Williamsburg fences are not only authentic in their Colonial design and beautiful to look at, but unusually well constructed. As the typical detailed drawings on this page show, the mainposts are of 5" x 5" concrete poured in a rough board form so that its texture looks like wood. At the time of pouring, bolts are imbedded, to which the 2" x 4" stringers (full size) are attached.

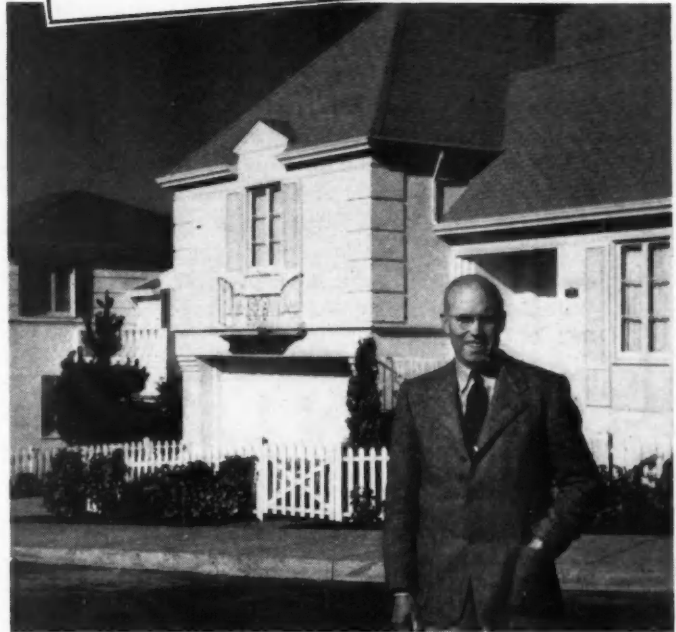
The charming Wythe house front gate is swung by a ball and chain attached to a concrete post. It has hand-wrought, L-shaped hinges. The pickets are 2 3/8" thick and 4' 3" long, spaced 2 3/8" apart.

The second fence illustrated below and on next page is a
(Continued to page 124)



COLONIAL BOARD FENCE—rear of Wythe house. Gate is hung on large hand-wrought strap hinges.

Mr. Stoneson knows
what home-owners
want



Here is Ellis Stoneson of Stoneson Brothers, in their recent development—Lakeside, College City, San Francisco,—"A City Within a City."

In the past three years Stoneson Brothers, San Francisco, have built and sold 700 homes. They use Western Pines for exterior and interior trim, doors, windows, and shutters. In every house there is a room with Knotty Pine paneling. Says Mr. Stoneson—

"Western Pines can be readily adapted to every architectural design."

WESTERN PINE ASSOCIATION

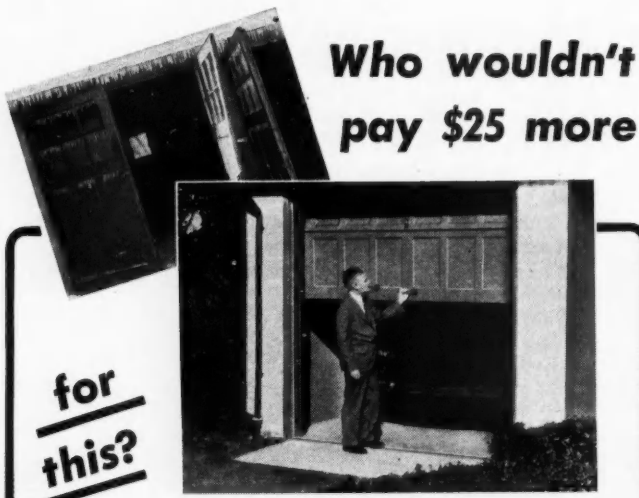
YEON BUILDING.



PORTLAND, OREGON.

* IDAHO WHITE PINE * PONDEROSA PINE * SUGAR PINE

* These are the Western Pines



Look around you anywhere and you'll see plenty of garage doors that look like the horrible example at top.

For only \$25 more you can have Stanley "Roll-Up" . . . the finest garage door equipment. It's easy to install, and trouble-free for the life of the garage.

Try one on the next house you build. It will help the sale. You can get it from your regular dealer. Write for descriptive folder. The Stanley Works, New Britain, Connecticut.

STANLEY

TRADE MARK

HARDWARE FOR CAREFREE DOORS

**"Automatic"-
CONCRETE CURING**

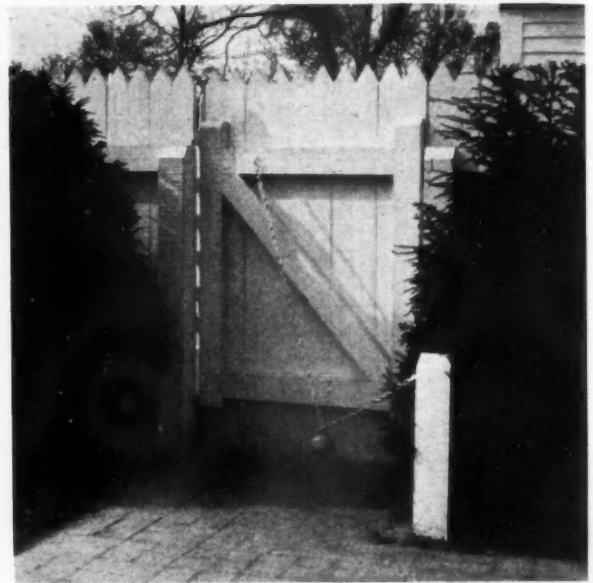


SEE

. . . how the tough, waterproof covering of SISALKRAFT retains the natural mixing water in the slab—how it protects the finished surface from freezing, dirt and debris.

SISALKRAFT is the one best building paper . . . and low in applied cost.

The SISALKRAFT Co., 205 W. Wacker Dr., Chicago, Ill.
New York San Francisco



SUBSTANTIAL GATE with ball-chain closer. Note wood texture of concrete post at left.

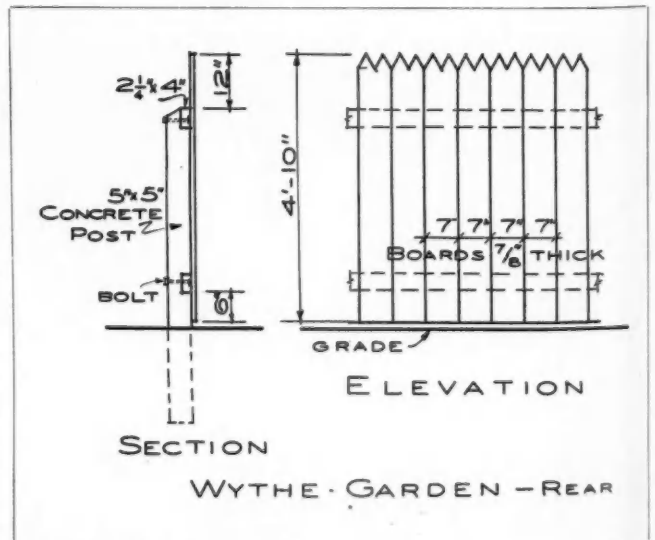
Williamsburg Colonial Fences

(Continued from page 123)

tight board fence surrounding the garden at the rear of the Wythe house. The remarkable feature of this fence is that it surmounts its utilitarian use to remain very attractive. In the illustration, the board fence is joined by a slatted fence which encloses a chicken yard. This, too, has architectural design and beauty that is not usually found in a back yard.

The Wythe house board fence as detailed is 4' 10" high and is built of 7/8" boards 7" wide. The main supporting posts are 5" x 5" concrete with the stringers set into notches and bolted in place. Bottoms of the boards are held just clear of contact with the ground.

Both of these fences would be an addition to any home. Future issues of *American Builder* will give other famous Williamsburg fence details, together with photos and measured drawings of numerous other striking architectural and building details—an enlarged service on this type of helpful editorial material for the benefit of the readers—an exchange of usable ideas.



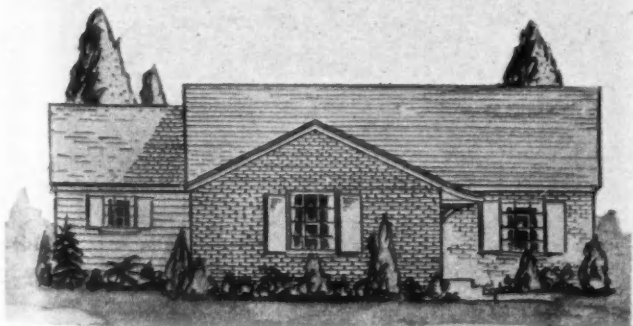
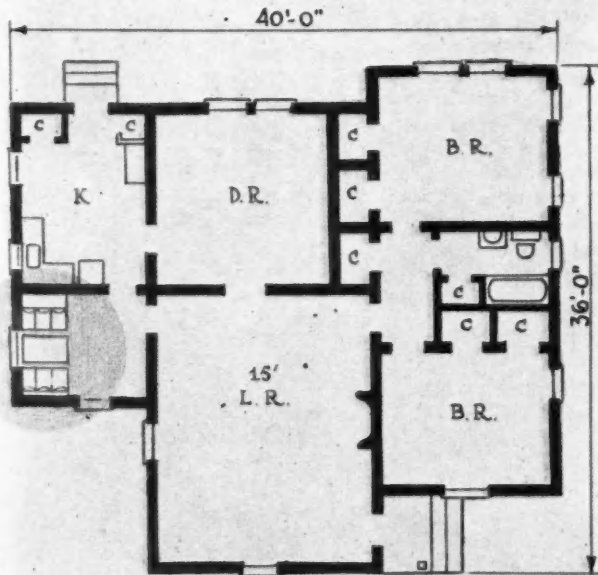
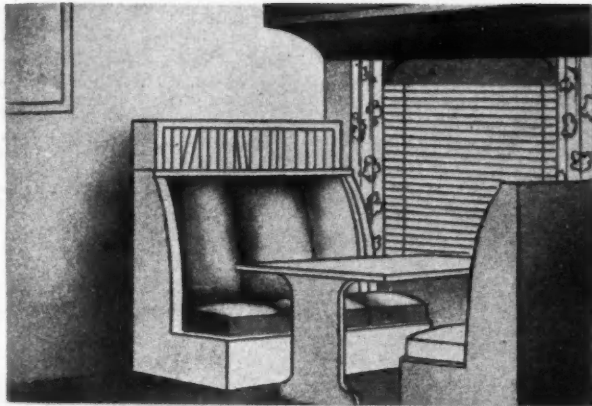
2 1/4" x 4" STRINGERS are bolted to the 5" x 5" concrete posts. Fence boards are 4' 10" long, 7" wide, 7/8" thick.

Many-Purpose Room

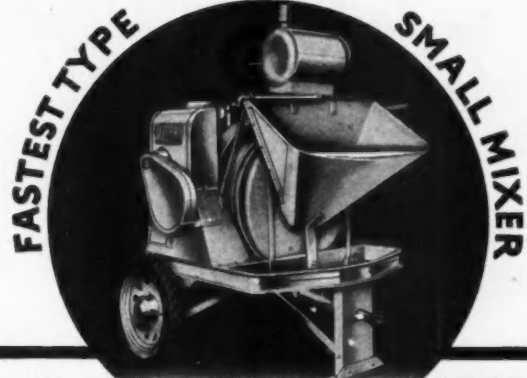
IN the Houston, Texas, development of Southwood Oaks, S. J. Tully, Jr., developer and builder, has worked out a most novel arrangement for a multi-use room in some of his homes. It is called "the stateroom" and is located between the kitchen and living room, as shown in the plan below.

During the day, the space serves as breakfast nook, sewing room, den or card room. Then at night, if extra quarters for the family or guests are needed, a bed is made up from the cushioned seats in a manner similar to a Pullman berth.

As seen in the sketch directly below, there is a cabinet space above the window where the mattress and bedding can be stored out of sight. Book shelf along the wall above the seat is handy and dresses up the room. The table, of course, pulls out of the way when the bed is to be made up.

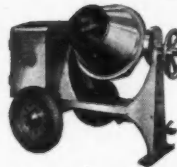


THIS Houston, Tex., design—S. J. Tully, Jr., builder—incorporates a novel stateroom indicated within the darker shaded circle on plan.



30% to 40% MORE CONCRETE with this Latest Jaeger 3 1/2 S

• Load Measuring Batch Hopper (12" lower) while you mix and discharge—fast as a power loader.



3 1/2 S HIGH SPEED FILTER TRAILER
Also 5S, 7S, 10S, 14S
Power Loader Non-Tilts with Automotive-Type Transmission, Machined Steel Drum Tracks.

- Criss-Cross "Re"-Mix Drum gives more thoro mix, faster discharge.
- Accurate Measuring Water Tank is fast, syphon type.
- 3 3/4 H.P. Air-Cooled Wisconsin Engine—lightweight, compact.
- End Discharge Design—handy to pour, fast to trail on Timken Bearings, Springs, Pneumatic Tires.
- Most advanced mixer on market. Get new Catalog and prices.

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

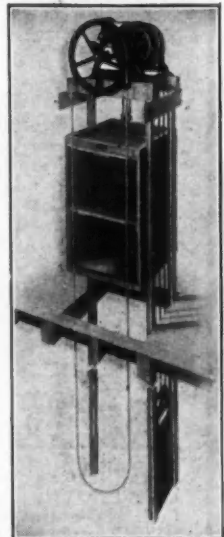
JAEGER 1940 SPEEDLINE

Dumb Waiters & Elevators

THIS — is a **SEDGWICK DUMB WAITER**

There's a vast difference in Dumb Waiter design and performance. Take this type "FDWG" for instance. It is a thoroughly modern hand operated outfit with capacities up to 200 lbs. It has *machine cut* gears. The *automatic brake* is self-regulating and adjustable for wear. The *full diameter* hoist wheel permits cable to lead directly to car and counterweight, eliminating deflecting sheaves. Less friction. Easier operation. Longer life. Many other hand power types. Also the popular push button control Sedgwick Electric **ROTO-WAITER**.

On your next Dumb Waiter contract—install a *Sedgwick* and build a local reputation for handling quality products.



SEDGWICK MACHINE WORKS

Member of Producers' Council, Inc.

154 WEST 15TH STREET,

NEW YORK, N. Y.

USE THIS COUPON

SEDGWICK MACHINE WORKS
154 West 15th St., New York
Please send catalog. I am interested in:

- DUMB WAITERS
- FREIGHT ELEVATORS
- SIDEWALK ELEVATORS
- RESIDENCE ELEVATORS
- HOSPITAL ELEVATORS
- TRUNK LIFTS
- FUEL AND LOG LIFTS
- Electric or Manual?

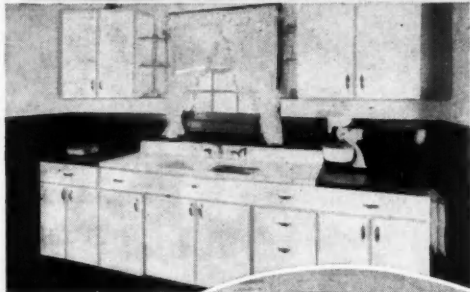
Name

Address



YOUNGSTOWN PRESSED STEEL KITCHENS

Open up New Possibilities for YOU



On rush jobs, YPS can save you time and money! Warehouse stocks in all large cities. Average installation time — less than a day.



Youngstown Pressed Steel Division, Dept. 100
Mullins Manufacturing Corp., Warren, Ohio

AB-341

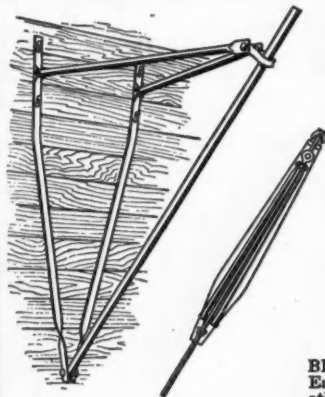
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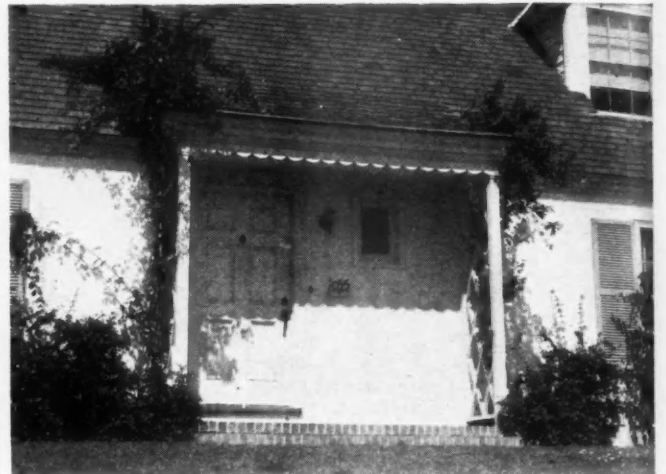
RELIABLE JACK CO., 1401 W. 2nd St., Dayton Ohio

RELIABLE
SCAFFOLDING BRACKETS

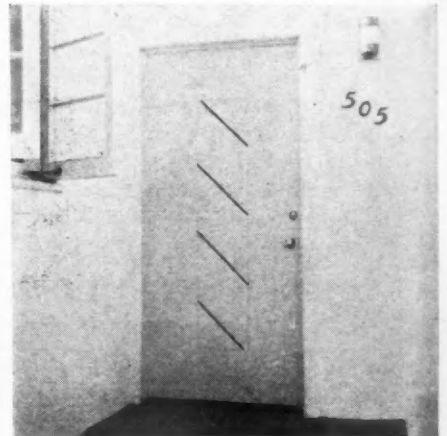
Selection of Door and Entrance Designs from California

Offering Ideas for Wide Range of Styling

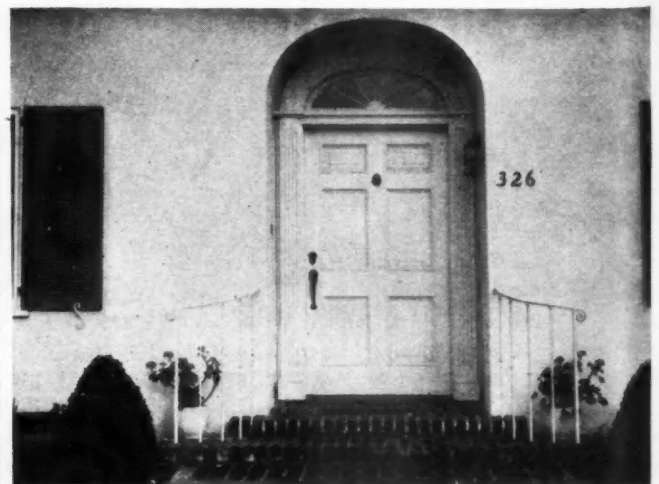
MOST builders will find the pictorial display of doors and entries appearing in the following columns a source of suggestions in design, as well as a good idea of how varied the architectural treatment in the wide range of California homes. This runs all the way from the novel and the modern types to the strictly period group. As such, they would be adaptable to homes in almost all other sections of the country, and ranging in size from cottage to the large estate home.—Hi Sibley.



ABOVE: Well detailed entrance adding charm to the small, informal type 1 or 1½ story home.



RIGHT: To harmonize with the simplified lines of contemporary design, this door was built up of outdoor plywood with diagonally paneled center section.



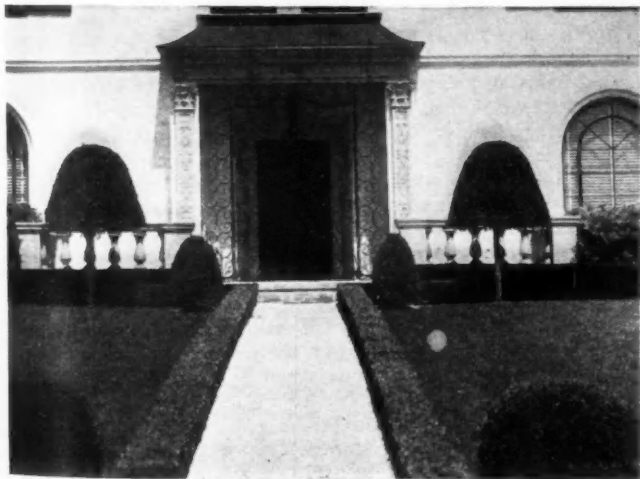
DIGNIFIED entrance way with Colonial door and fanlight.



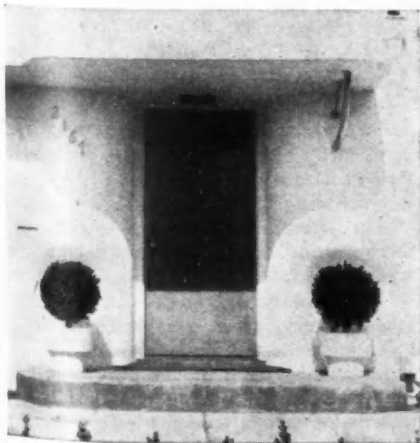
ABOVE: A most unusual treatment of an upward-acting garage door fits in with the rustic exterior and Mexican window grille.



LEFT: Wood grille doors and light above within arched head in La Canada.



FORMAL approach to entrance with an effective iron grill-work screen.



LEFT: Note the curved metal pipe brackets of this ultra modern entrance; door is painted Chinese red.



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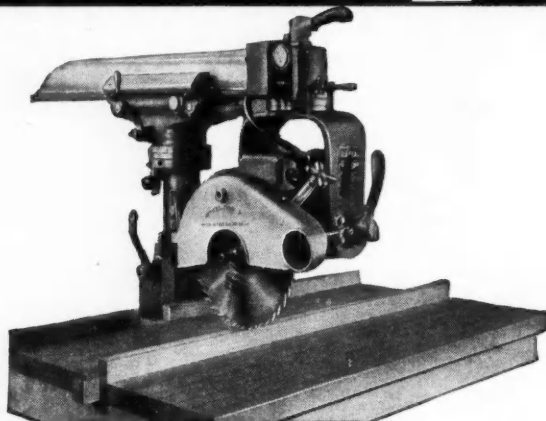
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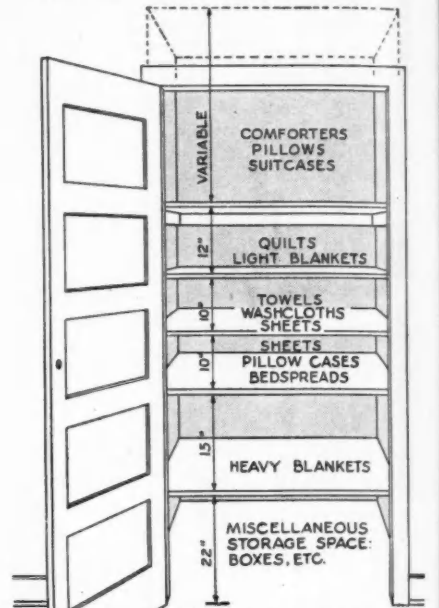
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How to Arrange Closets for

SINCE satisfactory plans for any livable home provide adequate storage space, the problem of planning such features has been given a good deal of thought by many experts, including those in the various branches of the government. Two such storage closets are presented here from the U. S. Department of Agriculture Bulletin No. 1865. Maud Wilson and Elma Edwards, Bureau of Home Economics, and J. Robert Dodge, Bureau of Agricultural Chemistry and Engineering, collaborated in its preparation. They have found that the most desirable location for a linen closet is near the bedrooms and opening directly into a hall. In addition to household linens, this closet may accommodate enough surplus supplies of bed clothing to take care of current emergency needs. If woolen blankets are stored here during the season of danger from moths, each one should be so wrapped as to be moth-proof. Families that have large supplies of woolen blankets and comforters should store these in moth-proof containers when they are not in constant use. Some families have one large chest or a specially constructed closet for woolen clothing and blankets out of season.



IN planning a linen closet, the dimensions shown will be useful.

Above is an inexpensive linen closet that shows a recommended arrangement of shelves for storing various linens and bedding for the average family. A good average size is 36 inches wide and 24 inches deep.

Most frequently used articles should be on the shelves that are easiest to reach. For accessibility and convenience of removing articles, some shelves may be wider than others. Sheets, for instance, may be stored most economically if they are folded in fourths lengthwise—then in eighths crosswise—and laid on the shelf so that their long dimension parallels the sides of the closet. Folded this way, a sheet 81 by 108 inches will need a shelf 22 inches from front to back. Narrower shelves are more convenient for smaller articles, such as towels and pillowcases.

The number of shelves needed in a linen closet varies from family to family. Therefore it is a good idea for each woman to determine the amount of storage space needed by measuring her own supplies. It is wise to make shelves adjustable to allow for changes in kind and number of articles to be stored. Drawers or trays add to the convenience of linen closets, but they increase the cost of construction.

Bathroom Storage

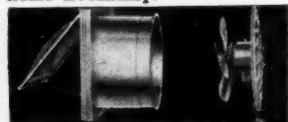
The size of the bathroom storage facilities depends both on the space available in other nearby closets and on the purposes the bathroom is likely to serve. Usually there needs to be a small cabinet above the lavatory. Storage for towels, bathroom supplies, and soiled clothes may be provided in a closet in the bathroom. Or, if the bathroom and the bedrooms are on the same floor, a closet in the hall may have space for both bathroom supplies and bedding.

Small toilet articles—soap, razors, toothpaste, combs—are kept in the cabinet above the lavatory. Such a cabinet may have a separate compartment for medicine and first-aid supplies. These cabinets have been standardized by the manufacturers so that it is possible to buy at a reasonable price a cabinet that will fit any bathroom. Some families find a cabinet with the lowest shelf open

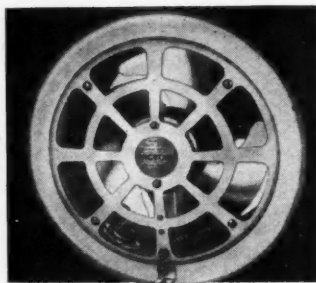
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I helped sell this beautiful home. The builders knew that modern home makers want fresh air comfort, freedom from smoke, soot, and odors, particularly in the kitchen. And I provide just that at mighty little cost. Prospects become buyers when they see how much I add to home liveability.



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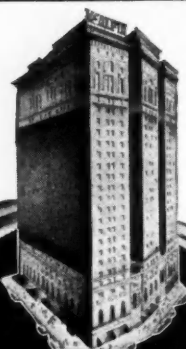


THE Master

The Victor In-Bilt has these features - round streamlined grille, easy to clean, weatherproof shutters, quiet, super-powered motors. Fits nicely into small places. The Victor Master is a popular priced ventilator of extremely high efficiency.

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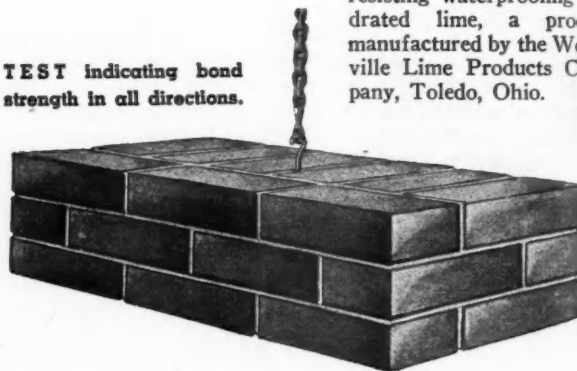
Water-Resisting Hydrated Lime for Leak-proof Walls

HIGH strength in a mortar is no certain indication of resistance to the weather. It has been observed that freeze and thaw have little or no effect on the materials of a dry wall and that masonry that will absorb water from contact and hold excessive moisture will show disintegration in proportion to its exposure. All things being equal, a watertight wall is a strong wall and will resist the years.

The important strength characteristic of masonry walls is the bond between the unit and the mortar, for investigation of hundreds of masonry jobs will show that the greatest leakage through a wall occurs at the mortar-joint.

Hydrated lime is one of the best waterproofing materials that can be used in the preparation of a mortar mix, and the properties of ordinary hydrated lime have been developed to a very great degree in Weatherite waterproofing hydrated lime, a product manufactured by the Woodville Lime Products Company, Toledo, Ohio.

TEST indicating bond strength in all directions.



Weatherite has the property of developing in a cement mortar a bond of great endurance. Actually, it has an increased water-holding capacity, holding the moisture in the mortar against the suction of the unit and the drying effect of the air. This permits the portland cement to set slowly, cure and dry out, thus avoiding the three causes of shrinkage—quick setting, quick curing and quick drying—which are apt to break the bond with the unit and cause a leaky wall.

Weatherite meets the requirements of the mason himself; its workability is such that he can lay more units per day with less effort, for he can imbue the last unit of a course as easily as the first. Weatherite makes a fat, buttery mortar; the bricks or other

VERTICAL JOINT



LOAD-bearing joints show least penetration of moisture, while vertical joints show greatest penetration. Proper use of Weatherite produces non-leaky vertical joints.

LOAD BEARING JOINT

units bed deeply into it and it stands up well at the head joints, thereby permitting a full mechanical joint. In mixes of specific proportions it is adapted to all types of masonry construction.

* * *

Increase in Mineral Wool Sales

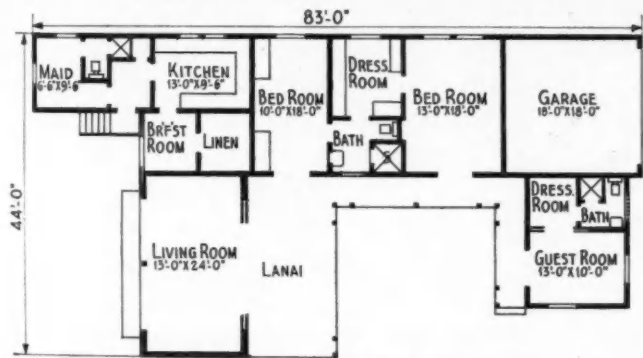
THE National Mineral Wool Association, at its annual January convention held in Cleveland, announced that mineral wool sales for the third quarter of 1940 registered a 35 per cent gain in dollar volume over the same period of 1939. For the first three quarters of 1940, the gain over 1939 was 32 per cent, a considerable part of the increase being due to wide use of mineral wool in government sponsored housing projects and structures erected in connection with national defense preparations.

Hawaiian Home Building

(Continued from page 65)

abundance of foliage, and climate which miraculously permits of a garden in a relatively short time, make possible the merging of the indoors and outdoors, depending upon the enthusiasm and application of the owner.

The Hawaiian home idea is taking hold. Each year finds prominent visitors from mainland and United States establishing fine residences there, all of which are characterized by architecture "gone native." On the slopes of famous Diamond Head overlooking Waikiki, in the beautiful Kahala district and the quiet exclusive valleys of Nuuanu and Manoa, are many homes owned by friendly and appreciative visitors.



ABOVE: A corner of the Robert Scott home, Honolulu, showing lanai opening upon the garden and plan of it, one of the finest in that part of the nation.

Houses to Finance

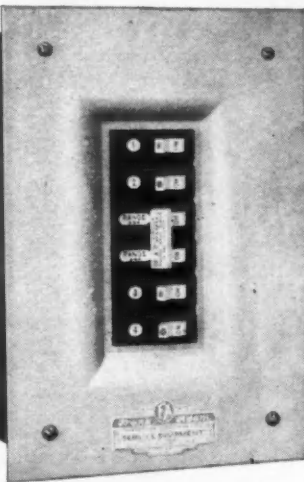
(Continued from page 63)

occupancy. It was financed by the First Federal Savings and Loan Association, South Bend, Ind. The heating plant was a Rudy oil burner and air conditioner.

Because of the fact that full-thick insulation was used in all of these three houses, the heating plants could be smaller, with greater comfort, on account of warmer walls in winter. If carefully designed, this could provide additional savings, an estimated \$162 in the first cost of the heating plant in the prize winning house, and an estimated saving of \$196 in the second choice house.

Additional reasons given by building and loan executives for preferring mineral wool insulation, in addition to the savings on fuel and the first cost of heating plants, are that houses so insulated are in less danger of destruction by fire than uninsulated houses, and that, should it be necessary to foreclose, the house would have a higher resale value.

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and how little is the cost over the old type equipment... It assures safety — modern protection against overload... It is convenient — restoration of service is easy — simply return the switch to the ON position after the cause of a short circuit has been removed... And it is good looking — designed and finished attractively... Ask your Architect or Builder.

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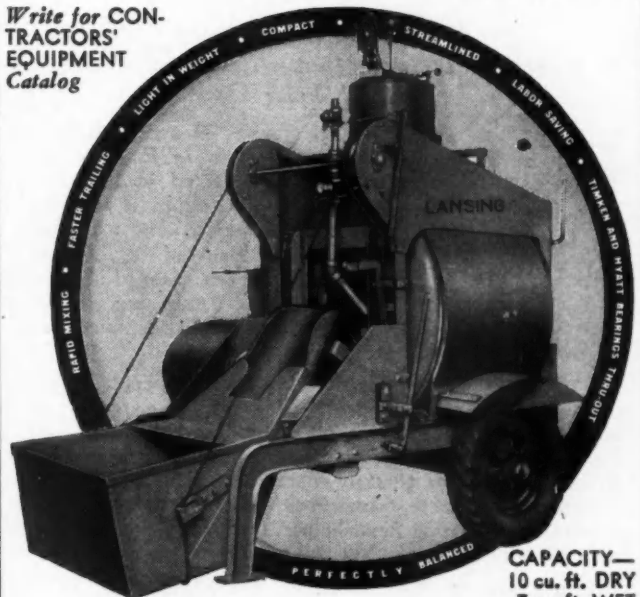
who will make quick delivery from stock. Write us for his name and address, and for illustrated folder.

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SIMPLIFIED CARPENTRY ESTIMATING

By **J. Douglas Wilson**

Head of the Building Trades Department, Frank Wiggins
Trade School, Los Angeles, California

and **Clell M. Rogers**

Mathematics Instructor, Venice High School, Venice,
California



Based on a series of articles by Mr. Wilson entitled *How to Estimate Accurately*, which appeared in *American Builder and Building Age* last year, the material has been revised and expanded into this book. Many of the original illustrations have been changed and the number of helpful tables and mathematical short cuts have been increased by Mr. Rogers.

This new book clearly explains the "taking-off" of a bill of materials required for the construction of a house and the rules and methods of making an accurate estimate of costs. The constructional order of quantity survey is used. Many skilled carpenters who have taken Mr. Wilson's evening school courses in estimating have helped in making the explanations given in this book clear and practical.

210 pages, 71 illus., 36 tables, 5 x 7, cloth, \$2.50.

Book Department

AMERICAN BUILDER and BUILDING AGE
30 Church Street New York, N. Y.

"Consensus House"—

(Continued from page 60)

15. **PORCH LOCATION**—The porch must be reached by doors from both dining room and living room.

16. **OVERHEAD DOORS**—Buyers were especially anxious to have wide, easy-to-operate overhead garage doors.

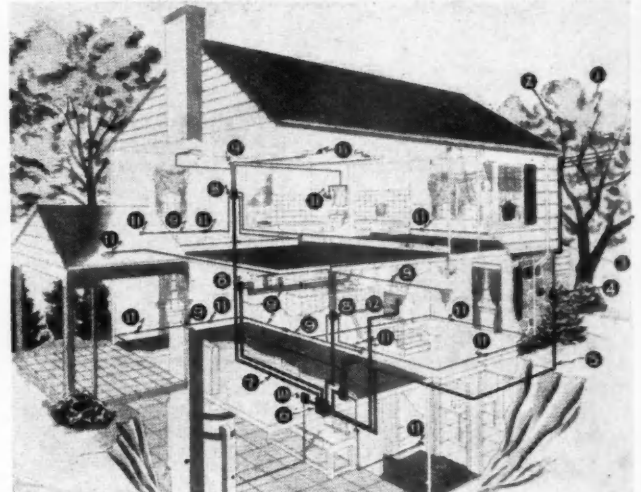
17. **HOT WATER**—Abundant hot water supply at low cost was an absolute requirement. Hatley provided a 40-gal. General Electric storage heater.

18. **TIGHT WINDOWS**—Buyers insisted on weathertight but easy-to-operate windows of attractive design. He equipped the house with Curtis Silentite windows.

The above were, of course, only a few of the features actually provided in the "Consensus House." The buyer expects sound construction, good architectural design, attractive restricted surroundings, a good high type of neighbor, and low maintenance costs.

Hatley stressed the importance of a completely up-to-date kitchen, which eliminates the drudgery of dishwashing and the unpleasantness of garbage disposal. Once a housewife has experienced the convenience and beauty of a thoroughly up-to-date kitchen, he said, they are so enthusiastic that they become the finest selling asset.

Another feature of the "Consensus House" of importance to the public was the certified adequate wiring system.



APPROVED WIRING SKETCH shows certified adequate wiring system used by Builder Hatley. The number identifications are as follows:

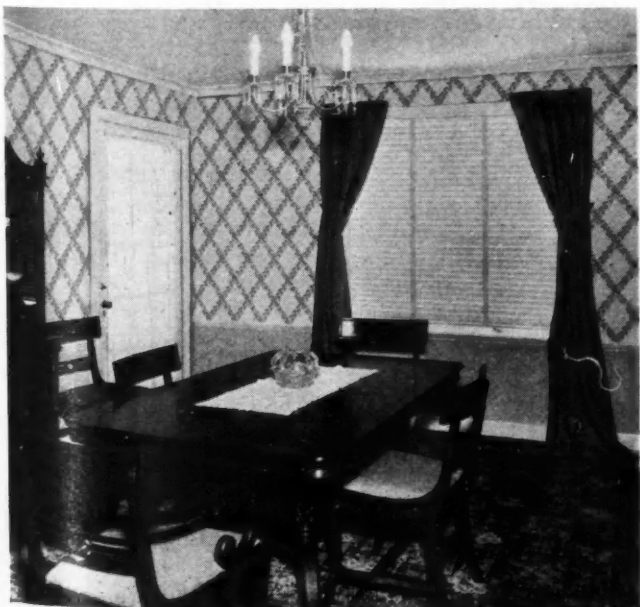
1. **SERVICE**—Conductors from utility high line to house.
2. **SERVICE FITTINGS**—Join service conductors and main feeders together.
3. **SERVICE ENTRANCE**—Cable or rubber-covered conductors in conduit from service head to main distribution unit.
4. **OUTDOOR METER**—Installed in accord with local utility.
5. **MAIN FEEDERS**—Should be of sufficient size.
6. **MAIN DISTRIBUTION UNIT**—Of proper size for total connected load. Shall contain main fuses or breakers, range fuses or breakers and protective devices for other fixed equipment.
7. **SUB-FEEDERS**—At least one size larger than final circuit conductors.
8. **BRANCH DISTRIBUTION UNITS**—Locate in heavy load areas. May be fuses or circuit breakers but devices should be same type as used in main distribution unit. Control all final branch circuits.
9. **FINAL CIRCUITS**—Recommended that circuit be divided into several short sub-circuits which radiate from control units—each sub-circuit to serve only a few outlets.
10. **BOXES AND FITTINGS**—Shall be furnished as needed.
11. **OUTLETS**—Should conform to modern standards of adequacy.
12. **RANGE WIRING**—Heavy enough to permit efficient operation of range considering diversity factor.

tem. The house is equipped throughout with General Electric silent mercury switches, ample electric outlets and a scientifically laid out system of wiring that provides ample power wherever needed without waste or inefficiency. Sketch on opposite page indicates system used.



COLONIAL STAIRWAY of George B. Hatley's "Consensus House" model home is impressive and attractive, which is one of the items his survey of public opinion showed to be of great importance.

INTERIOR FINISHING and decoration must be done in good taste, making use of the latest ideas of professional interior decorators, Hatley's survey shows. Dining room is attractively decorated.



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Make the Living Room **MORE LIVABLE** with a

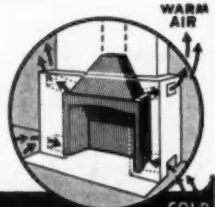
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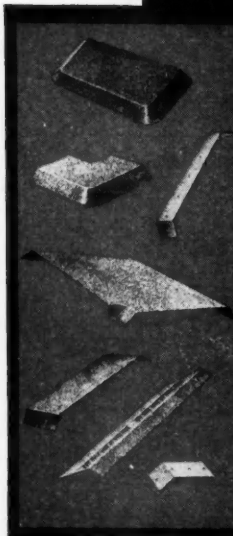
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K-VENIENCE CLOSET FIXTURES

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Washington, D. C.

Rebuilding Store Fronts—Hoquiam

(Continued from page 67)

and hot-dipped galvanized nails were used to fix the panels over old siding, shingles, or stucco. The walls were first made plumb, or furred-out with nailing strips, or shimmed, to be made true. Old wiring, which had constituted a fire menace, was replaced. Gutters, flashing, and downspouts were renewed. Windows, doors, and trim were



HERB ROOT, Hoquiam paint dealer, said "The 'Save Simpson Avenue — and Hoquiam' campaign sold plenty of paint—on the Avenue jobs as well as all over town."



D. E. PRYDE, sheet metal contractor, said "Flashing, gutter, downspouts, and metal trim were all renewed. These little jobs filled in well with the many new jobs that followed in the wake of the Avenue campaign."



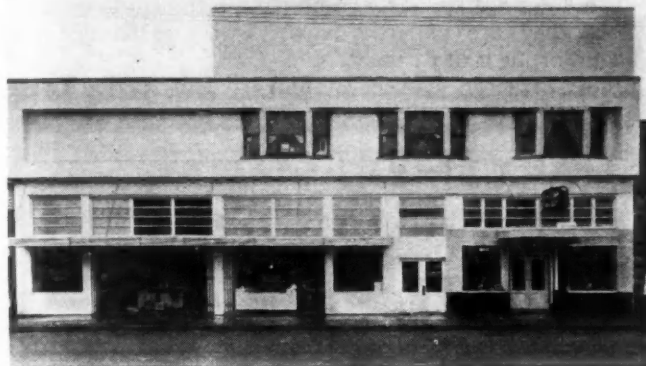
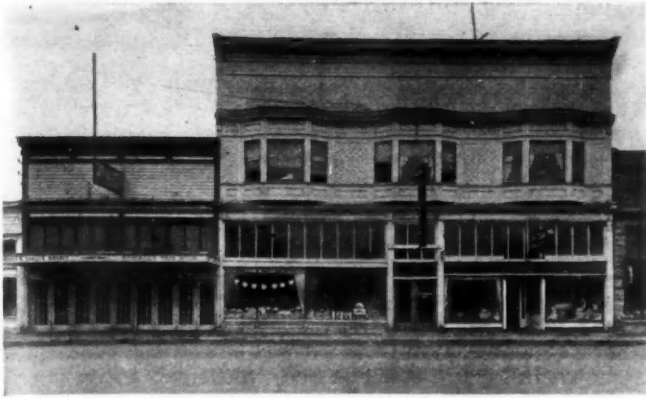
CECIL E. JENKS, banker and Chamber of Commerce president, envisioned the campaign. He said, "We couldn't go at the job piecemeal, for it would have bogged down in inconclusion."



F. W. McEACHRON, Hoquiam Electric Company, found that much of the old wiring was a real fire menace. "The job should have been done anyway, or we likely would have had some costly fires."

made modern. . . Painting inside and out with harmonizing colors gave the final touch to a mass refurbishing project that is giving the community a business district of which it is proud.

Bonuses and extra dividends are accruing to the city of Hoquiam, traceable easily to the impetus and improved morale. The mayor and his aides were so strengthened that they have presented federal authorities with evidence of a strategically located air-base-site adjacent to the city.



"BEFORE" and "After"—These were typical of the structures on Simpson Avenue, Hoquiam, Wash., when the campaign was launched. Below (photo made from same camera location) shows how the old buildings were given a "face lifting," resulting in improved business and property values.

The convincing evidence resulted in a new half million dollar air base project for national defense. A new cannery was built and put into operation. The excellent port dock facilities were made even more efficient. Two national organizations have chosen new plant locations and are establishing units, creating new construction projects greater than have been undertaken in the past decade. New residents and old citizens have been infected by the contagion, and home building has increased 317 per cent, Home repairs are up 108 per cent. Industrial employment figures have risen to an all-time high.

The merchants and landlords on Simpson Avenue are happy—business is good. Business leaders of a score of other Washington towns, comparatively situated, have seen and appreciated the results, and a decision to proceed similarly has been made by two of them to date. The *idea* may serve as a pattern for little cities in other states.

* * *

Milcor Personnel Changes

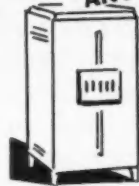
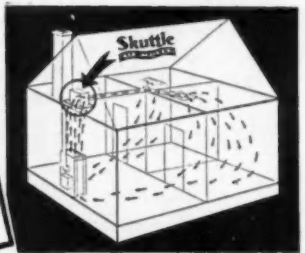
THE Milcor Steel Company, Milwaukee, Wis., manufacturing sheet metal and fireproof building materials, has announced the appointment of C. G. Wollaeger to the position of assistant general sales manager. Mr. Wollaeger, who has been with Milcor for fourteen years, has been assistant manager of the Milcor Fireproof and Specialties Division since 1934, devoting himself largely to the development of the Metal Trim line.

W. G. Baum, who has had fifteen years' experience in sheet metal and fireproof building products, will succeed to Mr. Wollaeger's position.

C. G. WOLLAEGER



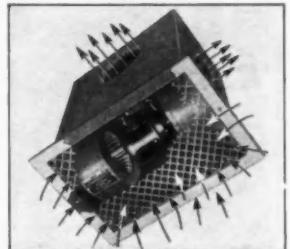
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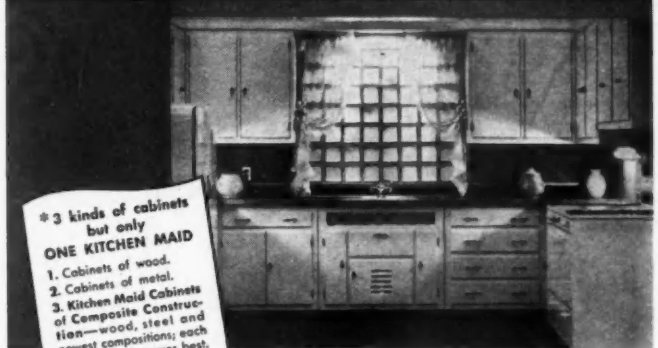


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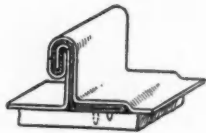
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Cross section showing standing seam construction

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GENERAL ELECTRIC

Cottage Apartments—

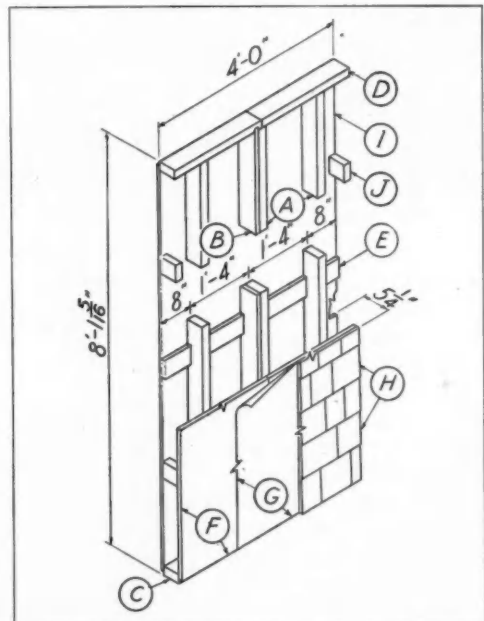
(Continued from page 79)

Your *American Builder* correspondent was on hand with his camera when a huge trailer truck drew up to the site of the apartments with all of the materials for a complete story. These materials consisted largely of standard wall and floor sections built in American Houses' Kearny plant. As fast as the sections were unloaded the crew of union carpenters nailed them together.

Of particular interest is the fact that the wall sections as delivered to the job contain windows and doors completely fitted, installed and given a prime coat of paint. A typical door section just as it was unloaded off the truck is shown in Figure 2. The door was fitted to its frame at the Kearny shop, and the hinges and lock installed. The door knob and key were wrapped and tied to the frame.

Windows are similarly completely installed at the shop where they are expertly flashed, weatherstripped and given a prime coat of paint.

The American Houses system of construction is the result of many years of experimentation of various types



A TYPICAL wall section includes: A, full-sized studs; B, half-sized stud; C, floor plate; D, top plate; E, plywood ribbon; F, plywood sheathing; G, paper; H, wood shingles; I, and wallboard.



6—INTERIOR VIEW of panels shows bracing method, mineral wool insulation as installed at shop.

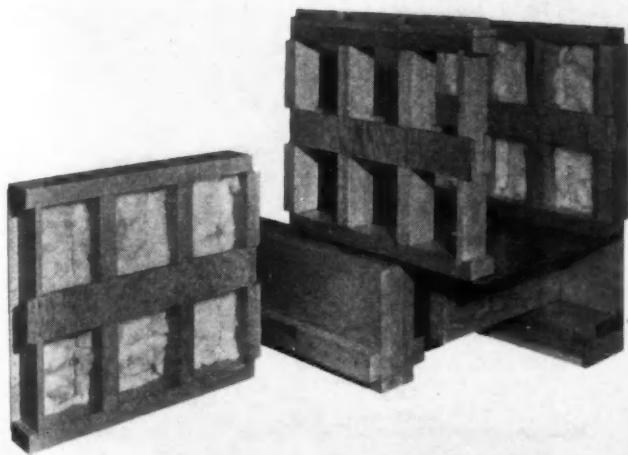
of materials and methods. It is one of the few prefabrication systems that has survived and has made considerable headway in the last year. Builders interested in a complete description and analysis of the system will find it in a report of the National Bureau of Standards of the U. S. Department of Commerce entitled, "Structural Properties of Prefabricated Wood Frame Construction." The 26-page report may be obtained direct from the Government Printing Office for 10 cents by asking for Report BMS47.

The basic features of the American Houses system as employed in the River Glen apartments are as follows:

Wall sections consist of 2 x 4's on 16 in. centers, to which 5/16-in. Douglas fir Plyscord sheathing is nailed. Panels are 8 ft. 5/16-in. high and are usually either 4 ft. or 8 ft. in width or in multiples of 16 in. The frame consists of three full-sized studs, A (figure opposite), one-half sized stud, B, fastened to a floor plate, C, on a top plate, D, by nails. The half stud is used where two wall sections join.

An important feature of the wall section is the 3 5/8" x 5/8" plywood ribbon which is notched into the 2 x 4's at the middle of the panel. This ribbon projects out over the edge of the panel (see Figure 7) so that it can be nailed to the studding of the adjacent panel.

As delivered to the job, the wall sections have no interior finish, although a one-in. mineral wool bat has been installed in the shop. The interior finish features dry
(Continued to page 138)

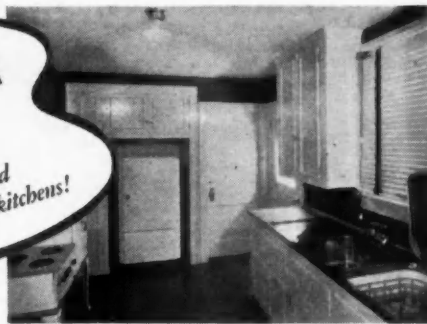


7—TYPICAL PANEL construction detail featuring platform frame. Note 4" plywood ribbon that ties sections together.



8—COMPLETED cottage apartment before addition of brick exterior. (Plans were shown in February '41 American Builder.)

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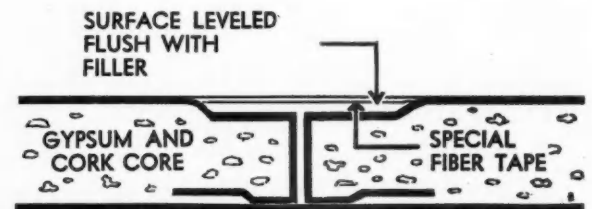
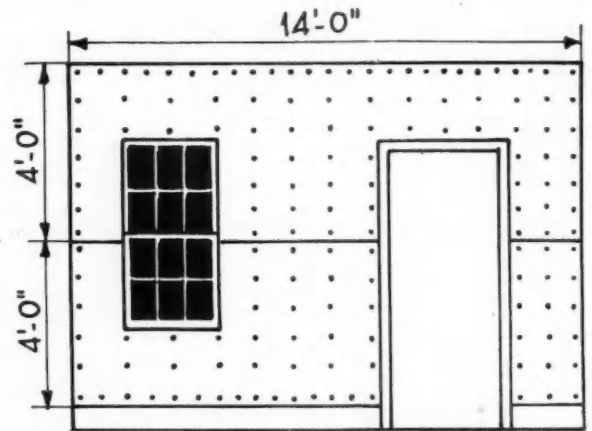
Cottage Apartments—

(Continued from page 137)

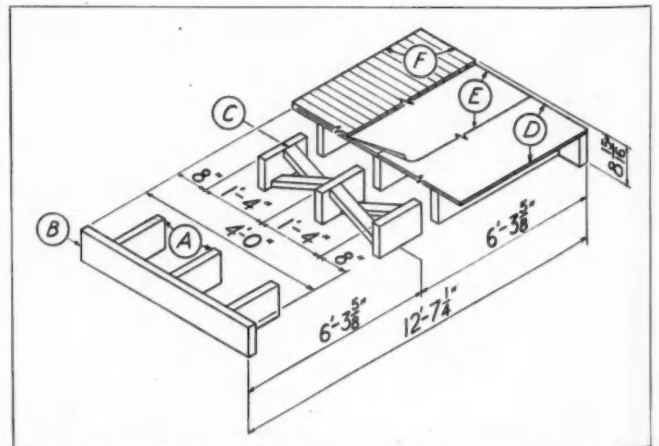
wall construction using half-inch gypsum board, which is painted or papered. The gypsum board is applied in large panels 4 ft. wide and up to 14 ft. long, laid horizontally, with the joint broken at the plywood ribbon. Thus, in an average room there is only one joint and that is reinforced with a fibre tape, filled and sanded smooth. The wall-board has a recessed edge so that when the tape and filler have been applied there is no visible raise in the surface.

The typical floor section consists of three 2 x 8 joists on 16-in. centers, over which 5/8-in. Douglas fir plywood is nailed. The standard section is 12 ft. 7/4 in. long and 4 ft. wide. The plywood at one side overlaps and is nailed into the joist of the adjoining section.

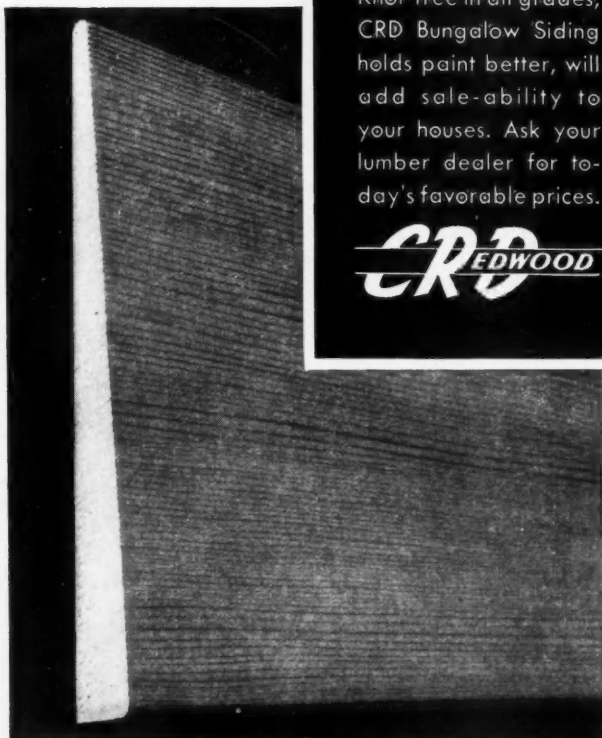
The floor and wall sections fit together easily on the job and the resulting construction is essentially a standard platform type construction in which shrinkage is thoroughly equalized. As a result of the substantial manner



TWO gypsum board panels 4' x 14', placed horizontally, cover entire wall (above, top). Depressed edges of gypsum board are covered with fibre tape, then leveled with filler.



TYPICAL floor section is 4' x 12' x 7/4", consisting of A, joist; B, header; C, bridging; D, 5/8" plywood subfloor; E, sheathing paper; F, finish floor.

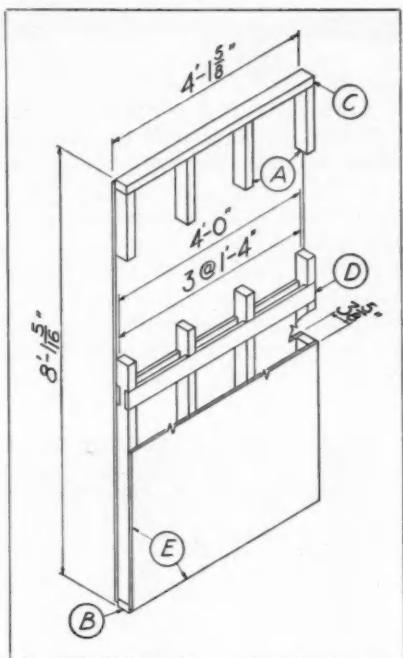


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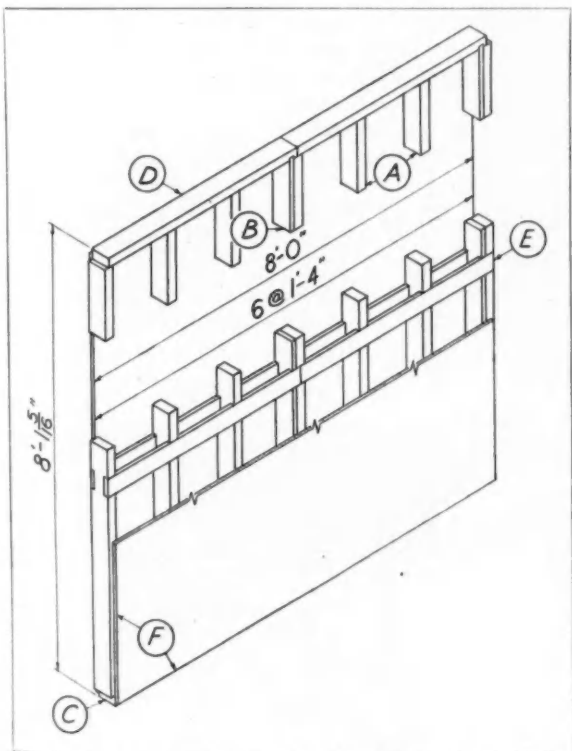
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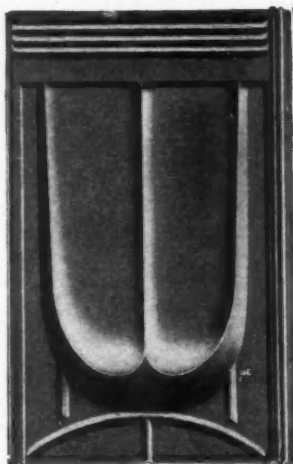
NON-load-bearing partition, 4' 1 5/8" x 8' 1 5/16". A, full size studs; B, floor plate; C, top plate; D, plywood ribbon; E, wallboard.

in which the sections are constructed and nailed together, shrinkage or movement of any kind is eliminated, and it is felt that there should be no trouble with joint cracks on the interior gypsum board walls.

Construction of the River Glen apartments went forward with reasonable speed and precision. Only three months were required from the time the foundations were placed to the date when the first tenants moved in. This same system of construction was successfully employed in a low-cost single house development at Dundalk, Md., on 136 individual homes for factory workers.



EIGHT-FOOT load bearing partition, consisting of A, full-sized studs; B, half-sized studs; C, floor plate; D, top plate; E, plywood ribbon; F, wallboard.



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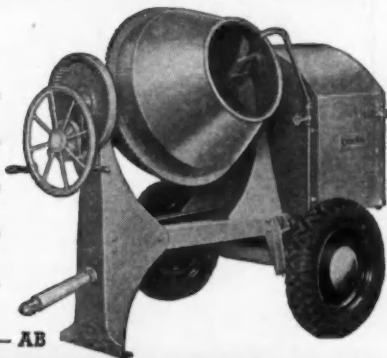


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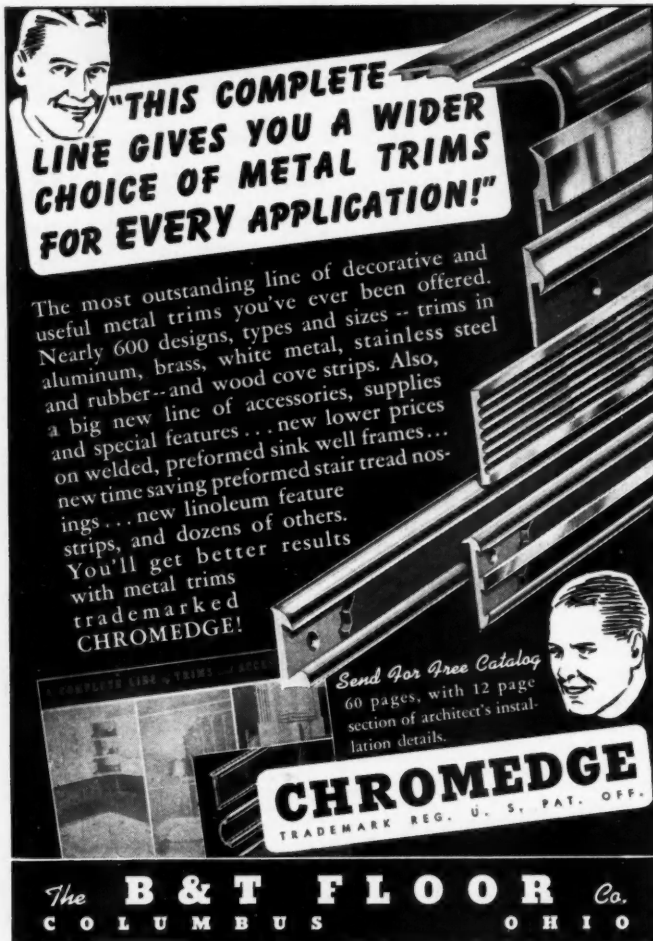
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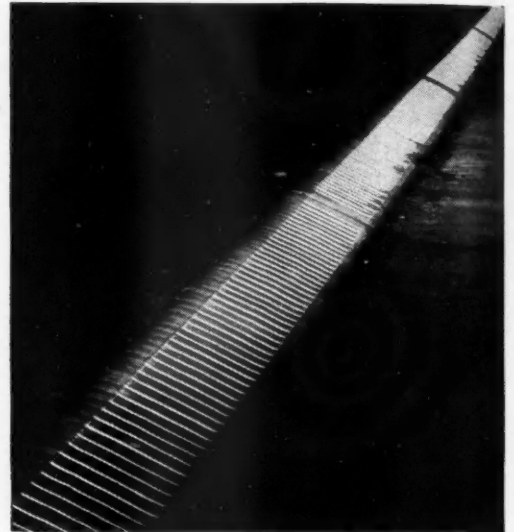
Reflecting Curbs--

(Continued from page 82)

as a vehicle travels nearby and parallel to the curb is small while any particular face is in view, and the extent of the diffusion exceeds, and compensates for, this angle change.

As already noted, on a wet night all ordinary surfaces appear almost totally black. However, the same conditions which produce this unhappy result fortunately increase the visibility of a properly designed surface. The lower diagram in Figure B shows the presence of a water film on a series of reflecting faces. The film of water tends to produce a true mirror effect and the intensity

AS SEEN BY NIGHT



WHITE CONCRETE CAST-IN-PLACE REFLECTING
The night view (left) has no illumination

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or brightness of the reflected light is greater than from a dry surface. Therefore, the reflecting faces stand out brightest and sharpest on wet nights—just when their help is needed most.

The photographs show night and day views respectively of a New Jersey highway equipped with white cement curbs, roughened with vertical scoring. This comparatively simple, though effective, design embodies the basic principles employed in the New Jersey reflecting curb. These pictures show the results that are obtainable by simply constructing a series of reflecting faces that lie approximately perpendicular to the headlamp rays. Many refinements have been incorporated in the latest designs

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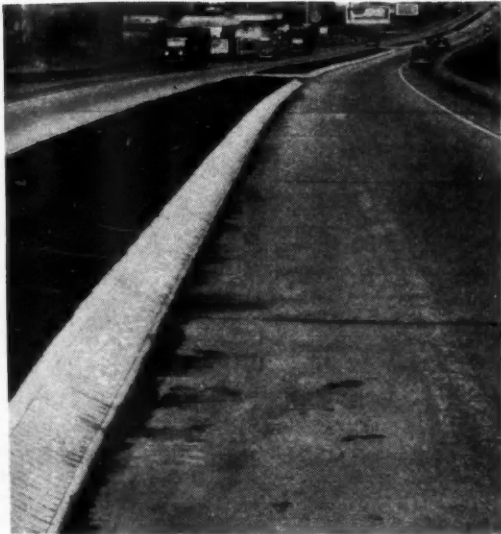


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of curb with a corresponding increase in efficiency. They have, for example, taken advantage of the way a water film causes the concrete reflecting faces to acquire the critical qualities of a true mirror. In order to utilize these qualities and co-ordinate them with the change of position of the vehicle, curvature and variable vertical inclination have been incorporated in the reflecting faces. In wet weather those portions of the reflecting surfaces that meet theoretical requirements reflect a high intensity of light—and a very distinct gleam is seen on those surfaces.

From a construction standpoint builders and contractors will be interested to know that these reflecting curbs are made in three different ways (a) vertical curb is cast



AND
BY DAY

CURB INSTALLED ON NEW JERSEY ROUTE 25
except that reflected from car headlights.

in the field against a negative form; (b) slightly sloping curb is cast in place and scored with a scoring tool (as illustrated in Figure A); and (c) scored face sloping curb is precast. The reflecting faces are not all alike. The slope, height, and curvature on different faces or fins within any foot of curb are varied so that some reflect light when a car is at a distance and others when a car is close by. As a result, one or more fins within any foot are reflecting light irrespective of the distance of the car. It may be desirable to point out something like this because while the idea of reflecting faces is basically simple, the actual application of it requires a little finessing in order to get best results.

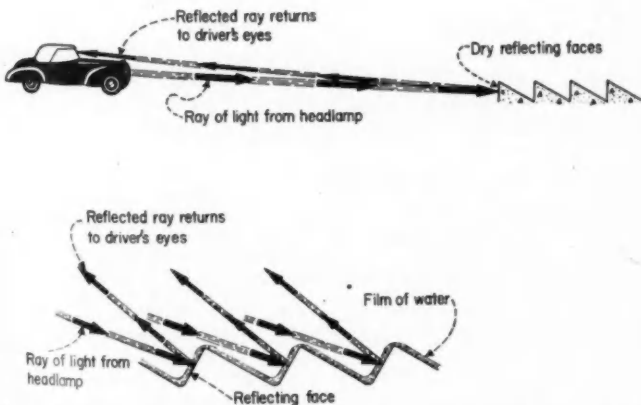
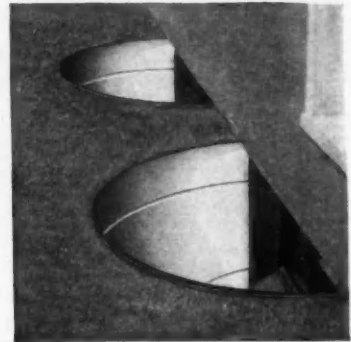


Fig. B. Diagram explaining how scored faces of curb reflect headlamp light back to car driver and make curb visible even on a wet night.

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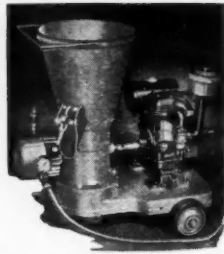
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Page 59, March; Hatley, Bldr.

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Page 61, March; Chatlos, Bldr.

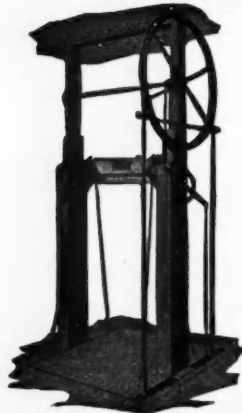
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 108 lin. ft.; Trench Walls, 46 lin. ft.; Basement Floor, 665 sq. ft.; Garage Floor, 180 sq. ft.; Excavation per ft. deep, 33 cu. yds.; Outside Walls, 17.00 sqs.; First Floor, 7.00 sqs.; Second Floor, without fin. flg., 5.00 sqs.; Ceiling, 8.80 sqs.; Roof Pitch, 9" rise per ft. run; Roof, 12.00 sqs.; Hips and Valleys, 12 lin. ft.; Cornice, C & F, 124 lin. ft.; Cornice, 8", 50 lin. ft.; Partitions, 108 lin. ft.; Inside Finish OS Walls, 108 lin. ft.; Front and OS French Doors, 2 opps.; Rear and Grade Doors, 1 opp.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps., 9 opps.; Windows and Casements, 17 opps.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Floor, .25 sqs.; Porch Ceilings, .25 sqs.; Porch Beam, 8 lin. ft.; Porch Roof, .30 sqs.; Porch Cornice, 14 lin. ft.

Page 62, March; Master Mechanics, Inc., Bldrs.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 132 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, 820 sq. ft.; Garage Floor, 180 sq. ft.; Excavation per ft. deep, 36 cu. yds.; Outside Walls, 20.00 sqs.; First Floor, 8.25 sqs.; Second Floor, without fin. flg., 6.50 sqs.; Ceiling, 10.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, incl. Porch, 15.00 sqs.; Hips and Valleys, 36 lin. ft.; Cornice, C & F, 200 lin. ft.; Partitions, 132 lin. ft.; Inside Finish OS Walls, 132 lin. ft.; Front and OS French Doors, 1 opp.; Rear and Grade Doors, 2 opps.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps., 13 opps.; Windows and Casements, 16 opps.; Gable Sash and Louvers, 3 opps.; Chimney, 28 lin. ft.; Main Stairs, 1; Porch Floor, .36 sqs.; Porch Ceilings, .36 sqs.; Porch Beam, 14 lin. ft.; Porch and Balcony Post and Newels, 1.

Page 63, March; Blair, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 130 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, 960 sq. ft.; Excavation per ft. deep, 40 cu. yds.; Outside Walls, 18.00 sqs.; First Floor, 10.00 sqs.; Second Floor, without fin. flg., 6.50 sqs.; Ceiling, 10.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 12.00 sqs.; Hips and Valleys, 24 lin. ft.; Cornice, C & F, 148 lin. ft.; Cornice, 8", 66 lin. ft.; Partitions, 150 lin. ft.; Inside Finish OS Walls, 142 lin. ft.; Front and OS French Doors, 2 opps.; Rear and Grade Doors, 1 opp.; Inside Doors and Cased Opps., 14 opps.; Windows and Casements, 20 opps.; Gable Sash and Louvers, 1 opp.; Chimney, 28 lin. ft.; Main Stairs, 1; Porch Floor, 1.60 sqs.; Porch Ceilings, 1.40 sqs.; Porch Beam, 42 lin.



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ft.; Porch and Balcony Post and Newels, 10; Porch Roof, 1.75 sqs.; Porch Cornice, 42 lin. ft.; Porch Rail, 7 lin. ft.

Page 64, March: Hicks House

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 220 lin. ft.; Outside Walls, 22.00 sqs.; First Floor, 13.60 sqs.; Ceiling, 13.60 sqs.; Roof Pitch, 5" rise per ft. run; Roof, incl. Porch, 24.00 sqs.; Hips and Valleys, 160 lin. ft.; Cornice, 36", 220 lin. ft.; Partitions, 120 lin. ft.; Inside Finish OS Walls, 220 lin. ft.; Front and OS French Doors, 3 opps.; Rear and Grade Doors, 3 opps.; Inside Doors and Cased Opps., 12 opps.; Windows and Casements, 12 opps.; Gable Sash and Louvers, 1 opp.; Porch Floor, 3.50 sqs.; Porch Ceilings, 36 sqs.; Porch Beam, 12 lin. ft.

Page 68, March: Mott Bros., Bldrs.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 134 lin. ft.; Trench Walls, 40 lin. ft.; Basement Floor, 800 sq. ft.; Garage Floor, 180 sq. ft.; Excavation per ft. deep, 40 cu. yds.; Outside Walls, 24.00 sqs.; First Floor, 8.00 sqs.; Second Floor, with fin. fig., 10.00 sqs.; Ceiling 20.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 14.00 sqs.; Cornice, C & F, 148 lin. ft.; Cornice, 8", 84 lin. ft.; Partitions, 275 lin. ft.; Inside Finish OS Walls, 268 lin. ft.; Front and OS French Doors, 1 opp.; Rear and Grade Doors, 1 opp.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps., 22 opps.; Windows and Casements, 28 opps.; Gable Sash and Louvers, 2 opps.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .16 sqs.

Page 69, March: McGurk, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 126 lin. ft.; Trench Walls, 84 lin. ft.; Basement Floor, 875 sq. ft.; Garage Floor, 298 sq. ft.; Excavation per ft. deep, 43 cu. yds.; Outside Walls, 26.50 sqs.; First Floor, 8.75 sqs.; Second Floor, with fin. fig., 9.10 sqs.; Ceiling, 21.00 sqs.; Roof Pitch, 7" rise per ft. run; Roof, 17.25 sqs.; Hips and Valleys, 10 lin. ft.; Cornice, C & F, 200 lin. ft.; Cornice, 6", 116 lin. ft.; Partitions, 236 lin. ft.; Inside Finish OS Walls, 250 lin. ft.; Front and OS French Doors, 2 opps.; Rear and Grade Doors, 2 opps.; Garage Door 8 ft. wide, 2; Inside Doors and Cased Opps., 18 opps.; Windows and Casements, 24 opps.; Gable Sash and Louvers, 2 opps.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 1.00 sqs.

Page 70, March: West, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 100 lin. ft.; Trench Walls, 200 lin. ft.; Basement Floor, 450 sq. ft.; Excavation per ft. deep, 44 cu. yds.; Outside Walls, 21.00 sqs.; First Floor, 7.50 sqs.; Upper Level, with fin. fig., 4.50 sqs.; Second Floor, without fin. fig., 4.00 sqs.; Ceiling, 12.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 15.00 sqs.; Hips and Valleys, 50 lin. ft.; Cornice, C & F, 160 lin. ft.; Partitions, 168 lin. ft.; Inside Finish OS Walls, 150 lin. ft.; Front and OS French Doors, 1 opp.; Rear and Grade Doors, 1 opp.; Inside Doors and Cased Opps.; 15 opps.; Windows and Casements, 20 opps.; Gable Sash and Louvers, 4 opps.; Chimney, 25 lin. ft.; Main Stairs, 1; Porch Floor, 2.00 sqs.; Porch Ceilings, 1.75 sqs.; Porch Beam, 34 lin. ft.; Porch Roof, 2.60 sqs.; Porch Cornice, 46 lin. ft.

Page 71, March: Guilford, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 120 lin. ft.; Basement Floor, 600 sq. ft.; Garage Floor, 200 sq. ft.; Excavation per ft. deep, 37 cu. yds.; Outside Walls, 13.50 sqs.; First Floor, 8.00 sqs.; Second Floor, without fin. fig., 5.00 sqs.; Ceiling, 8.00 sqs.; Roof Pitch, 12" rise per ft. run; Roof, 12.00 sqs.; Cornice, C & F, 152 lin. ft.; Cornice, 8", 72 lin. ft.; Partitions, 118 lin. ft.; Inside Finish OS Walls, 120 lin. ft.; Front and OS French Doors, 1 opp.; Rear and Grade Doors, 2 opps.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps., 12 opps.; Windows and Casements, 17 opps.; Gable Sash and Louvers, 2 opps.; Chimney, 28 lin. ft.; Main Stairs, 1; Porch Floor, .24 sqs.

Page 72, March: Johnke, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 108 lin. ft.; Trench Walls, 80 lin. ft.;

(Continued to page 144)

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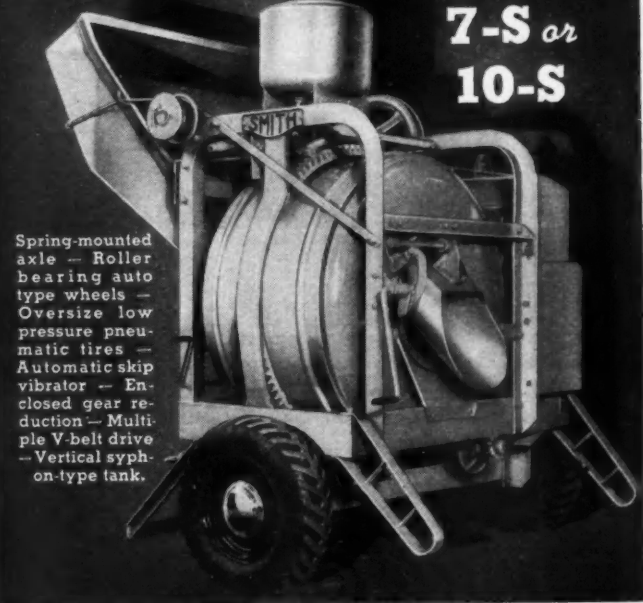
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TruCost Figures—

(Continued from page 143)

Basement Floor, 620 sq. ft.; Garage Floor, 180 sq. ft.; Excavation per ft. deep, 27 cu. yds.; Outside Walls, 22.00 sqs.; First Floor, 6.20 sqs.; Second Floor, with fin. fig., 6.20 sqs.; Ceiling, 15.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 10.00 sqs.; Hips and Valleys, 36 lin. ft.; Cornice, C & F, 225 lin. ft.; Partitions, 230 lin. ft.; Inside Finish OS Walls, 225 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft wide, 1; Inside Doors and Cased Opgs., 16 opgs.; Windows and Casements, 20 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 1.50 sqs.; Porch Ceilings, 1.50 sqs.; Porch Beam, 48 lin. ft.; Porch and Balcony Post and Newels, 8; Porch Roof, 1.80 sqs.; Porch Cornice, 54 lin. ft.

Page 73, March; Allen, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 138 lin. ft.; Basement Floor, 970 sq. ft.; Excavation per ft. deep, 46 cu. yds.; Outside Walls, 20.00 sqs.; First Floor, 9.70 sqs.; Second Floor, without fin. fig., 6.00 sqs.; Ceiling, 9.70 sqs.; Roof Pitch, 13" rise per ft. run; Roof, 16.00 sqs.; Hips and Valleys, 90 lin. ft.; Cornice, C & F, 200 lin. ft.; Partitions, 160 lin. ft.; Inside Finish OS Walls, 130 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 16 opgs.; Windows and Casements, 19 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Steps, .30 sqs.

Page 74, March; Quinn, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 105 lin. ft.; Trench Walls, 16 lin. ft.; Basement Floor, 570 sq. ft.; Excavation per ft. deep, 27 cu. yds.; Outside Walls, 16.00 sqs.; First Floor, 5.70 sqs.; Second Floor, with fin. fig., 5.30 sqs.; Ceiling, 11.00 sqs.; Roof Pitch, 7" rise per ft. run; Roof, 7.25 sqs.; Hips and Valleys, 72 lin. ft.; Cornice, C & F, 118 lin. ft.; Cornice, 8", 96 lin. ft.; Partitions, 144 lin. ft.; Inside Finish OS Walls, 200 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 13 opgs.; Windows and Casements, 17 opgs.; Gable Sash and Louvers, 1 opg.; Chimney, 34" lin. ft.; Main Stairs, 1; Porch Floor, .25 sqs.

Page 75, March; Quinn, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 150 lin. ft.; Basement Floor, 1018 sq. ft.; Excavation per ft. deep, 43 cu. yds.; Outside Walls, 18.00 sqs.; First Floor, 10.18 sqs.; Second Floor, with fin. fig., 4.75 sqs.; Second Floor, without fin. fig., 5.00 sqs.; Ceiling, 15.00 sqs.; Roof Pitch, 12" rise per foot. run; Roof, 14.50 sqs.; Valleys, 36 lin. ft.; Cornice, C & F, 186 lin. ft.; Partitions, 236 lin. ft.; Inside Finish OS Walls, 242 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 2 opgs.; Inside Doors and Cased Opgs., 20 opgs.; Windows and Casements, 25 opgs.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Floor, .25 sqs.; Porch and Balcony Post and Newels, 4; Porch Rail, 14 lin. ft.

Page 76, March; Wall, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 114 lin. ft.; Trench Walls, 78 lin. ft.; Basement Floor, 700 sq. ft.; Garage Floor, 2.45 sq. ft.; Excavation per ft. deep, 31 cu. yds.; Outside Walls, 21.00 sqs.; First Floor, 7.00 sqs.; Second Floor, with fin. fig., 7.25 sqs.; Second Floor, without fin. fig., 1.40 sqs.; Ceiling, 14.25 sqs.; Roof Pitch, 13" rise per ft. run; Roof, incl. Porch, 18.00 sqs.; Hips and Valleys, 40 lin. ft.; Cornice, C & F, 278 lin. ft.; Cornice, 24", 60 lin. ft.; Parti-

tions, 235 lin. ft.; Inside Finish OS Walls, 228 lin. ft.; Front and OS French Doors, 2 opps.; Rear and Grade Doors, 2 opps.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opps., 24 opps.; Windows and Casements, 23 opps.; Gable Sash and Louvers, 2 opps.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, 1.08 sqs.; Porch Ceilings, .90 sqs.; Porch Beam, 19 lin. ft.; Porch and Balcony Post and Newels, 3; Porch Cornice, 19 lin. ft.

Page 78, March: Adams, Archt.

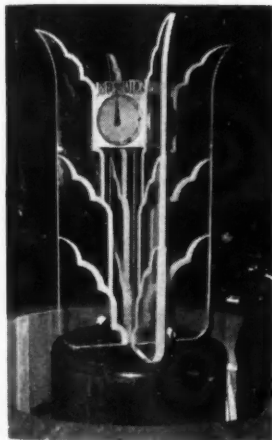
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 168 lin. ft.; Trench Walls, 10 lin. ft.; Basement Floor, 1450 sq. ft.; Excavation per ft. deep, 58 cu. yds.; Outside Walls, 26.50 sqs.; First Floor, 13.50 sqs.; Second Floor, with fin. flg., 8.60 sqs.; Second Floor, without fin. flg., 1.50 sqs.; Ceiling, 23.50 sqs.; Roof Pitch, 12" rise per ft. run; Roof, 20.00 sqs.; Hips and Valleys, 36 lin. ft.; Cornice, C & F, 224 lin. ft.; Partitions, 320 lin. ft.; Inside Finish OS Walls, 336 lin. ft.; Front and OS French Doors, 1 opp.; Rear and Grade Doors, 1 opp.; Inside Doors and Cased Opps., 28 opps.; Windows and Casements, 36 opps.; Gable Sash and Louvers, 2 opps.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .25 sqs.; Porch Ceilings, 1.20 sqs.; Porch Beam, 12 lin. ft.

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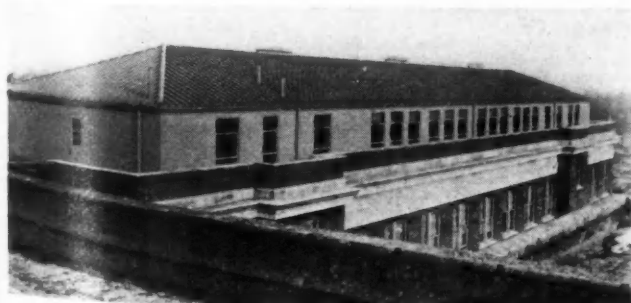
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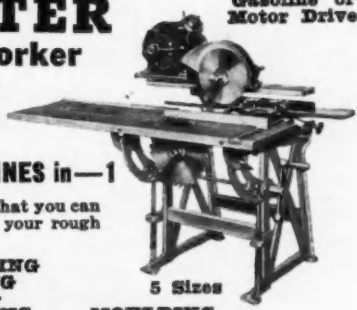
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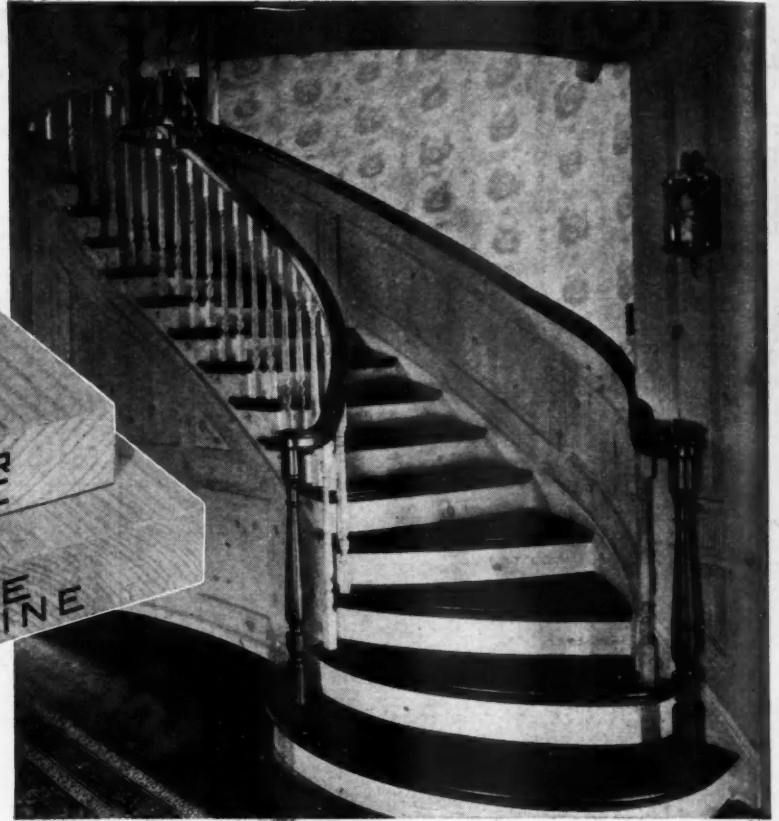
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