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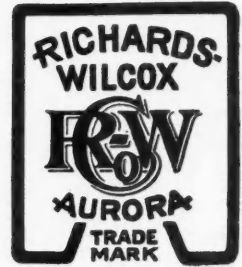
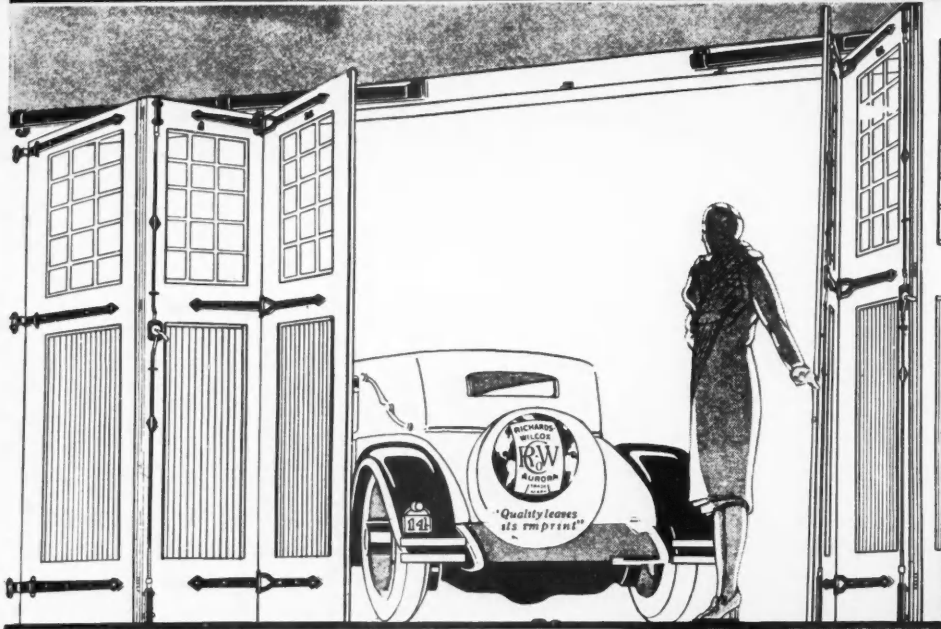
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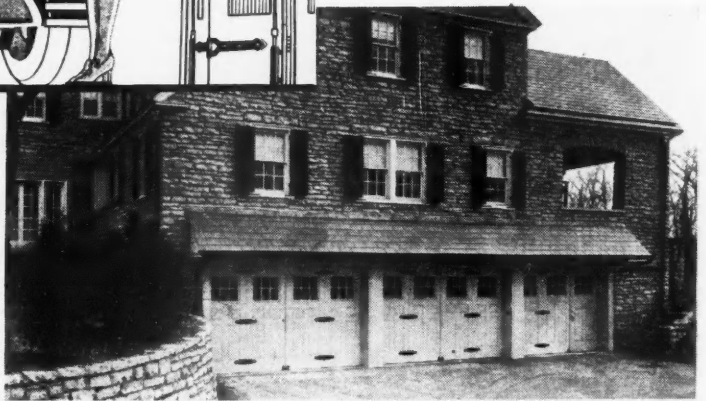
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Regardless of the width of the opening there are no center posts—the doorway is entirely unobstructed, an R-W feature. Use R-W Slidetites for all service stations, public and private garages.

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Door-Ways

SLIDETITE — RUNSLITE — FITSTITE — STAYSRITE

A Talk with Our Readers

GOVERNMENT policies affecting business have been discussed on this page for some months.

Numerous letters regarding what has been said here have been received, some commendatory, some critical, but all reflecting the intense interest being taken by intelligent citizens in current national problems. Some have accused us of talking "politics."

The *American Builder* is a *business* paper devoted exclusively to the building industry, and presents and discusses conditions and policies that affect that industry. The building industry being so large and important, this includes conditions and policies that affect general business. Full revival of building is dependent upon full revival of general business.

The problems of reviving business are essentially *economic*. If they are not intelligently dealt with, restoration of prosperity will be hindered, no matter who is responsible.

FORTUNATELY or unfortunately, legislation within recent years has forced into politics some of the most important *economic* problems with which the American people ever have been confronted. This has not changed their nature. They remain essentially problems of *economics* and *business*.

In discussing them the *American Builder* is not talking "politics," but *business*. It did more to promote passage of the National Housing Act than any other publication, because it believed—correctly, as subsequent developments have shown—that it would help revive the building industry, and thereby stimulate general recovery. It is opposed to many policies of the so-called "New Deal," not for political reasons, but because it believes they are *economically* unsound, and therefore have hindered, and are still hindering, improvement in business, including the building industry.

STIMULATED by the National Housing Act, residential construction is rapidly increasing throughout the country. The *American Builder* predicted in its July issue that the Supreme Court's decision destroying NRA would stimulate recovery. Is it significant or not in this connection, that there has been since then the most marked improvement in general business since the depression began?

All letters from our readers are welcome, whether they contain bouquets or brickbats for us. The more the problems of business in general, and of the building industry in particular, are discussed the better it will be for all of us. We are telling you frankly what we think. Tell us frankly what you think.

Samuel O. Drun,
CHAIRMAN,
AMERICAN BUILDER PUBLISHING CORPORATION
SIMMONS-BOARDMAN PUBLISHING CORPORATION



TO help clear the stack gases of cement particles and to save that cement for return to the kilns, huge hoppers like those you see at the left are installed in the plants where Universal and Atlas portland cement is made.

To help clear the way for efficient concrete construction and to save time and trouble for you (where we are able), we offer our cooperation in helping to solve those occasional problems of concrete work which may be bothersome.


It is not at all our idea to try to set ourselves up as experts. You who are practicing contractors and engineers certainly know as much theory and considerably more about actual job conditions on concrete work than we do.

But we have accumulated considerable helpful material on cement and concrete in our years of carrying on the business of cement-making—not only theory from the laboratory but also job-practice experience and results learned from men like you in the field. And each year we tackle new problems on some of the many projects where Universal Atlas cements are used, and learn new things thereby.

So *this* is our idea—if the information we have gathered and have on file can be useful to you at any time, we want you to take advantage of it. And there's no charge, of course—it's a service that is as much a part of the manufacture of Universal and Atlas cement as are those dust hoppers in the plants. Try us out!

238

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United States Steel  Corporation Subsidiary

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AMERICAN BUILDER AND BUILDING AGE

How to Fool Old Man Obsolescence

MORE residential values are destroyed every year by obsolescence (a high-sounding word for "out-of-dateness") than by fires, floods, panics or poor construction. The building industry must gird itself to prevent this destruction of values.

Old Man Obsolescence is a sinister villain who sneaks up unawares to shave off hard-earned dollars from the sales price of a property. Why is it that some houses make such good pickings for him?

It takes more than good groceries to make a good meal. It takes more than workable wood and metal to make a musical instrument. Similarly it takes good materials and equipment to make a house—but it takes more than that to make it a modern house and a lastingly sound investment.

The qualities required to beat Old Man Obsolescence are skill, imagination and awareness of the trend of building styles and neighborhood values. Many houses that are soundly built by well-meaning men are obsolescent and out-of-date before they are completed. They never have a chance. Their value is impaired from the start because the builder did not know or did not care to consider the building trends of the time.

In no other industry does change take place more rapidly. Never have developments in materials, equipment and house styles swerved so swiftly as in the past three years. There are far too many short-sighted men in the building industry who refuse to recognize the change and progress that is taking place. They are a danger and a detriment to the industry.

How can open-minded aggressive builders beat Old Man Obsolescence?

This entire Model Home Issue of the *American Builder* is devoted to the answer. The model and demonstration homes shown here are concrete evidence of changes and progress in style, materials and equipment. The model homes of today set the pattern for the mass market of tomorrow. Study them carefully to see what other builders are doing; then adapt the best features to your own localities.

Influence of FHA Mortgage Rating

A new influence in the prolonged match of "Kid Value" vs. "Old Man Obsolescence" is the Federal Housing Administration. FHA is acting as rule-setter and umpire. And the new umpire is giving a lot of good breaks to the

intelligent, responsible and honest builder of homes.

FHA experts have made exhaustive studies of obsolescence. It is undoubtedly the most important feature in determining the value of a twenty-year mortgage loan. They have set up in an understandable way the features that tend to make a house and its mortgage stable values. A table setting forth some of these risk rating features is shown in connection with the FHA article on page 33. *American Builder* urges every reader to study these factors, for they constitute one of the best anti-obsolescence helps we have ever seen.

Taking Out the Uncertainties

The studies of the FHA have shown that most of the mistakes of the past that have destroyed residential values have not been in construction practice primarily. They have been in the financing, real estate and neighborhood aspects. In making a long-term insured loan, particular attention is now paid to the character of the neighborhood, its restrictions and its long-term trend. A stable neighborhood means stable values.

Many of the practices that have come in since FHA was set up, and which may be fairly attributed to it, are having a beneficial effect in stabilizing construction and residential values. To get a long-term loan, whether FHA or otherwise, plans and specifications must be more carefully thought out in advance. The owner and the builder are forced to review their financial set-up as well as their construction plans in a fashion that tends to bring out errors in judgment or in taste.

Once the loan has been approved, inferior materials may not be substituted. More frequent inspections during construction tend to prevent deviation from plans and specifications.

Discouraging to Chiselers

While many of the new rules under which this old building industry operates may seem troublesome and may delay operations, within reasonable bounds they will be of benefit to everyone concerned, for by stabilizing building practices and forcing the incompetent or careless operators to live up to minimum standards they do the entire industry a lasting benefit. They will help us all to beat Old Man Obsolescence as well as a lot of other evils that have plagued the industry in the past.

Why Not Broaden FHA Rules To Admit Homes on Low-Cost Land?

ONE of the announced purposes of the National Housing Act was to encourage the building of low cost homes such as the average wage earning family could successfully buy and own. Much has been said and written by economic and business leaders concerning the importance of this big mass market for homes for the lower two-thirds of the population—homes costing \$1,000 to \$3,000 and within reach of wage earners' incomes.

Under existing FHA regulations, however, very few low cost homes are being created since it is practically impossible to qualify them for mortgage insurance. The stipulations calling for paved streets, full municipal service of water and sewers, and for exceptional social ratings before a neighborhood can be approved for FHA loan insurance automatically rule out the low cost properties and encourage only the de luxe developments.

Low-Cost Homes Are Possible Only on Low-Cost Land

Home cost is the combination of three factors—land, construction and financing; and it should be plainly evident to the Federal Housing Administrator that land made high priced by expensive paving and underground piping cannot be used *if total home costs are to be kept low*. Yet the present official regulations do not permit approval for FHA mortgage insurance of properties outside the fashionable city suburbs. Small city and village home building and the movement toward garden homes and subsistence homesteads out toward the open country find no encouragement under present rules.*

It is a matter of general comment that most of the FHA loan-financed new homes are up in the \$10,000 to \$20,000 class and in the best city suburbs. They are unquestionably prime risks—none better; yet are the broader purposes of the Act being served when low cost homes for wage earners and the great volume of small town home building are not encouraged?

Figures given out by the Federal Housing Administration on Sept. 18 cover all FHA mortgages insured up to Aug. 14. There were 42,297 loans with total value of \$165,236,197. This gives an average for each loan of \$3,906; and, since the average percentage of loan to total value is 68 per cent, the average cost of all these properties is \$5,744. This is 41 per cent higher than the average value of all new houses for which building permits were issued in 94 cities during the first half of this year, \$4,080, according to figures compiled by the U. S. Department of Labor; which again goes to prove that FHA, under its present working rules, is serving the upper crust of the home building field and not the low-cost, wage-earner type home for which there is unquestionably such a tremendous need.

The Housing Administrator, in considering the broadening of the regulations to admit to insurance loans on suitable homes on low-cost land, might well bear in mind the fact that *volume* always comes from the outlying towns. This truth was well phrased in a press release from the Treasury Department on Sept. 20, following a conference of durable goods industries men. "Considerable importance was attributed," this Treasury statement said, "to the fact that not less than half of all the building activities in this country during a given year took place in communities of five thousand and less."

Broaden Rules for Bigger Volume

The regulations governing the appraisal of homes for FHA mortgage insurance ought certainly to be drawn with consideration for this "big half" of the market. A good house on an unpaved street in a small town and served by a well and septic tank sewage disposal may be a safer risk than the same house on an expensively improved city plot at twice the valuation.

The Administration is said to be keenly desirous of making "a big push" on home building to increase employment and bring about recovery in 1936. A broadening of FHA Rules to permit the acceptance for insurance of loans on houses on low-cost land would, in our opinion, go far toward creating the desired volume.

*Quotations from "Underwriting Manual" of FHA for valuation procedure under Title II:

Appeal of the Neighborhood—"315. The appeal of a residential neighborhood results from the general condition and attractiveness of the properties located therein; the kind and social status of the inhabitants; nearness to commercial centers and facilities for religious worship and for recreation, amusement, and sports, such as swimming, boating, riding, tennis, and golf; the provision of adequate police and fire protection; proper maintenance of the public streets and other public improvements; the percentage of owner occupancy; the degree to which the neighborhood is built up; and other similar factors.

"316. The rating of this feature will be greatest when the mortgaged property is situated in an exceptionally desirable neighborhood. On the other hand, if influences are present or are likely to occur which will lessen the attractiveness of the neighborhood, it becomes less appealing to the general public for home use, and a lower rating will be given."

Sufficiency of Utilities and Conveniences—"318. 'Utilities and conveniences' may be considered to include, electricity, gas, water, telephone, postal service, sewers, garbage disposal, storm drains, parkways, street lights, fire and police protection, and street cleaning services—all for the neighborhood as a whole. When these utilities and conveniences are provided so as to adequately meet the needs of the inhabitants of a neighborhood, the highest rating of this feature will result.

"319. The absence of some of the less important factors should not bring about a disqualifying or extremely low rating so long as the more important ones are well supplied. An insufficiency of the more important utilities or conveniences, however, such as water, gas, electricity, and sewage disposal, is sufficient cause for a 'Reject' rating."

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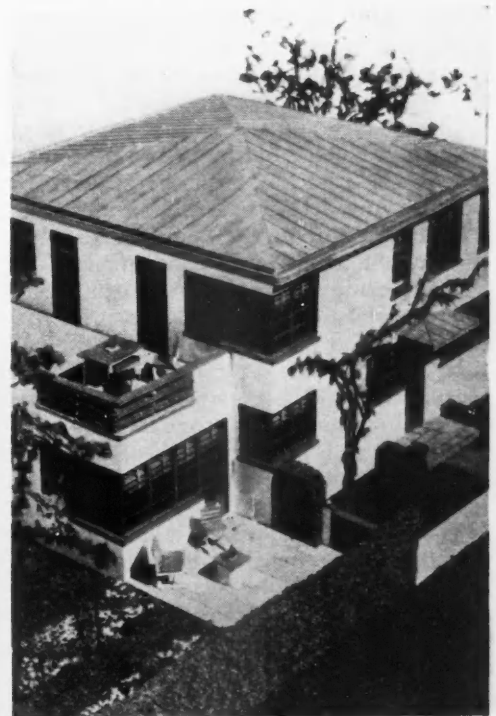
PUBLIC interest intense at opening of the Dayton, O., "Home of Today"



Model Homes Set The Style for 1936

5,000 MODEL AND DEMONSTRATION HOMES in 5,000 communities are showing the remarkable forward strides of home builders and planners. Prominent among the 1936 models are the "New American" Demonstration Homes sponsored by General Electric and dedicated to "a better way of living." Planned from the inside out, these homes show a distinct new trend in modern design and equipment.

LOOKING DOWN on Model of Design No. 11 in the "New American" Home Program; John Ekin Dinwiddie, of San Francisco, Architect.



—AND IN THE SOUTHWEST—Governor Moeur of Arizona breaks ground for G-E "New American" home to be built at Phoenix by Dwight B. Heard Investment Co.



How to Get a Higher FHA Rating on Insured Loans

QUALITY CONSTRUCTION REQUIRED

by JOSEPH B. MASON

A "SMALL REVOLUTION" is taking place in home construction as a result of the practice of risk rating of mortgages which has been put into effect by the Federal Housing Administration.

Under this system *merit* and *quality* are being substituted for price. Building is being stabilized, and destructive price cutting discouraged.

Builders anxious to obtain long-term loans at the lowest cost may well study the FHA mortgage risk-rating plan.

American Builder presents the following facts after study of the FHA plan and consultation with builders who have used it. In addition, *American Builder* has interviewed the chief underwriter, Bradley Randall,* and the chief architect, Frederick Mathesius of the New York FHA division which has approved many thousands of insured loans on new houses. Randall and Mathesius have personally passed on every loan in the New York territory, which includes the hundreds of speculative builders on Long Island who have been unusually active. A high percentage of all homes in this territory are financed by long-term FHA mortgage loans.

In answer to the question "how can a builder get a higher rating on insured loans?" chief underwriter Randall stated in no uncertain terms: "Build better houses." He points out that the extra cost of sound construction and sound quality work is slight. But the effect on the lasting quality and the loan value of the house is great.

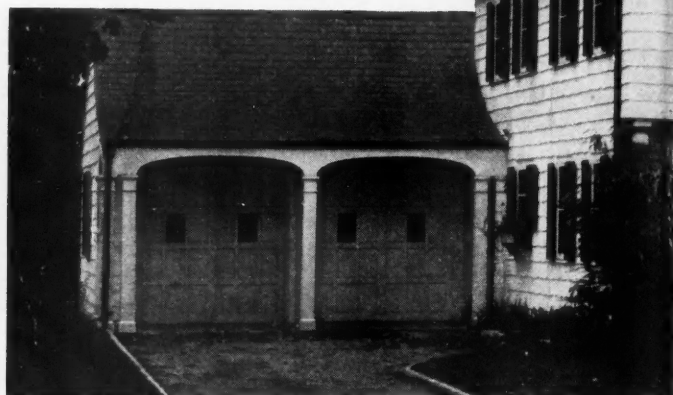
Chief architect Mathesius pointed out that price cutting in the past has been the speculative builders' own worst enemy. "There was no end to the ways in which a builder could cut the quality and value of a house in his attempt to underbid a competitor," he says. "Now we have made progress towards stabilized home building, and are substituting merit for price. Loans are now based on what actually is put into the building."

In the New York territory FHA officials got leading speculative builders together and persuaded them to agree on certain minimum standards. They have followed these standards and now, instead of competing to cheapen quality, are competing to *improve* quality of houses being sold.

What are the qualities in a house and in a neighborhood that the FHA considers important in rating their value as security for a long-term loan?

Before answering that question it should be pointed out that the system of rating mortgages by the FHA has been developed after long research and careful study.

*Editor's Note: Mr. Randall has since been promoted to the post of Senior Underwriting Supervisor for the entire country.



The preparation of this plan has been, and still is, largely in the hands of chief underwriter Frederick M. Babcock at Washington. The difficulties of rating the mortgage risks on homes scattered throughout a country the size of the United States was very great. The system developed is the best attempt ever made along this line, and many of the basic features have already been adopted by mortgage lenders not directly connected with FHA. For that reason the following is of importance to builders not financing homes under the FHA plan as well as those who are.

FHA experts first point out that the value of a house is dependent not only on the construction of the property itself but on the relation of the property to the neighborhood and its long-term outlook in relation to the long-term trend of the neighborhood.

The rating of the mortgage risk on a house is done on the basis of five major factors as follows:

1. The value of the house itself
2. The desirability of the neighborhood
3. Relation of the house to its neighborhood
4. The rating of the borrower
5. The type of mortgage loan

Each of these five divisions has to get a good score to permit the making of a long-term insured loan. On the opposite page is shown the important points considered under each of the five major divisions. Each of the features listed is given a certain value and if a perfect score is made the value would total 100 percent.

Each of the five major rating features receives the attention of an FHA specialist. The house itself is rated by the FHA architectural inspector. The "neighborhood" and "relation of property to neighborhood" items are filled in by the FHA real estate valuator. The two sections on the "rating of the borrower" and the "type of mortgage" are made by the FHA mortgage risk examiner.

If a house fails in any important major classification it would be rejected. A perfect score is not required, however, and certain items that do not fulfill the highest

FHA Mortgages Are Rated on These Points



Comparative Rating Value of House

General Layout.....	15%
Design of Property.....	8%
Suitability of Climate.....	7%
Livability	15%
Light and Air.....	8%
Mechanical Equipment.....	7%
Accessory	3%
Special Equipment.....	2%
Structural Soundness.....	20%
Resistance to Elements.....	10%
Resistance to Use.....	5%
Total	100%

Comparative Rating of Neighborhood

Stability of the Neighborhood.....	25%
Protection from Adverse Influences	20%
Adequacy of Transportation.....	15%
Appeal of the Neighborhood.....	10%
Sufficiency of Utilities and Conveniences.....	10%
Level of Taxes and Special Assessments.....	10%
Presence of Civic, Social, and Commercial Centers....	5%
Topography and Special Hazards of Neighborhood	5%
Total	100%

Relation of Property to Neighborhood

Conformity as to Type.....	15%
Conformity as to Usefulness and Function.....	15%
Conformity as to Physical Condition.....	10%
Conformity as to Architecture.....	10%
Relative Adequacy of Municipal Utilities.....	10%
Relative Accessibility to Neighborhood Conveniences	10%
Relative Freedom from Nuisances.....	10%
Conformity as to Lot Characteristics.....	10%
Conformity as to Probable Remaining Useful Life....	5%
Conformity as to Placing of Buildings on Lot.....	5%
Total	100%

Rating of Borrower

Character	30%
Attitude Toward Obligations.....	15%
Ability to Pay.....	15%
Prospects for Future.....	12%
Business History	10%
Ratio Value of Property to Annual Income.....	7%
Ratio Monthly Mtge. Obligation to Income.....	6%
Associates	5%
Total	100%

Rating of Mortgage Pattern

Ratio of Loan to Value.....	50%
Ratio of Useful Building Life to Life of Mtge.....	20%
Interest Rate.....	15%
Amortization Provisions.....	10%
Service Charges by Mortgagee.....	5%
Total	100%

standards may receive less than the perfect score indicated on the table, but this brings down the total rating.

For example, under the rating of the "House Features" in the table, the "structural soundness" item might be brought down by use of inferior methods or materials. In that case, the inspector might rate that item at 10 percent instead of 20 percent, which would reduce the score under that classification.

The FHA inspectors have a specially prepared form which enables them to figure the risk rating of the mortgage on the basis of points. When all the points under each classification have been totaled and the findings summarized by the chief underwriter, the mortgage is given a rating of "A," "B" or "C" or rejected on the score.

Obviously the risk rating of mortgages is a combination of science and good judgment. The system enables the FHA inspectors to use good judgment and provides them with a sound background of knowledge and understanding of all the elements involved in creating the value of a house and of a mortgage. FHA men take the attitude that when they insure a loan they must be willing to back up their judgment for many years to come—even to the extent of taking the property over at a later time.

Probably the best advice any builder can take on the methods he can employ to get the highest FHA rating on his houses is to get acquainted with the local FHA officials and discuss with them the things they consider important. Local conditions and practices affect building, and FHA recognizes this fact. FHA officials advise builders with definite projects to come in and discuss a proposed construction plan before they make commitments. In effect, the builder has available in the staff of the FHA an advisory service on architecture, real estate and financing.

The long-time results of this system of rating residential properties should be a real benefit to honest and capable contractors and builders. There is a real incentive to substitute *merit for price*. Competent builders will welcome this trend for it will tend to eliminate the unscrupulous and incompetent competitors who have done so much to hurt their business.

SELLING HOMES

The Demonstration Way

By JOHN F. QUINLAN

Manager G-E "New American" Home Program



JOHN F. QUINLAN

IN A WORLD WHIRLING with new ideas and changes the home building industry cannot remain stationary. We of the General Electric Co. have adopted the *demonstration way* of bringing to the attention of the American public a type of home fundamentally suited to a modern concept of living.

By the demonstration way of selling I mean the method which the automobile industry has so successfully followed,—putting people behind the wheel and letting them drive a demonstration car. This is exactly what the "New American" program is aiming to do for home building. We are bringing millions of people to see New American demonstration homes located in strategic points throughout the nation—hundreds of modern, thoroughly equipped houses which set a new standard of living.

I need hardly point out the important factor obsolescence is in the automobile industry where new models are constantly creating new markets. In the same way, new home models can create new home markets.

In adopting the term, "New American," which describes a form of modern living, we hope to call attention to new models in homes. It is not our desire that this program should be a General Electric or even a home electric program exclusively. We invite all other lines of the building industry to join with us in this campaign to establish the thought in the minds of the public that *a new type of modern homes is now available that makes all previously built houses obsolete*. I wish to take this opportunity particularly to invite residential contractors and operative builders to join with us in this program.

We know that the progress of home building is dependent on the open-mindedness and progressive spirit of the contractors and builders of the nation. They are the ones who will build these houses and sell them to the public. They can make "New American" a term which will be universally used to describe a new era of home building in this nation.

This issue of the *American Builder* is dedicated to model and demonstration homes. As this issue reaches you, hundreds of New American demonstration homes

are being opened simultaneously to the public. Newspapers, popular magazines of all kinds and trade publications are joining with us at this time to talk about and describe this new American concept of building. Many of you are building New American homes and I hope your experience will be as favorable and as valuable as it was in the case of Angus MacDonald, the Cape Cod builder who opened his New American home at Marblehead, Mass., a bit ahead of the rest of the procession. (See illustrations on pages 36 & 37.) More than 20,000 visitors inspected this little Cape Cod house on the first Sunday, and since then 40,000 more have visited this house. As a result of the wide publicity and advertising and the crowds of people, Angus MacDonald has sold lots all around the demonstration home and has also been successful in selling several houses completed last year which had not found buyers. This is just one example of the effectiveness of the demonstration way of selling.

Perhaps I should make it clear that in talking about New American homes, we are not referring to any particular type of architecture or design. Some people mistakenly confuse this term with "factory-built" or "prefabricated." Nothing of the sort is intended. All of the New American demonstration homes built are of sound traditional architecture that the American public appreciates and will buy. As you know, the New American homes are being built from plans submitted by more than 2,000 architects in the General Electric Home Electric competition. We have analyzed the important features of planning, construction and equipment that were brought out in the competition designs. The twelve features that are outstanding may be briefly summarized as follows:

1. *Practical Design*—New American homes are designed for living, from the inside out. Cheaper to build because of emphasis on space use.

2. *No "Traffic Lights" Needed*—You go from one room to another with the fewest possible steps, without tripping over furniture, or disturbing other people.

3. *Completely Equipped Kitchen*—The kitchen is arranged for the "use sequence" of equipment in the preparation and serving of meals. All-electric equipment cuts manual labor to a minimum.

4. *More Wall Space*—Windows and doors are placed scientifically (windows at corners of rooms, for example). Simplifies placing of furniture and hanging of drapes.

5. *Adequate Wiring and Lighting*—Good wiring, and enough of it, make possible scientifically planned lighting, conveniently placed labor-saving equipment. Result: greater comfort, safety and health.

6. *Garage Part of House*—Garage close to street, easy to get in and out of, no lot space wasted, easy access to and from house.

7. *Air Conditioned*—Automatic control of temperature, humidity, circulation. Dust is filtered from air. Less housecleaning, greater health and comfort.

8. *Outdoor Living*—Terraces connect directly with many of the rooms. Provide for outdoor dining, relaxation, living.

9. *"Dining Room" Works 16 Hours a Day*—A good-sized dining alcove replaces the old-fashioned dining room. The space is usable not merely three hours a day, but all through the waking hours.

10. *Simplicity*—The keynote of the New American design is simplicity. Cornices and traditional mouldings are eliminated,—another reason for lower construction cost.

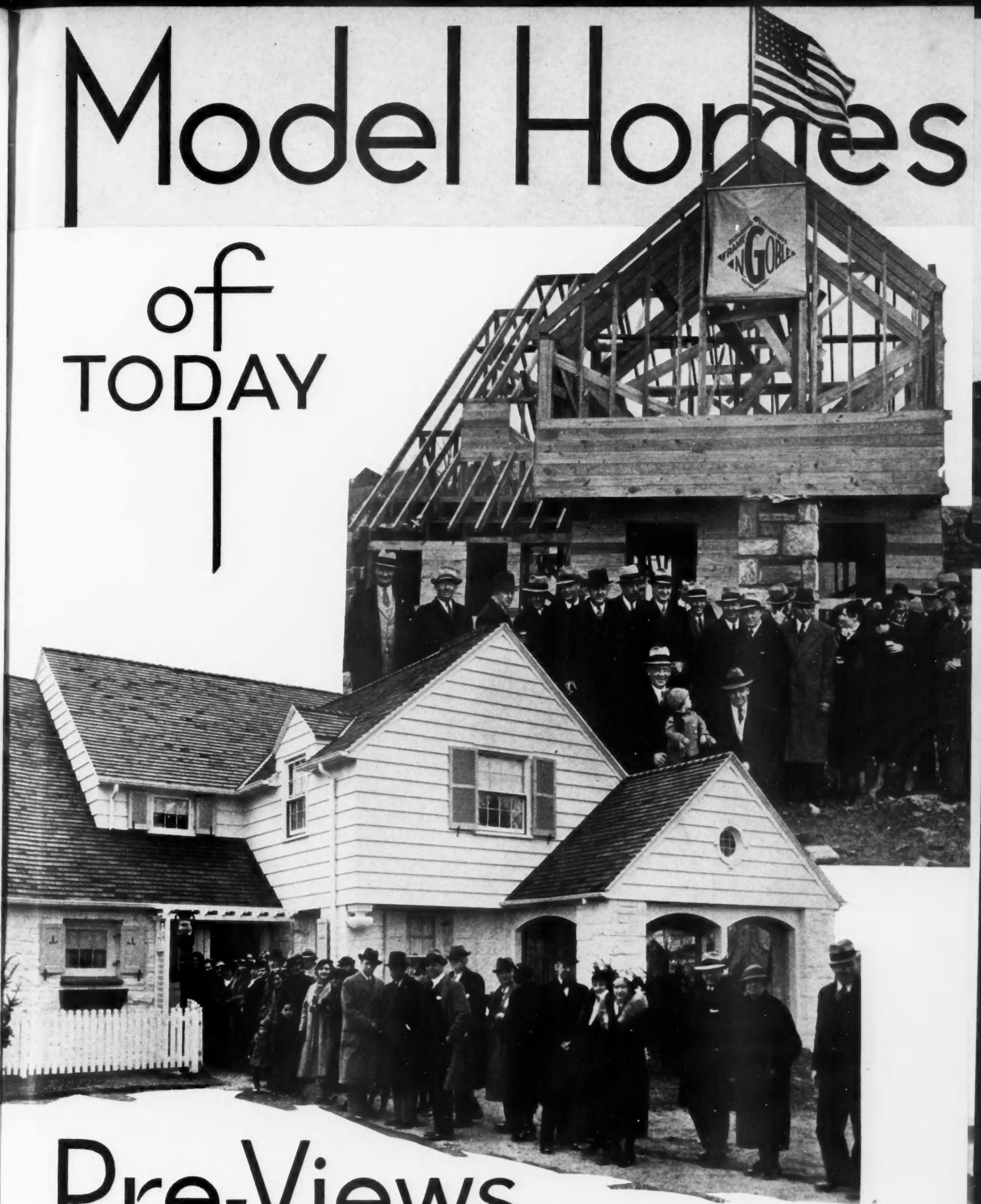
11. *Practically No Waste Space*—In many old houses only 65 or 70 percent of the space is used. In the New American home the usable space runs as high as 80 or 85 percent.

12. *Better Use of Windows*—The windows are larger than average. They are placed where needed, rather than for external design balance.

Have you analyzed the houses you are building and selling to see whether they cover these twelve features? If they do, you are entitled to call them "New American" homes. We believe you will find them suited to the needs and habits of the modern way of living of the American public—your customers.

Model Homes

of
TODAY



Pre-Views of 1936 Styles

Latest Ideas in Design-Planning-Equipment-Materials

Automatic Heat

ALL THE CONTROLS necessary for heating this "New American" demonstration home are located in the living room. The house has an oil furnace, air conditioner, scientific lighting throughout.



Livable Basement

THE BASEMENT recreation room of the Marblehead, Mass., "New American" demonstration home built by Angus MacDonald, is clean, cheerful and well lighted. The pine paneling, linoleum floor, attractive fireplace, make it one of the most livable rooms in the house.



Open Porch

THIS REAR VIEW of the Marblehead demonstration house shows how the open porch is skilfully handled to bring the outdoors at the convenient command of the owners. Floor plans and further details of this house are given on pages 54 and 55.



OF ALL THE PRIZE WINNERS—radical and conservative—in the recent General Electric small home competition, this Cape Cod Colonial has proved most popular with builders. It is located at Marblehead, Mass.
 Cost Key is 1.731—127—630—28—18—15

First "New American" Demonstration Home

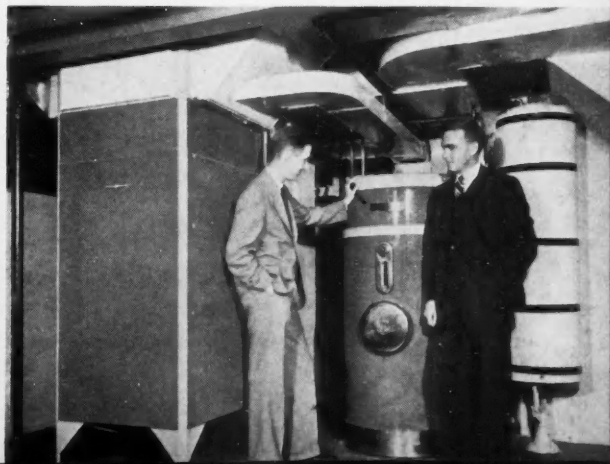
Angus MacDonald, Builder; Royal Barry Wills, Architect

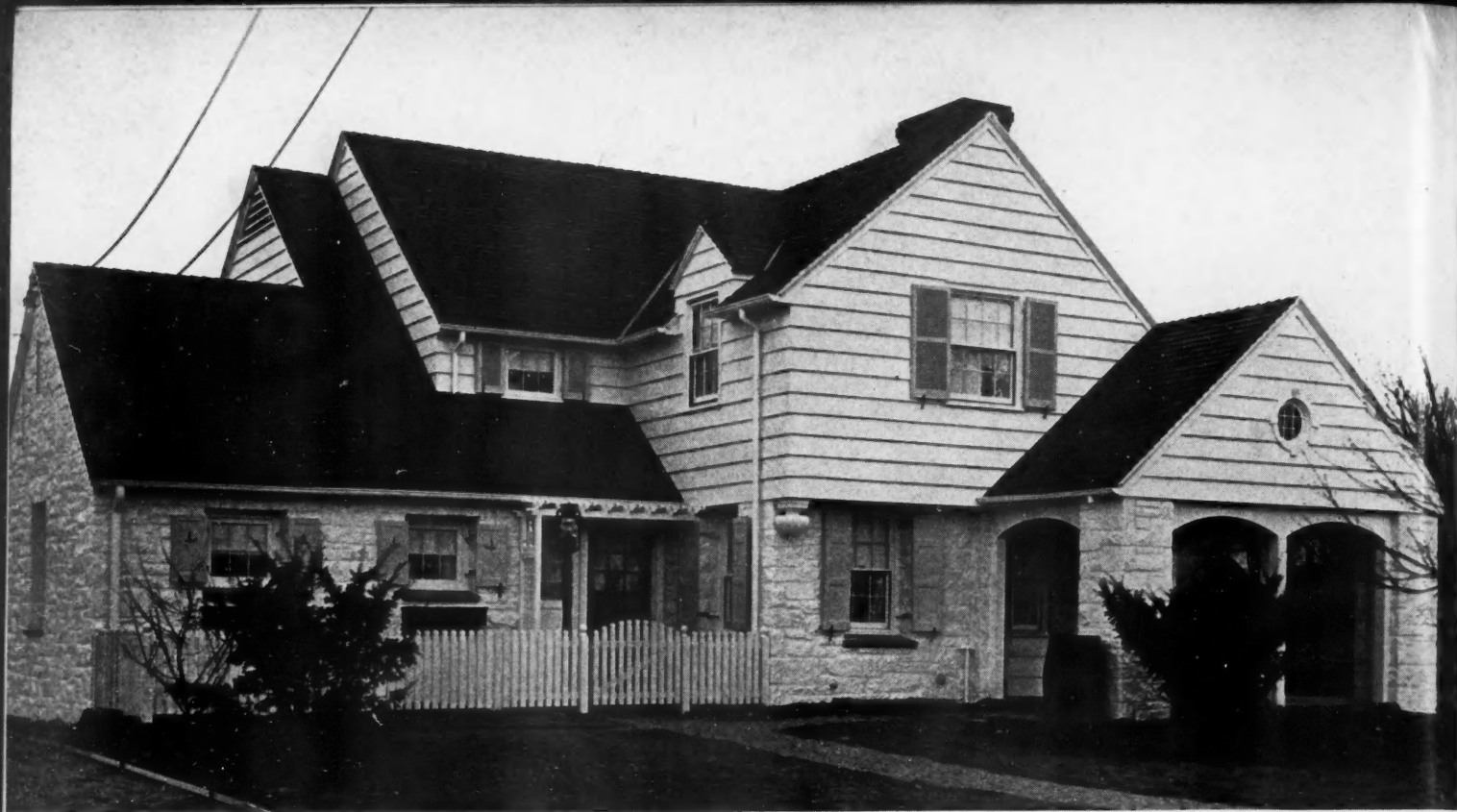
FLOOR PLANS AND FURTHER DETAILS GIVEN ON PAGES 54 & 55



MANY MODERN FEATURES are included in this Marblehead demonstration home. Garage is located close to the street. The plan is convenient, economical. Its equipment includes air conditioning, scientific lighting, electric range, home laundry, dishwasher, kitchen ventilation, basement workshop, basement play-room, compact, scientifically arranged kitchen. The cost is reported at \$9,000.

37





Looks like a lot of house—but cost is low



MODEL HOME CROWDS exclaimed at the charming entrance arrangement above, glass breakfast nook below.



Westchester County, N. Y., Model Home

Frank N. Gobel, Builder
Theodore Richards, Architect

A NEW MARK in home building was set by this Westchester County Model Home located in White Plains, N. Y. It is expertly-planned, well-built, fully-equipped in most modern fashion. Cost of duplicating it is estimated at \$8500. It has concealed radiation, oil burner, winter air-conditioning equipment. First floor exterior is field stone painted white. Shingle roof is stained black; shutters, flower boxes and doors are painted red.

ENTRANCE DETAIL at left attracted much comment with its picket fence, hand-turned lamp post, colorful flower boxes, trellised doorway. These are the details people like. Rear view of house shows glass-enclosed breakfast nook and overhang over garage door to protect back door. The garage rear entrance and breakfast nook arrangement were very popular.

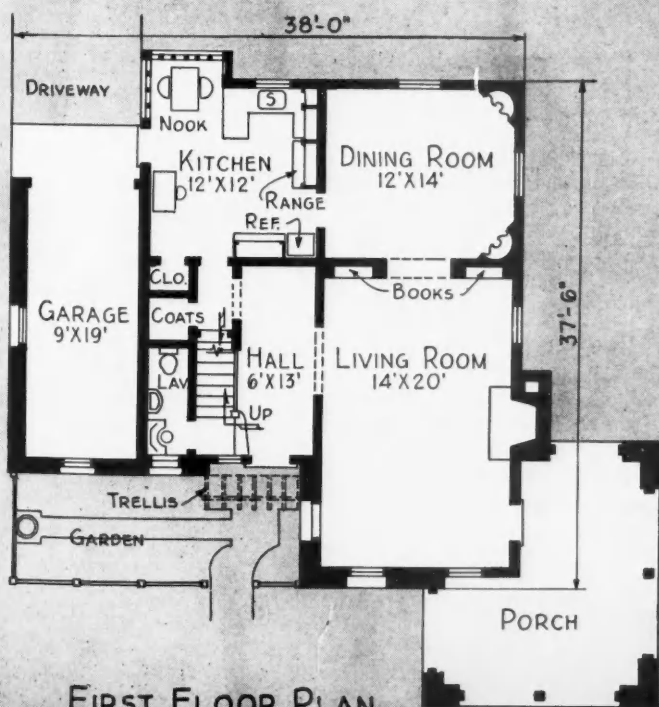
Cost Key is 2.170—154—948—41—27—19

Complete Specifications
Given on Page 51

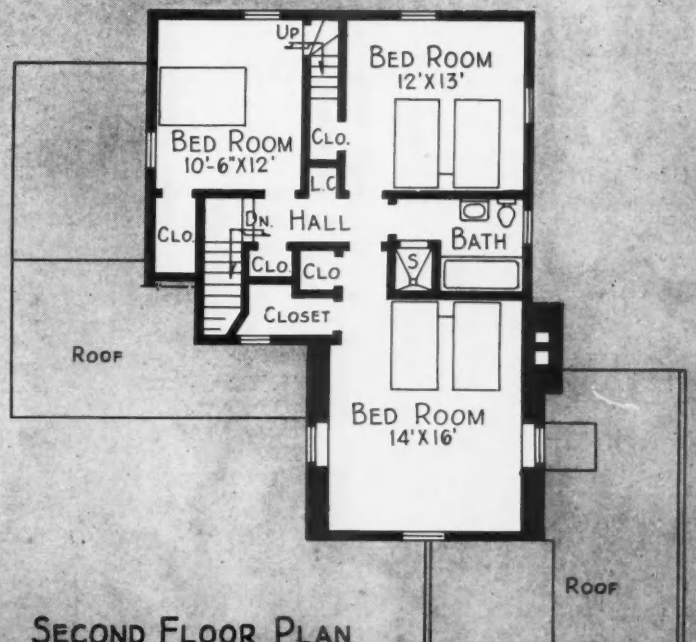
NEW AND MODERN WOODWORK with latest hardware, fixtures and wallpaper make the interiors of the Westchester Model Home unusually fine. At right is seen the inexpensive stair detail with random-width feather-edge vertical pine panelling. Below is shown view of dining room with attractive arch trim and built-in corner china cabinet with shell top.



FLOOR PLANS show expert planning. Open hall gives spaciousness, easy access to kitchen. Rooms are ample, cross ventilated. Kitchen-dining-alcove layout is one of the best.



FIRST FLOOR PLAN



SECOND FLOOR PLAN

Kitchen Bath Playroom

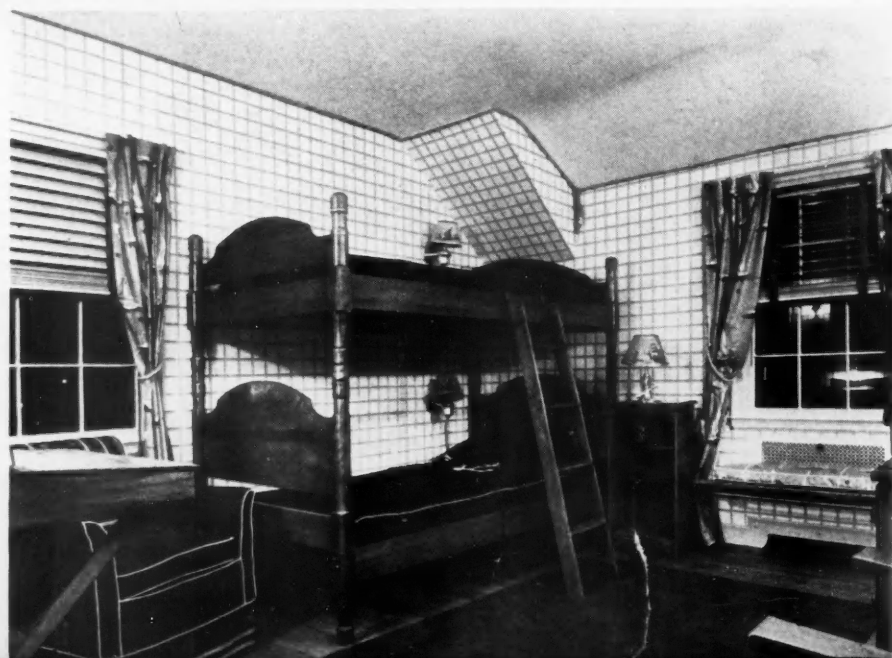
THE WESTCHESTER Model Home has the latest in equipment of all kinds. The bathroom at left shows attractive tiling, built-in fin-type radiator, shower stall, metal medicine cabinet. Lavatory is vitreous china with hooded overflow, chromard metal legs. Toilet is one-piece syphon-Vortex bowl and tank.

THREE GOOD-SIZED BEDROOMS are included in the Westchester Model Home, one of which is the attractive child's room below. Note the rope moulding, concealed radiator, built-in desk and seat, double-deck ship type beds. Windows are new style double-hung factory built with built-in copper weatherstripping.



A NAUTICAL ATMOSPHERE is given the boy's room at right by the double-deck beds with ladder. This room, like every room in the Westchester Model Home, is well proportioned to fit necessary furniture. It has ample light, cross ventilation, latest wallpaper designs, simple trim, Venetian blinds, concealed radiators, plenty of electric outlets conveniently located.

Complete Specifications Given on Page 51





A MODEL KITCHEN in every respect. The work area is scientifically grouped in a U shape to eliminate extra steps. Yet the dining alcove which is separated from the work area by the metal-top table gives a sense of size that is desired. Equipment includes package receiver, towel

driers, planning desk, gas range, Monel metal sink. The glass enclosed breakfast alcove was one of the most popular features of the house. The basement recreation room illustrated below features a fireplace, indirect lighting, modern decoration on concrete.



"The Home of Today"

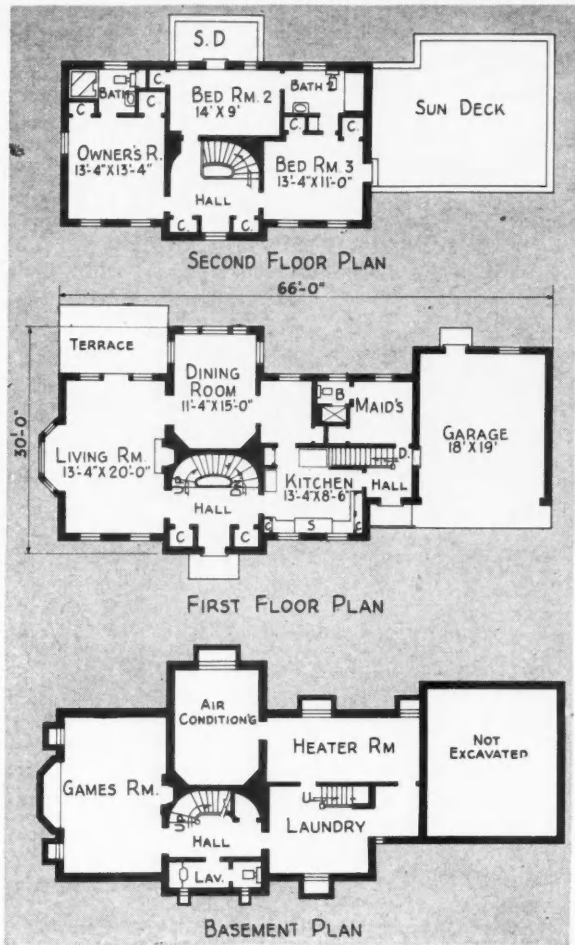
at Dayton, Ohio

Designed by Dayton Chapter A.I.A.
 Constructed by Dayton Master Brick
 Contractors Ass'n.

DAYTON'S "HOME OF TODAY" was formally dedicated and opened in impressive fashion on the evening of August 28 in the presence of some 200 women club leaders and officials of Dayton and surrounding communities. Climax of the ceremony was the unlocking of the front door of the home by Miss Colleen Moore, noted motion picture star, who assisted the committee in welcoming the guests into the home.

Mayor Charles J. Brennan, in behalf of the City of Dayton, lauded the undertaking as one that will keep the community to the forefront as "the city of homes."

"The Home of Today" is of English Georgian design, a two-story brick home with a beautiful center hall. The first floor contains a living and dining room, kitchen, breakfast alcove, and maid's quarters. The second floor has two master bedrooms, two baths and an upstairs study. Sun terraces are adjacent to two upstairs rooms. The garage for two cars is on the main floor level, attached to the house. The home is situated well back from the roadway, with a secluded garden development to the north and west, and a terrace leading from the living room to the north lawn. The basement has a commodious game room, a laundry, air-conditioning and heating rooms and a lavatory.



PARTICIPATING FIRMS AND ORGANIZATIONS

- Air Conditioning Equipment.....Frigidaire Corp.
- Automatic Gas Water Heater Cleveland Heater Co.
- Booklet.....Hugo Wagenseil Advertising Agency
- Brick.....Pursell Brick Co.
- Brick Work.....Master Brick Contractors Ass'n.
- Building Supplies.....Dayton Builders Supply Co.
- Building Supplies.....Hoefler & Stoecklein
- Copper Pipe.....American Brass Co.
- Concrete.....Ready Mixed Corp.
- Control Equipment.....General Electric Supply Corp.
- Control Equipment.....Minneapolis-Honeywell Co.
- Decorating and Furnishing The Elder & Johnston Co.
- Electrical Supplies.....Nichols Electric Co.

- Electrical Wiring.....J. C. Federle
- Fireplace Heaters.....Homestead Heater Co.
- Forced Air Gas Furnace The Surface Combustion Co.
- Gas Range.....The Rike-Kumler Co.
- G. E. Dishwasher and Sink Hollister Electric, Inc.
- Incinerator.....The Kohn Mfg. Co.
- Insurance.....Arnold S. Althoff Insurance Agency
- Land.....Gorman & Peters, Inc.
- Landscaping.....San Rae Gardens
- Lighting Fixtures.....The M. D. Larkin Co.
- Lumber and Mill Work The Peter Kuntz Lumber Co.
- Mirrors and Vitrolite Glass Geo. Behm & Sons Co.
- Oak Flooring.....Reguarth Lumber Co.
- Overhead Garage Doors.....Overhead Door Co.

- Plumbing.....Master Plumbers Ass'n.
- Plumbing Fixtures.....M. J. Gibbons Co.
- Plumbing Fixtures.....W. F. Kiefaber Co.
- Printing.....The Thompson Printing Co.
- Radio Antennae.....Copp Radio Laboratories
- Refrigerator.....Frigidaire Corp.
- Roofing.....Reick Sheet Metal Co.
- Sand and Gravel.....Sand & Gravel Ass'n.
- Sheet Metal Work.....Lau Heating Service
- Steel Floor.....American Rolling Mills Co.
- Telechime.....General Kontrolor Co.
- Termite Treatment.....Terminix Co., of Cincinnati
- Water Softener.....Dayton Pump & Mfg. Co.
- Window Glass (Double Glazed) The Thermopane Co.



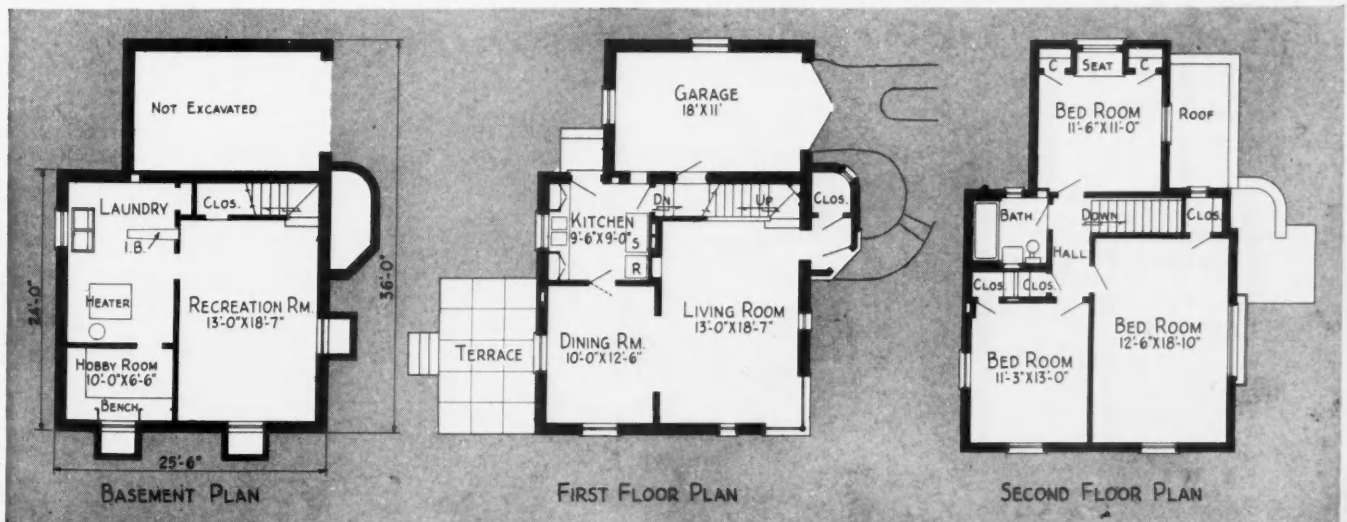
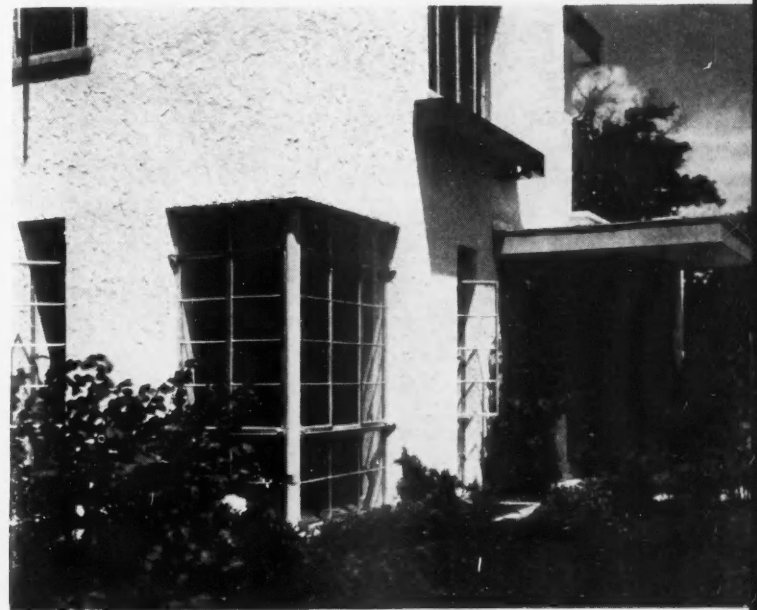


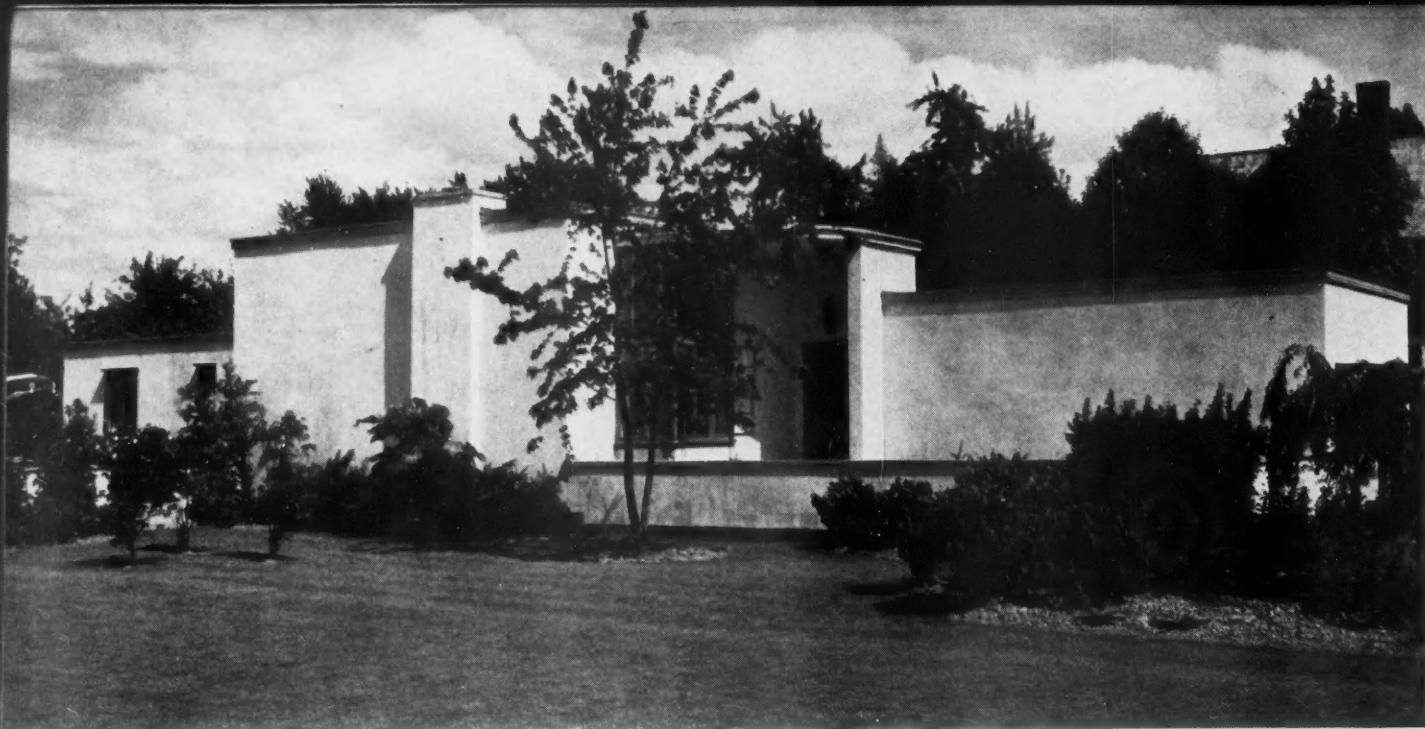
Chicago Builder
**Features Ultra-Modern
 Home at LaGrange, Ill.**

Wm. Joern & Sons, Contractor
 Wm. F. Kramer, Architect

THIS MODEL HOUSE was erected and exhibited in a west Chicago suburb early in August. Within a month after opening the house to the public, this contractor had signed contracts for seven more houses of similar construction—concrete masonry and stucco walls with concrete first and second floors. Cost is \$7,250.

For further details of the construction of this house, see page 56



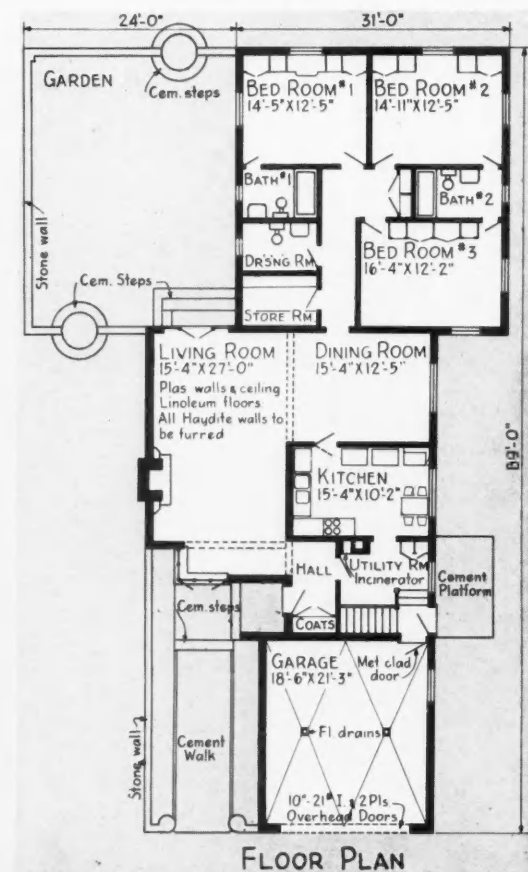


General Electric's Experimental House at Nela Park, (Cleveland)

J. Byers Hays & Russel Simpson
Architects

Keyes-Truehaft Co.
Builders

Mrs. Margaret Green Dargan
Decorating and Furnishing

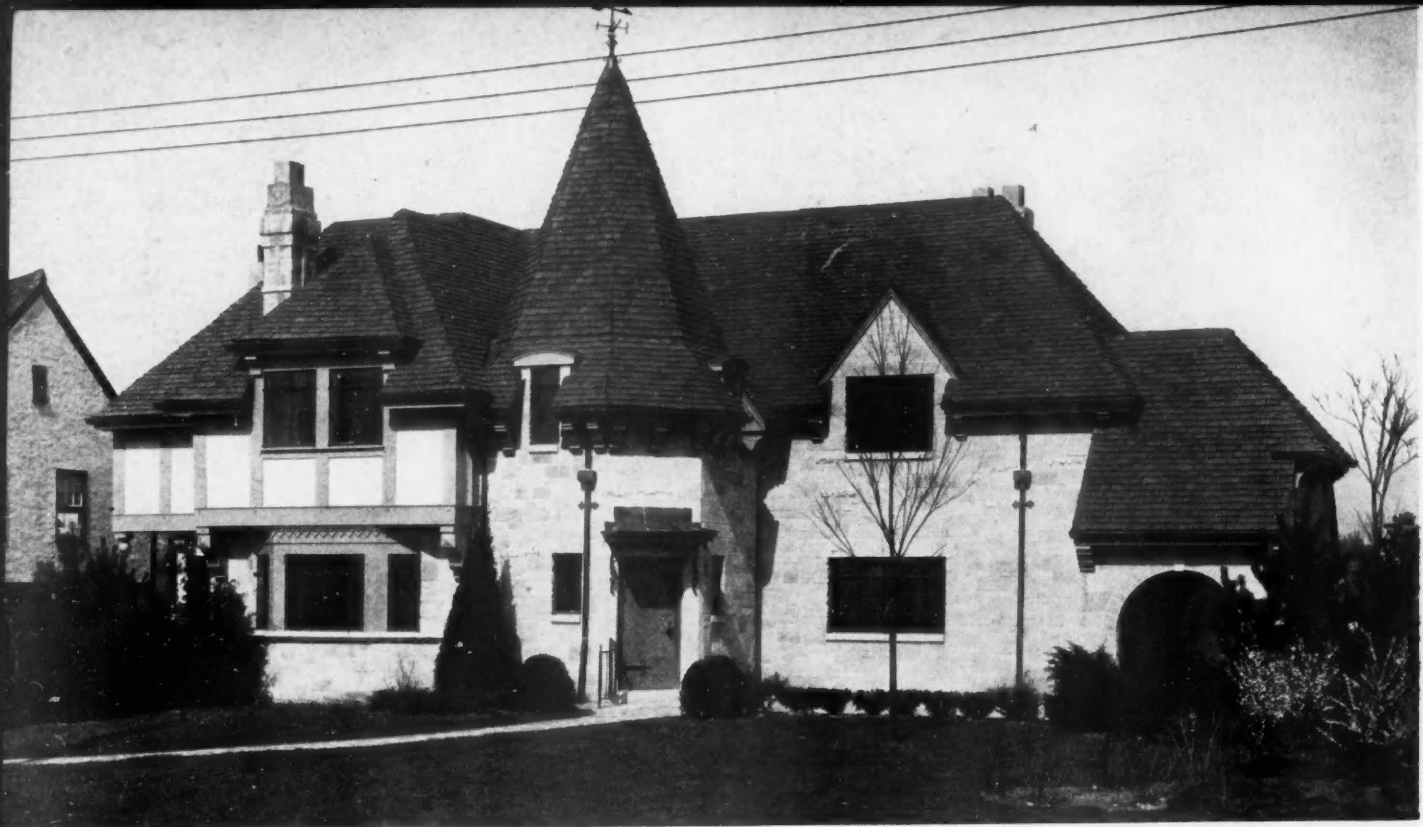




INTERIORS of the G-E experimental house feature new ideas in decorative lighting. Over page is living room with 12½ foot ceiling; above is book case between living and dining room; to right built-in utility cabinet in bath room; below the electrified kitchen.

**For detailed specifications
of this house, see page 56**



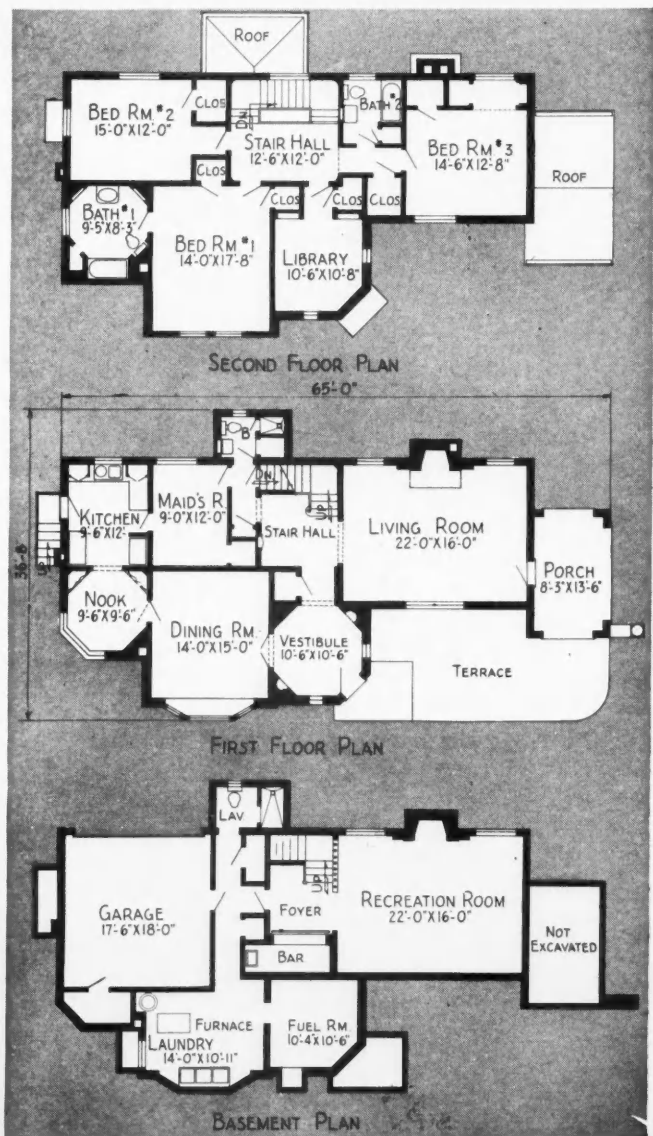


Cincinnati's Steel Frame Demonstration Home

Kopf & Kopf, Inc., Builders
L. J. Marioni, Architect

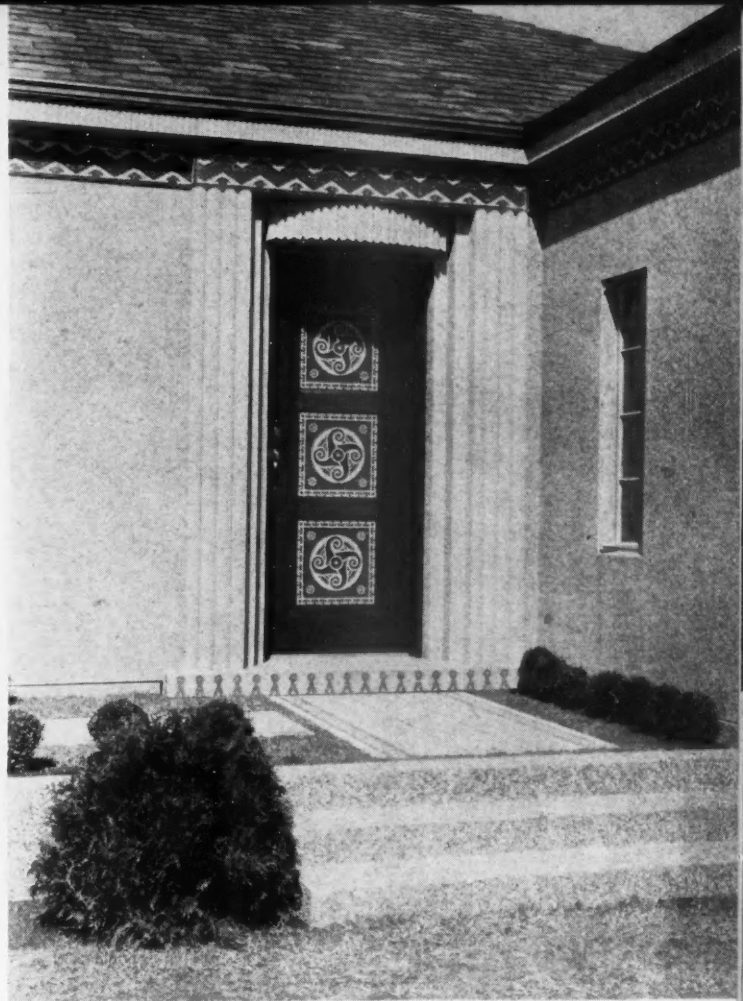
THIS HOUSE is notable in that, early in the 1935 season, it aroused public interest in Cincinnati in home building and in quality construction. Among the first of the truly modern type homes to be opened to the public, this perfect example of design and construction was acclaimed by the newspapers and by the home seeking public. Its unusual talking point was the Stran-Steel frame, rigid, safe, and practical—as pictured below.

46





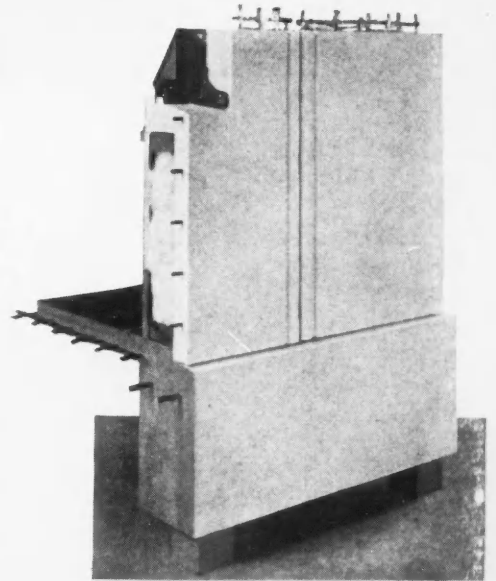
Cost Key is 1.197—146—1110—46—14—15



JOHN J. EARLEY'S
Shop-Cast Polychrome House
 Demonstrated at Washington, D.C.

EARLEY Polychrome House No. 1 has been built to show how the walls of a small house can be made with a beautiful material that was developed for the construction of great buildings. It is built with 32 precast panels which were made in a studio with great care and by fine craftsmen. They were made with the same materials and by the same process which produced the famous mosaic concrete ceilings in the new Department of Justice building at Washington.

These panels are two inches thick, approximately nine feet high, from four to ten feet wide and heavily reinforced with electrically welded steel mesh. They are cured for fourteen days in a humidity chamber until they have a crushing strength of about 5,000 pounds to the square inch. The panels are so made that they can be easily assembled upon a concrete foundation, such as can be constructed by any builder who knows how to make concrete and handle it properly.



47



Carefree Cottage

HEMPSTEAD, L. I., N. Y.

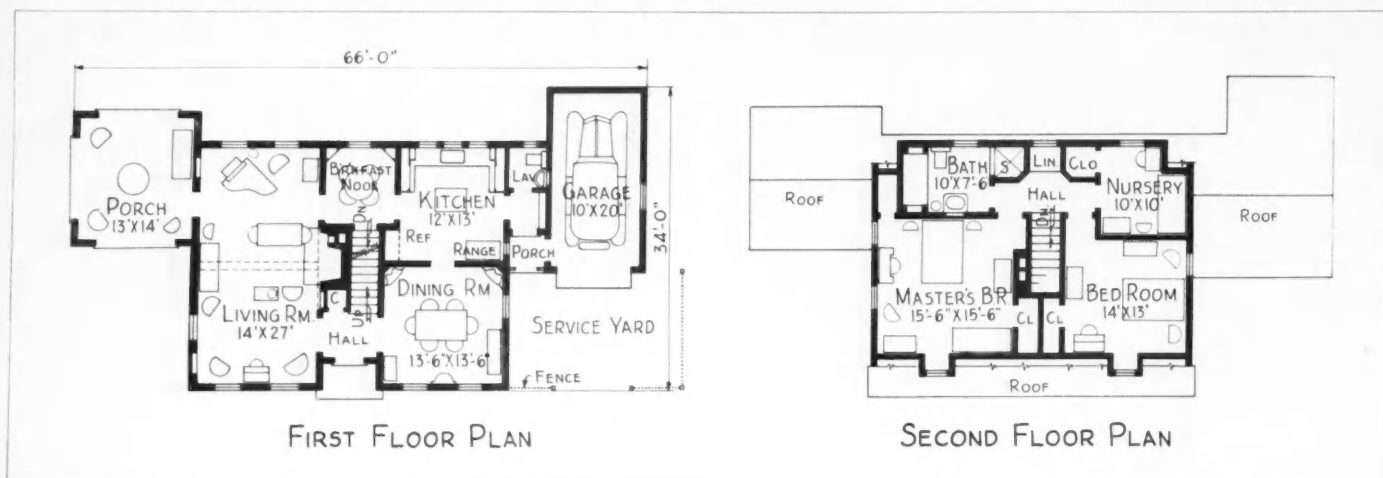
Estabrook Construction Co.

Maximillian R. Johnke, Architect

THOUSANDS OF PEOPLE ADMIRER this compact little model home, and rightly so, for it is splendidly done. It is a truly low-cost house, yet meets all the needs of modern living. It is built in the Cape Cod fashion with shingle exterior and gives a quaintness and homelike appeal that make it one of the best of the country's model homes to be exhibited this year.

Cost Key is 1.863—206—753—35—23—18

Even the garage and back door entrance of Carefree Cottage have charm and beauty.



CAREFREE COTTAGE has a balanced compact plan with unusually good circulation. Porch and garage offset each other. The breakfast nook, lavatory off kitchen, ample entrance hall are good features.

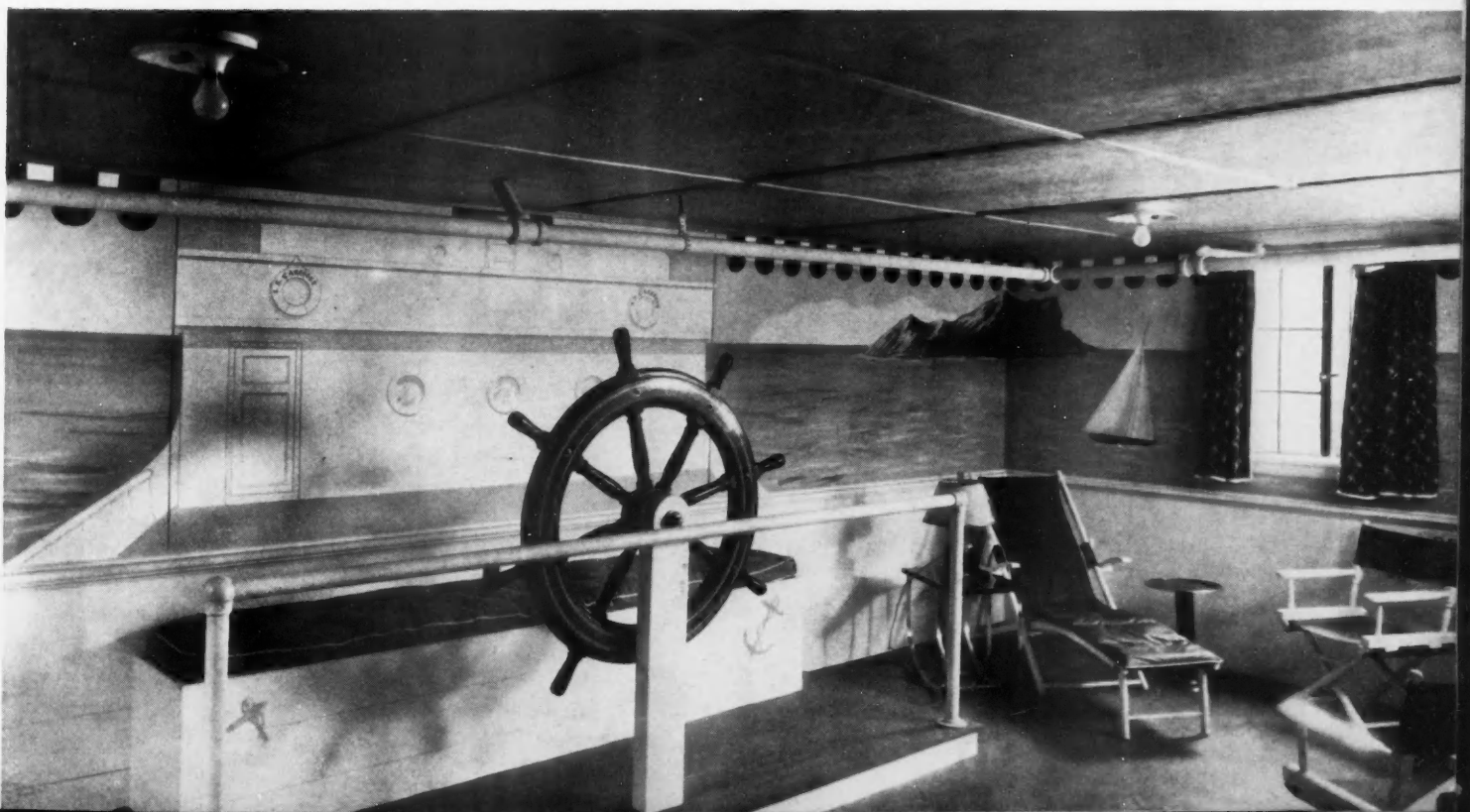


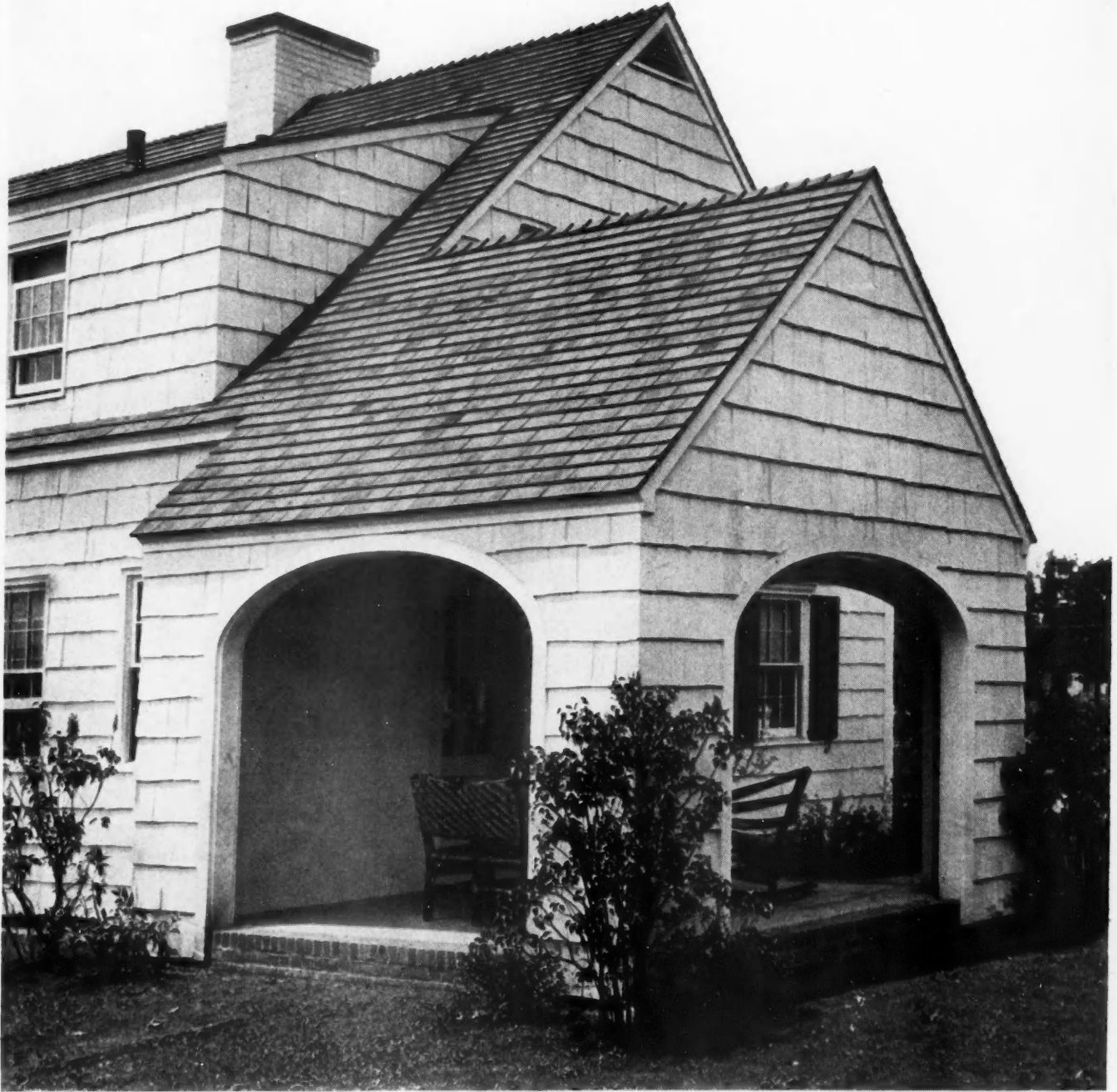


WHO WOULDN'T BE CAREFREE in this attractive pine panelled living room? The fireplace is Early American with an 8 ft. mantel shelf and built-in cupboard for logs. Panelling is knotty pine with antique maple stain and wax finish. The marine basement recreation room illustrated below is one of the most

striking and popular rooms of the house, and is a splendid example of what can be done to make the basement livable. It is designed to represent the open deck of a ship. The seascape views on walls give an effect of great distance. Ceiling is of wall board.

Complete plans, specifications given on pages 51-53





OUTDOOR LIVING IS INCREASINGLY IMPORTANT and in this Hempstead, L. I., model home an open porch adds much to the appearance and living of the house. The concrete and brick floor, arched openings and irregular shingle exterior make this porch detail especially good. The gable angle and the arch openings are well proportioned so that the porch does a great deal to increase the beauty and attractiveness of "Carefree Cottage."

Specifications and Detailed Plans of
Carefree Cottage Given on Pages 51, 53

Specifications—Westchester Model Home

Frank N. Gobel, Builder; Theodore Richards, Architect

(For photographs and floor plan see pages 38-41)

FOOTINGS—10" deep, 36" wide, concrete reinforced with $\frac{3}{8}$ " bars.

FOUNDATION—12" and 18" thick concrete. Truscon waterproofing.

DRAINS—Round tile drain pipe at footings around cellar, branches in each direction under entire cellar floor which is also waterproofed.

FRAME—Rigidly braced construction, over-size members, diagonal cross-bracing, trussed window and door openings, cross-braced partitions. Bearing walls and partitions carried on masonry or steel girders to prevent settlement. All headers and trimmers framed into bridle irons, windows and doors have double stud jambs and sills. Floor beams cross-bridged. Double floors throughout. Cellar ceiling wall board.

WATER TABLE—Copper flashing at bottom of frame under stone to prevent water leaks.

FIRESTOPS—Cinder concrete fire and vermin stops under floor on top of foundation.

CHIMNEY—Well built of stone and brick, with fireplace in living room specially detailed to prevent smoking. All flues lined with $\frac{7}{8}$ " thick terra cotta linings. Flashed above roof with copper pan through entire chimney into flue lining; counter flashed on exterior with copper cricket.

EXTERIOR—Walls of varying materials, including 12" cedar clapboards and dressed field stone, all painted white. Stone painted with Dixie White special masonry paint.

EXTERIOR TRIM—Frames, exterior trim, cornices and all clapboards back painted to prevent warping and cracking. Curtis double-hung Silentite windows with copper weatherstripping.

PAPER—Building paper used is improved waterproof kraft paper reinforced between layers with heavy threads of sisal fibre to hinder tearing and penetration of air. Made by Sisalkraft Co.

FLASHING—All window and door openings are copper flashed as well as paper sealed to prevent filtration of air.

ROOF—Edge grained red cedar shingles stained black two coats, to guard against curling, laid on 1" x 2" strips.

GUTTERS AND LEADERS—16 oz. cold rolled copper.

INSULATION—Air tight, hand packed, water-proofed rock wool in bats, on all exterior surfaces, walls and second floor ceiling, to prevent heat loss in winter and retain coolness in summer. Eagle Picher Co.

WEATHERSTRIPPING—All window and door openings have improved metal weatherstrip built in at factory. Each door has a brass saddle.

PLUMBING—All hot and cold water pipe lines are Anaconda red brass. Plumbing fixtures by Standard Sanitary Co. Enamelled iron laundry trays. Lavatories vitreous china with hooded overflow, chromard metal legs and combination fittings. Toilets vitreous china one-piece syphon-Vortex bowl and tank. Stall shower and built-in shower fitting with

self cleansing ball jointed head and side control. Bathtub cast iron enameled, recessed, chromard over-rim fittings and plaster arch over.

KITCHEN—Cabinets latest type Napanee flush door factory built with baked enamel and stainless steel counters. Equipment consists of drawers, cupboards, towel driers, delivery compartment, planning desk, telephone space, broom closet, serving counter, etc. The kitchen also has a pot closet, Norge refrigerator, electric clock, utility outlets, Curtiss built-in ironing board and glass enclosed breakfast alcove.

RANGE—The kitchen range is a Universal model flush top with all improvements including drawer broiler, self-lighting aluminum burners, heat control, two service drawers, porcelain burner reflector tray, porcelain-lined oven and range lamp.

HEATING—Latent type vacuum, balanced vapor heating system by Dunham Co. All piping enclosed. Each steam main vented and trapped. System includes return traps, air eliminators, Minneapolis-Honeywell thermostat for controlling oil burner, Aquastat to control hot water and a 40 gal. Monel metal storage tank. Radiators are Dunham fin-type concealed in wall with checkered grilles and regulating fittings at inlet and trap at outlet. Air humidifier and filter by Harris Auto Car Co.

BOILER—Burnham oil-burning boiler built to give high efficiency and insure perfect combustion with domestic hot water unit built in. Heavily insulated steel jacket finished in baked enamel encases all parts including Petro-Nokol oil burner.

OIL BURNER—New horizontal Petro-Nokol direct motor-driven rotary cup-type burner, designed for high efficiency and low fuel cost, including all specialties and 275 gal. oil tank.

ELECTRIC—Building wired for complete lighting system with service and power meter and ample convenience outlets. Edwards recessed flush call bell and buzzer combination installed in kitchen does away with unsightly dirt-collecting bells. Radio aerial is installed in the attic and connected to special radio plate in base of living room. Telephone conduit and bell call box is enclosed in partition for telephone receptacle in master bedroom. Electric fixtures by Whiffen Electric Co.

INTERIOR—All walls and ceilings are plastered in hard white finish, three coats, on Reynolds Co. Ecod lath composed of network of steel ribs, wires and fibrous paper backing. Interior woodwork is white pine, painted. Six panel Curtis colonial doors throughout. Mirror door in master bedroom. Closets are completely equipped with shelves, hanging rods, shoe shelves, etc. All rooms except ink kitchen, bath and powder room have stained and waxed clear white oak floors. Kitchen floors are Congoleum-Nairn linoleum in new designs, cemented in place. Walls of powder room of linoleum.

BATH—Walls are Franklin tile of recent design, cushion edged 6" x 12" units, tile floor and shower all of select grade, well-equipped with tile accessories. Columbia Metal Box Co. medicine cabinet

with Venetian top mirror.

HARDWARE—Russwin colonial, with black iron hinges, brass rim locks, all master keyed. Wilson Overhead Door in garage.

SPECIAL INTERIORS—Dining room has two Curtis shell-top colonial corner china cupboards, a dado rail, window valances, and cornice moulding. Living room fireplace side is entirely panelled with detailed assembly of pine panels and mantel with colonial brick-faced fireplace. Wood cornice finishes wall at ceiling. Hall walls are feather-edged vertical panels, elliptical arches. Stair is early American with closed string and delicately turned balusters and newels, a silk rope hand guide.

Specifications—Carefree Cottage

Hempstead, Long Island, Model Home

Esterbrook Construction Co., Builder

(For photographs see pages 48-50; for working drawings see pages 52, 53)

FOOTINGS—Reinforced concrete on gravel base 8" deep, 20" wide.

FOUNDATION—8" concrete.

FRAME—Best type rigid braced construction, diagonal cross bracing, 3" x 8" joists on 16" centers. Trussed window and door openings, cross braced partitions. Steel girders support bearing walls. Bridle irons used at headers and trimmers; double studs at all openings.

FIRESTOPS—Brick firestops on bearing partitions.

FIREPLACE—Selected common brick with Covert Co. damper, terra cotta flue lining.

FLASHING—Copper flashing and counter flashing at chimney, where porch and garage abut main building, and at heads of windows and doors. All gutters and leaders 16 oz. copper.

EXTERIOR—Diagonal sheathing covered with heavy building paper over which is laid hand cut cedar shingles, 24" painted white.

INSULATION—Celotex board used as plaster base.

HARDWARE—Colonial hardware by P. & F. Corbin Co.

WINDOWS—Pre-fitted Andersen windows, fully weatherstripped.

FLOORS—Dining, living room and hall are random oak, pegged. Kitchen, bathroom, breakfast nook covered with linoleum.

HEATING PLANT—Crane Co. boiler, with vacuum vapor system. Home Oil Burner.

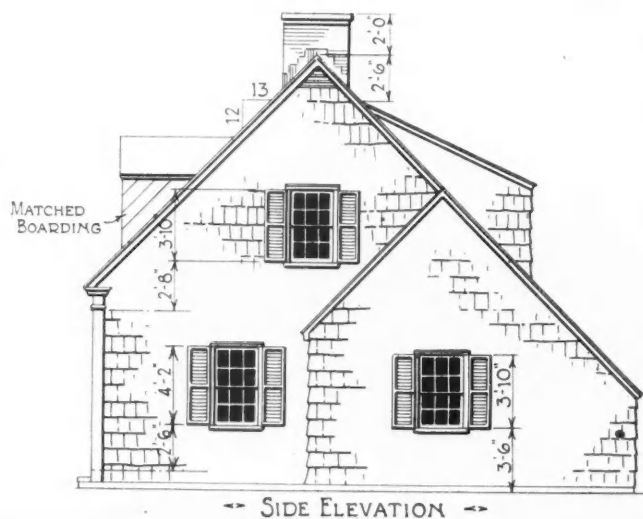
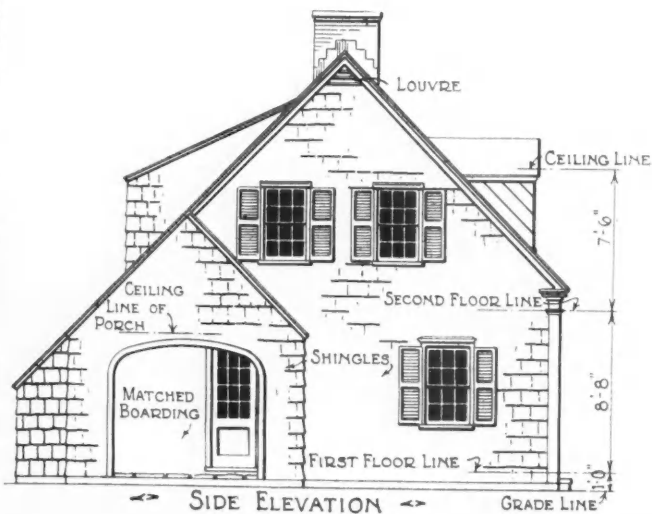
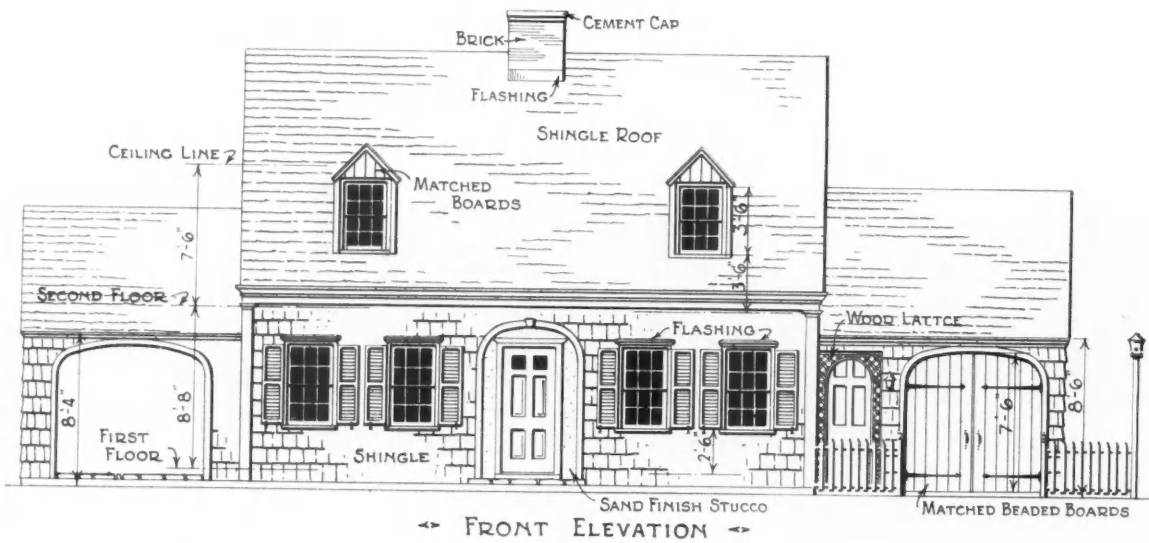
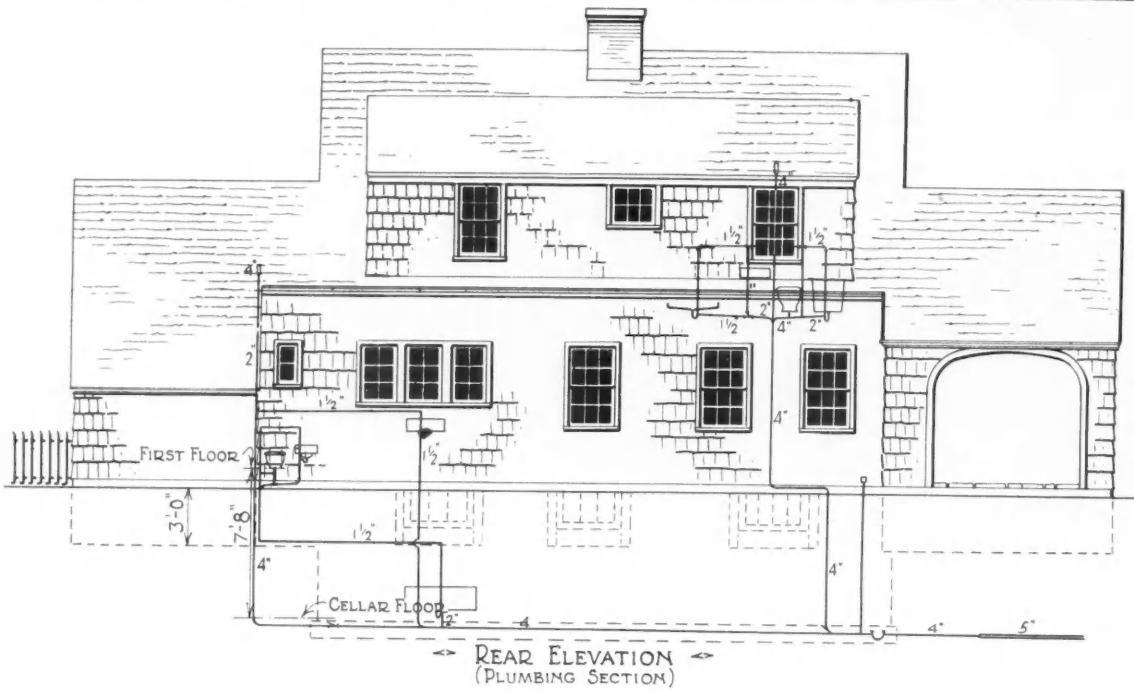
PLUMBING—Seamless Chase copper tubing, colored bathroom fixtures by Crane Co. Full tile bathroom.

KITCHEN—Frigidaire refrigerator. Cabinets, special mill made. Walls tiled 5' high. Crane sink.

ROOF—18" stained cypress shingles.

INTERIOR—Authentic colonial woodwork and trim. Knotty pine wainscot in living room.

WORKING PLANS OF CAREFREE COTTAGE AT



Specifications—G-E "New American" Demonstration Home No. 2 as Built at Marblehead, Mass.

Angus MacDonald, Builder; Royal Barry Wills, Boston, Architect

Masonry

PREPARATION OF SITE—The contractor is to stake out the building and erect permanent batter boards at such points that they will not be disturbed during construction.

EXCAVATION—Excavate to the depths shown on the drawings and no deeper unless the condition of the soil calls for deeper footings. Make excavations one foot wider than the walls to be built in them.

SURFACE DRAIN—Connect surface drain to sewage system.

DRY WELLS—Construct dry wells where required and connect to leader drains.

LEADER DRAINS—Construct dry wells where required at leaders.

ROCK—Any boulders under two cubic yards encountered in excavation must be removed by the contractor without cost to the Owner. Rock excavation must be allowed for at a separate figure per cubic yard which must be stated by the contractor.

WATER—All water must be removed from the excavation during construction.

REFILLING—Do all refilling against walls using dirt from the excavation.

GRADING—All rough and finished grading is included in this contract.

MATERIALS—Lime must be fresh, clean, live lime, properly slaked.

Cement must be best grade Portland cement.

Sand must be clean, sharp, well washed, and free from loam, vegetable matter or other impurities.

Stone shall be hard, sound, local stone, broken to pass through a 2" ring, free from dirt and rotten stone.

Should clean, sharp, coarse, bank run gravel be obtainable at less cost than broken stone, the contractor shall use it in place of broken stone, but it shall be screened and graded in size from 1/4" to 2".

PROPORTION—Concrete for foundation shall be one part cement, two parts sand, four parts stone.

Mortar shall be one part cement, three parts sand, gauged with not more than 10% lime putty.

Cement finish for concrete floors shall be one part cement and two parts sand.

FOUNDATION—All foundation walls, including those for the house and chimney, piers, and so forth, shall be built as established on the drawings, of thickness and shape as called for, of stone concrete. Sleeves shall be left in the foundation walls for service pipes.

WATERPROOFING—Exterior walls of foundation shall be covered with a coat of hot tar.

MIXING—Forms to be thoroughly wet down before concrete is poured. Concrete shall be placed in forms in layers about 8" thick, shall be

well spaded and tamped until water rises to the surface.

CONCRETE FLOORS AND PITS—Lay concrete floor in basement and garage. Subsoil shall be leveled off and wetted and tamped. Lay 4" of cinders well rammed and soaked. Concrete shall be 2 1/2" screeded to level planes 3/4" below finished floor level. Surface shall be screeded evenly, floated, and trowelled to a smooth hard finish.

Construct pits around openings for traps and cleanouts. Build in cast iron covers for traps and cleanouts.

FIRESTOPPING—The contractor shall do all firestopping required by local ordinances, and in absence of such requirements he shall fill spaces between studs at first floor level from top of sill to point 4" above top of floor joists, and at second floor level on girders and partition caps to tops of floor joists in all partitions. Fillings shall be done with common brick in lime mortar, concrete, or wood blocking.

CHIMNEY—Build chimney from top of foundation to height determined on the drawings of brick. Face chimney on outside with second hand hardburned waterstruck brick.

Locate thimbles and cleanouts where necessary.

FLUES—Line all flues from top to bottom with terra cotta flue lining of sizes shown on drawings, carrying same about one inch above brickwork and bank with mortar pitched for drainage. Joints in flue lining shall be staggered.

DAMPER AND ASH DUMP—Furnish and install a suitable damper and ash dump in living room fireplace and a damper in recreation room fireplace.

FIREPLACES—Fireplaces shall be constructed of second hand hardburned waterstruck brick according to detail. Play room fireplace to have facing cement coated.

HEARTHES—Hearths shall be second hand hardburned waterstruck brick.

CLEANING OF BRICKWORK—At completion of work clean all brickwork with dilute oxalic acid. Do this thoroughly, removing all white spots from the brick.

PORCH FLOOR—Porch floor shall be new brick laid in cement mortar.

Plastering

PATCHING—The plasterer must make good all defective and broken plaster to the satisfaction of the Owner, leaving all plaster free from cracks and stains. He shall exercise care to keep all floors, woodwork, glass, and so forth, free from plaster.

LATH—All wall and ceiling surfaces throughout the house, including the garage, shall be lathed with gypsum lath, applied according to the directions of the manufacturer.

PLASTER—All plaster throughout the house shall be gypsum plaster applied according to the directions of the manufacturer.

WORK TO BE DONE—All walls and ceilings, except in basement and garage, shall be plastered in two coats. Basement and garage shall be plastered in one coat.

Last coat on all walls, except in basement and garage and ceilings, shall be finished smooth and hard. Finish on all other walls and ceilings shall be slightly trowelled.

Tiling

FOUNDATION—Foundation for the tile is to be furnished by the carpenter to within 1 3/4" of finished floor level. He shall, also, furnish grounds for dados and studding not over 12" centers, ready to apply metal lath and scratch coat.

TILE—All tile used for walls shall be colored satin glazed tile.

All tile used for floors shall be ceramic tile.

WALLS—Walls of bath and lavatory shall be tiled up 4'0" high with a 6" x 2" cap and sanitary base, except around tub in bath room which shall be tiled up 6'0".

FLOORS—Floors of bath and lavatory shall be tiled with ceramic tile laid in pattern as selected.

COLORS—All colors of tile as selected.

ACCESSORIES—Seven pieces of tile accessories to match wall tile shall be furnished for the bath and five pieces for the lavatory.

BACKING—Metal lath and plaster backing for tile to be by tile contractor.

Carpentry

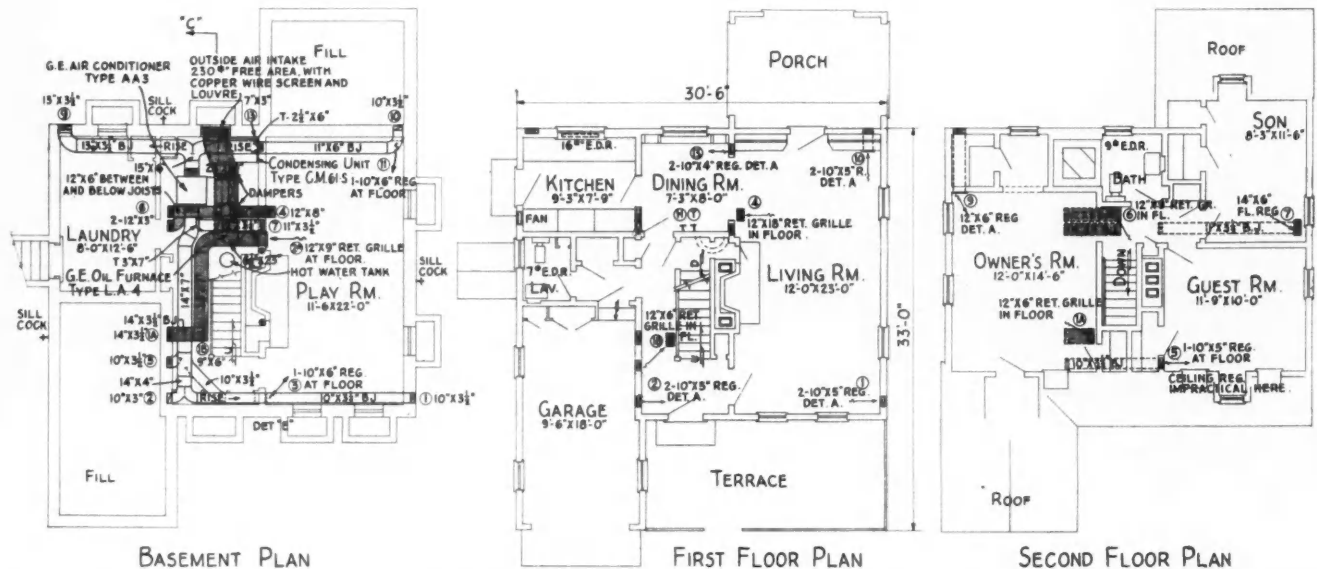
QUALITY AND KIND OF WOOD—All timber, unless otherwise specified, must be the best quality spruce or fir. All finished exterior woodwork, unless otherwise specified, shall be best quality Atlantic Coast cypress, except as noted, or white pine.

All timber shall be of the best merchantable quality, sawed die square, sound, clear, and free from sap, shales, large or loose knots, wet or dry rot, and all imperfections injuring its quality or strength.

FORMS—Build all forms for concrete work thoroughly wired.

SIZES OF TIMBERS

Sills	4 x 6"
Sunk Girts	4 x 8"
Plates	4 x 4"
First Floor Beams	2 x 10" 16" oc
Second Floor Beams	2 x 10" 16" oc
Attic	2 x 8" 16" oc
Rafters	2 x 8" 16" oc
Corner Posts	4 x 6"
Studs in Exterior Walls	2 x 4" 16" oc



FLOOR PLANS of Marblehead Demonstration Home, Showing Air Conditioning Layout. For Photographs of this G-E Demonstration Home see pages 36 & 37. Cost Key is 1.731-127-630-28-18-15

Studs in Partitions 2 x 4" 16" oc
 Studs in Minor Partitions 2 x 3" 16" oc
 Girders Steel. See plan.

FRAMING—All framing of partitions, roofs, floors, and so forth, must be plumb and square, true, well braced, and pinned together with good joints and true bearings and without the use of shims.

Sill shall be halved at corners and tightly bolted.

Corner posts shall run through two stories and finish against rafter plate. They shall be braced both ways to sill with 3 x 4" timbers. Fit studs between braces to avoid cutting same.

Studs in exterior walls shall be one story lengths, capped with a sunk or raised girt, or plate, as the case may be.

Interior partitions shall be spiked to 2 x 4" soles placed on the rough floors, except for bearing partitions which must stand on the girder below. Partition caps shall be two 2 x 4".

Roof rafters shall be notched over, placed and butted against ridges and well spiked together.

Ceiling beams shall be well spiked to rafters, lapped over bearings and well spiked together.

Floor beams must be doubled for headers and trimmers. Beams must be brought to a true upper surface, by notching them down over the bearings.

CLEARANCE OF CHIMNEY—No timber shall be placed within 1 1/2" of the face of the chimney.

BRIDGING—Cross bridge all floor beams at 8'0" intervals, using 1 x 3" stuff well fitted and heavily spiked to beams. Beams are to be levelled up before bridging is finally nailed fast.

BOARDING—Boarding on walls and roofs is to be 3/4 x 8" matched boards, two nails to a bearing. Use spruce or fir for outside walls and roof.

SHEATHING PAPER—Use a layer of water-proof building paper between boarding and roof shingles and clapboards.

FURRING—Fur all ceilings on inside of building, except closet ceilings, with 1 x 2" stuff set 12" oc.

BLOCKING—Do all blocking required.

FOUNDATIONS—Furnish and set dressed grounds for all door and window trim, all base, and elsewhere where required for other finish. Furnish and set 3/4" grounds for metal lath.

INSULATION—Insulate exterior walls, all exposed first and second floor ceilings, and knee walls with 4" of rock wool.

SHEATHING PAPER—Use a layer of rosin sized paper between rough and finished floors on first and second floors, turning same up in back of the baseboard.

UNDERFLOORING—Over the entire first, second, and attic floors lay a rough floor of 3/4 x 8" square edge boards, nailing them thoroughly to bearings. Before any finished floors are laid, repair all damage that may have been done to the rough floors. Lay first floor diagonally.

WINDOW FRAMES—No. 1 pine window frames shall be provided for all windows.

WINDOW SASH—Sash shall be 1 3/4" clear pine as shown on elevations. Stock muntins and mouldings shall be used.

EXTERIOR DOOR FRAMES—Exterior frames shall be 1 3/4" pine, rabbeted twice for doors and screens.

EXTERIOR DOORS—Main entrance door to be as shown on front elevation, with bullseyes in upper panels.

Garage doors to be sheathed pine as shown on elevations.

Other exterior doors to be as shown, special design.

GLAZING—Glazing of doors and windows to be done with double flat drawn window glass.

WEATHER STRIPS—Weather strip all doors and windows with metal interlocking weather strips.

SCREENS—Furnish and install copper screens for all doors and windows, and, also, porch.

SHADES—Furnish and install shades for all windows, same to be standard washable tint cloth.

HARDWARE—Provide and install all building hardware, best grade.

Furnish and install good grade of finished hardware throughout the house. An allowance of \$125.00 shall be made for it.

CLAPBOARDS and MATCHED BOARDING—Clapboards shall be 6" white pine laid 4" to the weather, graduating to 2" at the bottom on the four sides of the house. Use matched boards where shown on garage, dormers, and porch.

BLINDS—Blinds to be stock louvre type blinds.

LEADERS—Leaders to be Ton-can metal, plain round.

Slate Roof

PREPARATION—Slating contractor shall examine roof boarding and report to the carpenter all defects which would be detrimental to the durability of the finished roof and shall see that defects are remedied before applying felt.

Carpenter shall furnish and apply a cant strip nailed about 2" above

the eave line of the slate and shall put water shedding cant strips where required. Carpenter shall furnish and place all blocking required by roofer.

Roofing contractor shall furnish and apply elastic cement where in his judgment same is necessary.

FELT—Cover surfaces to be slated with slater's asphalt impregnated roofing felt weighing 30 lb. to 100 sq. ft. lapped 6".

SLATE—All surfaces prepared for slate as above described shall be covered with small sized Monson black slate.

NAILS—Nails shall be copper slater's nails of sufficient length to penetrate adequately the roof boards, using not less than two nails to each slate.

FLASHING—Flash and counterflash chimney with heavy copper flashing. Flashing shall be carried through and up against the flue lining. Flash intersections of vertical surfaces with roof with soft copper. Flash window heads, and so forth, with same material. Flash, also, all valleys, using 16 oz. copper.

GUARANTEE—Contractor shall guarantee to maintain all slate roof surfaces in a watertight condition for a period of two years from date of completion.

Ironwork

CAST IRON COVERS—Build in cast iron covers where needed.

LALLY COLUMNS—Furnish and set light-weight concrete filled lally columns where shown on basement plan, with caps and bases.

STEEL BEAMS—Furnish and install steel I beams where shown on basement plan.

ANGLE IRONS—Furnish and install angle irons where needed.

SHEET METAL WORK—Flash all tops of doors and windows thoroughly with 16 oz. copper flashing.

Interior Finish

MATERIALS—All stock must be of the best quality. All trim shall be thoroughly seasoned, kiln dried, free from sap, knots, and other defects on the finished side. All trim and finished flooring shall not be set until the plaster has thoroughly set.

TRIM—Trim for doors and windows shall be Arkansas pine, and other wood work, except in play room, of white pine. Trim in play room shall be country pine.

DOOR FRAMES—Frames shall be 1 3/4".

DOORS—Doors shall be six panel pine, stock.

THRESHOLDS—Provide thresholds for exterior doors, bed room doors, and closets.

TO DETAIL—Living room mantel and fireplace cupboard, book cases, dining room cupboard, dado cap, base, trim, stair and so forth.

CLOSETS—Clothes closets shall have boot shelves, 3/4" hanging pole, hook strips, and shelf. Broom closet shall have high shelf. Linen closet shall have adjustable shelves. Cold closet shall have six shelves. Laundry closet shall have one high shelf.

WORK BENCH—Build work bench in shop with cabinet at end with shelves.

BATH ROOM CABINET—Build cabinet in bath room with shelves, also in lavatory.

MEDICINE CABINETS—Furnish and install steel medicine cabinets in bath room and lavatory.

FLOORS—Floors throughout the house shall be soft pine boards to be as wide as possible, except where linoleum is called for, which shall be 3/4"

slash fir.

All floors to be turned over in perfect condition to the painter.

All floors to be laid with wide enough joint to allow for expansion.

STAIRS—Construct stairs from basement to first floor of Arkansas pine with 3/4" risers and treads.

Treads to be same as floors on main stairs, risers same as woodwork.

Ballusters and hand rail to detail.

Basement stairs to have plain hand rail and square post.

FLOOR PROTECTION—Lay heavy building paper over all finished floors and stairs when completed, pasting same with 4" laps.

CLOSET FLOORS—Lay closet floors flush with thresholds.

KITCHEN CABINETS—Kitchen cabinets and equipment to be as specified on the plans.

PRIMING—All interior and exterior woodwork shall be primed one coat on back.

FAN—Furnish and install General Electric ventilating fan in kitchen.

Plumbing

CAST IRON DRAIN PIPES—All soil, vent, waste, and horizontal drains, traps, and fittings over 2" that are placed on the inside of the building shall be extra heavy cast iron pipe.

BRASS PIPE—All hot and cold water pipe shall be iron sized red brass or copper.

LEAD PIPE—Lead soil connections to water closet to weigh 8 lb. per foot. Connections between iron and lead pipes shall be made with brass ferrules and wiped joints. Branches to be carried in front as close to fixtures as possible.

CAULKING—All joints in cast iron pipe shall be made with oakum and new pig lead using 12 oz. of lead to each one inch in diameter of pipe. Joints to be made thoroughly tight.

EXPOSED METAL WORK—In bath room, lavatory, and kitchen, all exposed piping, including traps, faucets, water, waste, vent, and flush pipes, hinges, chains, bolts, brackets, screws, washers, nuts, and all other exposed metal work about the fixtures, are to be chromium plated brass.

WORK TO BE DONE—All plumbing shall be in accordance with local plumbing laws. If it is necessary to increase or decrease the size of any pipes from the sizes indicated, or should there be required additional material, or any deviation from these specifications or plans in order to conform to the Code or to facilitate the proper functioning of a fixture, system, and so forth, he shall do so without extra cost.

The plumber shall obtain and pay for all permits.

All pipes shall be concealed in the walls, partitions or floors, and must be erected in advance of partitions to avoid unnecessary cutting.

HOUSE DRAINS—House drains shall be run as required. Main house drain shall be four inches.

TRAPS—Provide and place where necessary and in accordance with plumbing ordinances, traps and cleanouts.

SLOPE—Slope all drainage pipes 1/4" per running foot.

PIPES ABOVE ROOF—Extension of soil, waste, or vent pipes above the roof are to be increased to 4" before passing through the roof. Flash around all pipes above the roof with copper carried around 8" on all sides of pipe and under upper course of slate. Make connection permanently water tight. No vent pipes are to extend through the roof on the front of the house.

PIPE SUPPORTS AND HANGERS—Make all pipes firm and secure with galvanized iron hangers and supports.

TESTS—On completion of the rough work and after all lead bands, vent pipes, and branches are in place, and when the work is ready for the setting of the fixtures, the plumber will test all vent, soil, waste, and leader pipes in the presence of the proper authorities by filling the entire system of piping with water to the highest point. On completion of the work the plumber will apply peppermint and hot water tests to the entire system of drain and vent pipe.

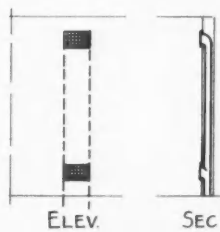
Any defects discovered and any damage caused by these tests shall be made good by the plumber and at his own expense, and the tests repeated until the whole work is proven secure.

Water Supply

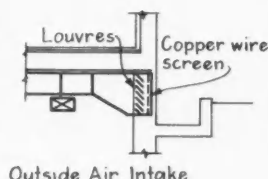
TEMPORARY SUPPLY—Place a temporary valve on main line for the use of mason and other craftsmen.

WATER METER—Provide, place, and connect, if necessary, on water supply main, one meter of size and make approved by the water department.

(Continued to page 92)



DETAIL "A"



SECTION C-C.

Details of Air Conditioning Ducts and Key to Drawings

LEGEND

- Basement outlet
- ▣ First floor outlet
- ▤ Second floor riser
- ▥ Volume damper
- ▦ Splitter damper
- ⊕ Thermal control
- ⊙ Humidistat
- B.J. Between joist.

All returns are shaded Positive locking dial type dampers to be installed in all individual supply and return branches and in supply mains at air conditioner.

This layout based on the following:-

- Walls:- Clapboards, 3/8" sheathing, 3/8" Rockwool, Gypsum, Lath and plaster
- Roof:- 3/4" fir sheathing, slate on felt.
- Windows:- Double hung, 4 casement.
- All doors and windows - weatherstripped
- Second Floor - lath and plaster - 4" Rockwool, 2"x8" joists, 3/8" rough floor. Insulate all exposed first and second floor ceiling and knee walls with 4" Rockwool including exterior walls

Construction Details of Joern System Home

Illustrated on page 43

THE ultra-modern six room residence illustrated on page 43, demonstrates fireproof construction in the medium cost field. Designed by William F. Kramer and built by Wm. Joern & Sons at a cost of \$7,250, it was opened to the public on June 23, to present an attractive combination of scientific construction and comfortable livability, aimed in every detail to provide permanence and freedom from maintenance costs.

With its simple massings and sincere lines, this home meets the needs of modern living by offering complete and convenient utilization of its whole structure. Its freedom from pretense and wasteful ornamentation is refreshing and appealing. The emphasized use of horizontal line is well-suited to this flat, midwestern region and to the quiet of suburban living.

STANDARDS AND METHODS OF CONSTRUCTION

All foundations, walls and footings are concrete. Foundation walls are water proofed with emulsified asphalt. The first and second floor construction consists of Jones & Laughlin Junior I beams with a concrete slab 2½ inches in thickness and re-inforced with ¼ inch steel rods 6 inches on center.

The exterior wall construction consists of Haydite Building Units—12 inch on the 1st floor and 8 inch on the second. This type of building block was selected because of the economy of laying, light weight, greater strength, fire resistance, high thermal insulation, stucco base, nailability, cutting, and uniformity.

Interior partitions—Gypsum tiles are used as manufactured by the U. S. Gypsum Company being 4 inches in thickness. They fit nicely into the picture because they are in keeping with the sound proof, fire proof, and vermin proof idea of the property, and also because they represent a minimum labor cost in laying.

The main roof construction consists of 2" x 8" wood joists spaced 16" on centers. The roofing an asphalt built-up roof.

The exterior finish of the building was as follows: A double under-coating of portland cement and finished in white Medusa cement, all coatings having water proof powder ground into them.

The surface texture of Haydite Building Units offered an ideal base for the exterior stucco. The interior lathing consists of ribbed metal lath on channel iron. The plastering was returned into openings of all windows at head and jambs. Metal corner heads were installed for all door and window openings thereby making an installation which is inexpensive, serviceable, and up-keep reduced to a minimum.

On all exterior sheet metal work including gutters, down-spouts, flashings, etc. copper was used.

Insulation: The interior of the exterior walls was insulated with Spray-o-flake, a process consisting of blowing on dry flakes of fibrous material impregnated with a fire-resisting agent. As the fibrous flakes leave the gun they are coated with a spray of atomized adhesive agent or binder and projected to the surface to be insulated. This formed a thick blanket of insulation covering the entire surface and sealed all cracks and crevices in the walls and around openings, and eliminated any infiltration of air or dampness into the building. This insulation also acts as a plaster base for finishing the inside of the exterior walls. It eliminated the use of lath and furring strips. The insulation on the second floor ceiling consists of ½ inch celotex lath and 8 inches of U.S. Gypsum Red Top insulating wool between the joists and rafters. A combination of this insulation gives practically a zero heat loss.

Doors and Windows: Distinctly modern is the use of steel door and window frames. Wall space is materially increased with the elimination of standing trim or casings and a light, airy, clean-cut appearance is achieved. Freedom from plaster cracks in the surrounding walls is also insured. A steel door opening onto the terrace, equipped with night latch and concealed lock rods, has been installed in the dining room to harmonize with the steel casement windows which are used throughout the house. A solid bronze weather-proof threshold laid in mastic cement has been provided at this doorway. All other exterior doors are of 1¾ inch solid stiles and rails of pine with solid pine panels. Chromium hardware is found throughout the house.

The glass areas in this model home are extensive and include a full length corner window of large proportions in the living room. Polished plate glass is used throughout except in the basement and garage windows which are single strength A-quality glass.

Open, recessed book shelves of birch have been provided in the living room. The open stairway, visible from the living room, has risers of birch and treads of red oak. All clothes closets are fitted with one pine shelf, metal rod, hook strip hooks and shoe rack. Cupboards in the kitchen are of birch completely furnished with hardware. All shelves are adjustable.

Modern Lighting: The type of lighting unit selected for each room has been carefully deter-

mined by the location and activity to be performed therein. Outlets have been provided in proper locations for lighting fixtures, floor lamps and table lamps.

Air Conditioned Heating: The gas automatic heating and air conditioning system installed in the model home creates an ideal custom-made climate by providing correct amount of warmth; correct degree of relative humidity; clean, purified, filtered air; and constant air circulation and ventilation, summer and winter. The system is entirely automatic in operation.

Recreation Room, Hobby Room and Laundry: The large basement houses not only the efficient heating and air conditioning system, but the laundry room with its completely equipped two-part granite laundry tubs, a 13 x 24 foot recreation room and a small hobby room equipped with cases and work bench.

Plumbing: For convenience and labor saving, a two compartment acid resisting enameled flat rim sink has been installed in the kitchen.

The built-in bath tub is equipped with combination bath and shower fixtures.

Domestic hot water is supplied from a 20 gallon automatic water heater to laundry, kitchen and bathroom.

All sewers inside the building are of cast iron with lead caulked joints, thereby insuring a perfectly tight sewage system. All underground water piping is of extra heavy lead.

Exposed sheet metal work is of excellent quality

and the water spouts are copper; these features all are in keeping with general plan of permanence and low maintenance costs.

Garage Part of House: The one stall garage, designed as part of the house, is constructed with Haydite blocks the same as the rest of the house. The ceiling is covered with an insulation board. Entrance to the house is made through the hallway leading into the kitchen and down to the basement.

Low Insurance: Because of the fireproof construction of the house, the insurance is only eight cents per \$100 and is 60 per cent lower than on the ordinary brick home.

This home was opened for inspection for 30 days and approximately 10,000 people visited the house. The builders did not think it advisable to furnish the house because they felt that this would be a distraction from the building itself. Also the building was shown without any finished floor coverings. The people who visited the house walked on the concrete except in one of the bed-rooms which was carpeted to illustrate the method of finishing the floors. This helped emphasize the standards and methods of construction.

The garage, during the showing, was converted into a sample room in which all products used in the building were displayed. This afforded the public the opportunity of understanding exactly what products helped make up the construction.

Specifications of G-E Experimental House at Nela Park, Cleveland, O.

Illustrated on pages 44 and 45

WITH much capital available for the building of new homes, there arises at once the pertinent question: What kind of house will offer the average purchaser the most value for his money?

In an attempt to gather helpful data in this connection, the General Electric Company recently erected an experimental house at Nela Park, Cleveland.

The structure was purely an experiment to determine whether houses of its type satisfy all present-day comfort and economy requirements, and yet will be modern and up-to-date for years to come.

The Nela Park house was built at 2115 Noble Road, Cleveland Heights, Ohio, on a lot 60 feet wide and 150 feet deep. The dimensions of the structure are 38 feet by 90 feet. The rooms are all on one floor. The living room ceiling is 12½ feet above floor level; ceilings of the other rooms are 8 feet above floor level. The garage is attached to the front of the house, thus leaving room for a secluded terrace at the rear. It would be possible to turn the house so that the garage would be on one side, but in that case a lot 100 feet wide would be necessary.

The high living room roof and the roof of the remainder of the house are level, except for a sloping parapet at the outside walls. The living room roof drains through scuppers to the lower main roof, and from this point to the storm sewer by means of two inside down-spouts. The house is adequately insulated to insure coolness in summer and warmth in winter. The main floor of the house is raised 2½ feet above ground level. This results in lowered costs of installing the plumbing and heating system and really improves the floor-space since it raises the windows above the usual shrubbery line.

The studio living room has large windows at either end to permit the entrance of plenty of daylight. The room is characterized by a neat fire-place with a large mirror built in above it to make the room appear still bigger, built-in radiators, and a wealth of electrical outlets. The dining room "ells" off the living room and since its ceiling is several feet lower, it makes a distinct room in itself. The vapor heat is controlled by an automatic heat regulator on the wall.

The bed-rooms have been designed to afford maximum convenience without wasted space. The clothes closets are handy. The built-in dressers and chiffoniers have drawers that slide on waxed surfaces. Ample wall space is provided for bedroom furniture.

The kitchen is the "General Electric Kitchen." It is designed to make housekeeping's chief task a light and pleasant one. Maximum capacity is obtained. The kitchen employs all automatic electrical servants, including a G-E range, dishwasher, and refrigerator, and features automatic ventilation and local illumination. All working surfaces are built on one level for convenience.

The laundry is spacious and features a G-E washer, ironer, and clothes-drying cabinet. A

General Electric "Electrical Workshop" for men has been supplied. One large fan and two smaller ones are installed in a penthouse on the roof. The large fan connects directly with the living room and the smaller ones connect directly with the kitchen. Natural ventilation through the penthouse and forced ventilation from the fans provide fresh air at all times.

For purposes of display, the house has been completely and beautifully decorated and furnished in a subdued modernistic motif under the personal direction of Mrs. Margaret Green Dargan, Interior Decorations Editor of the "Ladies Home Journal." Much of the furniture was expressly designed by the well-known Gilbert Rohde. The lighting fixtures were selected by Mr. Comery of the General Electric Company and were approved by the Illuminating Engineering Society.

The house was designed under the title of "General Electric Good-Value Servantless Home" by the widely-known Cleveland architects, Hays and Simpson. The Keyes-Truehaft Company constructed the house.

MAJOR SPECIFICATIONS

WALLS: All exterior walls are of Haydite Concrete Blocks. The outside of the walls is covered by two coats of government specification stucco as made by the Medusa Co. A third coat of Medusa Cement Paint shall also be applied.

ROOF: Good sound 2" x 10" joists are used in the roof. Space between the joists is filled to a depth of four inches with Rock Wool. A high-grade Aluminum Building Paper is used between the joists and the sheathing. Roofing is 4-ply Tar and Gravel made by the Johns-Manville Company.

INSIDE OF WALLS AND PLASTERING: Sound 1 x 2s shall be erected on the interior side of the Haydite walls and covered by Aluminum Foil over which shall be placed Rock Lath. Plaster applied is to be manufactured by the U. S. Gypsum Co.

INSULATION: 4" of Rock Wool and Aluminum Building Paper are used in the roof, and Aluminum Foil is used in the walls, Johns-Manville Aluminum paper and foil are used.

DOORS AND WINDOWS: Windows and attachable screens are of metal and manufactured by the Vento Steel Sash Co. The front entrance door is also metal as made by the Vento Co. Interior doors are of the best pine and birch as made by the Miracle Door Co. The garage doors are of the upward-acting type as manufactured by the Yoder-Morris Company.

PARTITIONS: Partitions are of standard construction using No. 1 spruce 2 x 4s.

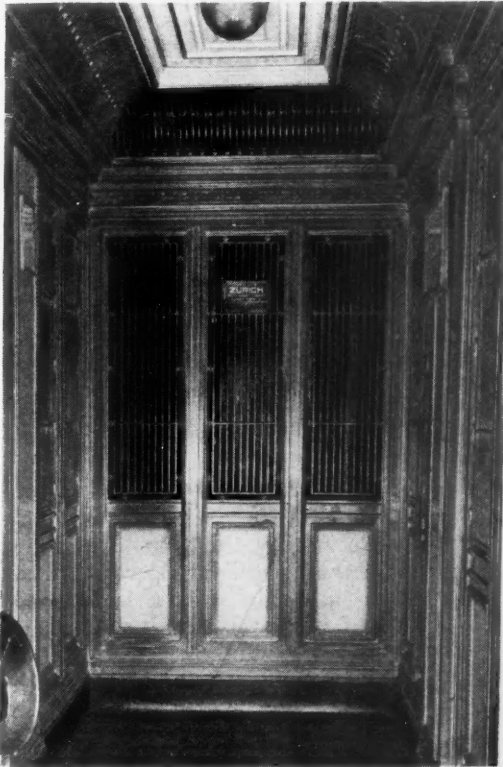
METAL WORK: Coal-shute, fire-place damper, mail receptacle, angle-irons, etc., are by the Donley Bros. Co. Scuppers, flashings, and the inside downspouts copper. "Miami" Medicine Cabinets as made by the Porter Equipment Co. used.

FLOORS: Floors are of Select Oak in a

(Continued to page 98)

MODERNIZATION

"which makes buildings of all kinds more cheerful, more livable and more salable"

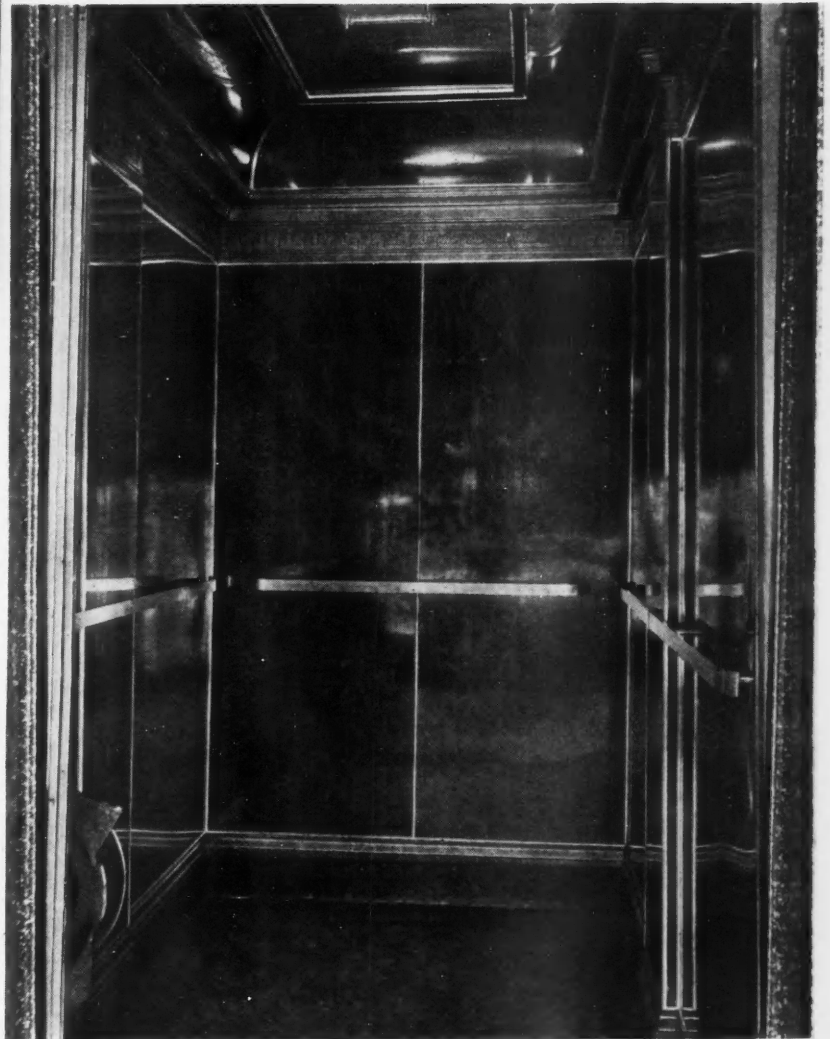


ABOVE: "Before view" showing antiquated grill work which was stripped from the elevator cab in effecting the installation. A cap section of the wall trim was placed in position at the door. The balance of the trim was then marked and laid out, the screw holes spotted, the holes drilled and tapped; flat head machine screws were then put in place and bolted from the outside where possible. The trim was then removed, the panels put into place starting against the cap section, and the trim fitted securely against each panel.

RIGHT: Interior of cab after having received the modernizing treatment. The wall covering used is a Bakelite laminated panel with a beautiful wood grain finish. Panels are securely fastened to the steel frame work of the elevator car by the Wooster metal wall trim which serves as a structural part of the wall covering as well as an important decorative feature. The glistening metal moulding emphasizes the panel design by its pleasing contrast to the more somber natural wood color of the panels.

Appearance Up— Costs Kept Down

IN ELEVATOR CAB REMODELING there is an excellent opportunity for effective modernization. The operation is one that is comparatively simple, and one that can be done quickly and economically—particularly so if any one of the many modern wall covering materials suitable for this work is used with the installation methods made available by a manufacturer of metal wall trim, Wooster Products Inc. Just how effectively this can be done is well illustrated by the accompanying, contrasting photographs which show a Hudson Terminal Building elevator cab "before" and "after" treatment.



Joint Enterprise Proves Value of Home Remodeling

By CHARLES W. BAUER, Jr.

Secretary Cincinnati's Little Home Committee

WHEN the Cincinnati Modernization of Homes Committee was formed last fall, with George D. Crabbs, prominent industrialist and civic leader as its general chairman, its objectives were stated in the following language:

"To conduct a survey for the purpose of finding the city's actual repair and remodeling and housing requirements.

"To demonstrate to home owners, through such means as Cincinnati's Little Home, the important advances made in the construction industry in the past several years—both in materials and methods."

To Mr. Crabbs' appeal for counsel and direct assistance, all professional, commercial, industrial and financial leaders responded. Both major objectives were simultaneously planned—the house-to-house canvass, reaching about 100,000 property owners, and the construction of the Little Home. A committee of qualified advisers immediately undertook the planning and construction of the Little Home, at the same time working with other leaders in launching the survey. Practically every trade-body and civic group rendered outstanding service from the first day of the movement.

With little time in which to work, the committee believed that a modernizing project would serve all practical needs of the movement. Cincinnati's topography, however, was a major problem. The city proper comprises seven hills. In order that the project might do the most good to all concerned, a central location was necessary. No house was available in such a location, so the committee chose the most likely house and moved



ATTRACTIVE
16 page booklet describes the construction of the house.

it to a lot at the intersection of the two most prominent highways and almost in the residential center of the city.

The house chosen for this job was a 1½ story structure dating from the era of the hand-forged iron nail—as the workmen discovered when they started to prepare it for modernization. A committee of architects had drawn plans for converting the structure into a two-story dwelling for a small family. However, when the workmen ripped off the "skin" of the house, they

found it would have to be rebuilt from the ground up. A clinical examination revealed that the "good old honest workmen" of the "good old honest days" of which folks today hear so much, were not so honest and not too good after all. The house was flimsy in design and in construction; it had no subfloors; it had no sheathing. Except for the square, hand made nails and the yellow poplar timbers—an almost extinct wood these days—it had little to excite the wonder of a prospective home-owner.

So, instead of a modernizing job, it was turned into a remodeling project on a large scale. There is scarcely an item known to the modern construction industry that is not represented in this Little Home.

Tangible results for the construc-



THE HALL in the remodeled home is dignified and hospitable. It demonstrates authentic style in Colonial millwork.



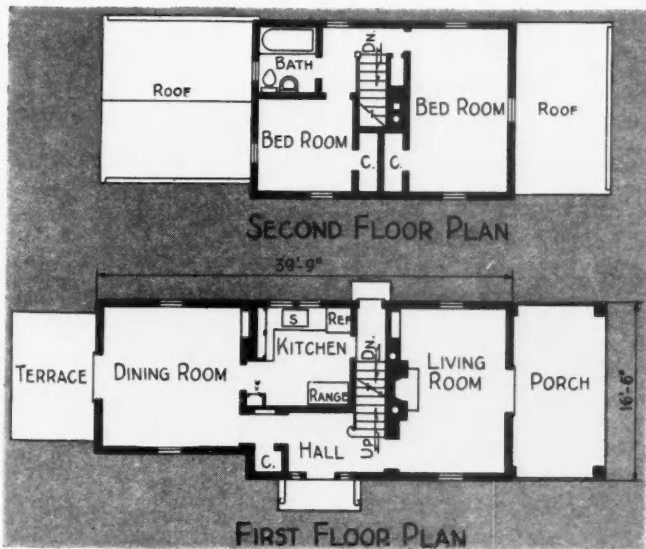
THE SECOND floor is finished in wood paneling, producing a most interesting decorative effect.

tion industry began to appear almost immediately. Stimulated also by the house-to-house canvass under the Committee's auspices, home-owners qualifying under the Federal Housing Act negotiated immediately almost \$400,000 in credit for modernizing and repairing of their properties. In addition, almost \$2,000,000 was spent in cash by property owners during the survey-period on actual construction and remodeling of all kinds.

The contagion has been such that one of the largest churches in the city got a present of a thorough renovation for the main structure and its parish buildings, a gift from an influential parishioner who saw the importance of setting a conspicuous example even though he

had no property then available for modernizing. Two large downtown buildings have had their "faces" rejuvenated and their interiors improved since the movement started. Store fronts have been done over both in the competitive spirit of the proprietors and also because the credit log jam was broken by the persistent efforts of the committee.

Described as "an achievement in civic co-operation," Cincinnati's Little Home stands today as a symbol for community endeavor. Although the mid western metropolis is no stranger to joint enterprise, the enthusiasm and eagerness to co-operate elicited by this single project have set a high mark in this city where popular sentiment is always on the side of civic progress.



FLOOR PLANS of the Remodeled House.



DINING ROOM is pleasantly lighted.

OPERATIVE BUILDERS

A monthly department for the men who plan, erect and equip homes for sale



THE CONSTRUCTION CREW is working overtime at Strathmore-at-Manhasset to take care of quality home seekers

Levitt Talks Quality

FOR most builders the depression years since 1929 have been years of slackening pace or no business. But for two young Long Island builders, William and Alfred Levitt, these same years have marked the growth of one of the most talked of, best thought of, home building businesses in the East.

The Levitt brothers were only 18 and 22 years old respectively in 1929 when they acquired a 40-acre tract near Rockville Center, L. I. Alfred Levitt designed unusually attractive homes and superintended their construction; William Levitt handled the financing, advertising and selling. Since 1929 they have built and sold more than 300 houses. Their most recent project has been Strathmore-at-Manhasset, a wooded 50-acre piece on the North Shore of Long Island which will contain 250 houses and

is now more than two-thirds built up. Announcement was made by William Levitt on August 11 that Strathmore-at-Manhasset will be completed early next spring, and as a result the builders are negotiating for another large acreage parcel on Long Island as a site for their next operation.

Many people have asked, "What is the secret of success of the Levitt Company?"

The most all-inclusive answer is "quality." The land is beautifully sub-divided with large lots, winding streets, no sidewalks, shrubbery and tall trees. Everything is done to maintain the natural beauty of the original setting of the property.

Every house is especially designed by Alfred Levitt for the prospective home owner, and he has shown a remark-

able ability to produce homes of quality and style that catch the public eye. The houses in Strathmore-at-Manhasset range from \$8,000 to \$20,000.

Sensible restrictions as to the type of people, the styles of architecture, the treatment of the lawns, all contribute to maintaining a quality and charm to the home project. The Levitts provide custom-built homes at speculative prices.

The matter of quality is carried out to a far-reaching extent in the Levitt-built homes. Quality methods, materials and equipment are used, but what is more, the Levitt advertising prominently features some of the outstanding quality products.

Standard construction practice, as reported by William Levitt, includes: Poured concrete foundations; N. C. pine frame; 7/8-inch diagonal sheathing; Bangor staggered slate roofs; copper leaders, gutters and flashing; brass plumbing throughout; Johns-Manville rock-wool insulation; Monel-Metal hot water boilers; General Electric oil furnaces; Fenestra steel casement windows with Roto-Adjuster bronze hardware; Armstrong linoleum; American radiators; plumbing fixtures and chromium fittings by Standard Sanitary Corporation; General Electric exhaust fans; Schlage self-locking hardware.

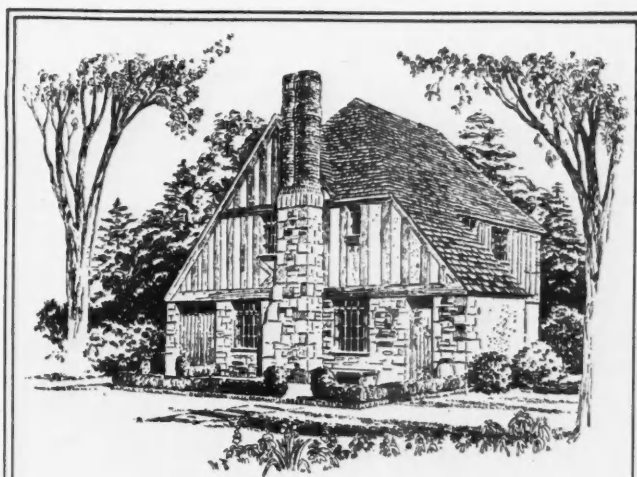
A typical advertisement showing how William Levitt presents the quality idea in his newspaper advertising is shown on this page. The advertising developed by Levitt has been so unique and so effective that many others have attempted to imitate it, but few with success. By far the majority of customers are secured from the newspaper advertising used, and the Levitt budget for this purpose is a liberal one.

Various financing plans have been used by the Levitts since 1929 in keeping up the continual sale of homes. They have had the respect and cooperation of the Prudential Insurance Company which has handled a large part of their mortgages, and here again the value of quality materials, quality restrictions and a quality project (without high prices) has paid, for financing would have been impossible in the depression years without it.

The financing plan now employed by Levitt is a minimum cash payment of 25 percent. On all cash paid over the minimum a discount of 2 1/2 percent is given. The unpaid balance on a house is lumped as one mortgage running for twenty years, which is amortized in monthly payments.

Interest rates vary in accordance with the amount of

RIGHT: Typical Levitt advertisement features quality materials
BELOW: A moderate cost Levitt-built house in parklike surroundings



Will You Invest \$2,500?

According to Webster, the word *invest* means "to lay out money with the view of obtaining a profit." In a home, that profit should be returned in the shape of many years of comfortable and enjoyable living. And unless you will experience that easy, effortless kind of living, there is no rhyme or reason for your buying a home. Sounds like a problem easily solved, doesn't it? In reality, however, a great many things go on behind the scenes to achieve the right result. Let us take the home shown above as an example.

It's located in the midst of what was once a forest. Careful planning and artistic landscaping have left a frame of hundred-foot oak trees all around. In a few weeks a velvety green lawn will appear. Then flowers, literally hundreds of them. Tulips, hyacinths, narcissus, forsythia—and a dozen others. You'll have quiet and contentment in beautiful surroundings, and yet a five-minute walk will take you to shops, station, school, and churches. And if you must have the City once in a while, fast electric trains will whisk you there in a little over a half-hour. Incidentally, sir, our commuting trains run every ten minutes.

Now for the house itself. The lower floor, front, is all stone, with hand-hewn timbers set in cement above. The roof is rugged slate and the windows are steel casements. From the foyer, a door leads to the powder room and washroom, both done in a black and Chinese red color scheme. Another door opens on the living room which has a stone fireplace set in a chestnut frame. The windows are leaded glass. The dining room, while not huge in size, has its wall space so arranged that a ten-piece suite can be comfortably accommodated. The kitchen is in ivory with a pale blue ceiling. Floor, cabinets, and gas range are in harmonizing colors. An attached garage completes the main floor.

There are three bedrooms upstairs. Each has a fully-equipped wardrobe closet, complete even to shoe shelves, hat racks, and tie racks. One bedroom has a casement door leading to a sleeping terrace. The bathroom has been done in autumn brown, with walls, floor, and fixtures in perfect harmony. It has a plate glass shower enclosure.

The complete price, on a plot 60x100, is \$10,000, with a minimum cash payment of \$2,500. It could be considerably less in cost, but then it could not be built the same way, nor with the same materials and workmanship. It could not, for instance,

1. Have a **POURED CONCRETE** foundation set on a **POURED CONCRETE** footing, as this has.
2. Have a **NUMBER ONE** Bangor slate roof, laid in **STAGGERED** fashion, as this has.
3. Have **SELECT WHITE OAK** flooring, as this has.
4. Have **GRADE NUMBER ONE** lumber used thruout, as this has.
5. Have **JOHNS-MANVILLE ROCK-WOOL** used for insulation, as this has.
6. Have **THREE** coats of Portland cement between the timbers, as this has.
7. Have **Fenestra STEEL** casement windows with **BRONZE** hardware, as this has.
8. Have **ARMSTRONG** linoleum on the kitchen and bathroom floors, as this has.
9. Have all its plumbing of **SOLID BRASS** with exposed joints in **CHROMIUM**, as this has.
10. Have a hot water tank made of **MONEL-METAL**, with a **TWENTY-YEAR** guarantee, as this has.
11. Have a **GENERAL ELECTRIC** oil furnace, complete even to an electric clock thermostat and automatic hot water supply all year round, as this has.

And so, if you are thinking of making an investment in a home, do as the smart banker does. Don't buy stock simply because the price is low, its value—real value—may be even lower. And don't buy a home unless you are assured that it will pay you dividends for many years to come in comfortable living, trouble-free, in the right kind of environment.

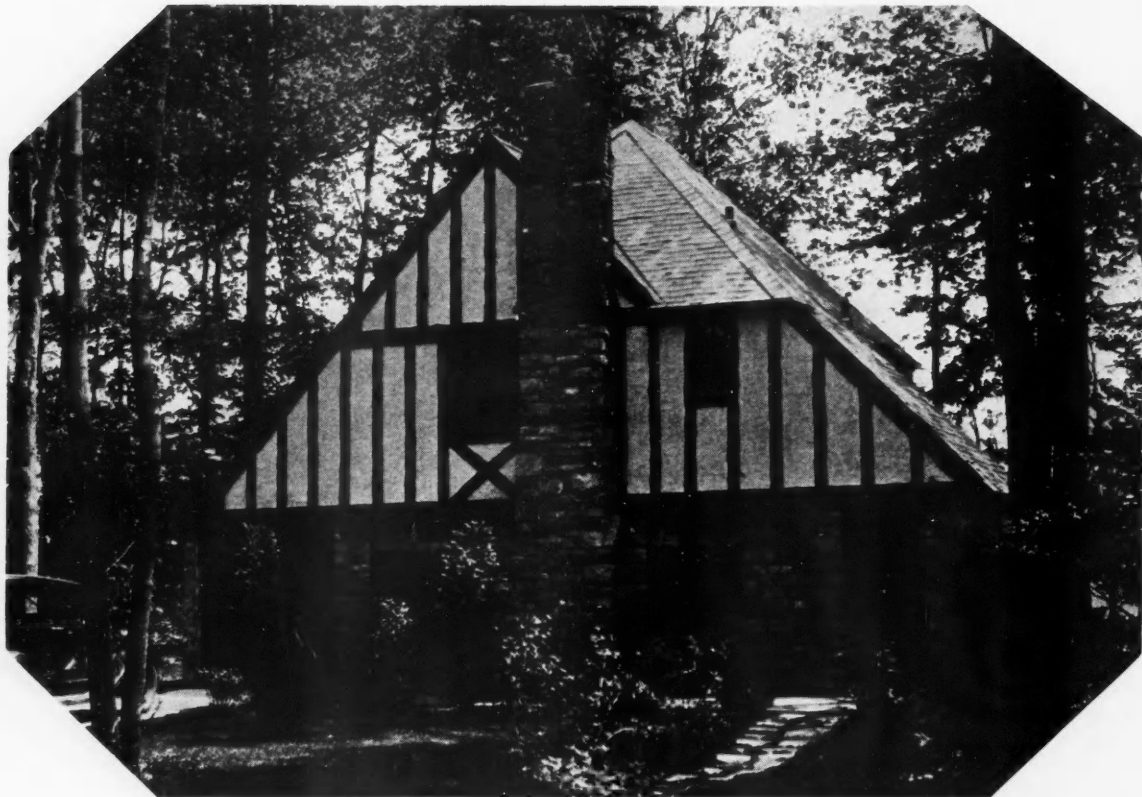
Strathmore-at-Manhasset invites you to inspect the home pictured above, designed, built and landscaped by the most successful non-speculative builders in the United States

Levitt and Sons

Northern Boulevard, Manhasset



Telephone, Manhasset 1100



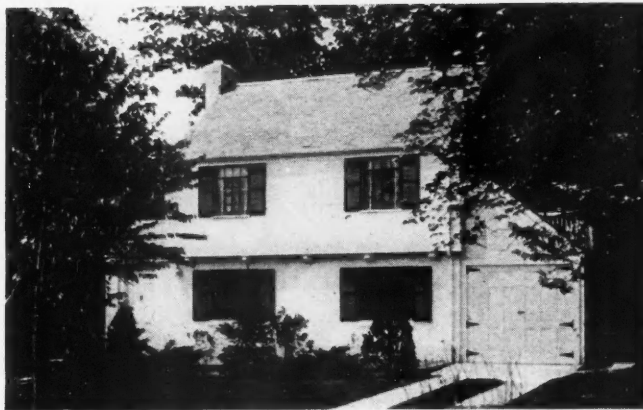
cash paid in, and are based on the following schedule:

25% Cash	6%
35% Cash	5½%
50% Cash	5%
60% Cash	4½%

In explaining the financing plan to customers, Levitt states that "carrying charges are easily figured by taking 1 percent of the mortgage per month. This includes interest, reduction of principal, taxes, water, and fire insurance. For instance, if a house is priced at \$9,000, the minimum cash is 25 percent, or \$2,250, leaving a mortgage of \$6,750. One percent of that is \$67.50, which is the monthly charge for all the items mentioned. There are no fees or charges of any kind."

The past year has been the most successful in the history of the Levitt brothers. When interviewed by *American Builder* early in August, William Levitt stated that they have stopped taking orders because their construction crew was so far behind on houses already sold but not completed. Business this year has tripled that of 1934, and the entire staff is working full speed to keep up with the volume of work sold.

The Levitts build very few houses on speculation. Frequently, at the beginning of a season, they will build one or two, and the number of speculatively built homes may run to half a dozen in the course of a season. These are usually advertised as model or demonstration homes, such as "The American Home" widely publicized in March this year. This demonstration home attracted wide attention, and deservedly so, for it had many unusually fine features that illustrated the latest developments in moderate priced homes. The Levitts feel that it is well to have several demonstration homes available to show the public, but they are careful not to have too many houses ahead at any one time, as they feel that too many empty houses inevitably create a bad impression. One of the restrictions of note maintained by Levitt is that no houses



TWO attractive homes in Strathmore-at-Manhasset, the Levitt development located in one of Long Island's beauty spots. Severe restrictions maintain the beauty and appeal of the surroundings.

may be built in Spanish or Modern architecture or style. They feel these styles would detract from the harmony of the setting. Houses are not duplicated in the subdivision but Alfred Levitt will attempt to produce a house with somewhat similar roof lines or details when a customer is thoroughly sold on a certain style.

To walk or drive through Strathmore-at-Manhasset is an encouraging and stimulating experience for anyone interested in better home building. The entire project has the appearance of a beautiful private estate, the homes are substantially built and harmoniously arranged, and what is most important, satisfied customers testify to the success of the quality methods employed by these builders.

"Quality Products Pay Their Way, Help Sales," Levitt Says

The SHOPCRAFTER'S Corner

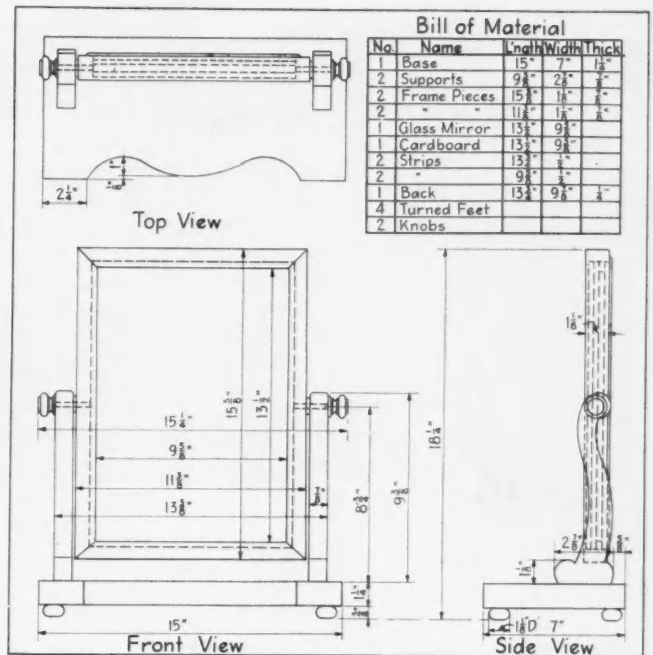
A Workshop Department of Things To Build for Profit or Pleasure

THIS MONTH two projects are presented which are quite different in their handling. The Colonial mirror offers the shopcrafter an opportunity to build a very useful piece of furniture since Early American furnishings are very much in demand at present. Placed over a chest of drawers it adds to the utility of that piece in the bedroom.

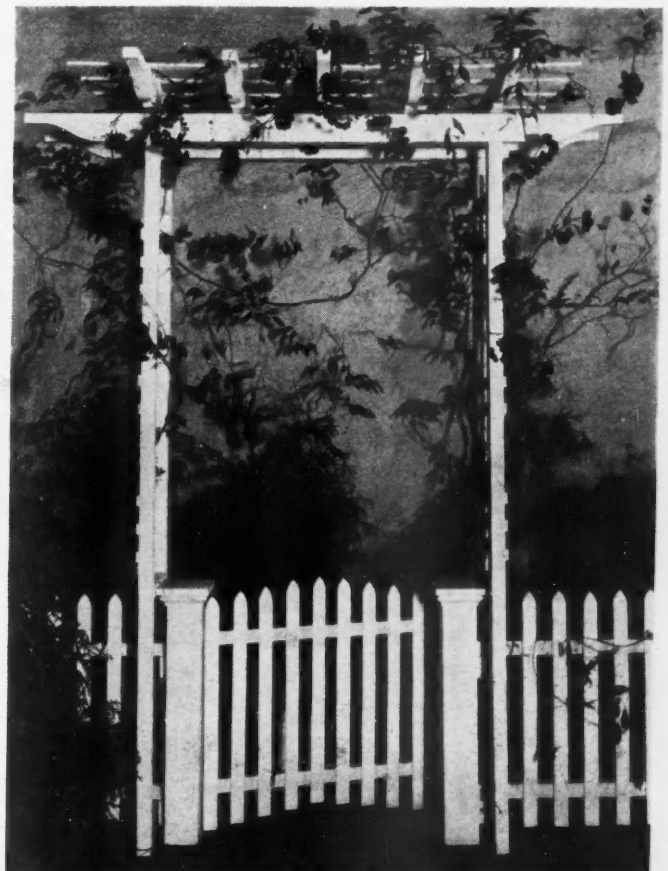
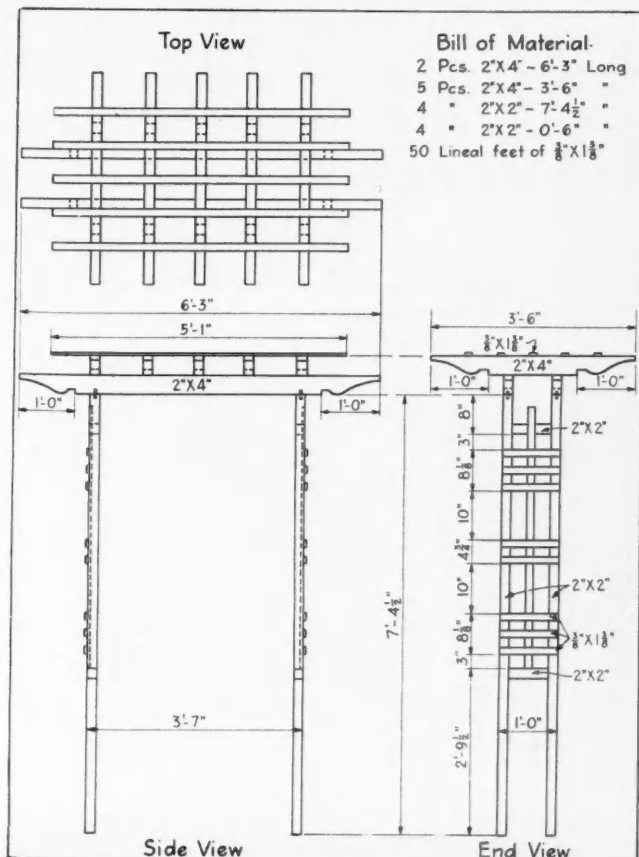
In constructing it, the uprights that hold the mirror in place may be cut out with a turning or heavy scroll saw and finished with spokeshave and file. The frame as shown in the drawings at the right calls for a deep rabbet to bring the glass up to the front of the frame, which is made more interesting by rounding the front of the pieces which make up the frame.

Another outdoor project is shown below in the form of a garden gate. It is very easy to build but, like the seat shown last month, can add much to the appearance of the landscaping about either a new or old house. Although it is getting late in the season, there is still time to do outside work and prepare the garden for an early start next spring—or the gate can be built during the coming winter months and used for next year.

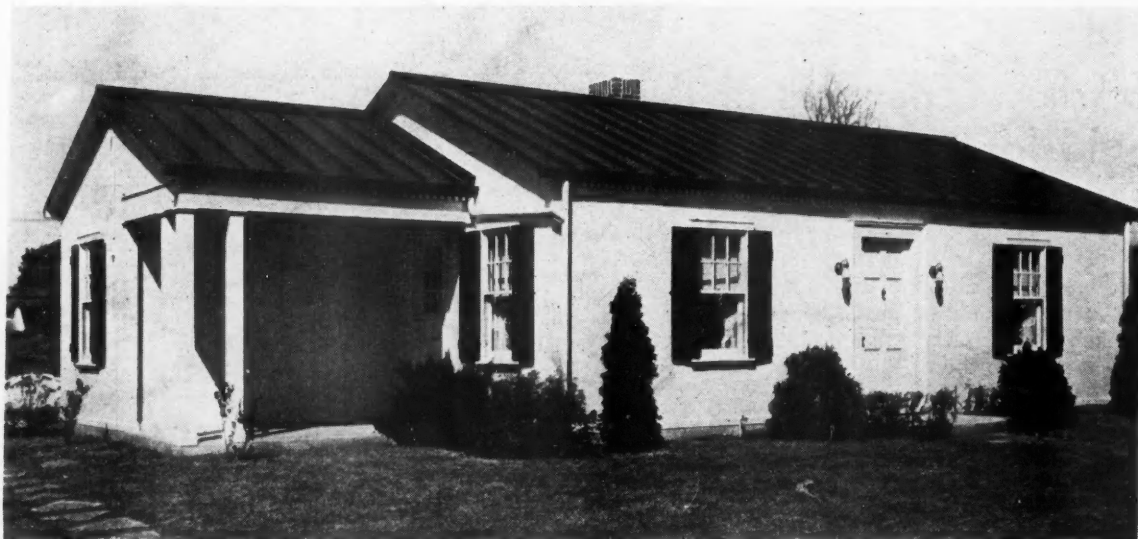
Readers are invited to write to *American Builder* about their experiences with the plans published in this department and give their ideas as to the most useful type of project which might be presented.



ABOVE: The drawings for building a useful and attractive Colonial mirror which will fit in with the popular Early American style. Below, illustration of garden gate and the plans for the construction of this outdoor feature. These projects are published through the courtesy of Edward F. Worst, formerly Director of Industrial Arts Work, Junior High and Elementary Schools, Chicago, Illinois.



New Low-Cost Steel Panel House



Contractors Offered Newest Development in Steel Interlocking Panel Building Construction

A NEW TYPE steel home of patented interlocking, self-framing construction has recently been completed on Centennial Ave., in Middletown, Ohio. It was built by Steel Buildings Inc., under patents of the Steelox Company of Chicago, with whom the American Rolling Mill Company has cooperated. The house can be duplicated for approximately \$2,500. It is of Cape Cod Colonial architecture and contains a large living room, two good sized bedrooms, a modern kitchen with dinette space, bath and service room.

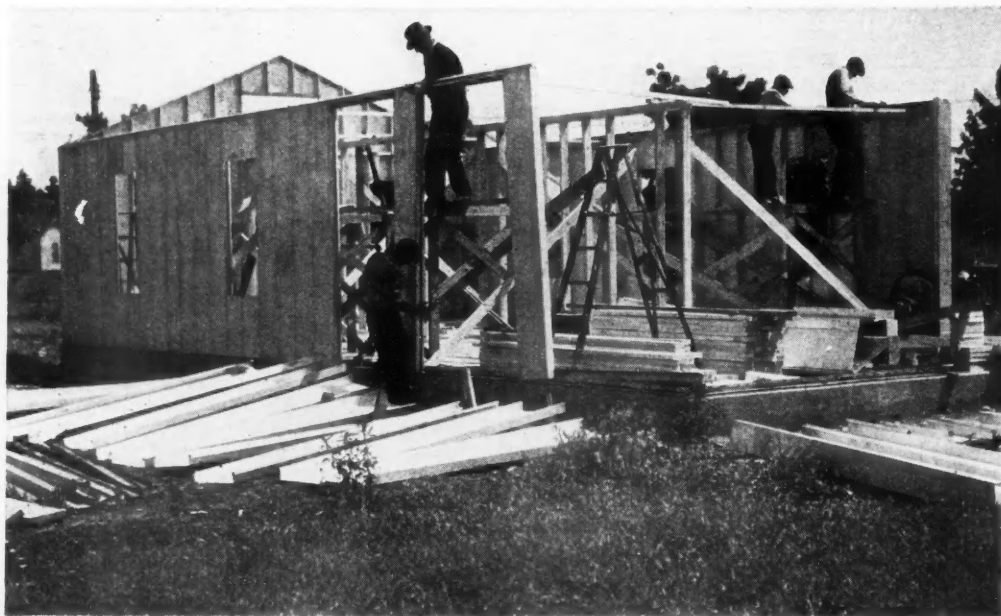
The house was built in record time, being made ready for the decorators in approximately two weeks after erection of the steel work was begun. The method used is interesting and extremely simple. Panel shaped sections are pressed from 20 gauge Armco galvanized steel.

Each panel has a flanged side designed so it interlocks with the flange of the adjoining panel. A steel angle, encased in asphalt, is bolted to the foundations. The wall panels are then upended and interlocked. They are fastened to the angle by means of a hook bolt. An angle-shaped wall cap is placed on top of the sections and hook-bolted. Short panels are inserted where doors and windows occur.

The roof is assembled from panels of the same design as the wall, except the flanges are turned up. No rafters or wall studding are required, the flanges serving this purpose.

Less than two days were required to erect the steel chassis of the home. The walls were then packed with bats of rock wool insulation three and one half inches thick. Plywood was used as the wall finish, attached to furring strips which were in turn nailed to the steel walls. See construction details opposite.

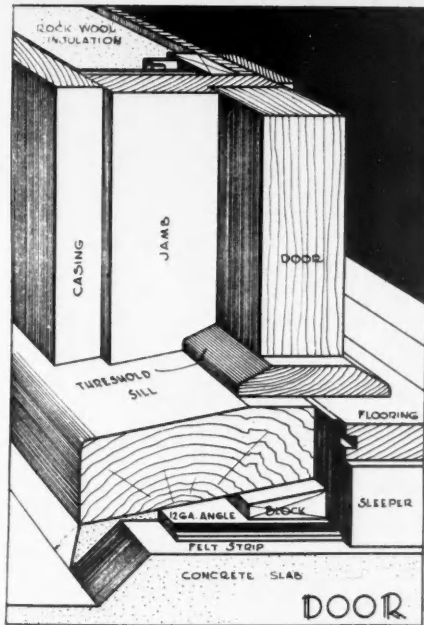
The modern kitchen contains two roomy cabinets, an automatic water heater and combination sink and laundry tray. Both bath and kitchen have linoleum walls.



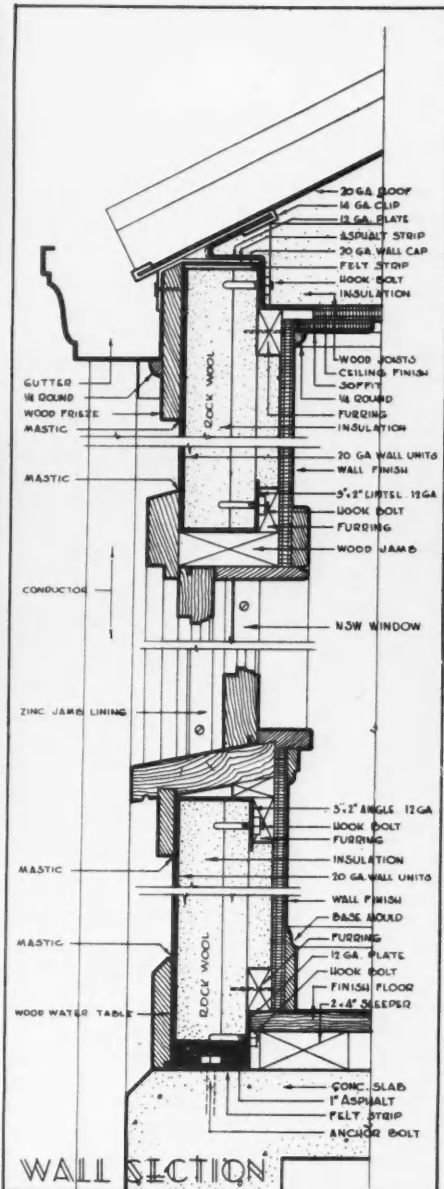
FOUR MEN erected the steel chassis in less than two days.



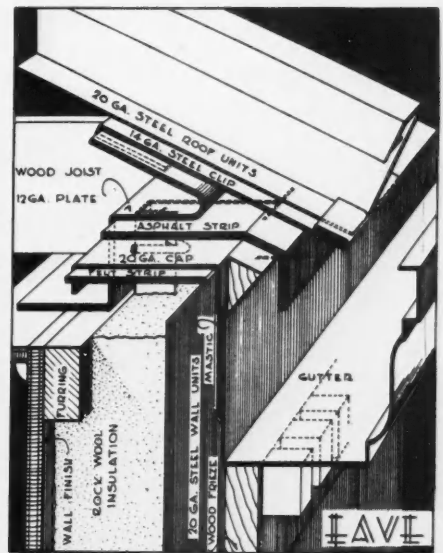
RIDGE



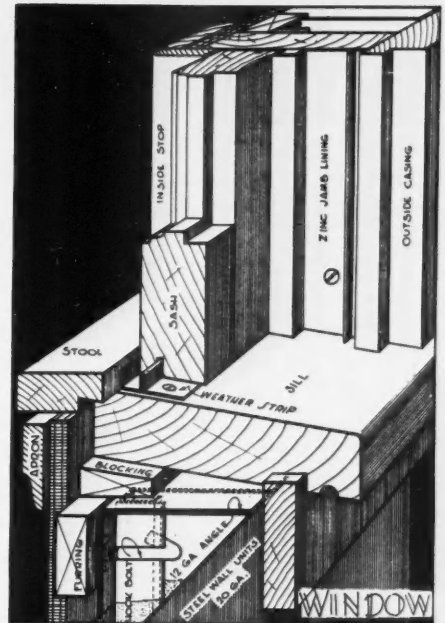
DOOR



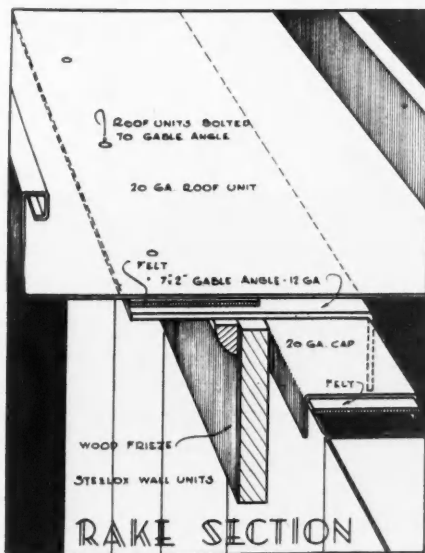
WALL SECTION



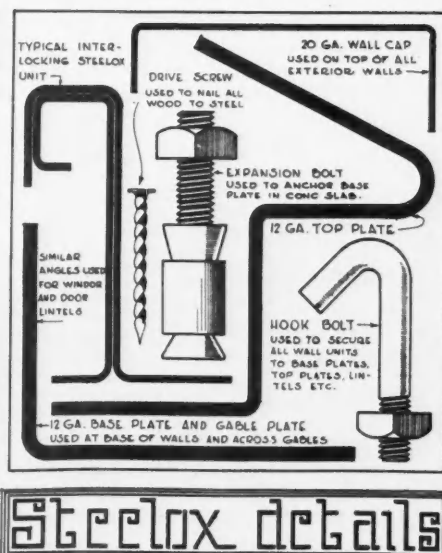
GABLE



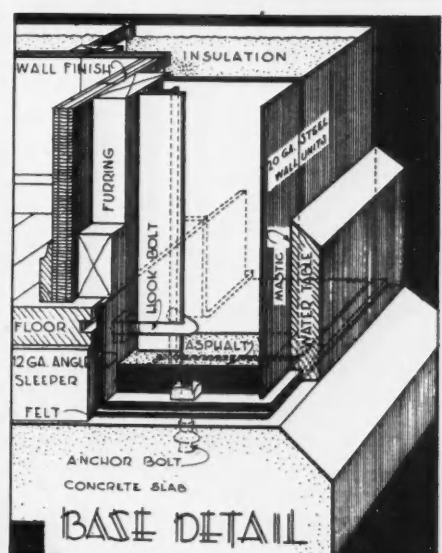
WINDOW



RAKE SECTION



Steelox details



BASE DETAIL

CONSTRUCTION details: The walls and roof of Steelox structures are made of 20-gage galvanized Armco steel channel-shaped sections sixteen inches wide, having flanged sides. The flange on one section easily and securely interlocks with the flange of the adjoining section. These patented sections are the exterior wall of the building, and at the same time their flanged sides when interlocked form strong, rigid steel columns which serve as the studding and rafters of the building.



PRIZE WINNERS

Modernize Main Street Competition

Drug Store, Food Store and Auto Sales & Service Station Restyled to Attract Trade—Details Presented

JURY of architects at work—left to right, leaning forward, Prof. Melvin T. Copeland, Harvard University; John W. Root, Chicago; J. André Foulhoux, New York City; F. R. Walker, Cleveland; Kenneth C. Welch, Grand Rapids; Kenneth K. Stowell, New York City, professional advisor; William Lescaze, New York City; pointing with ruler, Albert Kahn, Detroit.

ELEVEN thousand dollars in cash prizes have been awarded to 52 architectural designers in the "Modernize Main Street" Competition sponsored by Libbey-Owens-Ford Glass Company. Their drawings present a splendid group of solutions to one of the building industry's most urgent problems—namely, what to do to the old style drug stores, grocery stores, and women's wear shops (dry goods stores) that stand on every business street, blocking progress and losing trade because of their old-fashioned, uninviting appearance; and the problem of the old time auto showrooms and gas stations which have been left behind in today's race for the motoring public's dollar.

This competition was announced on June 15 and closed Aug. 12. More than 2,000 architects and designers submitted drawings. The Jury of Awards under the chairmanship of Melvin T. Copeland, Professor of Marketing and Director of the Bureau of Business Research, Harvard University, met the week of Aug. 26 and selected First, Second and Third Prize Designs for each of the four problems, together with 40 Honorable Mention Designs. This entire collection of 52 designs in a large page portfolio (in color) will be obtainable from the sponsor by architects, contractors, dealers and property owners interested in store modernizing. *American Builder* is privileged to present on the next three pages, in reduced size, the First Prize Design in the Drug Store, Food Store and Auto Station groups. Additional designs will follow in later issues.

In approaching the problem of redesigning typical old style stores for this competition, the contestants were given the following specifications (and these will help to make clear the intent of the drawings that follow):

THE DRUG STORE: The modernized corner drug store is to provide for the selling of many types of small merchandise, as well as medicines and prescriptions. Among other things the following "departments" must be provided for: soda fountain and lunch counter, cigars, candy, toilet articles and cosmetics, proprietary medicines and home remedies, sick room supplies and rubber goods, packaged drugs, and prescriptions.

The kitchen for the lunch counter may be considered to be in the basement if proper stairs, conveyors or dumb-waiters and flues are shown on the plan.

Dimensions: The building is on a level corner lot 25'0" x 75'0", the short side on the north side of Main Street; the long side faces west on the side street. The east party wall extends 6" into store lot. The present clear height, floor to ceiling, 12'0".

THE FOOD STORE: This store is to provide for the merchandising of groceries, packaged and canned foods, fresh fruits and vegetables, meats, fish and frozen foods.

Dimensions: The building covers a level inside lot (not a corner lot), 25'0" x 75'0" on the north side of Main Street. There is a service alley at the rear. The clear width between the party walls is 24'0". The present clear height, floor to ceiling, is 12'0".

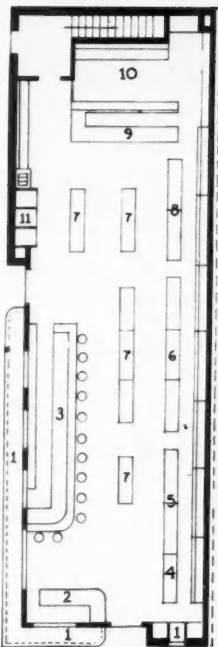
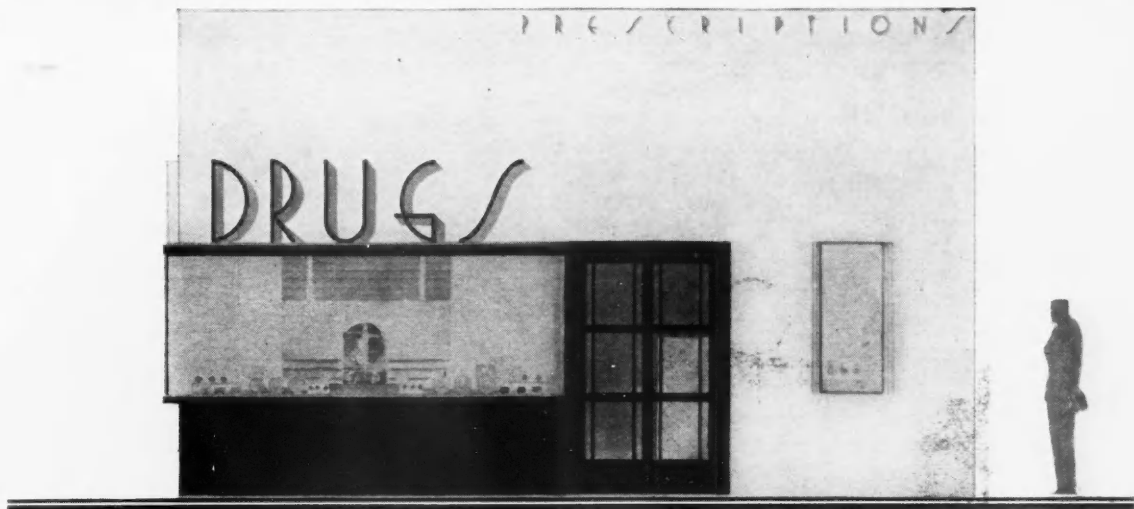
THE AUTOMOTIVE SALES-AND-SERVICE STATION: The gas station, presumably, is to be modernized by an automobile dealer as a "feeder" for his main showroom, as well as to produce a profit through the sale of gasoline, oil, tires, accessories and parts. Servicing, such as greasing, washing and minor repairs on all makes of cars, will return a profit in addition to creating good will which may lead to a car sale.

The plan shall provide a showroom for two low-priced passenger automobiles; space for the display and sale of tires, parts and accessories; cash and record space; "restroom" toilets; one car-washing space; two greasing pits, hoists or lifts; work bench and tool racks for minor repairs, with inclosure for repairing one car at a time; gasoline pumps and oil dispensers shall be located within the building lines.

The basement is not to be shown on the drawings. It is assumed that employees' lockers, the heating plant, air compressors, etc., and extra storage space may be provided for in the basement, providing a stairway is shown on the plan.

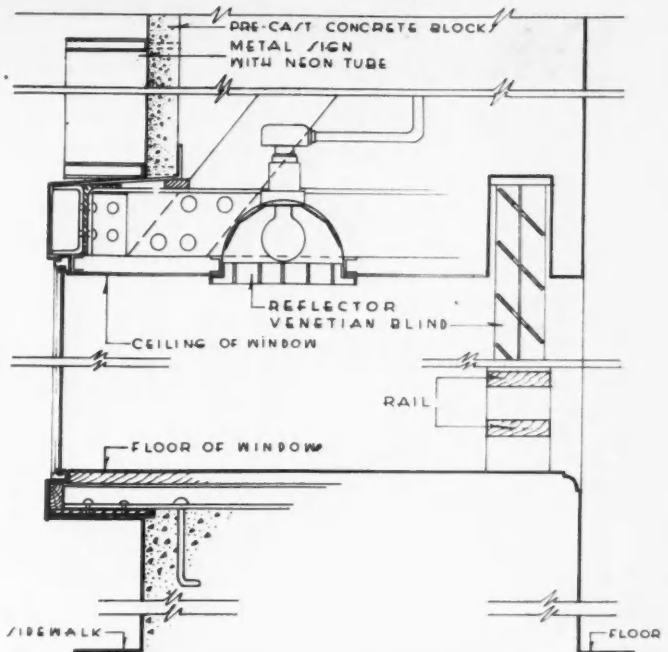
It is assumed that the present structure may be moved, enlarged, altered, or torn down so that the most efficient design for the lot can be realized. Gasoline pumps, also, may be added, changed or relocated.

Dimensions: The level lot is on the Northeast corner of intersection of Main Street and a through traffic artery. The wide Main Street runs East and West. The rectangular lot measures 100' on Main Street, 75' on the intersecting street. Both are two-way traffic streets. From building line (lot line) to curbs of streets is 12'.

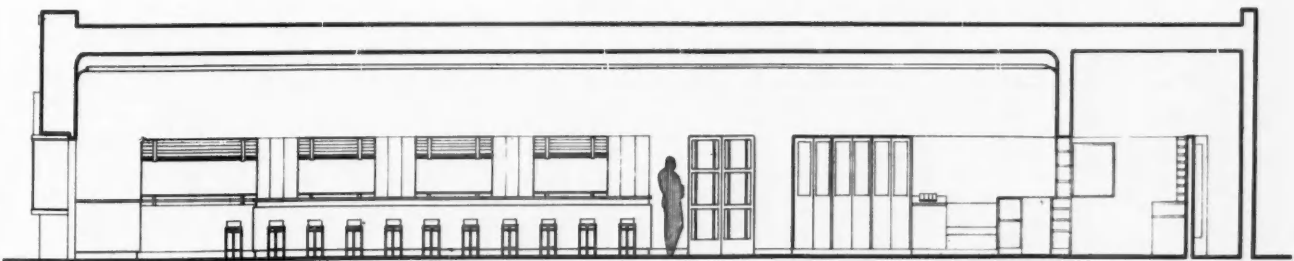


PLAN

- LEGEND**
- 1 DISPLAY WINDOW
 - 2 CIGAR
 - 3 SODA FOUNTAIN &
 - 4 LUNCH COUNTER
 - 5 CANDY
 - 6 COSMETIC &
 - 7 TOILET ARTICLE/
 - 8 PROPRIETARY MEDICINE/
 - 9 HOME REMEDIE/
 - 10 RUBBER GOOD/ &
 - 11 SICK ROOM /SUPPLIE/
 - 12 PRESCRIPTION COUNTER
 - 13 PRESCRIPTION ROOM
 - 14 TELEPHONE/



SECTION THROUGH WINDOW



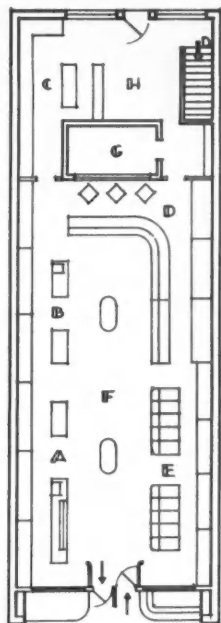
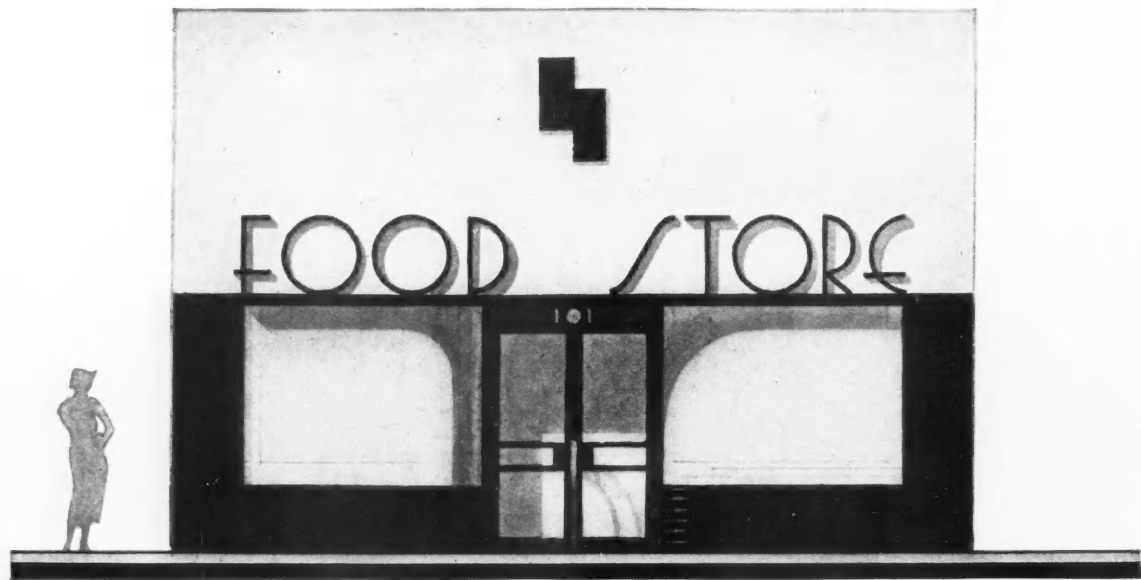
SECTION

PROBLEM "A"

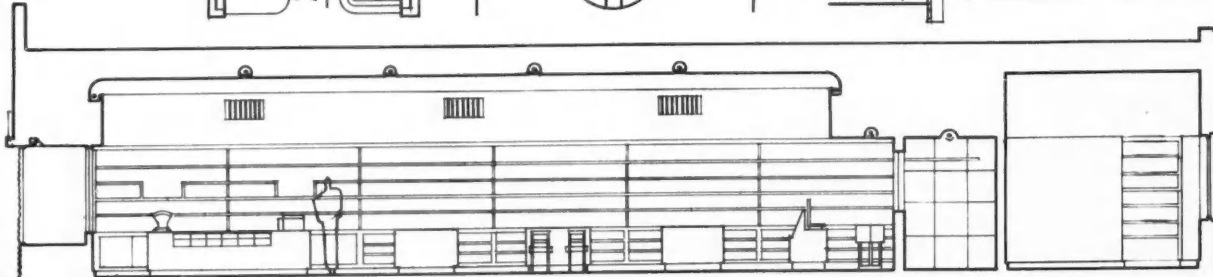
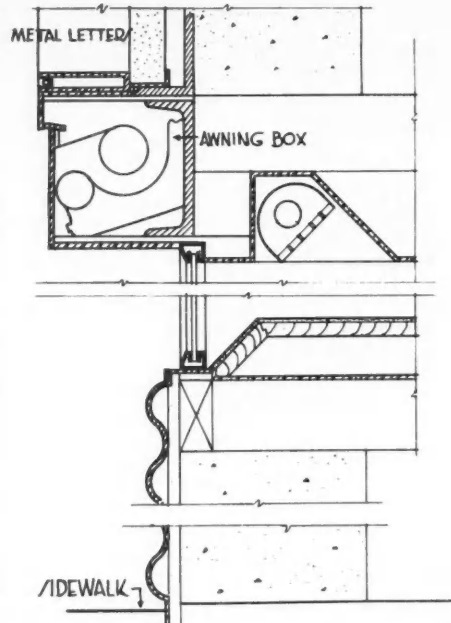
MODERNIZE MAIN STREET COMPETITION
 SPONSORED BY
LIBBEY-OWENS-FORD GLASS COMPANY

DESIGN SUBMITTED BY
 M. RICHTON SWICGOOD
 153 EAST 40th ST.
 N. Y. C.

FIRST PRIZE, Class A (Drug Store), submitted by M. RICHTON SWICGOOD, New York City. Specification calls for: show window, 5-4'2" x 10'0" x 1/4" L.O.F. "A" quality D.S. window glass; show window floor, black linoleum; show window ceiling and walls, lacquered Transite; interior lighting fixtures, indirect lighting from ceiling; partitions, prescription room L.O.F. Plate; facing of bulkhead, spec. aggregate (steel brushed) concrete; sign lettering and illumination, metal letters with Neon tube; sales interior, walls, light gray lacquered Transite; ceiling, white lacquered Transite; flooring, Olympic Blue Sealex; show cases, terra cotta color; furniture, metal and terra cotta color leather; main lighting fixtures, indirect ceiling trough; trim, nat. finished stainless steel.



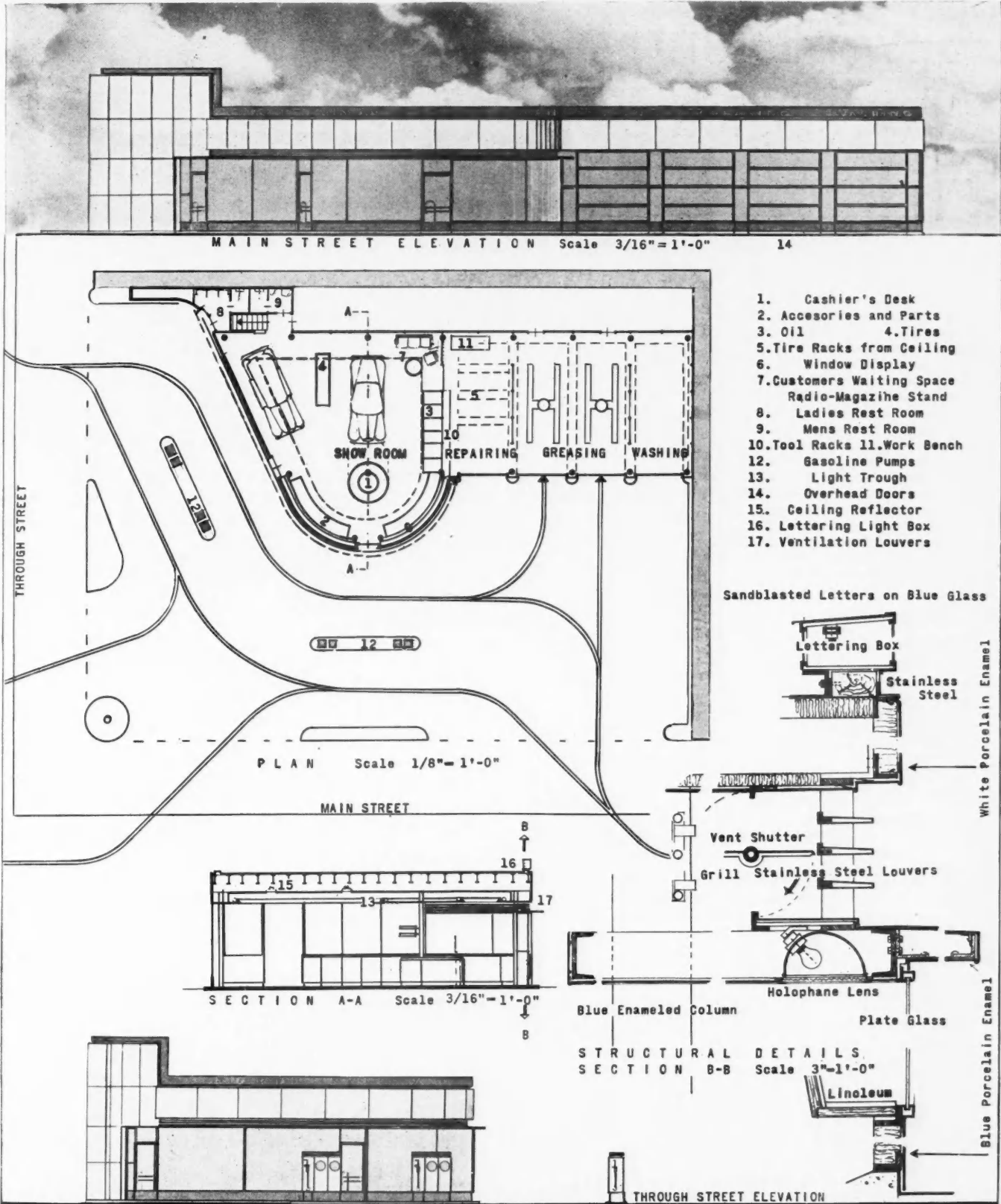
- LEGEND
- A. FANCY GROCERIE/
 - B. STAPLE GROCERIE/
 - C. ORDER ROOM
 - D. MEAT, FI/H, FOWL
 - E. VEGETABLE/
 - F. SALE/ TABLE/
 - G. REFRIGERATOR
 - H. BREAKING UP ROOM



MODERNIZE MAIN STREET COMPETITION
 SPONSORED BY
 LIBBEY-OWENS-FORD GLASS COMPANY

DESIGN SUBMITTED BY
 G. FOSTER HARRELL, JR.
 155 EAST 40 ST.
 NEW YORK, N.Y.

FIRST PRIZE, Class C (Food Store), submitted by G. FOSTER HARRELL, Jr., New York City. Specifications call for: show window, 1/4" L.O.F. Plate, bent; show window lighting troughs or fixtures, 3/16" L.O.F. Sand Bl.; skylights (exterior), Blue Ridge Wire Glass; Skylights (interior or ceiling), 1/4" L.O.F. Sand Blast; store front frame, metal; facing of bulkhead, corrugated terrazzo; bulkhead trim, stainless steel; sign lettering and illumination, stainless steel and Neon; show window floor, walls and ceiling, stainless steel; sales interior, walls, lacquered Transite; ceiling, acoustic block; flooring, terrazzo; show cases, steel and glass; main lighting fixtures, indirect; trim, stainless steel.



CLASS D
AUTOMOTIVE SALES
and
SERVICE STATION

MODERNIZE MAIN STREET COMPETITION
 SPONSORED BY
LIBBEY-OWENS-FORD GLASS COMPANY

DESIGN SUBMITTED BY
ALFRED CLAUSS
 205 Union Bldg
 Knoxville, Tenn

FIRST PRIZE, Class D (Automotive Sales-and-Service Station), submitted by ALFRED CLAUSS, Knoxville, Tenn. Specifications call for: glass for show window, 1/4" L.O.F. Polished Plate; show window lighting troughs or fixtures, Holoplane lenses below reflectors flush in ceiling; show cases, 3/16" L.O.F. Polished Plate; partitions, 3/16" L.O.F. Polished Plate; rear windows, 1/4" Blue Ridge wire glass; store front frame, stainless steel; facing of bulkhead, blue porcelain enamel; trim, stainless steel; facing of exterior wall, walls or columns, white porcelain enamel; trim or ornament, blue porcelain enamel projecting canopy—stainless steel louvers; sign lettering and illumination, letters sandblasted on blue glass light box; show window floor and walls, 3/16" dark gray battleship linoleum; ceiling, blue porcelain enamel.

"Silver Lining" Model Home

New Coordinated Building Plan
and line of products announced
by Reynolds Corporation.

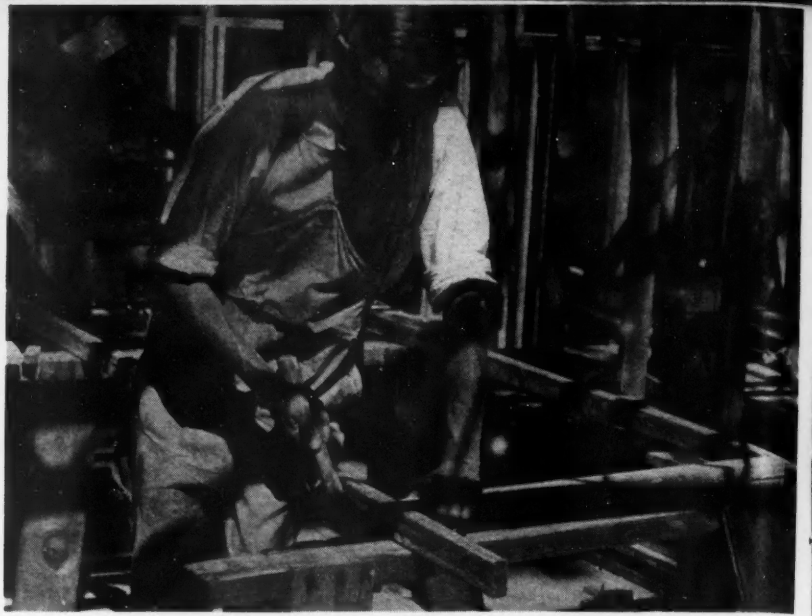
USING a new coordinated building and distribution plan, the Reynolds Corporation, New York City, is now offering 80 per cent of the building materials and equipment that go into a house under one bill of sale in the way that may have a far-reaching effect on the building industry.

Under the Reynolds plan, local architects, builders and lumber dealers take an active part and perform their usual functions in the field. They are supplied with technical assistance by the Reynolds company that is intended to assist them in selling a fully engineered, nationally advertised, guaranteed house.

Through acquisition of new plant and production facilities the Reynolds system provides the following procedure:

1. Flameproof and termite proof framing and structural flooring known as Metalumber.
2. Ecod Fabric plaster base—plain or metallated.
3. Reynolds Metallation (insulation).
4. Air Conditioning System complete with conduits.
5. Plumbing system and fixtures.
6. Steel windows.
7. Complete roofing installation.
8. Liquid Metallation.

While the above products are available individually through the regular dealer channels, where desired, the important feature of the new Reynolds plan is that they can all be purchased under one bill of materials for a "Reynolds Specified House," effecting important cost economies. A house so supplied will be entitled to a



NAILING Metalumber door frame.

distinctive, nationally advertised trade name. The significantly important result of the plan is that all of the parts are carefully planned and engineered in relation to each other and to the whole house. In addition to the sales plan which includes the architect, builder and dealer, the Reynolds company is setting up the Reynolds Fiscal Corporation to supply local financing where none is now available from customary mortgage lending sources.

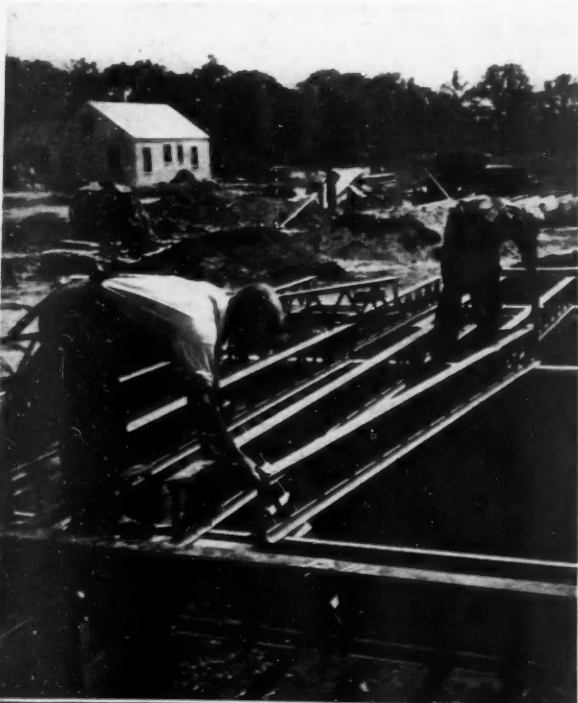
Will Help Builders

Residential contractors, whether building for sale or on contract, will send plans and specifications of their houses to the Reynolds Corp. The Reynolds engineers translate the requirements into a fully engineered house. The structural engineers prepare special framing plans for the Metalumber. The air conditioning engineers plan a complete system which is supplied with air ducts, pre-cut and ready for installation. Plumbing experts coordinate the layout with the structural department.

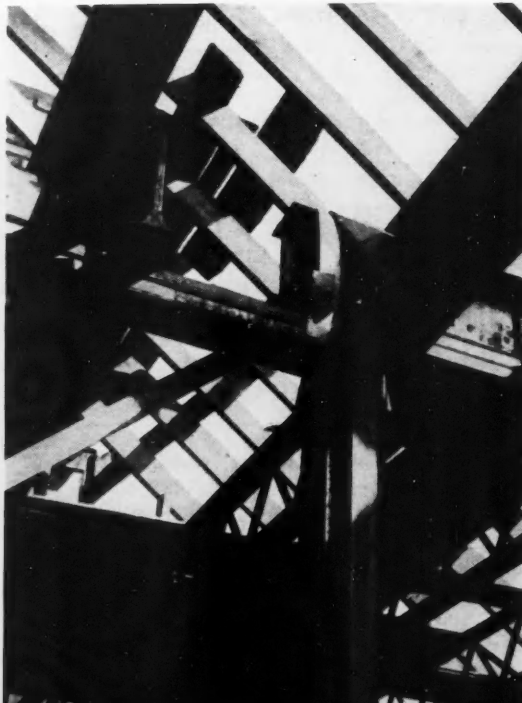
Materials and equipment will be sold through the local lumber or building materials dealer.

Of especial interest to builders is the fact that the Reynolds Corp. will supply advertising and selling helps

FLOOR MEMBERS are lightweight.



SECOND FLOOR construction detail.



ERECTED like lumber.





STRUCTURAL GYPSUM FLOORING on Metalumber joists.



STEEL BAND bridging is nailed in place.

for their Reynolds specified houses. These consist of:

1. Supplying sample advertising, mailing literature and signs particularizing the advantages of the houses.
2. Arranging special previews of "House with the Silver Lining" for which engraved invitations are supplied and mailed to the builder's list of prospective buyers and civic officials.
3. Arranging a demonstration in the house which dramatizes the advantages of this type of house over other kinds of construction.
4. Organizing a direct mail campaign to the best of the builder's prospects.

Many unusual and interesting new materials and construction ideas are incorporated in the new Reynolds plan. The Metalumber consists of steel shell units filled with a cementitious compound that can be nailed, sawed and otherwise handled like lumber. Floor joists, studs and framing members are manufactured at the factory and delivered ready for erection. Floor joists are placed on two-foot centers, bridged every eight feet with a steel band two inches wide. Spans are up to 18 feet. The Metalumber is flameproof, decay proof, termite proof and has high structural strength and rigidity.

The plan, design and exterior materials of the Reynolds houses are determined by the architect or builder.

Of the 50 houses already sold, practically all are of traditional types of architecture. The houses are thoroughly insulated. Pictures show job by McMorrow Co., Norwood Manor, Manor, N.J.

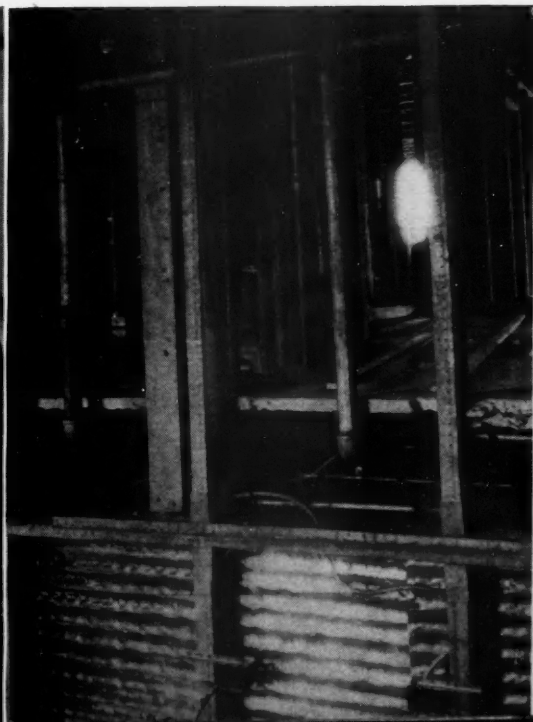
One of the most progressive steps of the Reynolds plan is the supplying of a complete air conditioning system which is delivered with all grills, ducts, supply and return lines ready for immediate installation. A standard air conduit system has been developed which eliminates the cutting and fitting of galvanized ducts on the job. The Reynolds ducts are equipped with special snap-lock fittings which eliminate solder or sheet metal screws.

R. S. Reynolds, president of the Reynolds Corporation, believes that important economies can be achieved by this "package system" of selling building materials and equipment. The company is not building "prefabricated houses" but is providing economically engineered and planned materials for individually designed houses that are planned for the local needs and conditions of the community. Associated with Mr. Reynolds are Roe Black, vice president and general manager, and Gardner W. Taylor, who is vice president and general manager of the Reynolds Fiscal Company in charge of housing for the Reynolds Corporations.

WORKING on the job.

PIPES and conduits easily run.

GYPSUM floor slabs light in weight.



Garage Models Forecast 1936 Activity

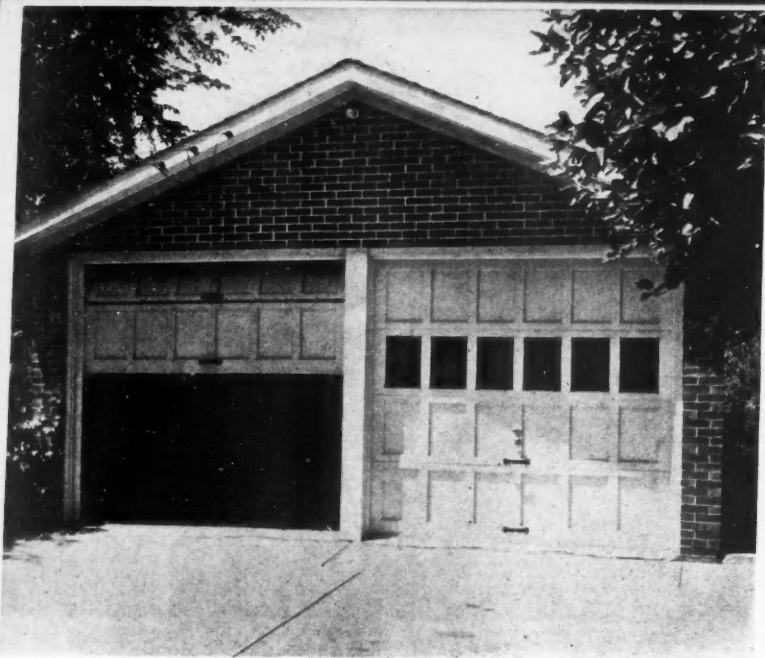
JUST as the radical improvements in automobile design developed by the car manufacturers and exposed to the public in advance of the 1935 car buying season relegated all previous models to the discard, so likewise there has been going on a radical development in garage design and equipment that makes obsolescent most of the private garages now standing.

For this reason, it is expected that 1936 will show unusual activity along lines of garage construction and remodeling. The new houses being built, and more particularly the 4,000 model demonstration homes that are being exhibited this fall, are bound to have a powerful effect on realty values, building design and construction practice.

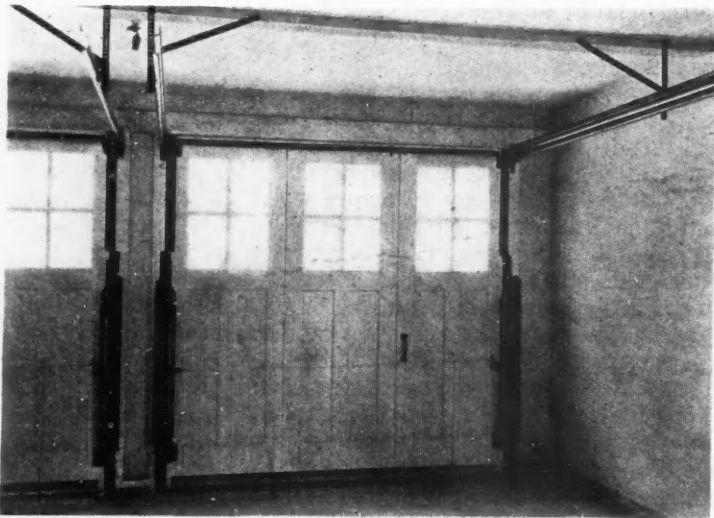
The attached garage, or a motor room incorporated within the home design, is greatly favored in all new construction. In the recent prize competition conducted by the General Electric Company, all designs submitted included a built-in garage, and uniformly the architects placed the garage at the front of the house close to the street approach, by so doing cutting down the amount of concrete driveway and leaving the side and rear lawn and garden areas free to be developed into quiet, safe and pleasant retreats for the family.

This prominent location for the motor room calls for particular attention to be given the door design and construction, to assure an adequate piece of equipment from the triple point of view of good appearance, security and ease of operation. Garage door openings are wide and doors are heavy, yet they must be so equipped that a frail woman or child can open and close them without difficulty.

Here is where the improvements mentioned above come into the picture. The upward-acting doors, delicately counterbalanced, have been so perfected as to construction and hardware equipment that they seem to be equal to any requirement.



NEAT 2-Car Garage at Galesburg, Ill., Equipped with "Ro-Way" Doors from Rowe Mfg. Co.; John Dahlberg Architect and Builder.



WORKING mechanism of Frantz Mfg. Co. "Over-the-Top" Door Equipment used by Jack Andrews, Builder, Sterling, Ill., in remodeling old 2'8" doors.



ATTACHED garage at Appleton, Wis., equipped with National Mfg. Co. hardware; Herman Hoepfner, Architect; Fred Hoepfner Sons, Builders.



EXAMPLE of large garage doors used in Commercial buildings. This washing and greasing station is equipped with Wagner Mfg. Co. hardware.



INDIVIDUALIZED design is featured in this triple-door garage in Cincinnati, Ohio; Standish Meacham, Architect. "Overhead" Door Corp. equipment was specified and used, proving entirely adequate to control these heavy doors.



ALLITH Prouty Hardware on this funeral home garage at Danville, Ill.



KINNEAR'S "Rol-Top" doors on Columbus, O., residence; R. G. Hanford, Architect; Petzinger & Schlepfi, Contractors.

Looking Ahead in Home Equipment

New Standards and Improved Models Stimulate Buying Interest

By V. L. SHERMAN

Department of Mechanical Engineering,
Lewis Institute of Technology, Chicago

JUST as I sit down to discuss the future in home equipment there comes a letter from my brother-in-law. He, and his young family, are on the brink of a new home in a middle eastern city, and would be thankful for any advice that I might tender. Well, I might at that; but I know from his letter that he is in good hands, and that when his home is completed there will be everything to be thankful for and nothing to complain about.

Given a good contractor, a contractor who can familiarly supervise the plans and specifications, who knows how to choose the best in materials, and who relishes a full responsibility, there can be little chance of any but the best results. The advent of the Federal Housing Administration with its long term single-mortgage loan and its direction of securities has worked a marked change in the past year. Thus it is that the family I speak of can count on several advantages to come in the way of a "domicile" which would have been considered rank extravagance by some a few years ago and by others as a risky building prospect. Now there is really nothing extravagant in what they plan, nor is there anything in the way of a risk.

Just to turn it over in prospect suppose we see what the intentions are. The home is to be a story-and-a-half house with living room, dining room, kitchen, two bedrooms and a bath on the first floor. The second floor is to have two bedrooms. (They probably will amount to play rooms for the boys and the boys' friends, if I am not mistaken.) There is to be no basement, but a heater room and laundry will be accessible from the kitchen. The heater and air conditioner will be furnished by a well known firm. Other mechanical equipment will be furnished by as reliable companies.

Now, I hold no special brief for basementless houses. Except for a few purposes the basement appears to me to be an unnecessary subject. With the "invention" of the hot-air furnace it was thought necessary to excavate so as to provide enough height for the hot-air stacks. And the anticipation of a dirty furnace on the same level as the parlor was not to be considered for a moment. Besides, how could hot air be distributed but underneath the floor?

This mention of a basement is merely to point out that with modern heating and air conditioning a basement really is not necessary at all. The heating is cleanly; the distribution of heat by steam, hot-water, or warm air is positive and not left to the difference in densities of the heating mediums; and floor, wall, and roof insulation is now, and has been for some years, a matter of success and certainty. The writer has lived in a basementless house for ten years and would not trade the type for any other.

The automobile builders are deservedly pointing with pride at the enormous improvements which have come in the last years. But I wonder if there is any greater improvement in cars than that shown in the building of garages for their housing. In roaming around the country it is evident that the modern garage is nothing akin to the ones we used to see. The newer ones grace the premises rather than disgrace them. And the equipment that is considered saving of time and temper is neither expensive nor superfluous. The garage is really a part of the

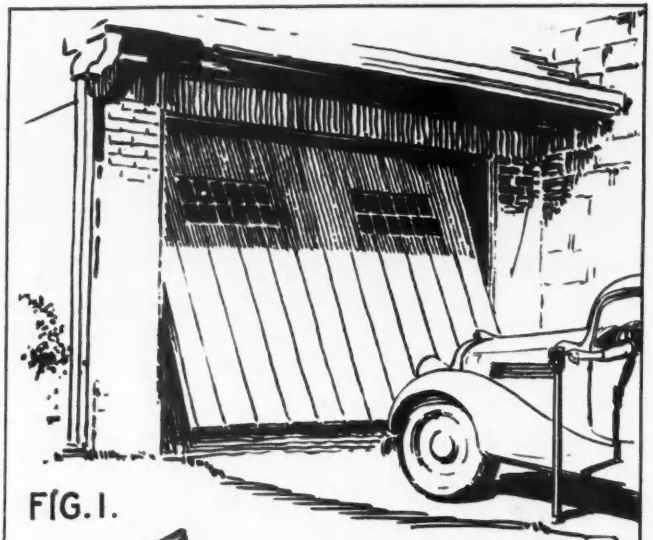
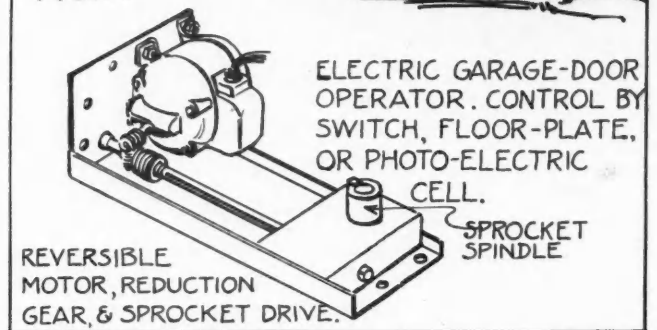


FIG. 1.



house whether it is built attached or detached. But even now, as well as in the future house, the garage doors are easy to handle, do not require excavation after a snow storm, are out of the way in any position and no longer look like the side door of a box-car. And if a little motor can run your vacuum sweeper or your refrigerator, why can't the garage doors be operated just as easily by motor power.

The sketch, Figure 1, shows one of a number of door types which can be operated from the car on entering or leaving the garage. This one is operated from a switch-post alongside the drive. The motor, which is reversible, and the reduction gear to the sprocket spindle are shown in the smaller sketch. Taking advantage of the scientific advance this company also has garage door operators which employ the photoelectric cell. These operate when the light beam strikes them. And there are operators employing floor and drive plates. These things may seem strange but they are far from radical. The photoelectric cell is certainly used for numberless cases where accuracy and convenience are required.

In these recent articles on mechanical equipment there may have been a disproportionate outlay on heating, cooling, and air conditioning. While these matters are of prime importance and it would suit the present writer to continue stressing them there are other items on the list which are just as deserving of discussion because of the

MECHANICAL EQUIPMENT FOR 20-YEAR FINANCED HOUSES

noted improvements and the necessity of prescribing their adoption in the homes of the future. The modern types of heating and conditioning units are really in their stride. The advantages gained by installing the modern units are just about universally granted. To omit from a future home whatever can be readily installed to insure successful heating, cooling or conditioning is surely gross failure.

But just as convenience and safety is the key note in these cases so are the other, and sometimes less considered

factors a part of this policy. Take the package receiver shown in Figure 2 for example. This is not a large item when considering the whole, but it is an example of what the hardware manufacturers have made available to the home owner. There is apparently no end of choice in hardware fixtures for the new home, both in use and design. The better hardware manufacturers seem to have a surprise for me every time I take up a new catalog, and the advance they have made in metals and structure are just as well advanced as in any other line.

Regarding convenience and safety again, let me repeat a little on what was said a few months ago about improvements in plumbing practice. Figure 3 shows the modern flush valve for the water-closet with a vacuum or syphon-breaker. It has been shown so positively that when the water supply opening in any fixture is below a possible high-water level a reduction in the supply pressure provides enough syphonage to draw contaminated water back to the supply side endangering all of the supply water. For this reason such fittings as the highly regarded flush valve must have vacuum breakers of approved design. These fittings are really part of any good plumbing system.

For the same reasons recent and future plumbing fixtures such as sinks, lavatories, and such have their faucets well above the possible overflow level. This point is only one of the many points of improvement in plumbing fixture design. The use of the modern metals, especially steel, has brought about various changes for the better that were heretofore considered impossible.

Another item for safety, somewhat related to the other featured electrical improvements embodied for safety and convenience, is the boiler protector shown in Figure 4. This attachment is always such a safeguard as thoughtful people appreciate. It is another of those features which give safety and long life to equipment so well exemplified by the water softener. So many times you hear complaints from those who expect hard water to be safely and unhinderingly heated by higher temperature heaters. But it is quite likely that these same people would be badly frightened if the water in the radiator of their automobile approached a boiling temperature. Hard water on one side of a tube and high temperatures on the other are, one might say, "conductive to scale." And so it goes on, less circulation, more scale. There is no special argument against higher temperatures since the coming of the modern types of heaters with modern steels and irons, but there never will be any excuse for abusing these heaters and lowering their efficiency by using hard water in them.

Another item for those interested in hot water heating of residences. For many years there have been those who proclaimed with a good deal of reason that the hot water heating system was thus and so better than any other type. They may have been prejudiced, but I have known of cases, in large installations, where this type of heating was adopted and found much favor. The seeming secret of these systems was the booster pump. Just as in the case of positive circulation for warm air heating, and the vacuum pump in steam heating, so the positive circulation of the hot water showed a marked improvement in the system. These pumps are not great in size nor in cost, for residential work, but they are great in effect and economy of operation.

It would be easy to devote these three pages to the modern fuels and the modern methods for handling them. But it would be very difficult to discriminate justly between these fuels. They are all "best." And by best I mean that whatever fuel is used there is an efficient heater

(Continued to page 78)

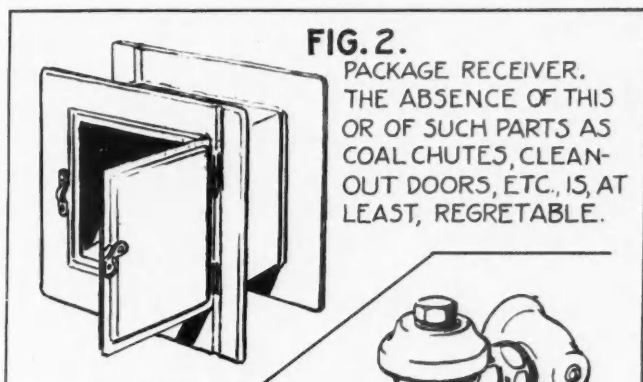


FIG. 2.
PACKAGE RECEIVER.
THE ABSENCE OF THIS
OR OF SUCH PARTS AS
COAL CHUTES, CLEAN-
OUT DOORS, ETC., IS,
AT LEAST, REGRETABLE.

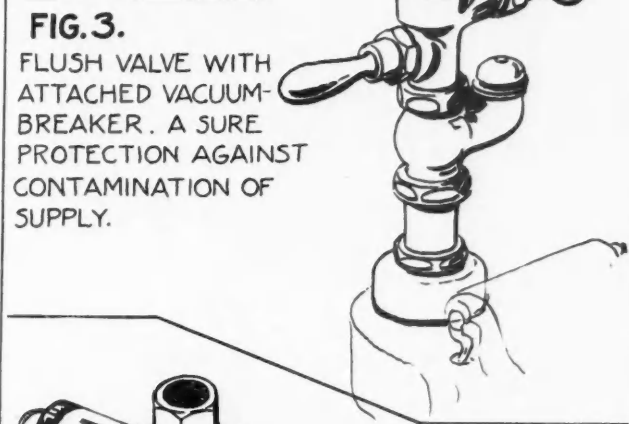


FIG. 3.
FLUSH VALVE WITH
ATTACHED VACUUM-
BREAKER. A SURE
PROTECTION AGAINST
CONTAMINATION OF
SUPPLY.

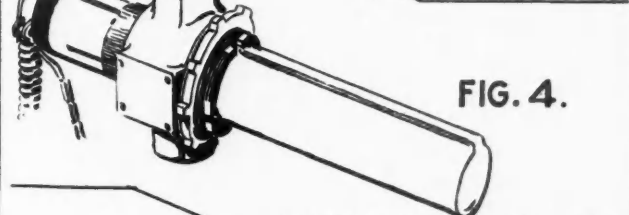


FIG. 4.

A BOILER ATTACHMENT, PRO-
TECTS AGAINST LOW-WATER,
HIGH-PRESSURE, LEAKS.

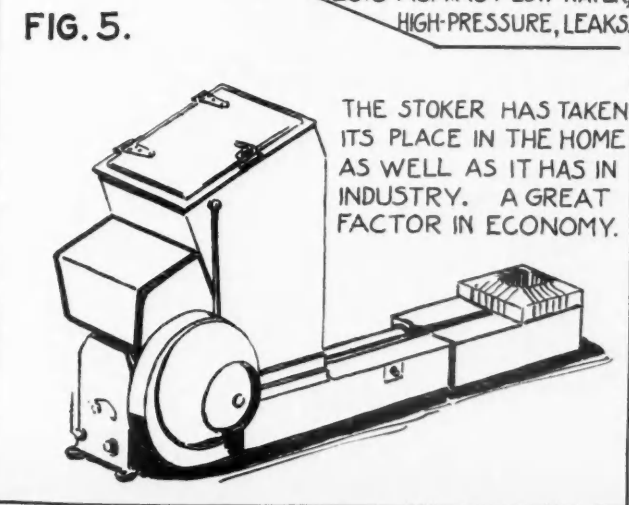


FIG. 5.

THE STOKER HAS TAKEN
ITS PLACE IN THE HOME
AS WELL AS IT HAS IN
INDUSTRY. A GREAT
FACTOR IN ECONOMY.

INSULUX

A REVOLUTIONARY NEW BUILDING MATERIAL

ADMITS DIFFUSED LIGHT • RETARDS HEAT FLOW

Insulux Glass Building Blocks bring to the building industry a revolutionary new material that has definite functional and decorative uses. These new glass blocks are hollow and contain dry rarified air under partial vacuum. They are available through your local lumber or building material dealer in three standard sizes with a wide variety of designs impressed on the faces of the glass blocks.

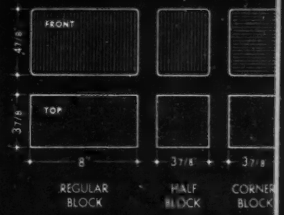
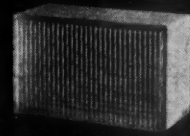
The designs produce a wide range of light transmitting values and diffusing properties resulting in an absence of glare with controlled intensity of light. They have high compressive, lateral and bond strength. Scientific tests, conducted by Purdue University, have proven that the impervious character of the material itself and the solid mortar joints makes infiltration losses negligible, that their heat conductivity is low, and that they reduce the effect of solar radiation.

For a complete brochure giving the necessary data on Insulux Glass Blocks, together with architectural details showing a large number of construction applications, see your local dealer, or write on your business letterhead to . . .

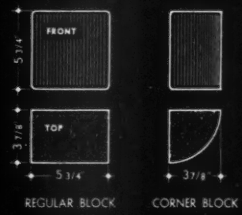
OWENS-ILLINOIS GLASS CO.
MUNCIE

the GLASS MASONRY

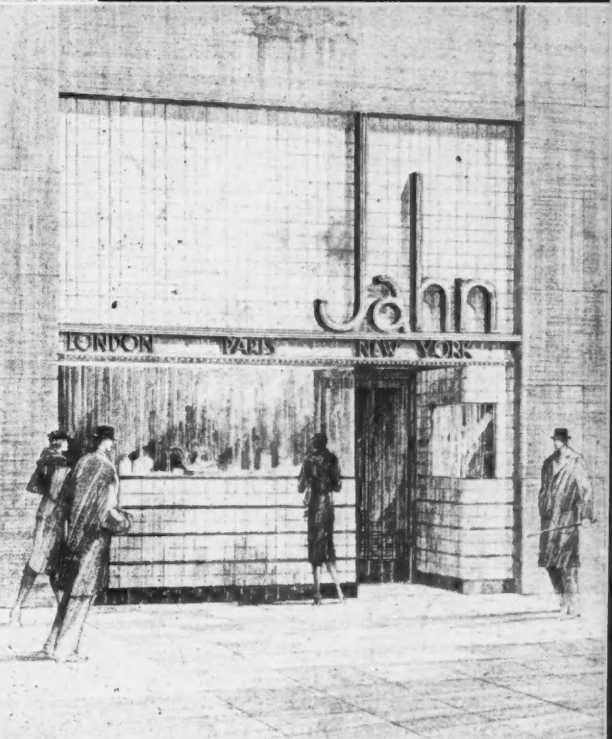
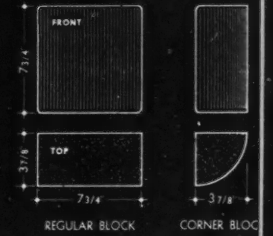
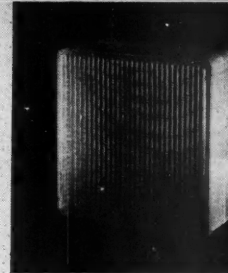
This block bonds with 2 courses of ordinary brickwork. Square corner blocks and half blocks used to start panels of Running Bond, are standard.



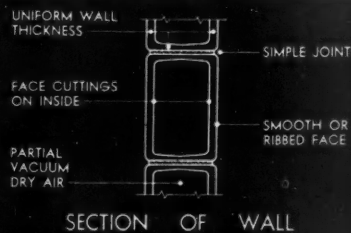
This block particularly suited to Checkerboard Bond. Rounded corner blocks are standard in this series.



The larger size square block results in a wall of larger scale. Rounded corner blocks are standard in this series.



The architectural rendering reproduced above has taken advantage of both the functional and decorative properties of Glass Masonry. The bulkhead and spandrel admit light into the building during daylight hours, or can be lighted from the inside to increase the "eye appeal" of the front.



Glass blocks are light in weight and are of a size that is convenient for the mason to handle. They lay up quickly in the same manner as other masonry units.



The Owens-Illinois Glass Company has given the building industry the Dustop Glass Wool Air Filter and Glass Insulating Wool. These products, as well as Insuluf Glass Blocks, were introduced only after exhaustive research and comprehensive studies of the problems involved.

OWENS-ILLINOIS GLASS COMPANY

HEATING—AIR CONDITIONING—PLUMBING AND WIRING

(Continued from page 75)

or boiler provided for its use. The question of economy is probably the chief problem, and the cost of the various fuels varies largely with the locality. Just now I have in mind a building owner who through connections was able to try out a number of types of fuel. Finally, with a friend, he determined to try a stoker. He had never tried one before and was rather skeptical. After a year's experience he asked me to look at his fuel bin to see what I thought of his grade of coal. Since I had no knowledge of the stoker before seeing what was in the bin I naturally called him a perfect chump for expecting such a grade to perform without making a mess of his boiler. Then he pointed out his stoker, and said it had performed entirely up to specifications. He certainly had cut his expenses, and, as he said, just about paid for his new stoker. The stoker has been a feature in industry for many years, just, for instance, as has air conditioning. Now it has been adapted to residential work with fairer results than many of us predicted. Where coals are an item of expense a stoker is invaluable.

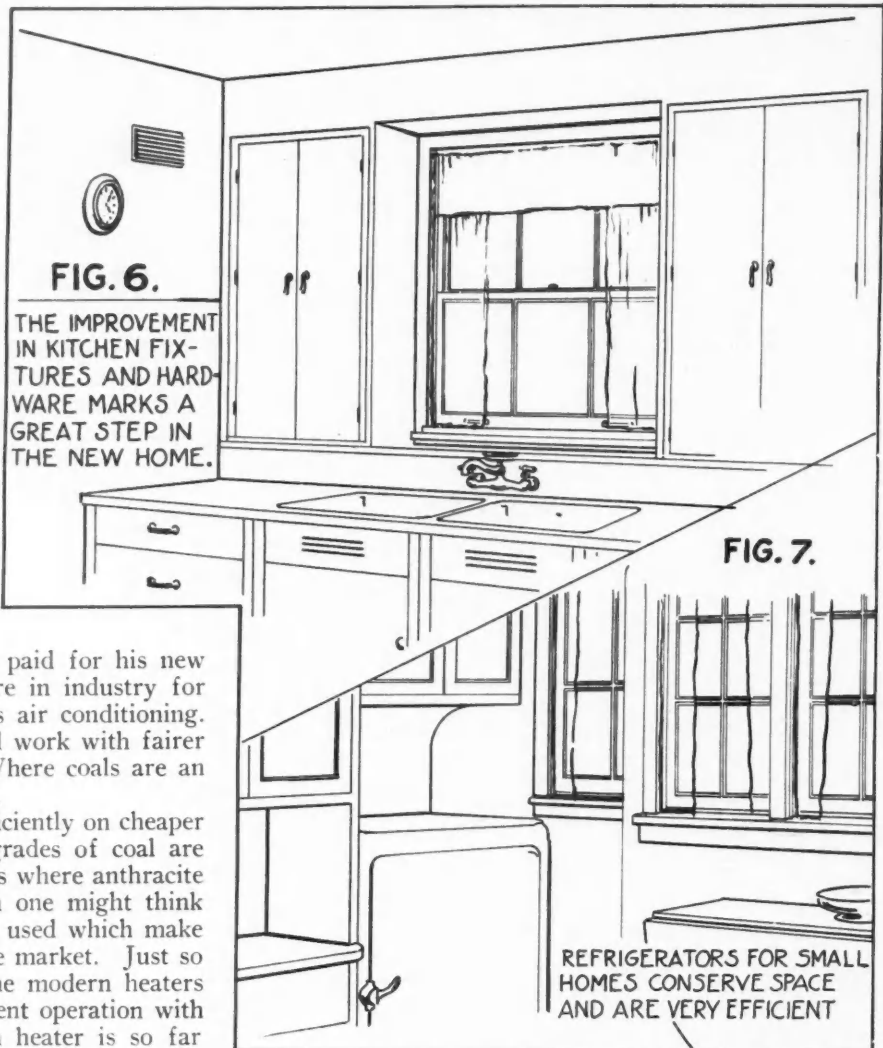
The fact that stokers can operate efficiently on cheaper coal does not mean that the higher grades of coal are necessarily expensive. In some regions where anthracite is available, at prices even more than one might think economical, there are types of heaters used which make other fuels scramble for a place on the market. Just so with oil and with gas. In a word the modern heaters have been designed for the most efficient operation with any of these fuels. And the modern heater is so far superior to the older types that there is no question as to preference. Only the modern heater should be installed in the modern home.

But to plan and build a modern home without deeply consulting the housewife would be a capital error. Therefore instead of approaching the subject of the kitchen and the bathroom last, as I have done, it would be more reasonable to prescribe for them first of all. Nowhere has the advance in metals played a greater part. The modern architectural lines seem to have caught the eye of most of us in the kitchen because the clean lines and surfaces reflected the newer metal fixtures so well. The old-time sinks with their heavy lines are gone. The bright surfaces aboveboard and the smooth enamels below and above are quite different. Color and an ease in cleaning have certainly set us far ahead. And available space through metal fixtures is a great advantage, too.

Speaking of the advance in metals certainly brings forth the mechanical refrigerator which is now an integral part of most residences. They are clean, and many think they are indispensable. Just the matter of frozen desserts puts the children on the mother's side when it comes to arguing the necessity of a mechanical refrigerator.

And I have noticed, too, that there seems to be a size suitable to any size of family. There are small ones as well as large ones, just as efficient. But do not forget to provide for ventilation.

So when it comes to the building of the future home consider what advantages are within each reach, how well



a modern home can be fitted for the convenience and comfort of the family, and how much to be regarded is the good office of the Federal Housing Administration, mutually protecting and economizing, and making the modern home the sensible home to build.

"Air Conditioning for Comfort" by Samuel R. Lewis; Keeney Publishing Company, 6 N. Michigan Ave., Chicago; (\$2.50)

AN author and authority on the subject of air conditioning has just put out this volume which should easily provide proper schooling in the subject for the novice and for those who need certainty in place of uncertainty. Mr. Lewis is here concerned with air conditioning for comfort, for adequate human comfort. Theory is patiently dealt with and thoroughly illustrated. Practice is carried from all viewpoints, with the theory, design and calculations plainly shown. A feature of the book is the provision of a large scale Bulkeley psychrometric chart. This is an excellent book for contractors.

"American Society of Heating and Ventilating Engineers Guide" published annually by the A.S.H. & V.E., 51 Madison Ave., New York; (\$5.00)

This volume is the last word in air conditioning texts. While explanations in the theory may not be so profuse as they would be in a school text, this "guide" takes us back to the original and leads us up to completion. The data contained in this book is backed by responsible men or groups to whom it is first-hand. Each chapter concludes with "problems in practise" which crystallizes the proceedings and thereby makes it a first-class school text besides a complete source of information.

SISALKRAFT

REG. U. S. PAT. OFFICE

Can Keep A House Snug and Tight

There is no substitute for the unique characteristics of Sisalkraft when you want to insure real weather protection in a house.

It's Strong and Tough

Your own test demonstrates these qualities. The reasons are almost as obvious. Sisal is the correct reinforcement for paper because, like paper, it will not stretch. String and other suggested reinforcements stretch when pulled and the paper breaks before the fibres take the strain. There's



over a half mile of sisal fibres in every square yard of Sisalkraft and the fibres are so closely spaced that no matter where you drive a nail, they give necessary resistance to movement in any direction.

It's Waterproof and Airtight



These qualities are also easy to demonstrate. Sisalkraft folded into a cup will retain water indefinitely. In laboratory tests, Sisalkraft shows no measurable air leakage under pressures corresponding to 133 miles wind velocity—much higher than could ever be encountered in service.

It's Permanent

This quality of Sisalkraft is demonstrated by thousands of early installations. When you subject the paper to severe abuse you can readily understand why it has a long life. Separation is made practically impossible by the method used in combining the materials. Oxidizing of the asphalt—the most common source of failure in any product with exposed asphalt—is prevented in Sisalkraft by covering the asphalt membrane with the two kraft cover sheets.



Ask your lumber dealer for samples of Sisalkraft. Test it—not only in the sample but on the job. Owners gladly approve Sisalkraft when you show it to them.

THE SISALKRAFT CO.

205 W. Wacker Drive, Chicago, Ill.
101 Park Ave., New York 55 New Montgomery St., San Francisco

ARE YOUR MODEL HOMES OBSOLETE?

... or Do They Reflect TODAY'S Building Ideals?

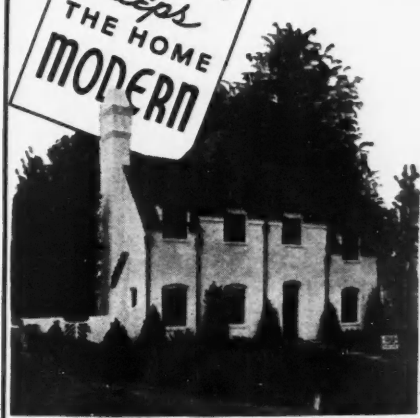
Remember when a "Model Home" was nothing but a conglomeration of the latest built-in gadgets and equipment? When the prospect was so dazzled by modern appliances that little or no attention was given the house itself?

Home buyers have changed since then. And many changes have occurred in the home building industry. The public is no longer willing to overlook the basic factors, construction and design. A model home today must feature these fundamental values in order to live up to its title.

Builders who depend exclusively upon eye-appeal and pretentiousness are finding that prospects for model homes are passing them up and buying homes whose appeal lies in their structural value. Stran-Steel fire-safe construction meets this new demand of home buyers.



Write us today for information regarding modern construction for model homes.



● One of 50 Stran-Steel Model Homes in Washington, D. C. This, and many others were sold before completion, due to interest aroused by permanent, fire-safe construction.

Gentlemen:

Please tell me about STRAN-STEEL framing.

I am interested as a

builder

realtor

architect

Name _____

Address _____

AB-10

STRAN-STEEL
CORPORATION
6100 McGRAW AVE. DETROIT

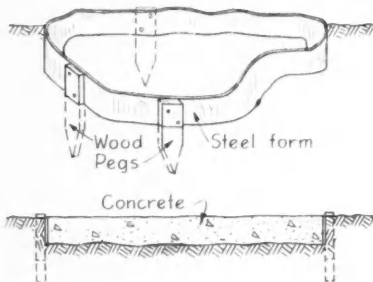
PRACTICAL JOB POINTERS

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

Making Artificial Flagstones

AT SLIGHT cost a piece of steel several inches in width and seven to eight feet long, which bends easily, may be purchased at the local junk yard or blacksmith shop.

With the ends welded together the form is laid in the holes already prepared for the purpose and is held in place with wooden pegs driven into the ground. These pegs hold the form to the various shapes into which it may be made. The concrete is then poured and smoothed. When nearly set a wire brush may be drawn over the surface to give the rough finish that the natural stone would possess. Then when the concrete has finally set the form may be removed, bent to any other desired shape and another flag may be made in the same way. —PAUL H. SMITH, Charlestown, Mass.



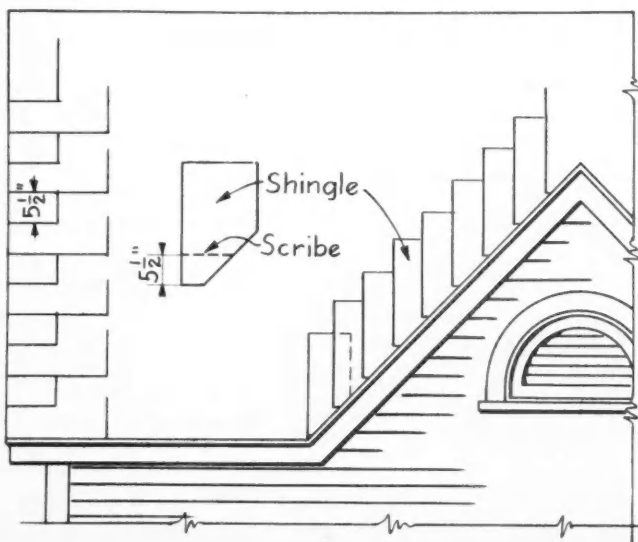
Forms for making concrete flagstones

Time Saver for Shinglers

I AM SENDING a sketch showing a short cut in shingling. First, cut all the valley shingles on the ground before beginning, as follows:

Cut one shingle to fit the valley, then make a mark 5½ inches from the butt which marks the space to show to the weather; then cut as many shingles as it will take to go to the ridge exactly like the pattern, and scribe a mark 5½ inches from butt of each. When I start to shingle all I have to do is run in the valley up to the top, with no measuring up or sawing shingles on the house top (see drawing below).

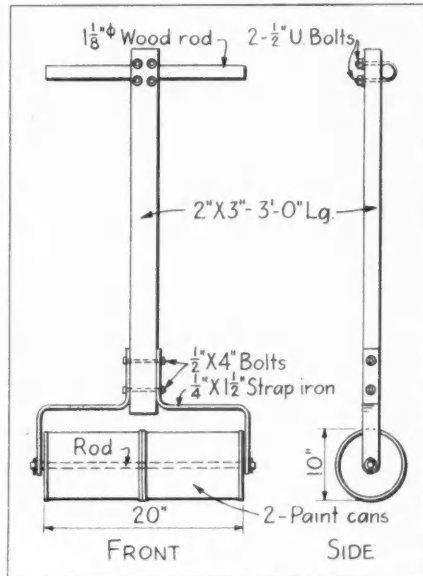
Also run up the ends of the house in the same way, only use the first one wide, second narrow, third wide and so on to break the joints. In the valley, use all of the shingles the same width. —C. C. COOPER, Salisbury, Md.



Handy Lawn Roller

FOUR YEARS ago I made this handy lawn roller of which I am sending a sketch. It has been useful on various jobs and perhaps others will be interested in building one like it.

The roller is made of two 100 pound paint cans with 5/8-inch holes drilled in the centers of the ends through which is inserted a 5/8-inch rod, 22 inches long. The cans are filled with cement, the rod put in place and turned on end until set.



Bend strips of ¼ x 1½ strap iron as shown in the drawing and drill holes for the bolts and axle. The center bar is made of a piece of 2 x 3 three feet long and a wood rod is fastened to it with U-bolts for the handle. — WALLACE OMAND, Builder, Manchester, N.H.

Handy lawn roller made of paint cans

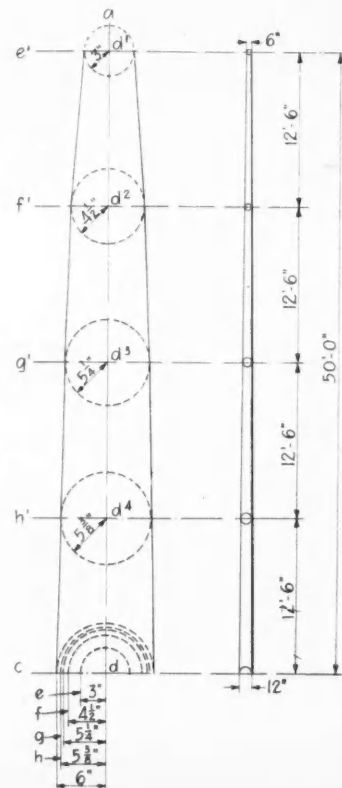
Correct Form of Flagpoles

SINCE FLAGPOLES are extensively used on buildings, public grounds, parks, club grounds and private estates, I am sending herewith a "Practical Job Pointer" for your editorial department. The curve or taper of a flagpole may be developed by the following method:

The diameter at the base where it emerges from the roof or ground should be about one fiftieth of the height, and the diameter at the top should equal one-half the lower diameter. Assume a flagstaff 50 feet long; its diameter would be one-fiftieth of this height, or 12 inches, while the diameter at the head would be 6 inches.

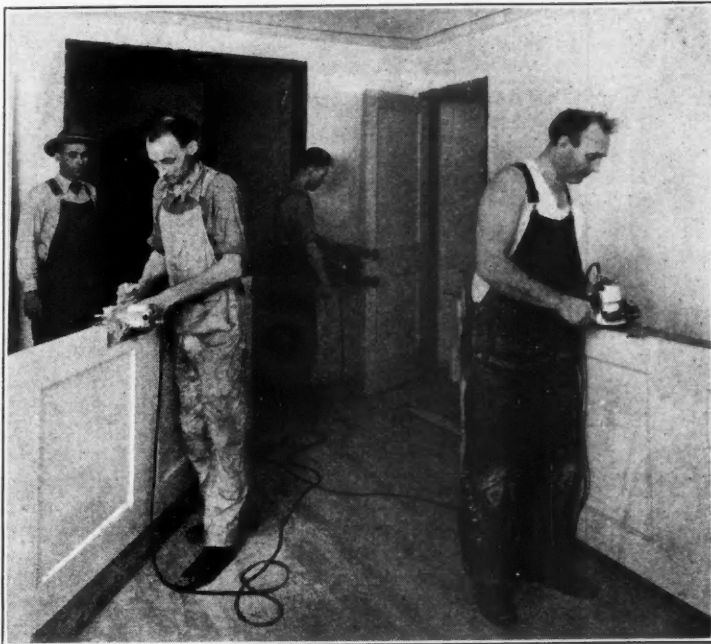
To obtain the curve or taper, draw a center line (ad) through the pole, as shown. Divide the lower half of the diameter (cd) as follows:

From d mark a point equal to ¼ of the lower diameter, as de; divide the remaining distance ec into two equal parts, as at f, and divide the distance cf into two equal parts, as at g, and again divide cg into two equal parts, as at h. Divide the vertical height of the shaft into four equal parts by horizontal lines; transfer the distance de to d¹e¹; df to d²f²; dg to d³g³; and dh to d⁴h⁴; then through the points marked, draw the curved outline. — ROMEO LAROSE, Rochester, N. H.



Method of laying out flagpole dimensions

New Carter Electric Tools



which enable you to pay full wages, make larger profits and still meet the market.

One week's hand work completed in a day:

AT THE LEFT — a door is being fitted and beveled with a Carter Power Plane.

IN THE CENTER—a mortise for a lock is being cut in 30 seconds with a Carter Lock Mortiser.

AT THE RIGHT — mortises for butts are being cut with a Carter Hinge Butt Router.

Pay for these tools as they earn for you.

- I would like to have you demonstrate these tools.
- I would like to receive literature on these machines and your easy payment plan.

Name _____

Street _____

City _____ State _____

Sign and return to R. L. Carter Company

THE R. L. CARTER CO.
116 Elm St., New Britain, Conn.

LOCAL DUNBRIK MANUFACTURER GETS THE BEST JOBS IN KALAMAZOO



Val Berry, the authorized DUNBRIK manufacturer in Kalamazoo territory, gets all this desirable business because his product and price are beyond the reach of competition.

Val Berry's sales are easy because of the high quality of his product—absolute uniformity—square true edges—water repellent faces and strength greater than any building requirement. In addition to common brick, he supplies face brick and DUNSTONE (3 sizes), all in 40 colors, shades and textures, enabling him to supply complete masonry material market.

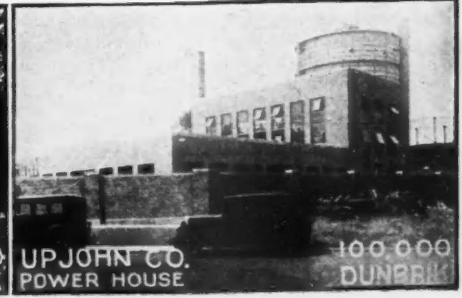
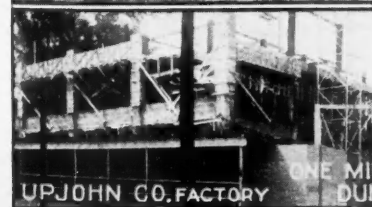
With DUNBRIK design he saves 20% in material—makes a one-fifth lighter brick,—thus effecting a saving in hauling, handling and laying. In addition he delivers direct from factory to job, eliminating high transportation costs.

On top of all these advantages, Val Berry's labor cost is less than \$1.25 per thousand. The automatic line production DUNBRIK machine not only eliminates every chance of human error but enables a few men to do the work of a large force and at a fraction of the investment.

THEIR BUSINESS FUTURE ASSURED—From Spokane to Newport News—From St. Petersburg to Montreal, wherever located—Authorized DUNBRIK manufacturers are getting as high as 80% of the good jobs.

YOUR OPPORTUNITY—Why not learn how you too can become the exclusive DUNBRIK manufacturer in your territory? Write today for booklet "4 Keys to Success."

W. E. DUNN MFG. CO., 450 W. 24th St., Holland, Mich.





from **FRENCH MANORS** to
LOW PRICED BUNGALOWS

PERMANENT roofs of **BANGOR SLATE** are covering all types of homes. Builders and contractors throughout the country are using this time-proven material to clinch their sales.

Outstanding developers and builders in the Metropolitan-New York area are using **GENUINE BANGOR SLATE** from our quarries.

Prospective owners easily visualize the permanence and economy of **GENUINE BANGOR SLATE** roofs. Sales resistance drops to a minimum. Many construction factors are of a disputable character but there is nothing more convincing than "*the best roof in the world*".

Builders, contractors and dealers will be interested in our prices and new sales plan. Write today.

NORTH BANGOR SLATE COMPANY
Established 1863 **BANGOR, PA.**

**GENUINE
BANGOR
SLATE**
"The Best
Roof in the
World"

North Bangor Slate Company
Bangor, Penna.

Please send me complete information
regarding your new sales plan.

Name

Address

City

State



NEWS OF THE MONTH

Building Activities and Meetings

Forecast Increased Insured Mortgage Sale

FURTHER developments in the regulations governing the sale of insured mortgages have occurred, the principal change dealing with the participation of real estate brokers in these transactions. The following information was made public by Jesse H. Jones, RFC Chairman, as contained in a letter reading:

"For the purpose of encouraging the construction of new homes and to assist in creating a more general market for mortgages insured under the National Housing Act, the RFC Mortgage Company will, until further notice and to the extent hereinafter named, buy and sell these insured mortgages.

"For the present it will buy the mortgages at par and accrued interest, less a discount of $\frac{1}{2}$ of 1 per cent, but will only buy from reputable financial institutions originally making the loans, who agree to look after servicing them.

"Any mortgages that we buy will be available for sale and when sold through qualified brokers and distributors, we will allow an over-all commission of $\frac{1}{2}$ of 1 per cent to cover their compensation and cost of distribution.

"Under the new Banking Act banks may invest in these mortgages, and such investments will not be regarded as real estate loans. We feel that these mortgages also offer a desirable form of investment for institutions and fiduciary trusts. The greater their distribution, the more home building we will have, and the more we will contribute to national recovery.

"Commitments for the purchase of these mortgages will be considered by the RFC Mortgage Company at the 32 RFC Loan Agencies throughout the country, as soon as regulations can be issued.

"\$10,000,000 has been made available to the RFC Mortgage Company by the Reconstruction Finance Corporation as a revolving fund for this purpose."

September Volume of Construction

THE F. W. Dodge Corporation for the first eleven business days in September reports the volume of all classes of construction to be \$67,654,400. Residential building amounted to \$17,539,700 for the period which is almost equal to the amount for the entire month of September 1934.

Calumet Steel Names Works Manager

W. BRUCE CALDWELL has been named works manager of the Calumet Steel Company, subsidiary of Borg-Warner Corporation, of Chicago Heights, Ill., according to an announcement by Roy C. Ingersoll, president. Mr. Caldwell has been associated with the steel industry since his graduation from the School of Mechanical Engineering of Cornell University in 1912. He was general superintendent of all the plants of the Sharon Steel Hoop Company of Sharon, Pa., from 1919 until 1933.



W. B. CALDWELL

A TIP

FROM AMERICA'S INDUSTRIES

GET ON THE CELOTEX ROAD TO SALES

Leading manufacturers in every field specify Celotex when efficient insulation is required. Domestic refrigerators, automobiles, coolers, refrigerated show-cases, refrigerator railway cars and trucks use Celotex to economically retard the passage of heat and to control temperatures.

Take a tip from these industrial leaders—recommend and sell Celotex. Widely advertised, widely used, backed by an experienced, fair dealing organization, Celotex is logically the product to merit your co-operation.

Insulation, decoration and modernization are the objectives today. An active, profitable market exists for lumber dealers who handle Celotex. Celotex Interior Finish, Celotex Sheathing, Celotex Lath, Celotex Finish Plank and Celotex Tile Board cover the entire range of uses in homes, new and old—also, shops, taverns, stores, schools and churches.

There's money to be made and there's money being made with Celotex. That's why more and still more lumber dealers are taking advantage of their opportunities.

See your Celotex representative—or write!

THE CELOTEX COMPANY

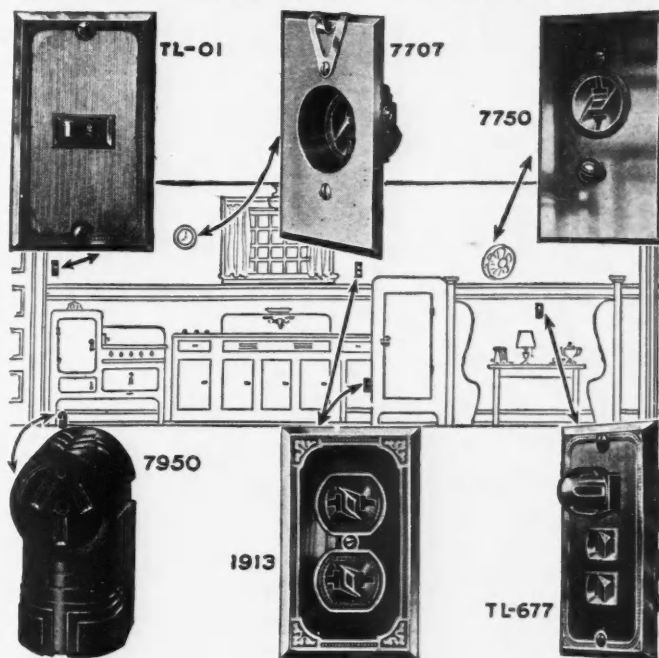
919 No. Michigan Avenue Chicago, Illinois

CELOTEX
BRAND
INSULATING CANE BOARD
Reg. U. S. Pat. Off.

BUILDS-INSULATES-DECORATES-SUBDUES NOISE



KITCHEN- ELECTRICALLY COMPLETE



In this modern layout, the overhead light is controlled by Tumbler Switch No. TL-01. The wall clock is provided for by Clock Hanger Outlet No. 7707 — combining mechanical support and electrical connection. The electric fan is held on the wall by Fan Hanger Outlet No. 7750, which also provides the electrical connection. The electric range is connected up by plugging into Range Outlet No. 7950. The electric refrigerator and vacuum cleaner are plugged into Duplex Convenience Outlet No. 1913. In the breakfast nook, the 2-Receptacle and Warning Light Combination No. TL-677 gives electrical connection for coffee percolator and chafing dish or table lamp. Warning light shows red when current is ON. . . These Arrow-H & H Devices make the kitchen electrically complete for utilizing all modern aids and conveniences. Send for illustrative data-sheets on any or all of the above numbers — using the COUPON.

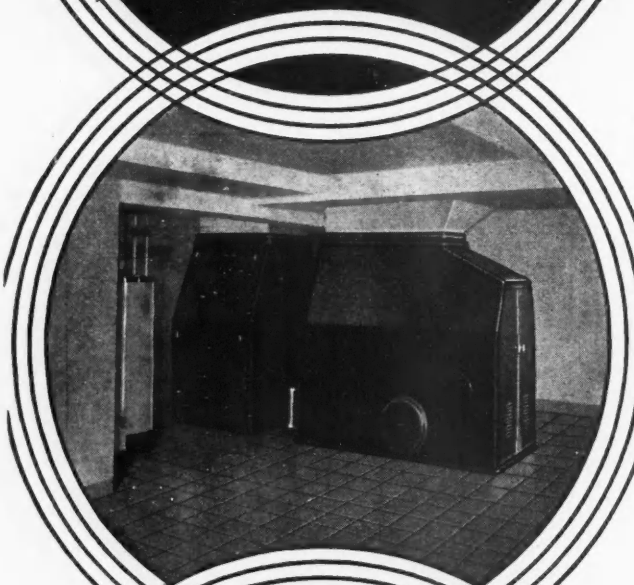
THE ARROW-HART & HEGEMAN ELECTRIC CO.
HARTFORD, CONNECTICUT, U. S. A.

COUPON: To Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
SEND ME illustrated data-sheets on the following numbers:

Name:
Address:
City and State:

GUESSWORK IS OUT

Definite fuel economy is no new discovery with Gar Wood engineers . . . for, since 1927, Gar Wood units have delivered efficient oil heat in all types of homes. With the Gar Wood Tempered Aire System *guesswork is out* because operating costs are known. Owners say Gar Wood automatic oil heat costs less than coal.



For economical and dependable Oil Heat and Air Conditioning specify the Gar Wood System . . . a compact unit . . . and enhance the value of the homes you build or sell. Write today for free descriptive literature. Air Conditioning Division, Gar Wood Industries, Inc., 7924 Riopelle Street, Detroit, Mich.

IT'S A FACT—any house with a

Gar Wood
system is a better home

Install Facilities for Lumber Treatment

IN ORDER TO meet the growing demand among retail lumber dealers for lumber treated to prevent decay, fungus growth and termite damage and the demand for timbers treated for bridge, dock and culvert construction, the Frost Lumber Industries, Inc., in co-operation with the American Lumber & Treating Company, is installing an up-to-the-minute treating plant at the big Frost plant in Shreveport, La.

The new modern treating plant will be equipped with cylinders for creosoting and others for treating with Wolman Salts, zinc chloride or any other recognized salt treatment. The Frost officials anticipate that the plant will be ready for operation about December 1st for salt treatment, and about December 15th for creosote.

Elect Steel Institute Officers

THE BOARD OF Directors of the American Institute of Steel Construction has voted to create a new office to be designated Executive Vice President, and has elected Robert T. Brooks of New York to fill it. This action will be confirmed at the Thirteenth Annual Convention of the Institute to be held at White Sulphur Springs, West Virginia, October 16, 17 and 18 next.

Mr. Brooks has been identified with the structural steel industry in New York for the past thirty years. He has been treasurer of the American Institute of Steel Construction for the past four years.

V. Gilmore Iden has been elected to the office of secretary. Mr. Iden has been serving the Institute, for the past year, in the capacity of acting secretary.

Mr. Iden joined the staff of the American Institute of Steel Construction in 1927 to become its director of public relations. Prior to that time he had been engaged in newspaper work in Washington and New York.

Michigan Architects Hear Building Outlook

THE NATION not only is swinging into one of the biggest building booms in its history but entirely new standards of comfort and convenience will be included in the construction of new homes, Ward M. Canaday, assistant federal housing administrator at Washington, told nearly 200 Michigan architects recently at a dinner in Detroit.

The architects represented a large section of the membership of the Michigan Society of Architects who were guests of the plumbing ware division of the Briggs Manufacturing Company.

Mr. Canaday declared that the new housing scheme and the need for new features and appeals for homes presents a challenge to the ingenuity of the architects which, if properly met, will have immediate effects in stimulating the building program.

"You may no longer think only of efficient heating," Mr. Canaday said. "You must think of efficient air conditioning. There is no reason why a \$5,000 home shouldn't have it. You must think of automatic heating, mechanical refrigeration, insulation and the designing of homes that will reduce upkeep to the absolute minimum. You must plan for comfort and convenience. You must not overlook garage space for motor cars."



ABOVE: Left to right—C. W. Ditchy, W. M. Canaday, J. A. Callahan, C. R. Hook, Joseph Dodge—speakers at Briggs dinner in Detroit.

EDWARDS LOXSEAM ROOFING

Easier to Sell and to Install



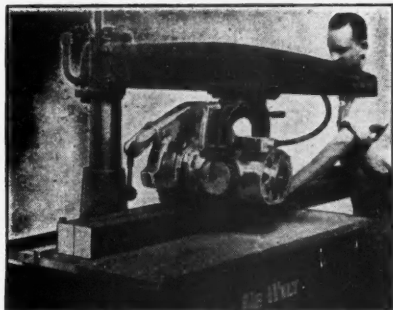
BEAT competition by bidding on Edwards Loxseam Roofing and the job is yours! The customer can see that you are offering a better roof, tight as a drum from ridge to gutter, handsome in appearance and good for the life of the building, at a substantial saving in cost.

You can be low bidder and still make your full profit on material and labor because LOXSEAM is so much easier to install, on new construction or over

old roofing. Sheets interlock full length with watertight seal, as fast as you can nail and lock them together.

Send roof measurements for estimate. Write for Loxseam Circular and General Catalog No. 88.

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



DeWalt machines rip, cut-off, miter, and bevel, all from one side of the table. 29 operations on one machine.



Full particulars also sent on DeWalt-Wodack Electric Hand Saws. Four sizes. Capacities 2 1/2" to 4 1/2".

25% PROFIT

You pay for a DeWalt whether you own one or not. One owner says "One job estimated to cost \$6,000. I completed for \$3,842.—on the next job I cut my estimate and that led to more business." Since you are paying the price of a DeWalt in actual work you may as well own a DeWalt.

Write for full information

DEWALT CUT WOOD—METAL—STONE

DEWALT PRODUCTS CORPORATION
252 Fountain Ave. Lancaster, Pa.

Please tell me fully how DeWalt machines will save and earn me money. DeWalt Variety Saws. DeWalt Wodack Electric Hand Saws. Volts..... Phase..... Cycles.....
Thickness of lumber..... Width of Cross Cut.....
Name.....
Address.....
City..... State.....

Permanency IN DECORATION

**AIDS
QUICKER
LOAN**



**APPROVAL . . . Specify
WALL•TEX
canvas wall covering**

Are you seeking loan approval for a building or improvement project? If so, you will find that permanency in decoration carries a lot of weight. The durability and permanency of Wall-Tex as a practical decorative covering for walls and ceilings insure that it will outlast the loan.

THESE WALL-TEX FACTS PROVE ITS ADVANTAGES

- 1** Wall-Tex is canvas decorated with permanent oil colors—the same mediums an artist uses. Gives colorings and textures not possible in paper.
- 2** Its strong fabric reinforces plaster walls and ceilings, prevents cracks, hides them if they should occur.
- 3** Wall-Tex is honestly washable, year after year, with soap and water. Its beauty is renewed with each cleansing.
- 4** The tough Wall-Tex fabric resists scuffing and tearing which so quickly ruin perishable paper.
- 5** Wall-Tex can be hung over plaster or any other smooth surface. No specialists are needed.
- 6** Wall-Tex is the perfect base for painting should it ever be desired to change the color scheme.
- 7** Dull prints, glazes, and metallic satinesques in nearly 200 patterns—for every room.

Mail the coupon today for complete details

Columbus Coated Fabrics Corporation
Dept. AB105, Columbus, Ohio
Please send me Wall-Tex file folder 28-C-1, including Wall-Tex samples.

Name.....

Address.....

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

WALL•TEX

decorative wall canvas

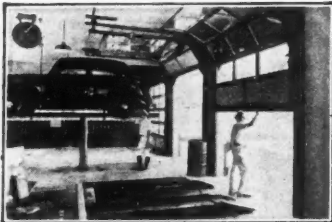
Play Safe!



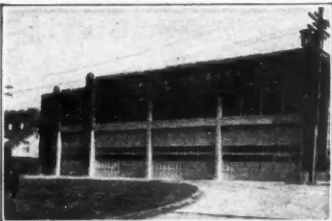
ROL-TOP


The door with
**SAFETY COUNTERBALANCE
 CONTINUOUS ANGLE
 MOUNTED TRACKS**

Safe! Because these two ROL-TOP features simplify satisfactory installation and insure safety in operation throughout the door's years of service. The torsion counterbalance spring is mounted on a solid steel shaft . . . in a fixed, harnessed position. Can't fly loose or cause trouble. Easy to accurately adjust. And it's always neat in appearance. The angle mounted track is equally important, facilitating a permanent solid installation — often-times with a saving in the otherwise necessary opening preparation.



For Lubritorium use, ROL-TOP is provided with special hi-lift tracks.



Large ROL-TOP Doors used for commercial purpose. Neat appearing.

By no means are these the only valuable features found in ROL-TOP. "Keystone" sealing — a weathertight arrangement without complicated mechanism . . . a rugged cylinder lock operable by key from outside . . . special ball bearing rollers . . . features that make ROL-TOP a better value.

ALL FORMS OF ELECTRIC CONTROL

There's a ROL-TOP to meet every requirement . . . for old or new residential, commercial or industrial buildings . . . for large or small openings. And with Kinnear's highly perfected electrical equipment, ROL-TOP can be arranged for any form of electrical control.

BUILT IN STEEL

For heavy duty purposes the Steel ROL-TOP is an "Ace". And it's fire repellent too! The steel angle and plate constructed sections have a continuous interlocking hinge which give the door astonishing strength and durability. Any number of sash sections can be provided.

Before deciding on any door, be sure to have the facts on ROL-TOP.

MAIL this coupon TODAY

The KINNEAR Mfg. Co. 1560-80 FIELDS AVENUE
COLUMBUS — OHIO

Please send me complete information on your ROL-TOP door. I have noted below the use and size I am interested in. No obligation.

NAME _____

ADDRESS _____

CITY _____

STATE _____

LETTERS from readers on all subjects

Facts, opinions and advice welcomed here

Readers Re-Act to "Big Push" Editorial

New York City.

To the Editor:

This conveys to you my sincere, whole-hearted congratulations on Mr. Dunn's signed editorial in the September issue of *American Builder*, under the caption: "What Kind of a 'Big Push' is It to Be?"

If the business press of the country had the courage and capacity to continuously speak its mind with the clarity and constructiveness which characterizes this editorial in your September issue, it would unquestionably accomplish great good.

WALTER C. McMILLAN,
National Shelter Group.

Disappointed at Our Attitude

Pittsburgh, Pa.

To the Editor:

I recently subscribed to your magazine *American Builder* for two years and find in the first issue received an article by Samuel O. Dunn entitled "It is *Your Money* that is Being Squandered." It seems rather inconsistent that the publisher of your magazine should take that attitude when the present activity in the building business and the necessary push to get the whole industry started again is being supplied by *government money* and when your magazine and many of its advertisers recommend cooperation with the Federal Housing Administration and its program. This program is one of the so-called "emergency" programs.

Of course, they all have to be paid for; but isn't it better to use the money now when it is needed and pay for it when business is good than to let business remain stagnant indefinitely? Would you have the building industry continue as it has during the last six or seven years? Or perhaps you are satisfied to let the government put up money for the building industry and let other things go.

You say the money is being wasted and offer no proof or example. That is a very dogmatic statement.

I had hoped that I was subscribing to one magazine that could keep out of politics, and then the first issue made me think for a moment that I was reading a Hearst newspaper. If you must deal with political matters in your publication, I suggest that you do it along the same progressive lines that your magazine recommends to the building industry in its work.

LEWIS Z. BIRMINGHAM, JR.,
Attorney at Law.

Wants to Distribute Copies

Clinton, Iowa.

To the Editor:

We would like 40 additional reprints of your September release "What Kind of a 'Big Push' Is It to Be" for distribution among our branch yards.

ECLIPSE LUMBER COMPANY,
F. J. Ward, Vice President.

Accuses Mr. Dunn of Being a "Mussolini"!

Council Bluffs, Ia.

To Samuel O. Dunn, Chairman:

I have been a reader of the *American Builder* for many years. I subscribe to it because it is the best building paper I know of.

I note that you personally have for some time used its pages to introduce your own personal views about politics. We subscribe to your paper for things pertaining to building. Your page tears down and offers no remedy.

This administration has done much to help us middle class people. It has guaranteed our bank deposits; lowered interest

(Continued to page 88)

GET THIS DOUBLE PROFIT BUSINESS


New or existing buildings are prospects for Wright Rubber Tile Floors. There is a profit in the sale and a profit in the installation. Our Instruction Booklet has been instrumental in starting many men in a profitable business. Write for a copy today.

WRIGHT RUBBER PRODUCTS CO.
 Racine, Wisconsin
 P. O. Box A-35



WRIGHT RUBBER TILE

AMERICAN STEEL SHEETS
 FOR ALL KNOWN USES



KEYSTONE Copper Steel Sheets
 Excel in the Building Field

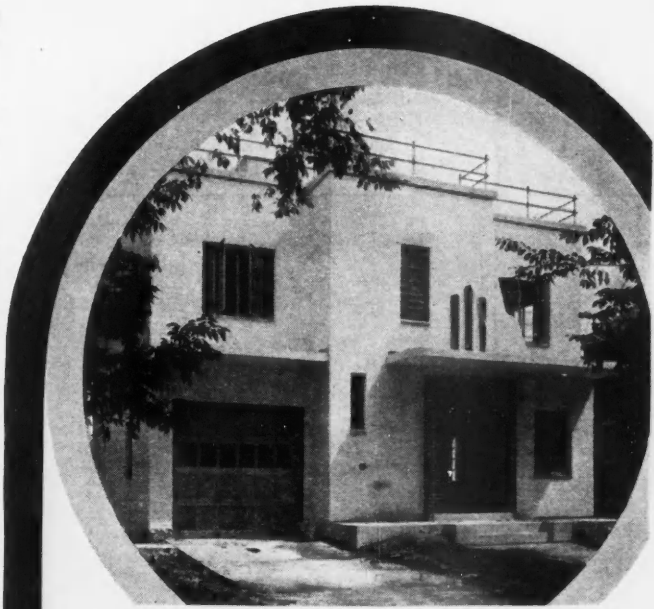
Use sheets of recognized reputation and value. For roofing, siding, gutters, spouting, air conditioning systems, and general sheet metal work—Keystone Copper Steel gives maximum rust resistance.

Insist upon AMERICAN Black Sheets, Keystone Rust Resisting Copper Steel Sheets, Apollo Best Bloom Galvanized Sheets, Galvanized Sheets, Heavy-Coated Galvanized Sheets, Formed Roofing and Siding Products, Terne Plates, etc. Write for information.

This Company also manufactures U S S STAINLESS and Heat Resisting Steel Sheets and Light Plates for all uses to which these products are adapted.

AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh, Pa.

SUBSIDIARY OF UNITED STATES STEEL CORPORATION



Toledo's newest: Concrete cinder block house with portland cement stucco exterior. Floors and roof of precast joist and concrete slab construction. Rigid insulation applied to interior walls over asphalt coating.

\$7,000 WORTH OF MODERN HOME... with the permanence and firesafety this community said it wanted

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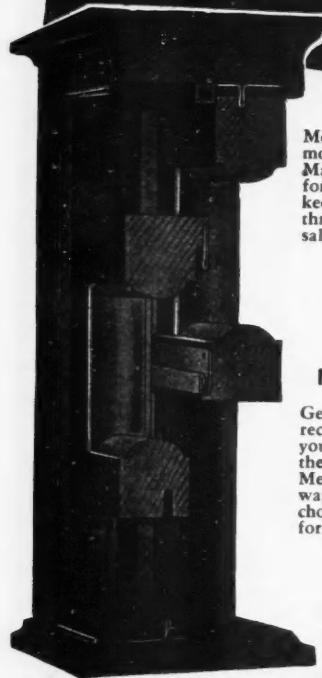
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COLORCRETE INDUSTRIES, Inc.
500 Ottawa Ave., Holland, Mich.



(Continued from page 86)

rates; helped us keep our farms and homes against the Shylocks; has helped the farmer as no other administration has ever done. Its big mistake has been to think that you and I were big enough to play the game of business or life squarely. We were not. We were a bunch of chiselers. We wanted the high wages and low hours ourselves but didn't want to give it to the other fellow. It wasn't the idea that was wrong; it was human nature that was still too greedy. You say building has increased 150 per cent in 1935 over 1933. Fine, I say. A good steady growth and not a boom is what we want.

I take it that you and I are on opposite sides of the fence. I want a home and time to pay for it. I don't want some shyster real estate man to hang a sword over my head and force me to pay him 3 per cent commission to get my loan renewed every 3 years. All other countries have financing over a long period.

If you want us ordinary folks to read and pay for your paper you had better write editorials for your readers and not against them.

I am telling you this because it is evident that you are the Mussolini of your outfit and the rest of the board are afraid to tell you this.

Please be big enough to be an American pulling for a bigger and better America and not a partisan sitting on the sidelines growling and doing nothing else but. We have all the work we can handle and are turning jobs away. Quit kicking and smile. If you are well off you can afford to pay part of our national debt. If you are poor you can't. So why kick?

ARNOLD RANCH,
P. Ranch & Sons, Contractors and Builders.

Approves Editorial Stand

Chicago, Ill.

To the Editor:

I liked your lead editorial in the September issue of *American Builder*. Perhaps so because of my close association with those in charge of the Administration of the National Housing Act.

You say that the buyers of homes "can be 'sold' only by making the cost of building or buying a good investment."

Surely the Federal Housing Administration is helping to do that—and in a manner that is fast making it a self-supporting agency of government not involving further use of the taxpayers' money.

Through the standards that the Federal Housing Administration has set up for its insured mortgages it has automatically raised standards of construction in all parts of the United States. Through the provisions it makes for long-time amortization of well built, well located properties it is making home ownership a "good investment"—making it possible for thousands of people to build and own well constructed properties for a nominal monthly payment.

If we are to have a "big push" to increase residential construction, let that push be along the lines of the National Housing Act which has already proved its soundness and has provided an opportunity for both the construction industry and that portion of the public that wishes to own a home of its own—on a sane and constructive basis.

D. R. COLLINS, Asst. Mgr.,
Cement Products Bureau, Portland Cement Assn.

Favors Letting Wreckers Have the Old Mansions

Evanston, Ill.

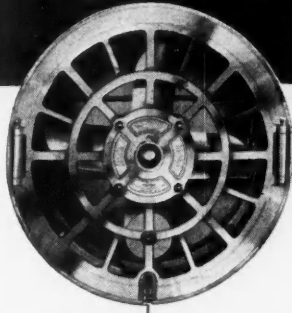
To the Editor:

I read with interest your reply to an architect in the September issue of *American Builder*. The policy you outline is certainly commendable and I admire you for adhering to it, in spite of repeated requests for "plan books" and "sets of designs."

There is another item in the same issue which I cannot refrain from commenting on, in the hope that your attitude toward Municipal Building Officials may be tempered with the same spirit of co-operation. I refer to the article on page 47 entitled "Old Mansion Saved from Wreckers." This is a description of the alteration of what appears to be a two-story and attic frame house into a multiple dwelling containing eleven separate apartments. It appears from the plans of the three floors included with the article that considerable ingenuity has been exercised in fitting the eleven apartments into the irregular layout of the old building. There is probably little doubt but that the income from the

(Continued to page 90)

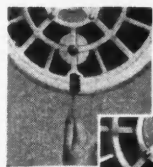
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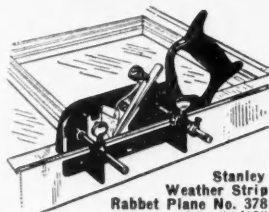
726 Reading Road Cincinnati, O.

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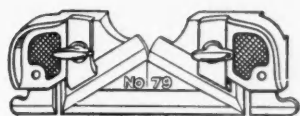


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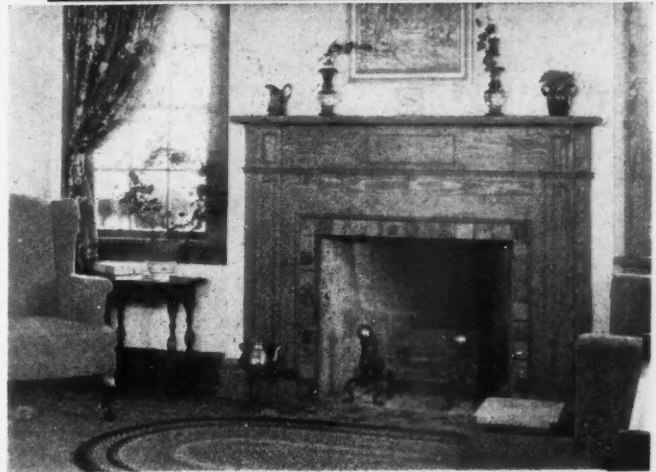
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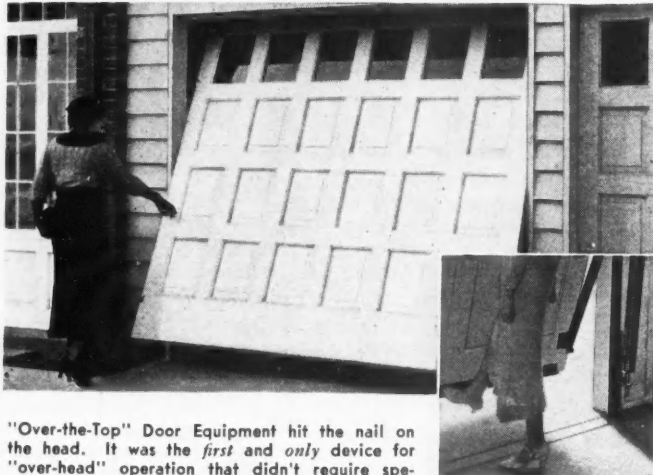
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Over-the-Top Door Equipment

(Continued from page 88)

remodelled premises will be very welcome to the owners and perhaps to the local taxing bodies.

However, consider the hazards involved. The building appears to be frame, but even if it were brick it probably has the average wood joisted floor construction, with little or no protection from fires originating in the basement. In fact the first floor plan shows the stairs to the basement to be located directly under the large open stairwell which is carried up through the center of the house to the attic. This stair, by the way, is the only one shown serving three apartments on the attic or third floor.

It seems reasonable to suppose that with eleven kitchens instead of one, the fire hazard will be increased materially over that which existed in the case of the original building, even though the four open fireplaces were not increased in number.

Many additional hazards could be listed, such as increased demands on the electrical equipment, more danger of fires caused by careless smokers, eleven electric irons instead of one or two, and so on. However, if I have not made my point by now it would be useless to continue, so I come finally to the reason for this letter.

Will you not co-operate with Municipal Building and Fire Officials by carefully considering the advisability of publishing such articles? There are not many cities in the country where similar alteration could be made in conformity with the Building Code, but there are a great many towns where codes are inadequate or totally lacking. In addition, there is the lamentable fact that the depression has so depleted the forces of Building Departments and other regulatory bodies that such alterations might be slipped in without notice in cities which would otherwise not permit them.

Should my position on this subject seem far-fetched or unduly severe to you, I would be glad to have you obtain an opinion on the subject from any of the recognized authorities, such as the National Fire Protection Association, The National Board of Fire Underwriters, the consulting engineers Mr. Rudolph P. Miller of New York or Mr. Frank Burton of Detroit, or the appropriate officials in Chicago, Mr. John Plant, Fire Prevention Engineer and Deputy Commissioner of Buildings Robert Knight.

E. M. GOODMAN,
Building Commissioner.

Pre-fabricated Houses

Scranton, Pennsylvania

To the Editor:

Your editorial on pre-fabricated houses in the June issue certainly was not written with much foresight. Don't you realize that when these houses are produced on a large scale, the cost will be reduced to one-half to one-third the present figure? Furthermore—the heavy industries, (steel, etc.) are in great need of something to stimulate their industry—here is something that will do it. The union labor in the factories will not be hostile to these new type homes. The union labor generally, not specifically in towns, carpenters, bricklayers, etc., haven't had any work for so long they can't pay their dues.

WILLIAM W. STAHL.

Answer:

I realize fully that if and when prefabricated houses are produced on a large scale the cost will be greatly reduced. The obstacle, however, is to attain that large production; and there doesn't seem to be any way to overcome this obstacle. However, we are cordial to the idea. The *American Builder* is in favor of anything that makes progress in the home building field. However, knowledge of the difficulties makes us critical of much of the loose talk now going on about "Houses Like Fords."

EDITOR, AMERICAN BUILDER.

Not in Plan Business

Philadelphia, Pa.

To the Editor:

Would you be good enough to send us full particulars with reference to your sale of plans for bungalows, particularly 1 and 1½ stories, preferably for 50-foot lots. Your co-operation in the matter will be deeply appreciated.

THE BETTER HOUSING INSTITUTE OF PHILADELPHIA, INC.

By EGBERT GLEBE, Asst. Executive Director.

Answer:

We have no plans nor architectural service for sale, preferring not to compete with thousands of our readers who are architects and designing builders.

EDITOR, AMERICAN BUILDER

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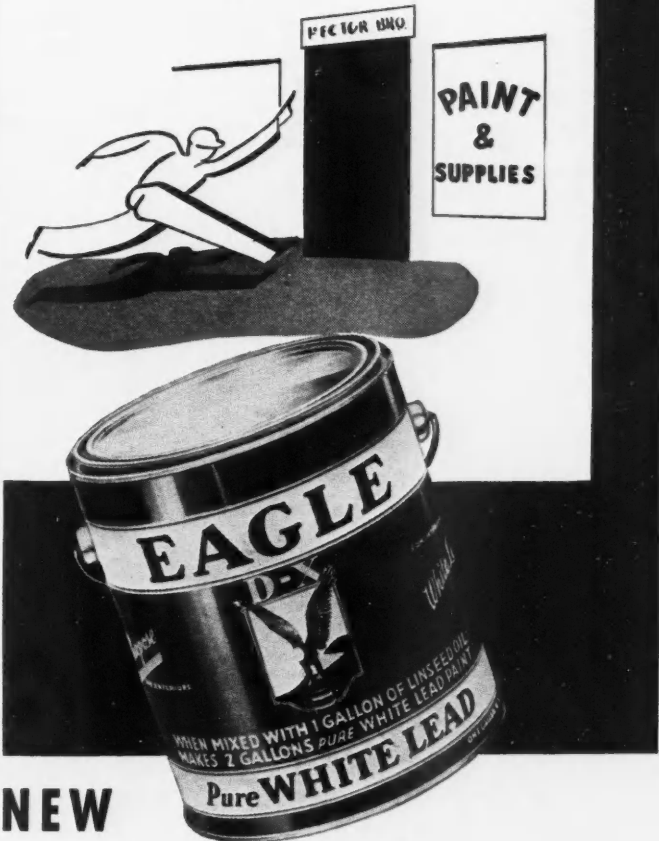
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Specifications for G.E. "New American" House

(Continued from page 55)

WATER SUPPLY IN HOUSE—From water meter extend a line of piping to all plumbing fixtures requiring cold water service. Carry line of pipe from hot water, also.

SILL COCKS—Furnish and install sill cocks where shown on plan and run cold water pipe to same.

HOT WATER SUPPLY—Connect to hot water system and run to all fixtures requiring hot water service.

COUPLINGS—No unions to be used on hot and cold water pipes when concealed in partitions. Use couplings set up in white lead.

HOT WATER TANK—For the domestic hot water supply the plumbing contractor shall furnish and install a storage tank properly insulated; the material and size of tank shall be specified by the G. E. Air Conditioning Dealer.

A Klearway flushing valve and a G-E mixing valve both purchased from the G-E Air Conditioning Dealer shall be installed by the plumbing contractor in the piping of the hot water storage tank.

Plumbing Fixtures

LAUNDRY TRAYS—Trays to be a two-part porcelain, size 48 x 24", with back, glazed all over, with porcelain legs to set the trays about 34" to the top of the rim, twin waste connection with C.P. plugs and stoppers, C.P. brass combination swing spout faucet with lever handles and hose end, 1 1/2" S trap, tapped.

CLOSET—Water closet to be a syphon action, no vent, white vitreous china closet bowl with jet, back inlet, floor outlet, water seal, self testing floor flange, brass bolts and china bolt caps, white seat and cover with hinge, ell flush connection and flanges; vitreous china low pattern tank and fittings with lever handle, 3/8" I.S. supply pipe to wall with angle pattern shut-off having 4-arm metal handle with index and metal wall escutcheon. All exposed metal to be chromium.

LAVATORY—Lavatory to be 21 x 17" white enamel lavatory with apron, 8" integral back, concealed wall hangers, plug, chainstay, beaded chain and rubber stopper; compression faucets with 4-arm metal handles with index; 3/8" I.S. supply pipes to wall with wheel handle angle pattern shut-offs and wall flanges; 1 1/2" S cast brass trap with 1 1/2" I.S. nipple to wall and flange. All exposed metal to be chromium.

CLOSET—Same as specified for first floor lavatory.

LAVATORY—Lavatory to be 24 x 20" vitreous china pedestal lavatory with rectangular basin having hooded overflow and anti-splash rim, white enamel wall brackets; all metal pop-up waste with metal knob and spout supply fitting having concealed 1/2" supply valves with renewable seats, 4-arm metal handles with index and metal slab escutcheons, 3/8" I.S. supply pipes to wall with angle pattern shut-offs having 4-arm metal handles with index and metal wall flanges; 1 1/2" S cast brass trap with bottom cleanout, 1 1/2" I.S. nipple to wall with flange. All exposed metal to be chromium.

BATH TUB—Tub to be square type double shell tub with shower head over with mixing valve. Supply swinging curtain rod and hooks with water-repellent curtain.

Painting

SCOPE OF WORK—This contractor shall include in his work, whether specifically called for herein or not, all materials and labor for all interior and exterior painting, varnishing, staining, sizing, and shellacking of all metal work and woodwork, including all wall, ceiling, and floor surfaces, stairs, trim, sash, and so forth, throughout the interior of the building from the basement to the second floor, and for all metal work and woodwork on the exterior of the building.

PREPARATION OF SURFACES—Clean and sandpaper all woodwork before finishing same, rubbing the direction of the grain.

SHELLACKING—On work to be painted, saps, pitch, knots, and similar defects shall be covered with good quality shellac before priming.

PRIMING—Priming for all woodwork is called for under Carpentry.

PUTTYING—All cracks, joints, and nail holes shall be carefully filled with putty after the priming coat, using putty stained or colored to match finish.

NUMBER OF COATS—Priming and shellacking shall not count as coats in this specification.

PROTECTION OF SURFACES AND CLEANING—Drop cloths must be used to protect surfaces from paint, oils, stains, and varnishes. At the completion of the work this contractor shall remove and clean off all spots from walls, ceilings, floors, trim, glass, and so forth, no matter by whom caused. All blisters of painted surfaces are to be made good to the satisfaction of the Owner.

SAMPLES—All colors as stated herein are for the general guidance of the contractor. He shall submit finished samples of the various finishes, both for color and finish.

MATERIALS—All materials shall be the best of their respective kinds and shall be brought to the premises in their original packages and mixed there.

All lead shall be pure white lead. All oil shall be pure linseed oil, free from sediment and cloudiness.

STORAGE OF MATERIALS—All materials shall be stored and mixed in such wise as not to damage in any way the floors or walls of the rooms in which they are mixed.

Exterior Painting

WOODWORK—All exterior woodwork shall be painted three coats of white lead and oil paint, except blinds which shall be painted in an approved shade of green, very dark. The above includes clapboards, matched boarding, doors, windows, trim, porch, dormers, and so forth.

CHIMNEY—Chimney shall be whitewashed with two coats of government specification white-wash, and the cap shall be painted black.

LEADERS—Toncan metal leaders shall be painted three coats of lead and oil paint, white.

Interior Painting

GENERAL—The room side of all doors shall be finished to match the finish in the respective rooms in which they are a part.

WALLS—Walls of bath and lavatory above tile dado, walls of kitchen, dado in living room, dining room, and hall, shall be painted three coats lead and oil paint, last coat part enamel, and stippled.

Closet walls shall be painted two coats lead and oil, stippled.

Basement walls shall be painted two coats lead and oil paint.

CEILING—Ceilings throughout the house shall be given one coat of calcimining.

WOODWORK—All woodwork on the first floor shall be painted three coats of lead and oil paint, last coat part enamel.

All woodwork in the basement shall be stained one coat. Woodwork in play room shall be stained, shellacked, and waxed.

All woodwork on the second floor shall be painted three coats of lead and oil paint, last coat part enamel.

FLOORS—All pine floors throughout the house shall be painted two coats lead and oil floor paint, spattered in three colors.

STAIRS—Risers to be finished same as woodwork.

There shall be three coats of paint on the treads, with a strip of spattering about two feet wide up the stairs.

(Continued to page 94)



Perfection BRAND OAK FLOORS

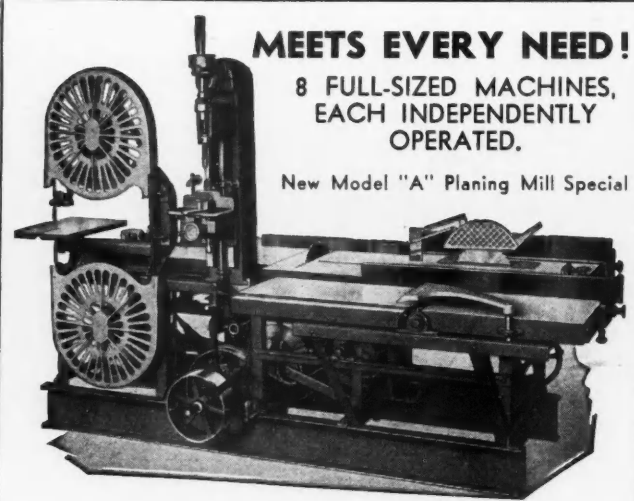
In old homes or new, whether for renting or selling, "PERFECTION" BRAND Oak Floors give service and satisfaction. The greatest value for the money. Take advantage of the new Housing Administration Act and sell good Oak Floors on your modernizing jobs.

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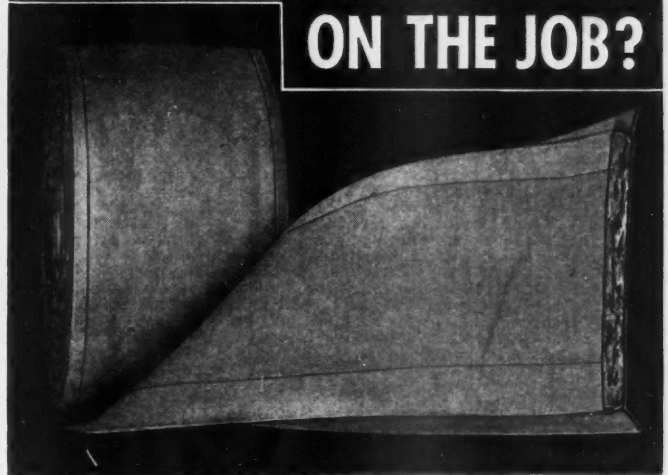
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WHAT WILL IT DO ON THE JOB?



A FEW UNVARNISHED FACTS ABOUT INSULATION

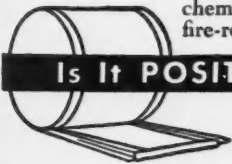
We have plenty of laboratory figures to show why BALSAM-WOOL is better insulation. But your customers don't want laboratory figures. They want insulation efficiency—on the job. Here are a few questions every contractor should ask . . . if he is interested in giving his customers more insulation value per dollar:



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We know—and you know—that moisture destroys the effectiveness of insulation.

We know—and you know—that moisture gets into any insulation which is not adequately protected as a whole. BALSAM-WOOL is completely and permanently protected from moisture . . . sealed in a waterproof covering. In addition, it is chemically treated to make it verminproof and fire-resistant.



Is It POSITIVE in Application?

To be effective, insulation must have no weak spots—leave no loophole for wind, heat or cold to get through. But you cannot be sure of continuous insulation with materials that are merely poured or dumped in by common labor. BALSAM-WOOL is positive in application—fastened in place by qualified carpenters who know their business. Flanged edges now make it even easier to apply than ever before.



Is It Permanent in EFFECTIVENESS?

Materials that settle or that change their form, cannot be permanently effective. BALSAM-WOOL lasts as long as the building in which it is applied—stays where it is put and does not change its form.

Does It Offer the RIGHT Thickness for the Job?

For every home and every climate there is a right thickness of insulation beyond which it does not pay to go. BALSAM-WOOL comes in thicknesses to fit every insulation need, everywhere.

Let us tell you all of the facts about BALSAM-WOOL.
We believe you will find them worth knowing!

BALSAM-WOOL
WOOD CONVERSION COMPANY
ST. PAUL, MINNESOTA



Made by the Makers of
NU-WOOD

Specifications for G.E. "New American" House

(Continued from page 92)

LINOLEUM—Linoleum shall be finished with a good grade of linoleum lacquer.

WALL PAPERS—Walls of living room, dining room, and hall above dados, and walls of bed rooms shall be papered with good quality wall papers in simple colonial designs.

Air Conditioning Installation

DESIGN CONDITIONS—The "New American" house should certainly be equipped with air conditioning or it will not be truly typical. Winter air conditioning is essential and summer air conditioning is desirable. Complete year-round (winter and summer) air conditioning is supplied by the G.E. air conditioning system covered by these specifications and drawings. The supervising architect must see that any variations from the specified design are worked out with the local G.E. Air Conditioning Dealer.

The size of equipment and the proportions of ducts, registers and grilles assume that the front of house faces north and are based upon design conditions for Boston, Mass., as follows:

Season	Indoors			Outdoors		
	D.B.	W.B.	Rel. Hum.	D.B.	W.B.	Rel. Hum.
Winter	27.0	xxx	45%	0	xxx	xxx
Summer	78		50%	91	74	46%

*Maintenance of this high humidity may, at times, be found impractical because of condensation on windows.

For houses built outside the Boston area, the supervising architect must see that the local G.E. Air Conditioning Dealer checks the design of the air conditioning system for local requirements and that he either approves the system described herein in every detail or specifies the necessary changes to meet the local design conditions.

The supervising architect and general contractor must confer with the G.E. Air Conditioning Dealer to decide whether double glazing is necessary in order to make practical the maintenance of desirable humidity in the winter time.

LIST OF GENERAL ELECTRIC AIR CONDITIONING EQUIPMENT AND MATERIALS

- 1. Oil Furnace Type LA-4.
- 1 Air Conditioner Type AA-3.
- 1 Air Conditioner Cooling Unit.
- 1 G.E. Mixing Valve.

- 1 Flushing Valve (Excelso Klearway).
- 1 Condensing Unit (including anti-vibration pads) CM-61S with cooling coil for enclosure.
- 1 Air Conditioning Power and Control Panel (enclosed complete).

General Contractor

1. This specification together with accompanying plans are intended to cover all labor and materials required to install the General Electric Air Conditioning system complete.
2. It shall be the responsibility of the general contractor to see that these specifications are carried out in complete detail.
3. It shall be the responsibility of the general contractor to set and level all major equipment in locations shown on plans.
4. It shall be the responsibility of the general contractor to secure all permits and have all inspections required by local ordinances and to see that all equipment is installed in accordance with local codes and regulations.
5. All pipes, covered or otherwise, shall be painted to conform to the color of the light gray trimmings on the oil furnace and air conditioner.
6. Exposed duct work and canvas collars shall be painted with GE-1212 Glyptal (an aluminum waterproof paint), thinned with GE-1500 Thinner.
7. The general contractor shall have the entire system checked for proper adjustment by the General Electric Air Conditioning Dealer.
8. The general contractor shall affix metal tags stamped with identifying numerals on all water, steam, and refrigerant valves and on all quadrant dampers in the duct system. He shall prepare a descriptive list for the numbers and mount it in a glazed frame at a suitable location.
9. The general contractor shall furnish material for and construct a sound absorbing enclosure for the condensing unit as specified and designed by the G.E. Air Conditioning Dealer.

Steamfitting Contractor

1. The steamfitting contractor shall connect the furnace to the air conditioner and any other heating equipment as shown on the drawings and any supplemental sketches and instructions from the G.E. Air Conditioning Dealer.
2. It shall be the responsibility of this contractor to have all pipes running in furred ceilings, partitions, in floors and under floors to be free of leaks before and after ceilings, floors and partitions are finished and insulation is applied.
3. Where pipes enter or leave a wall, ceiling or floor in finished rooms they shall be provided with nickel plated floor plates.

4. Main steam connection from furnace to air conditioner shall be 1 1/2" pipe, run as directed by the G.E. Air Conditioning Dealer.
5. Return from air conditioner to furnace shall be 1" pipe, run as directed by the G.E. Air Conditioning Dealer.
6. Steam supply and return piping shall be insulated with 1" aircell asbestos.
7. The air vent valve (supplied with the air conditioner) shall be mounted on a 4 to 5 ft. cooling leg of 3/4" pipe connected to the top of the return pipe immediately adjacent to the steam chest.
8. A 3/4" cold water supply line provided with a 3/4" globe valve shall be run and connected to the boiler as directed by the G.E. Air Conditioning Dealer.
9. After the installation is complete, the contractor shall have the boiler and heating system cleaned. The system shall be adjudged clean when the boiler water line is steady with the oil furnace operating between zero and five pounds gauge pressure.
10. The furnace shall be connected to the masonry chimney with inch No. 26 gauge galvanized iron pipe. Each joint shall be fastened with 4 sheet metal screws. Pipe shall be cemented into chimney and joint made air tight.
11. Jacket shall be uncrated and assembled on furnace.
12. Radiators of type and size indicated on drawings shall be furnished and installed at locations indicated on the drawings and connect to a two pipe steam system, each radiator to be provided with thermostatic inlet valve and return trap.
13. Supply and return piping between furnace and radiators shall be installed by the steamfitting contractor as specified by the G.E. Air Conditioning Dealer.
14. Radiator and boiler accessories shall be furnished and installed by the steamfitting contractor as specified by the G.E. Air Conditioning Dealer.

Plumbing Contractor

1. Arrangement of piping and details of installation shall be as specified by the G.E. Air Conditioning Dealer.
2. Unless specified in detail herein, the use of brass, copper, galvanized or black iron pipe shall be at the discretion of the supervising architect.
3. Where local practice is to cover cold water lines, or where condensation will occur on cold water lines in summer or winter, they shall be insulated with 1" of air cell asbestos.
4. A drain cock shall be furnished and installed on the boiler.
5. Connections to domestic hot water storage

(Continued to page 96)

The ONLY DOOR with SEAL-TITE Molding

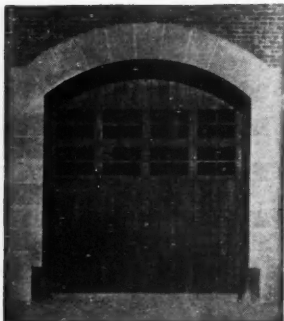


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RO-WAY OVER-HEAD TYPE DOORS

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16 Different Types for Commercial and Residential Use

with headroom requirements of 8 1/2 to 21 inches. All Standard Sizes, as well as Special Sizes and heavy duty doors with special heavy tracking are available. Ask especially about the Ro-Way low priced doors for residence garages and the Ro-Way specially designed torsion spring high lift doors for use in public service stations.

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New and Used Instruments for SALE or RENT

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Made also without compass and are at lower prices.

SpeedWay GROOVER

for Weather Stripping

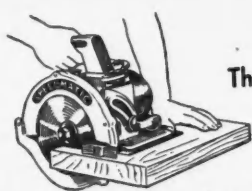
There's no Groover like the Speedway 404. Only 7 lb.—balanced weight. Right or left hand with adjustment both laterally and vertically. Safety (trigger) switch. Powerful universal motor. Greaseal ball bearings. Speed of 16,000 r.p.m. assures clean cuts. It's a money maker.



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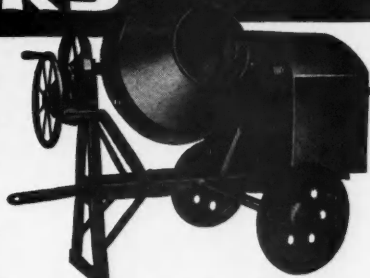
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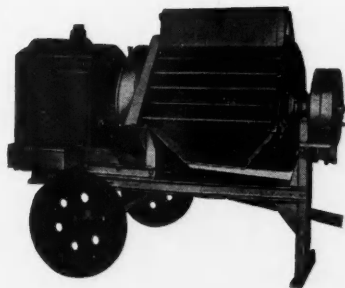
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PAINTS • VARNISHES

Quality Unsurpassed Since 1869

Specifications for G.E. "New American" House

(Continued from page 94)

tank are included in general plumbing specifications for the house.

AIR CONDITIONER—6. A 1/4" brass water line shall be run from the nearest source of cold water to the 1/4" water inlet connection on the steam chest of the air conditioner.

7. A 1/4" needle valve shall be furnished and installed in the above water line, at a point near the water inlet connection on air conditioner.

8. A 3/4" brass drain line shall be run from water drain connection on air conditioner into an open drain or sink, as required by local code.

9. In case a cooling unit is installed, a 3/4" drain line shall be run from the cooling unit into an open drain, as required by local code.

OIL TANKS AND OIL PIPING—10. Furnish and install a 550 gallon oil storage tank, Underwriters' Laboratories labelled. The tank shall be located and buried underground in accordance with local codes and Underwriters' regulations. Back filling shall be such that the ground will be level on settling.

11. Furnish and install oil suction line of 3/8" copper tubing, from tank to burner buried under floor where indicated.

12. A G.E. screen valve (furnished with the oil furnace) and a manual or safety shut-off valve (as required by local code) shall be installed in the suction line at the point where it passes through the exterior wall.

13. Furnish and install a vent line of standard 1 1/4" pipe with proper cap fitting, in accordance with local and Underwriters' regulations.

14. Furnish and install a 2" fill line with fill box as directed by the supervising architect, and in accordance with local and Underwriters' regulations.

CONDENSING UNIT—15. A 1/2" water supply line, with gate valve at the unit, shall be run, as directed, from a suitable source of supply to the condensing unit, through the water cooled coil used in the sound absorbing enclosure.

16. A 1/2" drain line shall be run, as directed, from the condensing unit water outlet connection to an open drain in accordance with local code.

REFRIGERATION PIPING—17. Run one 3/8" O.D. soft seamless copper tubing liquid line from liquid connection on condensing unit to the 3/8" flare liquid connections on cooling unit. Connection shall be as directed.

18. Run one 1 1/8" O.D. soft seamless copper

tubing suction line from cooling unit to the suction connections on condensing unit manifolded at the condensing unit as directed.

19. All lines run under the floor and in partitions shall be a single piece and there shall be no connections or joints in the floor or walls.

20. All joints shall be of the soldered or flared compression type.

21. All pipes shall be thoroughly cleaned internally with carbon tetrachloride.

22. The suction lines shall be insulated with 1" of air cell asbestos or equivalent with seams sealed and the entire covering waterproofed.

Sheet Metal Contractor

Sheet metal work shall be constructed and installed in accordance with plans, Sheet Metal Specifications G.E. Form DS-325, Detail Sheet Form DS-324, which are included as a part of this specification, and, in addition, shall conform to and include the following:

1. Where dampers in branches would be inaccessible, friction dampers shall be installed back of registers and grilles, even though there are shutters in the registers. They shall be accessible through the grilles, except where the "snap-in" type Uniflo grille is used, in which event they shall be accessible for adjustment by hand when grille is removed. Such damper shall not interfere with the shutter which is an integral part of a register.

2. All supply ducts in unexcavated spaces under the house and in unheated basements shall be insulated with 1" air cell asbestos, covered with 6 oz. canvas, tightly drawn and neatly pasted. Where summer cooling will be performed, the canvas shall be painted and waterproofed with G.E. No. 1212 glyptal, thinned with G.E. No. 1500 Thinner.

3. All return ducts in unexcavated spaces under the house and in unheated basements shall be insulated with 1/2" air cell asbestos applied as directed in specification sheet DS-325.

4. All other ducts shall be covered with a single thickness of asbestos paper (12 lbs. per 100 sq. ft.) except the outdoor air intake and all return ducts, including those covered in 3 above.

5. All return ducts shall be lined from air conditioner to points indicated on drawings, with 1/2" of air acoustic, as manufactured by Johns-Manville Company, or equivalent.

6. Grilles and registers located in the floor shall have 78% free area. Grilles and registers located in walls shall have 92% free area and shall be located as shown on the drawings; sizes given in drawings are dimensions of duct opening. Supervising architect shall specify the type.

Electrical Wiring

GENERAL—All materials used under these specifications shall be installed in accordance with the rules and regulations of the National Electrical Code, and as approved by the local Inspection Bureau.

ELECTRICAL CONTRACTOR—The electrical contractor shall furnish and install all wiring materials necessary to complete the electrical installation hereinafter defined or indicated on the drawings, using wiring materials of General Electric manufacture throughout of types or grades of materials as designated herewith and as on drawings. When the materials thus designated as G.E. Standard Under Normal Conditions are not applicable to the conditions of the installation, the contractor shall install companion items of General Electric manufacture. All fittings and accessory materials not indicated in this table but necessary to complete the installation shall be furnished by the contractor as though herein defined in detail, and they shall be of a type or grade appropriate to the quality of specified parts. No substitutions of materials of another manufacture nor of a quality or type inferior to the typical item designated as standard shall be made without written permission of the architect or owner and a proper allowance made in the contract price.

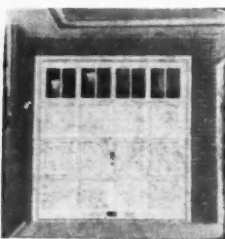
SERVICE ENTRANCES AND DISTRIBUTION CENTERS—The local Utility Service requirements as to voltage, number of conductors, metering, etc., should in each case be obtained before service entrance materials are determined. Unless contrary to regulations the following types shall be used:

Building Entrance to distribution center—G.E. Service Entrance Cable or Code Wire in G.E. Rigid Conduit. Underground entrances, pole to distribution center shall be G.E. 600 volt Lead-sheathed Cable in G.E. White Rigid Conduit, except where local regulations permit use of G.E. Parkway Cable of type adapted to installation conditions.

SERVICE DISTRIBUTION EQUIPMENT—Shall be Trumbull Combination entrance and range switch such as 2924-O.

Service Entrance Conductors and Service Equipment should be checked for sizes which will allow for sufficient adequacy after the final decision is reached covering all electrical demands. The local utility service requirements and rates may cause increased demands on the service materials and changes should be made accordingly. In no case shall the Service Conductors be less than an equivalent of three (3) No. 4 A.W.G.

(Continued to page 98)



For garages—factories—
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WAGNER GLIDE OVER GARAGE DOORS

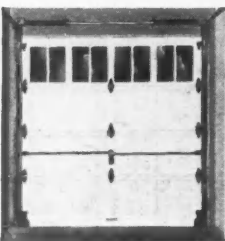
Easy to operate—attractive appearance—simple to install—weather-proof. Here is perfection in overhead door construction . . . no bulky or complicated mechanism to clutter up the interior of the building—so easy to operate women and children can easily open and close the Glideover door.

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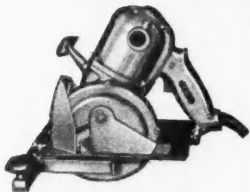


Stanley Portable Electric Saw No. W-6 is compact, nicely balanced and powerful. With its full one horse power motor it will cut steadily hour after hour without heating. Steel base adds greatly to its wearing qualities.

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The W-6 Saw will cut dressed 2 x 4's or less, hard or soft wood. Its compactness and light weight make it adaptable for many types of work on the job.

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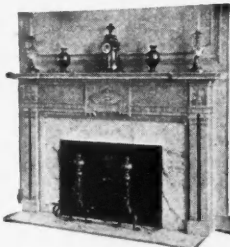
Invaluable for the architect, engineer, owner, contractor and all who have to do with building construction. A consideration of the mutual rights, duties and liabilities of architect, owner and contractor, with appendices and forms. Second revised edition, 396 pages; 6x9 buckram. \$5.00.

A GLOSSARY OF TERMS USED IN ENGLISH ARCHITECTURE

By Thomas D. Atkinson, Architect

In this little work there are about 800 terms explained. The appendices include a chronological list of buildings and other useful information, and the illustrations are from drawings by the author. Third edition revised, 267 illustrations, 5x7, cloth. \$1.50.

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Think of it—a complete window frame including metal casing, frame and ventilating wings for this remarkable low price. Simple and quick to install . . . fits between studding 24" on center. Galvanized . . . rust resisting . . . won't rot . . . won't swell . . . won't stick. With ordinary wood sash makes an ideal ventilating window. Tilts for indirect ventilation—also tilts and raises.



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SAW UNIT
TILTS TO
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LOW
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This remarkable saw can be used for cutting cork, sheet rock, tile and brick by simply replacing the saw blade with an abrasive cut-off wheel.

Either on the job or in the shop, the DRIVER Tilting Arbor Saw will quickly pay for itself in time and labor saved.

Its 10" blade handles all stock up to 3" thick, ripping and cross-cutting with extreme accuracy. All angles are cut by simply tilting the combination saw and motor unit. The top is laminated maple 1 1/4" thick with metal slides inserted in it for the mitre gauge. The ripping fence is a rigid casting, wood faced, easily adjusted to a fraction of an inch.

SPECIFICATIONS

SKF Ball Bearing equipped. Endless "V" belt drive. Geared mechanism makes raising and lowering of saw arbor easy and positive. Indicator shows depth of cut. Gauge indicates degree of tilt. Powered by 1/2 or 3/4 H. P. 3450 R. P. M. motor which may be plugged into any lamp socket.

Walker-Turner Co. Inc.
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I would like to know more about your Tilting Arbor Saw. Please send me complete catalog.

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City _____ State _____

WALKER-TURNER CO. INC. PLAINFIELD, N. J.

Specifications for G.E. "New American" House

(Continued from page 96)

capacity and the Service Equipment shall be of a capacity not less than the Trumbull combination entrance and range switch Catalog 2924-0.

BELL RINGING TRANSFORMER—Shall be provided and installed on Meter Board of capacity adequate for the load indicated on the drawings, such as G.E.-2332.

DISTRIBUTION MATERIALS:

Circuit Breakers: For branch circuits—all circuit breakers used in the branch distribution centers shall be located approximately 60" from the floor. Gang outlet boxes and covers such as SP-6732 and SP-6751 shall be used with suitable hangers and their accompanying plates. These circuit breakers shall not be further than 25 running feet from the service distribution equipment.

All Conductors—Shall be of G.E. Code Grade Rubber-covered Wire, Flame-retarding Finish unless otherwise noted.

The Conductors from the Service Equipment to the electric range and/or to the electric water heater and/or to the air drier shall be a capacity of not less than three (3) No. 8 A. W. G. conductors.

The Conductors of all the feed circuits from the service distribution equipment to the branch circuit breakers, as shown on the drawings, shall be of a capacity not smaller than No. 10 A.W.G.

No conductor shall be smaller than No. 12 A.W.G. except where used on low voltage requirements.

Armored Cable—Shall be General Electric BX in dry locations, and BXL in damp locations.

Non-Metallic Sheathed Cable—Shall be BraidX. Rigid Conduit shall be G.E. white or black rigid conduit.

Electrical Metallic Tubing shall be G.E. Electrical Metallic Tubing.

Underplaster Extension Circuits may be run in G.E. Oval BX or G.E. Oval Metallic Tubing where conditions require.

OUTLET BOXES—Floor boxes in masonry floors shall be G.E. floor boxes, such as Cat. No. SP8400 where waterproof adjustable boxes are required or Cat. No. SP8200 where waterproof, non-adjustable boxes will serve.

Floor boxes in wood joist floors shall be G.E. Utility outlets, Cat. No. SP8000.

OUTLET BOXES FOR WALL OR CEILING FIXTURES—Boxes for side walls and ceiling fixtures shall be 4 in. Cat. No. SP 52151

with fixture studs and covers such as SP 52C13 or SP 52C57 for side walls and cover SP 52C3 for ceilings.

SWITCH BOXES AND SECTIONAL BOXES—Shall be G.E. Sectional Switch Boxes such as Cat. No. SP6972 with proper supports unless otherwise specified in drawings. All side wall fixture boxes shall be 5 ft. 6 in. above the floor line.

SWITCHES—Shall be G.E. single-pole Flush Tumbler Switches, such as GE2841. Step-Saver Switches shall be G.E. Three-way (and four-way) Flush Tumbler switches as specified.

DOOR SWITCHES—Shall be G.E. door switches Cat. No. GE273.

CONVENIENCE OUTLETS—Shall be twin convenience outlets such as GE2679.

PORTABLE FIXTURE OUTLETS, for fans, etc., shall be G.E. Fan Hanger Outlet GE2755.

ELECTRIC CLOCK OUTLETS—Shall be G. E. Electric Wall Clock Hanger outlet Cat. No. GE2942.

SWITCH AND CONVENIENCE OUTLET PLATES IN LIVING OR PUBLIC AREAS—Shall be Textolite except where brass plates are designated. Brass plates shall be .600" thick and in finishes elsewhere specified.

SPECIAL CIRCUITS:

Low Voltage Circuits, for bells, annunciators, thermostats, etc.—Shall be G.E. rubber covered fixture wire.

For public telephone extensions—Shall consist of G.E. black rigid conduit or G.E. Electrical Metallic Tubing where conductors are subsequently to be installed by Telephone Company unless a G.E. Underfloor Fiberduct system is provided.

For Private Telephones—Shall be G.E. Telephone Wires run exposed except where BX or conduit circuits are indicated.

For Protective, signaling, and line voltage control devices—Shall be run in G.E. black rigid conduit where tampering would endanger operation; otherwise in BX or Electrical Metallic Tubing as designated on drawings.

For Radio Wiring—Shielded Circuits—Shall be run in G.E. black rigid conduit or G.E. Electrical Metallic Tubing where future changes require possible withdrawal of circuits, or shall be BX with sheathing grounded, as designated on drawings.

Non-Shielded Circuits—Shall be BraidX single conductors or cables.

THIS CONTRACT is to include all electrical work, including air-conditioning, electric range, and all low voltage wiring as specified.

The contractor shall install bells and buzzers, radio and telephone outlets and their wiring as here specified and shown on the drawings.

If larger capacity appliances than those shown on the plan shall be used, the conductor capacity throughout the whole system shall be increased accordingly where needed.

LIGHTING FIXTURES—The lighting fixtures are to be installed by the electrical contractor. They will be selected by the owner and the contractor will give him an allowance of \$225.00 for them.

Specifications for G.E. Experimental House

(Continued from page 56)

double construction.

INSIDE TRIM: Woodwork is of select birch.

PAINTING: Exterior woodwork to have three coats; interior woodwork shall have three-coat enamel job. Floors also to have three-coat job.

PAPER, SANITAS, LINOLEUM: All wall-papers to be washable types. Bathroom and kitchen shall use Sanitas and Linawall on walls. Bathroom, kitchen, storage room, and hall to garage, shall have on their floors Linoleum as made by the Armstrong Cork Co., over a Goodyear Rubber Base. Basement steps likewise, with metal edges and corners.

ELECTRICAL WORK: Entire installation to be approved by National Board of Fire Under-Writers and by General Electric engineers. An allowance of \$175 is made for electrical fixtures. 125 outlets are provided. Fixtures modernistic and incorporate latest indirect lighting principles. No ceiling lights used, except in dining room, hall, and storage room, garage, and basement. Instead, in living room, bathrooms, kitchen, bedrooms, local illumination is used, employing where suitable, Lightolier Floor lamps, "I.E.S." table and floor Reading lamps, and "pin-it-up" lamps. "Lumilene" G-E tubular bulbs used in cove over dining room windows.

INCINERATOR: A Model-T Kernerator as manufactured by the Kerner Incinerator Co. shall be installed.

PLUMBING: Copper pipes used throughout. Sill-cocks are of the anti-freeze type. Plumbing fixtures installed are those manufactured by the Standard Plumbing Fixture Co. (Except the kitchen sink, which is combined with the G-E dishwasher.) A complete G-E Kitchen is installed. The hot-water heater is the Insulated "Dictator" type made by the American Radiator Corp.

HEATING: A Mouat Vapor Heating System with Modene Concealed Radiation shall be installed. A "B-Line" General Electric Gas Boiler is to be used.

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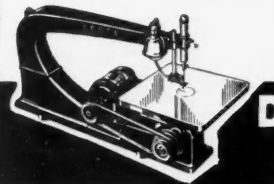
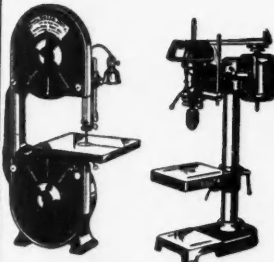
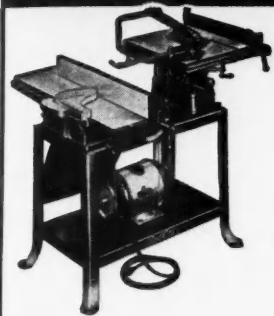
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Selected List of Manufacturers' Literature

For the Service of Builders, Contractors, Architects and Dealers

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

PLANS AND DESIGNS

PORTLAND CEMENT ASSN., Chicago, Ill.

1—**Concrete Houses**—"22 Low Cost Concrete Homes"; 32 pages of designs and illustrations.

CLAY EQUIPMENT CORP., Cedar Falls, Ia.

2—**Barn Plans**—160-page catalog of Clay barn equipment with numerous floor plans and designs for all types of farm buildings.

CONSTRUCTION MATERIALS

UNIVERSAL ATLAS CEMENT CO., Chicago, Ill.

3—**White Stucco**—Details regarding factory-prepared Atlas White Stucco for modernizing Main Street and for new buildings.

BRIGGS MANUFACTURING CO., Detroit, Mich.

4—**Brigsteel Beautyware**—"Here's Something New," a display in full colors of the sinks, tubs and lavatories in acid-resisting porcelain enamel, 65 per cent lighter than cast iron fixtures.

JOHNS-MANVILLE, New York City.

5—**J-M Materials**—"General Catalog, Johns-Manville Building Materials"; 36 pages illustrating complete line, with specifications and numerous color illustrations.

BARBER-ASPHALT CO., Philadelphia, Pa.

6—**Asphalt Products**—"Propaganda vs. Facts" tells why Trinidad Lake Asphalt Cement is used in Genasco Shingles and why it makes these shingles superior.

RUBEROID CO., New York City.

7—**Asbestos Cement**—"Eternit Colonial Timbertex Siding," an illustrated brochure on this new type side wall material.

AMERICAN SHEET AND TIN PLATE CO., Pittsburgh, Pa.

8—**Galvanized Sheets**—"American Apollo Best Bloom and Keystone Copper Steel Galvanized Sheets"; Sixth Edition of this standard sheet steel catalog, 24 pages.

INTERNATIONAL NICKEL CO., INC., 67 Wall St., New York City.

9—**Sinks, Tables**—"Inco Standardized Monel Metal Sinks, Tops and Tables," a 24-page catalog.

THE KAWNEER CO., Niles, Mich.

10—**Store Fronts**—Information regard-

ing a new and revolutionary type of store front construction.

LIBBEY-OWENS-FORD GLASS CO., Toledo, Ohio.

11—**Store Front Portfolio**—The 52 prize winning designs in the recent architectural competition modernizing Main Street.

PITTSBURGH PLATE GLASS CO., Pittsburgh, Pa.

12—**Modern Store Fronts**—"How Modern Store Fronts Work Profit Magic"; 28 pages of practical designs and suggestions.

THE SISALKRAFT CO., 205 W. Wacker Drive, Chicago, Ill.

13—**Reinforced Paper**—A printed sample of Sisalkraft for walls, roofs or floors.

REYNOLDS CORP., 19 Rector St., New York City.

14—**Insulation by Metallation**—Information regarding Reynolds Ecod fabric and Metallation. A complete set of folders.

THE CELOTEX CO., Chicago, Ill.

15—**Celotex**—"You Need Celotex"; also a companion piece, "Planning Modern Interiors with Celotex."

THE INSULITE CO., Minneapolis, Minn.

16—**HardBoard**—"Meeting your Hard-board Needs"; all about Insulite Hard-Board and its many uses.

WOOD CONVERSION CO., St. Paul, Minn.

17—**Insulation**—"Make All These Temperatures the Same," a discussion of Balsam Wool insulation for maintaining uniform winter and summer temperatures.

NORTH BANGOR SLATE CO., Bangor, Pa.

18—**Roofing Slate**—"Consider the Roof Over Your Head"; information regarding the use of genuine Bangor slate.

MILCOR STEEL CO., Milwaukee, Wis.

19—**Metal Lath**—"The Milcor Manual," a 60-page handbook of metal lath, metal trim and other Milcor specialties.

SOLVAY SALES CORP., 61 Broadway New York City.

20—**Calcium Chloride**—"Solvay Calcium Chloride in Concrete Construction," a 32-page manual.

LOUISVILLE CEMENT CO., Louisville, Ky.

21—**Masonry Cement**—"Brixment"; 20-page manual on better brickwork.

THE TILE-TEX CO., 1235 McKinley Ave., Chicago Heights, Ill.

22—**Resilient Floor Tile**—"Tile-TEX Book of Designs," a portfolio of color cards.

MARSH WALL TILE CO., Dover, Ohio.

23—**Tile Wall**—"Wonder Walls"; folder giving general and technical information on Marshtile, a fiber tile in sheet form.

LLOYD FLOOR & WALL TILE CO., Kansas City, Mo.

24—**Ceramic Tile**—"Catalog No. 32"; 56 pages of designs and details, many in color.

SEAL-ALL CLIP CO., 100 Smith St., Flint, Mich.

25—**Asphalt Shingle Roof Fasteners**—Information regarding this ingenious new help for roofers.

CONSTRUCTION SPECIALTIES

H. H. ROBERTSON CO., Pittsburgh, Pa.

26—**Residential Steel Floors**—"Robertson Keystone Beam Steel Floor for Low Cost Housing and Apartment Construction"; 12-page handbook giving details of use of special inverted floor section for housing and apartment construction.

TRUSCON STEEL CO., Youngstown, Ohio.

27—**Steel Casements**—"Truscon Resi-Casements"; Series Five is a new 30-page manual on Truscon steel casements and fittings.

STRAN-STEEL CORP., 6100 McGraw Ave., Detroit, Mich.

28—**Steel House Framing**—"East Side, West Side, All Around the Town"; illustrations of Detroit's latest Stran-Steel homes.

KALMAN STEEL CORP., Bethlehem, Pa.

29—**Steel Joists**—"Kalman Steel Joists"; 20-page handbook of spans, safe loads, and design data.

MID-STATES STEEL & WIRE CO., Dept. S20, Crawfordsville, Ind.

30—**Wire Fencing**—Information regarding "Galvannealed" weather-proof woven wire fencing.

METAL LATH MANUFACTURERS ASSN., 208 S. La Salle St., Chicago, Ill.

31—**Fireproof Construction**—"Handbook, Lurie Steel House Construction"; best standard practice in steel and concrete construction for home building.

OWENS-ILLINOIS GLASS CO., Toledo, Ohio.

31-A—Glass Brick—“Owens-Illinois Translucent Glass Masonry”; a reprint of “Pencil Points” announcement giving full details of this newest building material.

CINCINNATI IRON FENCE CO., Cincinnati, Ohio.

32—Ornamental Iron Work—Illustrated circular on wrought iron stair railings and gates for modern homes.

WRIGHT RUBBER PRODUCTS CO., Racine, Wis.

33—Rubber Flooring—Information regarding the Wright line of rubber flooring.

MARSCHKE CO., St. Paul, Minn.

34—Disappearing Stairs—How to add a room to your home with the Marco folding stairway.

FRAZIER STAIR CO., INC., 1817 Banksville Ave., Pittsburgh, Pa.

35—Disappearing Stairs—“Save Space with the Frazier.” Specifications and dimensions of the six models of Frazier disappearing stairs.

PAINTS & DECORATING MATERIALS

ALUMINUM CO. OF AMERICA, Pittsburgh, Pa.

36—Aluminum—“Aluminum Paint, Its

Uses and Applications,” a 62-page handbook.

THE LOWE BROTHERS CO., Dayton, Ohio.

37—Paint Guide—“High Standard Specifications for Painting and Varnishing” contains specifications covering every type of job. Arranged so that they can be copied word for word. “The Lowe Brothers Pictorial Color Chart,” full color illustrations with actual paint; also offered through Lowe Brothers dealers.

EAGLE-PICHER LEAD CO., Cincinnati, Ohio.

38—White Lead—“The True Story of An Indiana Community” graphically illustrating painting quality with white lead.

THE REARDON CO., St. Louis, Mo.

39—Plastic Paint—“Modernize Your Property with Plastex”; how to produce all the modern textures and color schemes for wall finish.

ARMSTRONG CORK CO., Lancaster, Pa.

40—Linoleum Wall Covering—“Transform That Old Room with Armstrong’s Linowall”; broadside in color illustrating uses of this beautiful material.

COLUMBUS COATED FABRICS CORP., Columbus, Ohio.

41—Washable Wall Coverings—“The Important Points of Interior Decoration”; folder of advice by a well known style critic.

HOME EQUIPMENT

PEERLESS MFG. CO., INC., Louisville, Ky.

42—Fireplace Fittings—“Peerless Building Specialties” featuring dome dampers, ash dumps, doors, coal windows, garbage receivers, electric heaters, etc.

MAJESTIC CO., Huntington, Ind.

43—Coal Chutes—“Majestic Building Products for Homes of Character”; 24-page catalog giving entire Majestic line of coal chutes, garbage receivers, garage doors and air conditioning furnaces.

LIGHTOLIER CO., 11 E. 36th St., New York City.

43-A—Lighting Fixtures—“Correct Lighting for American Homes Styled by Lightolier”; 16 pages, well illustrated; complete specifications.

THE ARROW-HART & HEGEMAN ELECTRIC CO., Hartford, Conn.

44—Electrical Supplies—“Arrow General Catalog No. 25”; full information regarding this extensive line.

VICTOR ELECTRIC CO., Cincinnati, Ohio.

45—Ventilators—“The New Victor In-Bilt Ventilator,” a technical data sheet, well illustrated.

AMERICAN TELEPHONE AND TELEGRAPH CO., 195 Broadway, New York City.

46—Telephones—Information regarding telephone installation and service in buildings.

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AMERICAN SAW MILL MACHINERY CO.
60 Main Street Hackettstown, N.J.

HEATING AND AIR CONDITIONING

AMERICAN RADIATOR Co., 40 W. 40th St., New York City.

47—Radiator Heat—Information regarding the American Radiator heating system for every home and building. Equipment for oil, gas or coal, for automatic or manual control.

GENERAL ELECTRIC Co., Air Conditioning Div., Bloomfield, N.J.

48—G-E Air Conditioning—"The Home with Air Conditioning Stays Modern" describes and illustrates equipment and installation; up to date, informative, helpful.

PERFECTION STOVE Co., Cleveland, Ohio.

48-A—Oil Burning Conditioner—"Conditioned Air, Cleaned, Humidified, Warmed and Circulated by Superflex"; an illustrated handbook. Also useful data in "Hot Water with Perfection Oil Burning Water Heater."

GAR WOOD INDUSTRIES, INC., Detroit, Mich.

49—Air Conditioning Unit—"Gar Wood Model 102 Tempered-Aire"; technical folder specifying this equipment.

L. J. MUELLER FURNACE Co., Milwaukee, Wis.

50—Air Conditioning Furnaces—"Mueller Climator," a 12-page handbook on this popular line of heaters and air conditioners.

THE EDWARDS MANUFACTURING Co., Cincinnati, Ohio.

51—Air Conditioning—"Why Air Condition Our Homes in Winter?"; an interesting discussion of the Edwards Hot-Kold equipment.

WEATHERSTRIPPING

THE ADVANCE METAL WEATHERSTRIP & SCREEN MFG. Co., 1281 Hayden Ave., Cleveland, Ohio.

52—Weatherstrips—"The Advance Metal Weatherstrip Catalog."

ACCURATE METAL WEATHERSTRIP Co., New York City.

53—Weatherstrips—"Protection for Your Comfort and Health."

ALLMETAL WEATHERSTRIP Co., 231 W. Illinois St., Chicago, Ill.

54—Weatherstrips—"Weatherstrippers' Sales Kit."

FEDERAL METAL WEATHERSTRIP Co., 4620 Fullerton Ave., Chicago.

55—Weatherstrips—"Federal Weatherstrip Opportunities."

MONARCH METAL WEATHERSTRIP Co., 6333 Etzel Ave., St. Louis, Mo.

56—Weatherstrips—"Simple Cure for Excessive Heating Costs."

PYRAMID METALS Co., 455 N. Oakley Blvd., Chicago, Ill.

58—Weatherstrips—"General Catalog for Architects and Builders."

LUMBER AND MILLWORK

HUTTIG MANUFACTURING Co., Muscatine, Iowa.

58-A—Improved Windows—Information regarding the Huttig rot-proof window, chemically treated, and factory-fitted.

ANGELINA COUNTY LUMBER Co., Keltys, Tex.

59—Lumber Through Retailers—Information for Retail Lumber Dealers About "Sudden Service" on virgin Southern Pine and hardwood.

ARKANSAS SOFT PINE BUREAU, Little Rock, Ark.

60—Pine Paneling and Finish—"New Interiors for Old," a beautiful 16-page brochure with detailed work sheets of paneling and interior finish.

DIERKS LUMBER & COAL Co., Kansas City, Mo.

61—Interior Trim and Paneling—"Beautiful Interiors"; 16-page booklet on inside finish.

MICHIGAN-CALIFORNIA LUMBER Co., Camino, Calif.

62—California Pine—"Facts About Sugar Pine," a folder giving qualities and uses of Sugar Pine lumber.

POLSON LUMBER Co., Hoquiam, Wash.

63—Lumber Through Retailers—Information for dealers on fir, spruce, cedar and hemlock lumber.

VON-PLATEN FOX Co., Iron Mountain, Mich.

64—Lumber Through Retailers—Information for dealers on hard maple, birch, basswood, brown ash, soft maple, hemlock and other northern forest products.

ARKANSAS OAK FLOORING Co., Pine Bluff, Ark.

65—Oak Flooring—Information regarding Perfection brand oak floors.

BRADLEY LUMBER Co. OF ARKANSAS, Warren, Ark.

66—Block Flooring—"Bradley Presents a New Creation in Block Design Flooring," a broadside in color showing this beautiful flooring.

MAPLE FLOORING MANUFACTURING ASSN., Chicago, Ill.

67—Maple Flooring—"Heavy Duty Finishes for Maple Flooring," a folder on approved finishes especially adapted to maple floors given hard usage.

E. L. BRUCE Co., Memphis, Tenn.

68—Oak Flooring—"Patterned Floors—of Wood"; information on Bruce Nail Block flooring.

FORDYCE-CROSSETT SALES Co., 80 E. Jackson Blvd., Chicago, Ill.

69—Treated Lumber—"Crossett Creates a New Day for Lumber," a valuable bulletin on Wolmanized lumber (pressure treated).

FROST LUMBER INDUSTRIES, INC., Shreveport, La.

70—Treated Lumber, Wholesale—Information on Frost yellow pine and hard-

American Builder, October 1935.

wood lumber, both treated and untreated, furnished through retail lumber dealers.

TENNESSEE EASTMAN CORP., Kingsport, Tenn.

71—Wood Treating—"Preservation with NO-D-K"; valuable information on termite and rot protection in lumber.

AMERICAN CREOSOTING Co., Louisville, Ky.

72—Termite Prevention—"Injury to Buildings by Termites"; U. S. Department of Agriculture Leaflet No. 101 giving a sane and careful review of the termite situation.

THE ANTIMITE Co., Arcade Bldg., St. Louis, Mo.

72-A—Termite Treatment—How to kill termites at a profit.

FLORIDA LOUISIANA RED CYPRESS Co., Jacksonville, Fla.

73—Red Cypress—"Build with Arrow Brand Tidewater Red Cypress for Beauty, Economy and Lifelong Durability." 16-page illustrated booklet of home and building designs.

WEYERHAEUSER SALES Co., St. Paul, Minn.

74—4-Square Lumber—"Improved Lumber for House Construction," a 20-page illustrated handbook on good lumber construction.

74-A—Edham Stained Shingles—"Edham Stained Shingles for Character in Homes," a beautiful color folder showing how good shingles do three jobs at the cost of one.

STANLEY WORKS, New Britain, Conn.

75—Builders Hardware—Information regarding the complete Stanley line of builders hardware.

F. D. KEES MFG. Co., Beatrice, Nebr.

76—Hardware and Specialties—"Builders Hardware Catalog No. 14," the Kees new 1935 catalog.

RITSCHER Co., St. Cloud, Minn.

77—Flour Bin Hardware—Information regarding the Ritscher bin swing hardware.

GARAGE DOOR EQUIPMENT

FRANTZ MANUFACTURING Co., Sterling, Ill.

78—Garage Door Equipment—"Over-the-Top Door Equipment," a 16-page well illustrated catalog with many photographs and detail drawings.

THE KINNEAR MANUFACTURING Co., Columbus, Ohio.

79—Garage Door Hardware—"Tip-Top Door Hardware," a broadside presenting this low cost Kinnear door set.

NATIONAL MFG. Co., Sterling, Ill.

80—Garage Sets—"No. 900 Overhead Data Sheet"; circular listing sizes and detailed information on National upward-acting doors.

OVERHEAD DOOR CORP., Hartford City, Ind.