



The home building outlook for 1936 is bright indeed when one considers the optimistic prediction of Peter Grimm, recently appointed Assistant to Secretary of U. S. Treasury, that a construction volume of from four to five times this year's total could be expected for next year. Facts upon which Mr. Grimm bases his assumption were recently revealed to American Builder—they appear on page 24 of this issue—and should be of interest to everyone building homes.

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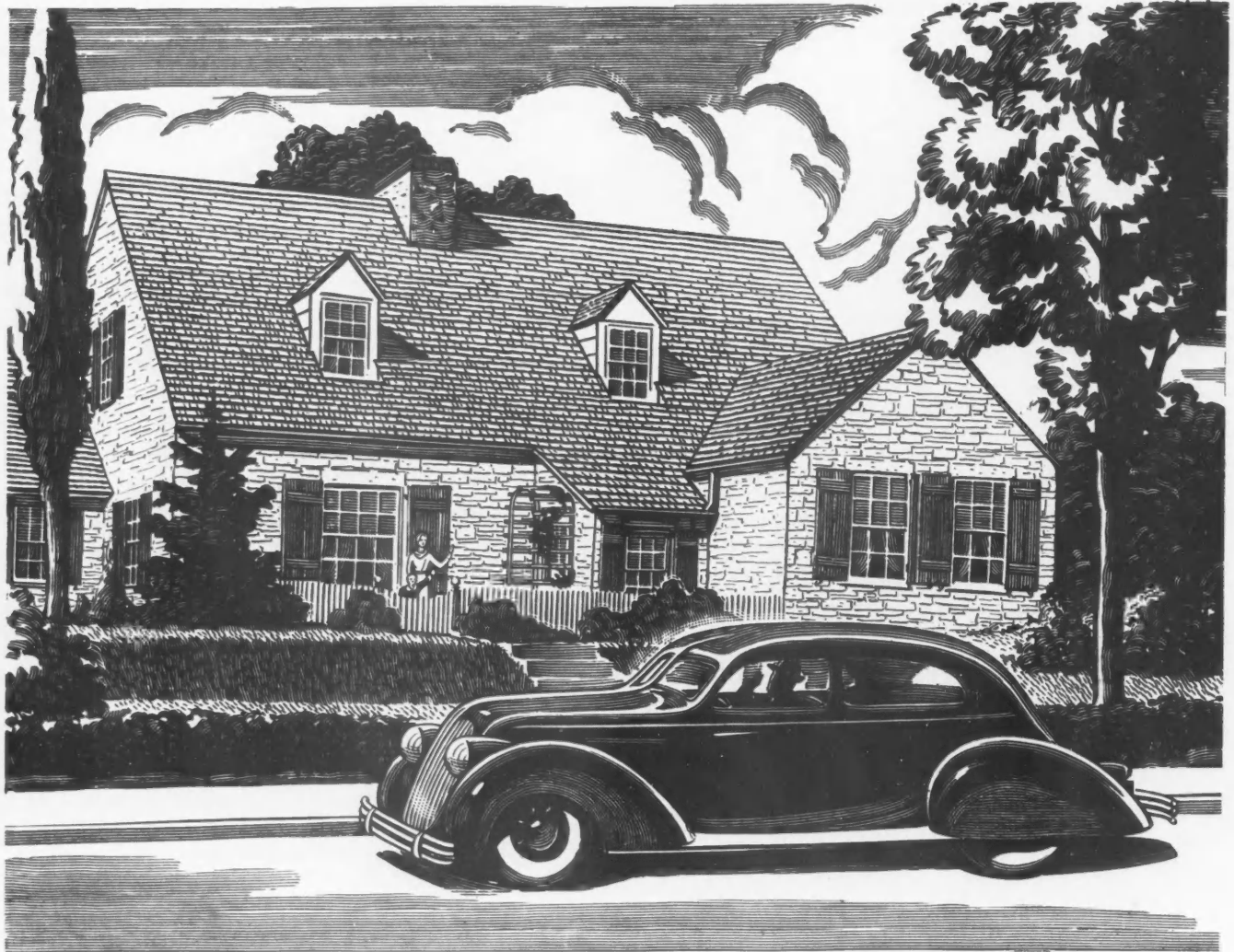
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SOMETHING BETTER

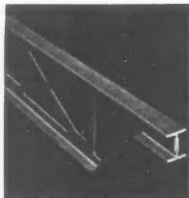
AN automobile of 1920 vintage would be hard to sell today at any price. The motoring public has grown accustomed to riding qualities, smoothness and power that no car possessed fifteen years ago.

Likewise, the buyer of a new home today expects something better than a dwelling of the type that only a few years ago was accepted as the last word. He's interested in fire-safety, conditioned air, and other advances that add so much to comfort and livableness.

In meeting the demand for really modern homes, Kalman Steel Joists offer decided possibilities to the alert building contractor. Combined with concrete floor slab and plaster ceiling, these joists

make a home virtually fire-safe. They greatly facilitate the installation of air-conditioning. They provide a rigid, substantial, non-shrinking, termite-proof floor structure that makes any home a better investment and less subject to swift obsolescence, less likely to need costly repairs.

In spite of all they contribute to safety, livableness and permanent value, the use of Kalman Joists adds only slightly if at all to the building cost. Kalman Joists present no difficult problems to the builder. They reach the job in the exact lengths required and are installed without cutting or fitting. They can, of course, be applied to any size or type of home.



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The New Deal and the Old Dealers

THE *political* struggle between the New Dealers and the Old Dealers will continue for a year. But the real issues are *economic*.

We all want an "abundant life." It can be provided only by (1) adequate *production* of housing, food, clothing, fuel, automobiles and other goods; and (2) economically sound *distribution* of the resulting income.

The American Builder has opposed policies of the New Deal. But, not being in politics, this paper is free to recall that the political and business Old Deal preceded the New Deal—and that *the depression began and reached bottom under the Old Deal*.

The people want to know why there was depression more than three years before the New Deal, and what policies different from those of the New Deal are offered by the Old Dealers for providing abundance in future.

THE Brookings Institution, Washington, D.C., a scientific and impartial economic research organization, has finished a thorough investigation with the conclusion that the depression was caused by *maldistribution of income*. In 1929 the average income of 5,800,000 farm families was only \$1,240, as compared with \$3,226 for 21,674,000 non-farm families. The economics of capitalism assume *free competition* that will cause the benefits of *increased efficiency in industry* to be distributed among all members of society through *reduced prices*. The Institution finds most industrial prices were maintained under the Old Deal, the benefits of industrial efficiency going to labor in increased wages and to capital in increased profits. There were 54,000,000 persons on farms and in small towns directly dependent on farms, who, because of inadequate farm incomes, became unable to pay the prices and wages of industry. Hence, the economic collapse and depression.

THIS conclusion will not suit many Old Dealers because it implies that too large a part of the national income went into industrial profits. It will not suit many New Dealers because it implies that too large a part of the national income went into industrial wages. But something certainly happened to the market of industry and its employees. *And those 54,000,000 persons were the largest part of industry's market.*

Most New Deal policies tend to *restrict production*. But so did Old Deal policies, because maximum production by industry is impossible without a distribution of national income that will afford maximum buying power to all classes.

The Old Deal collapsed because it did not solve the problem of so distributing income as to create a *national demand* for all that could be produced. It hardly tackled it. Many will decide for or against the New Deal according to the way the Old Dealers advocate tackling this vital problem in the future.

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

6 NEW HOUSES SNATCHED UP by tenants who are sold on STUCCO



Six Atlas White stucco homes, six different color combinations, six different textures. Cream and pink, cream and chocolate, pure white, two-tone cream, leather, cream and green—these are some of the colors. The textures range from medium smooth to deep broomed. Average cost of each house—\$6,000. Location—Missoula, Montana. Architect and builder—O. B. Parsons, Missoula.

EVERY house in this attractive block of new Atlas White stucco homes has a satisfied tenant—every house, in fact, was spoken for before completion!

The colorful, pleasingly-textured stucco finish on these homes was not, of course, the only reason for their prompt rental. But builders and realtors tell us that the advantages of an Atlas White portland cement stucco exterior coupled with the other modern improvements that make today's residence a pleasant, safe, comfortable place to live, build waiting lists of tenants and buyers.

Portland cement stucco has qualities which appeal to builder and buyer alike. It is actually a thin exterior wall of concrete—and is as permanent and durable and firesafe. Made with white portland cement, it is applied in *any* color, and in *any* texture suitable to the architectural design. It requires little or no upkeep, is not expensive to apply, and actually becomes better-looking as it grows older.

Complete information on Atlas White stucco will be of dollars-and-cents advantage to you. Write today to Universal Atlas Cement Co. (*United States Steel Corporation Subsidiary*), 208 South LaSalle Street, Chicago.

212

A
factory-prepared
stucco
is
preferable

STUCCO *made with* **ATLAS WHITE**
PORTLAND CEMENT

AMERICAN BUILDER AND BUILDING AGE

Give the Rural Builder a Break

ONE of the queerest quirks of the Federal Housing Administration Program is the definite discrimination against insured loans on houses away from paved streets. It is extremely difficult, if not entirely impossible, for a builder to obtain financing for a prospective home owner who wishes to locate an inexpensive little cottage in a semi-suburban or rural location.

American Builder understands that a well established community with pavements, utilities and convenient transportation is the easiest type of project to insure. It is natural that FHA should make its best showing in large built-up suburban areas that are the easiest to reach and control. But this is no answer to the problem of creating residential construction in the places where it is needed and where there are men anxious to go to work in building needed small homes.

Good Type of Citizen

The "little fellow" in the country or just outside the limits of cities or small towns should have a chance to obtain financing. People who live and build in such places are among the best of American citizens. They are anxious to pay their own way and provide a secure refuge where they can live at low cost and possibly grow some of their own food, keep some chickens or a cow, and lead their own life in their own way. They do not all choose to live in group settlements or controlled subsistence homestead projects, even though there is much to be said for this type of living.

FHA officials might well ponder the following figures from the 1930 census showing where country people live:

Farm population.....	30,160,000
Rural population not on farms.....	14,480,000
Rural population in 13,400 incor- porated places of less than 2,500....	9,200,000
2,200 towns of 2,500 to 10,000.....	10,615,000
791 small cities, 10,000 to 50,000....	15,522,000

Consider the second item above in particular. Here is a rural population of 14,480,000 that lives in dwellings other than on farms. These are "off the pavement" people, certainly, and at the same time they cannot be classed as farmers. By far the greater part of the third group, namely, the 9,200,000 people who live in the 13,400 in-

corporated places of less than 2,500 population—are not on the pavement and, therefore, not able to secure FHA insured loans.

We have the greatest respect and appreciation for what FHA has done for the expensive, urban home builder. But we feel much more can and should be done for the inexpensive semi-rural home builder. Expensive pavements, utilities, close transportation and close shopping regions are simply not possible for people of meager means. The natural inclination of many persons to want to locate their little homes in low cost, "off the pavement" areas—homes they can pay for easily on a long-time amortized basis—should be encouraged by FHA rather than discouraged as at present.

SIMPLIFY THE UNIONS

IN an industry which is making such rapid technical progress as building construction, and especially residential building, the intricate and complicated set-up of craft unions is a handicap that does much to slow down progress and increase costs. The introduction of new materials and new methods into home building is further complicating an already complicated craft set-up.

The building industry is historically the Utopia of the craft union. The large and important unions have a long and honorable history that goes back to the days when modern machine production and materials were unheard of. From the few simple basic trade unions, however, a maze of new groups has grown up so that today the problem of the contractor, especially in the larger cities, is unbelievably complicated and hampered by the need of dealing with so many groups.

Complexities of 50 Unions

The problem of the New York City contractor is complicated by the necessity of dealing with some fifty union groups affiliated with the American Federation of Labor. Rules, regulations, wage and hour disputes and jurisdictional difficulties are becoming more and more difficult to handle. Such peculiarities as a requirement that one union can drill holes up to $\frac{3}{8}$ of an inch, but $\frac{1}{2}$ -inch holes must be bored by another union, are encountered. Putting up a plain baseboard calls for one type of worker. If the board has a certain groove in it, however, erection

is claimed by another union. When a shield is fixed to a radiator, it is the work of a steam-fitter. But if the shield is not attached to a radiator, it must be erected by a sheet metal worker. Flat faced tile laid in mortar is allocated to the bricklayer. When laid in asphalt, this becomes a roofer's task. The continual addition of new materials and composition materials is daily adding to these complications. It leads to the inevitable conclusion that the building industry ought to reorganize its unions into one or two large vertical unions, or at least take steps to simplify and reduce the present number of craft unions.

Simplify or May Lose Market

A single vertical union of the building trades for skilled workers, and another for unskilled would solve most of the contractors' problems. The outlook for such a change is slight at present. The big danger to the unions, as well as to the established building industry as it now exists, is that unless the labor problem is simplified, new competition from prefabricated construction will usurp the market.

A more immediately possible and practical plan to solve some of the union difficulties would be the amalgamation of all the present unions into a few strong, well organized groups under a single authority which would have power to enforce decisions among the individual groups. There is much talk in the building industry today of modernizing work. It might be suggested that a thorough job of remodeling is needed on union set-ups.

Hourly Wages vs. Annual Income

The current criticism of residential construction costs throws into the spotlight again the problem of hourly wages versus annual income. *American Builder* has frequently stated its belief that building workers should have every opportunity to earn a decent income to permit them to maintain a standard of living compatible with American ideals. It has also frequently pointed out that a steady monthly or yearly income is better than irregular employment under excessively high hourly wages. The recent strike of Works Progress Administration workers in New York against the "security wage" of \$93.50 per month granted under the Federal relief plan showed that union officials believe just the opposite. They forced and won a strike against a steady "security wage" solely because it did not pay the established hourly union rate.

Excessively high hourly wages are a real deterrent to improvement in the building industry. Building labor would earn more by accepting a lower hourly scale in return for an increase in the volume of work done. In the residential field particularly, full union wages are seldom paid. If they were, what little recovery has been achieved this year would have been smothered.

In the interests of labor itself, and of the building industry as a whole, more emphasis should be placed on annual income and less on hourly wage rates.

KEEP LOOKING AHEAD

MANY MEN in the building industry today are looking ahead. They do not pretend to know exactly where the present confusion of thought and action is leading us, but they are keeping open-minded and thoughtful. An example is a lumber dealer in an Eastern industrial city of 100,000 who is thinking about the low-cost home market in his town. He has studied the real property inventory and the census figures of his community, and he knows that there are literally thousands of wage earners with good jobs who could buy homes if they could get those homes at a cost of \$15 to \$20 per month.

Richest, Ripest Market

Every effort to date to build houses in this class—which would cost from \$2,000 to \$3,000—has failed to provide the comforts, conveniences and living standards American people demand.

Yet common sense tells us that here is one of the biggest, ripest building material markets in the world.

This lumber dealer has gotten together a group of local building men—architects, engineers, contractors—who are trying to design a house in the low-cost field that actually can be built in that community. He freely admits such a house may never be built, but he is not willing to sit back and do nothing about that market.

Certain it is there are many new developments in construction that should make it possible to build adequate houses that can rent or be carried by a purchaser for from \$15 to \$20 per month. Use of panel materials such as plywood, wall board, and other new products might be tried. If certain important structural parts of a low-cost house were treated against termites or decay, it might be possible to use lighter weight members. Perhaps truly low-cost houses do not need to be built to last for 30 to 50 years as most houses are.

Need Single Family Homes

Surely the building industry can produce single-family homes—not housing—for the great masses of the American public who cannot afford to pay more than \$20 a month. This is a vital matter, and if the private building industry does not do it there is a constant threat that governmental building operations will be invoked instead.

Tremendous harm has been done the low cost home field by the idiotic publicity and unfounded claims of some of the recent comers in the field who claim to be prefabricated house builders, although none of them has been able to build and sell a successful low cost house. The unfortunate part about much of this activity is that it has been aided and abetted by some of the biggest names in the equipment and materials field.

The publicity seeking prefabricators have talked a lot about a low-cost house. Let's see whether some of the experienced practical men of the building industry cannot really get somewhere with such a plan in their own towns.



Samuel Minskoff is owner and builder of this modern apartment structure now nearing completion at 420 E. 86th St., in New York City. The corner windows, modern equipment and small units are typical of the many new structures now being built in some Eastern cities.

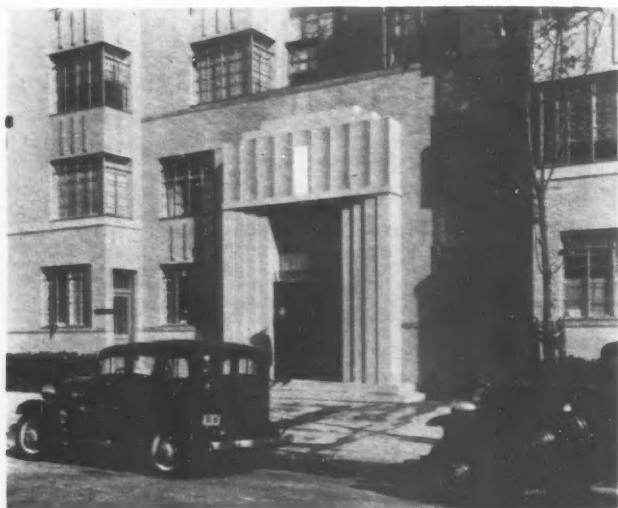
Apartment Building Steps Ahead

RISING rents and a growing shortage of small and moderate sized apartment units in many cities are opening up the new apartment building market. More than 100 new apartment buildings have been built in New York the past year, and considerable activity has gotten under way in other cities. The opportunities for builders in modernizing old apartments and building new ones are unusually great today. The bulk of such work is done by building operators who form a building and ownership corporation. Reports from the smaller towns and cities show an unusual increase in modernizing and construction of smaller types of store buildings, shops and commercial buildings—a profitable field.



Featuring Corner Windows

New York Builders Adopt Modern Styling, Modern Equipment in New Apartment Structures



Attractive modern entrance to 1000 Grand Concourse building

THE apartment building market is slowly opening up in New York and other cities where the rental situation, particularly in the low and moderate cost brackets, is becoming more and more acute. It is estimated that more than 100 apartment structures of various types and sizes have been built in the New York area this year.

The majority of apartment structures in New York are owned and built by special corporations formed for each individual job. The 1000 Grand Concourse structure illustrated with this article is owned and built by the Concourse Development Company, David Rose, president. It was financed by a mortgage of the Equitable Life Assurance Society.

Builders engaged in this type of apartment project, as well as many of the modernizing projects in New York, are referred to as "operators." They buy the land, arrange the financing, hire an architect to draw plans, and do the actual construction and supervision themselves. After completion, the project is turned over to a real estate management corporation or is sold to an operating

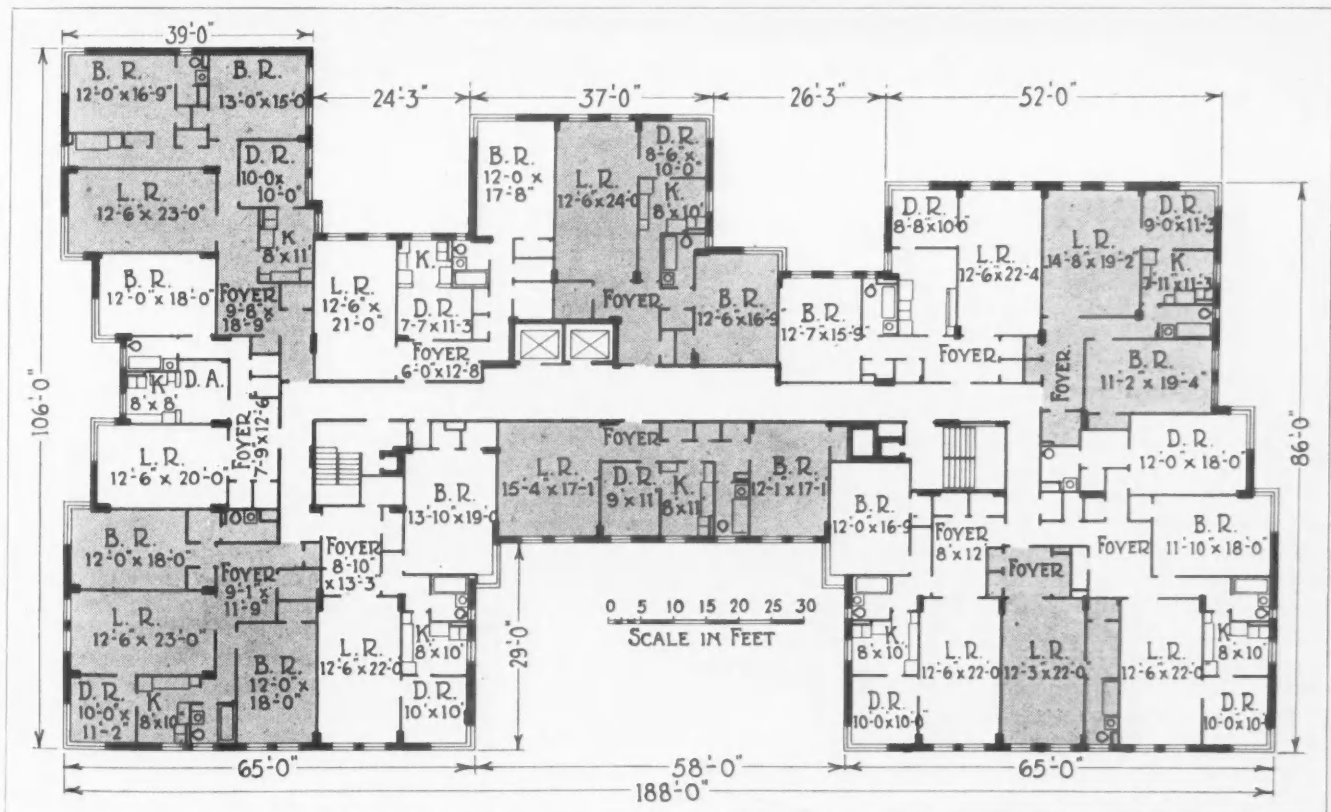
and management company or corporation.

The 1000 Grand Concourse structure illustrated at right, for which plans were drawn by Sugerman & Berger, illustrates many of the new trends in apartment design, equipment and construction. It has attractive corner windows which give light and roominess. Practically all the new apartment structures are featuring such corner windows. It is a 10-story, concrete structure using a new system which eliminates showing of beams in the finished room. The building has sound-proof walls, heat insulation, recessed radiators, roof garden, terraces and pent-house. Suites range from 1½ to 6 rooms, all of good size. In co-operation with the Kernerator Company, a new type of incinerator has been developed and installed. Kitchen and bath equipment are of the latest modern type.

By far the greatest demand in the New York area is for smaller type units, such as 2½, 3½ and 4½ room apartments. The public is demanding large rooms with plenty of light and air, courts, larger foyers and modern interiors, particularly in the treatment of bathrooms and kitchens. The new "operators" who have taken over this work are profiting by the six years of engineering and architectural developments and advance in mechanical science. Centralized control of purchases of land, materials, equipment and of financing gives the operative apartment builder an opportunity for economies and attractive future profits. It has proved successful.



Built by David Rose and financed by mortgage of the Equitable Life Assurance Society.



Apartment units from 1½ to 6 rooms are included in the 10-story fireproof structure. Small and moderate priced units are in greatest demand in the present apartment market.

Record Home Building Rise Forecast—

New Assistant to Secretary of U. S. Treasury Predicts 1936 Volume will be Five Times This Year

by JOSEPH B. MASON

PILING fact on favorable fact, recent fast moving developments in the building industry are creating a glowing picture for 1936.

The current building news of rising rents and prices, lower mortgage rates and an increasing supply of building money is cheering alike to builders, bankers and business men.

There have been rumors of a big "building push" for 1936. Some of the rumors are exciting, others disquieting. It has been pointed out that of all the recent activities of the government, the Housing Act has been most favorably received. Political wiseacres are saying that home building will be actively pushed and widely featured in every possible way in 1936 because of the political value that would be attached to a revival in this most basic of all industries.

American Builder set out to track down some of the rumors and find out for its readers in as accurate a way as possible at this date what is ahead for residential construction in 1936. The facts will speak for themselves.

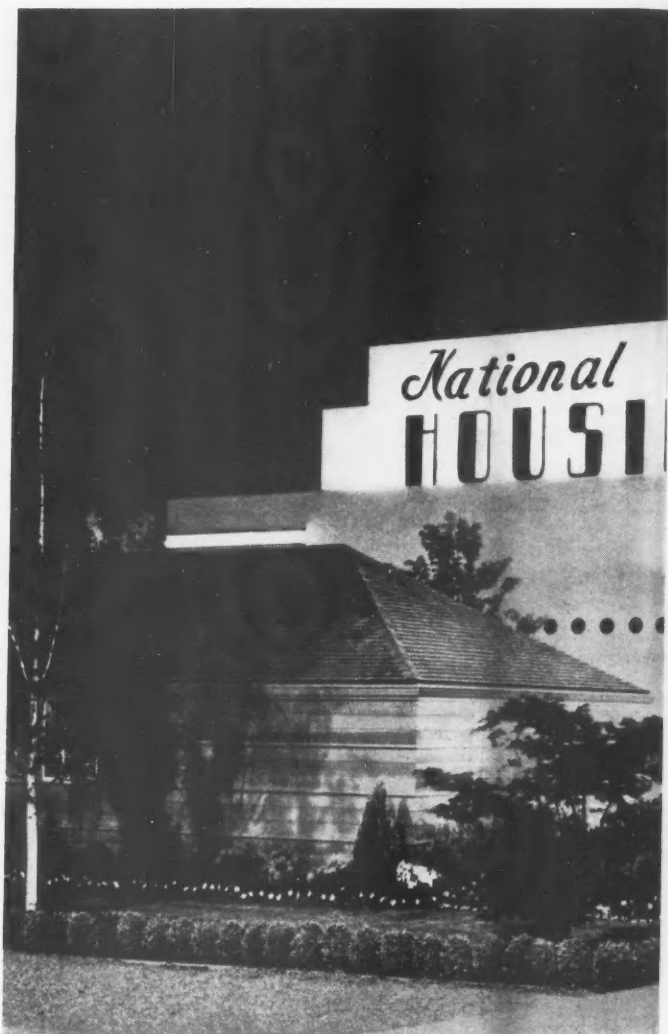
Grimm Is Not Grim

Of all the favorable factors assembled, the most startlingly encouraging were those revealed in a special interview with Peter Grimm, the new Assistant to the Secretary of the U. S. Treasury. Grimm was recently appointed to this important government post to represent the Treasury Department in all housing activities of the Government. He had just returned from a tour of leading cities in which he talked with real estate and building men in close touch with current conditions. Sitting in his office in the Treasury Building—a large Colonial room formerly occupied by Secretary Mellon—Peter Grimm told *American Builder* that a building boom that will carry residential construction to new heights is in the making. He predicted a 1936 residential volume of from four to five times this year's volume, with a probable construction of at least 450,000 residential units.

This new assistant to Henry Morgenthau, Jr., is a real estate man of practical experience and ability. His knowledge of building conditions will be of high value in keeping governmental housing activities on a sane basis that will encourage private work to the maximum.

One of the first steps taken by Grimm and his associates was a study of building statistics supplied by the various housing and building divisions of the Federal Government. It was on the basis of these thoroughly considered data that his predictions are made.

The long term building picture as revealed by the treasury statistics is extraordinarily encouraging. On the basis of these figures, Grimm predicts a construction of at least 6,000,000 new homes in the next ten years, and there is basis, according to one analysis of the data



Millions of People Will Attend Housing Shows in 1936

to indicate that the program might well go ahead at the rate of a million homes a year. To builders as well as bankers and business men, such a program can mean only one thing—a period of housing activity unequalled in this nation's history and one that will put every building man back to work and tax the capacity of all manufacturing and producing establishments to the limit.

Vacancies Less Than 2 Per Cent

Every important factor in creating a housing need has been analyzed and taken into consideration by the Treasury Department in computing these data. A rapidly increasing marriage rate to make up for the subnormal rate of the past few years is an important factor. An enormous housing deficiency as a result of the building depression is shown. Other factors include obsolescence, decrease in the doubling up of families common during the depression and now being lessened by improved business conditions. Rising rents, lower taxes, increased occupancy and a liberal supply of mortgage money are other factors making for the predicted increase.

Vacancies in most cities, Peter Grimm pointed out, are down to 2 per cent, and in many cities even lower. The shortage is particularly great in the moderate priced

Builders Prepare for Sharp '36 Upturn



Home Building Will Be The Most Talked of Subject in 1936

home field. The steadily rising rent curve will go up almost perpendicularly in the near future.

The inevitable result of the occupancy, rental and financial factors will be a feverishly rapid increase in building, a sharp upturn in building costs and a building boom that would inevitably be followed by an equally sharp drop later on. In the opinion of Grimm, the Federal Government can help to even out this cycle by stimulating a supply of homes early next year before the housing shortage becomes excessively acute. By exerting other controls within the province of government, a more orderly increase in building will thus be made possible with greater assurance of quality construction and a minimum of over-supply, or of ill advised, poorly planned work.

The Treasury Department is in a position to exert a powerful influence on the building program through the various housing divisions, the RFC, the Home Loan Bank system and, recently of supreme importance, the new real estate mortgage discount features of the Banking Act of 1935. An enormous expansion of building credit can be assured. At the same time, ample control exists to prevent excessive use of credit.

It was pointed out by Peter Grimm that use of Federal credit in connection with housing and home building

Plentiful Supply of Mortgage Money, Rising Rents and Building Shortage Are Factors in Increase

must be kept in close relationship to the needs of the country and the financial structure of the government. It is his hope to promote the co-ordination of all the housing activities of the government and insure their close co-operation with private financial institutions in a way that will aid private construction to the utmost.

Billions for Building

A well known economist, when asked recently about the discussed building boom ahead, said, "If cheap money and a plentiful supply of it can make a building boom, we will have one."

Most building authorities agree that if an ample supply of long term mortgage funds at increasingly lower interest rates is made available, residential construction is bound to forge rapidly ahead. Probably the task of greatest importance, therefore, to be undertaken by Assistant Secretary Peter Grimm and his Treasury associates is the building up of confidence of banks and lending institutions in the security of mortgage loans for residential work and the advantages to these institutions of liberalizing credit to the utmost extent.

The potential credit for home building today is the greatest in the nation's history. To translate this potential credit into active building money is the task of Mr. Grimm. In summarizing the attractiveness of insured mortgage loans, he pointed out the following facts which the Treasury is now taking steps to make clear to the banks and lending institutions of the nation. Briefly the points are:

(1) These mortgages may be held as a sound type of investment with a high interest return, backed with the guarantee of the U. S. Government. No other security is available to financial institutions today with comparable high return and sound rating.

(Continued to page 68)

Forward Factors

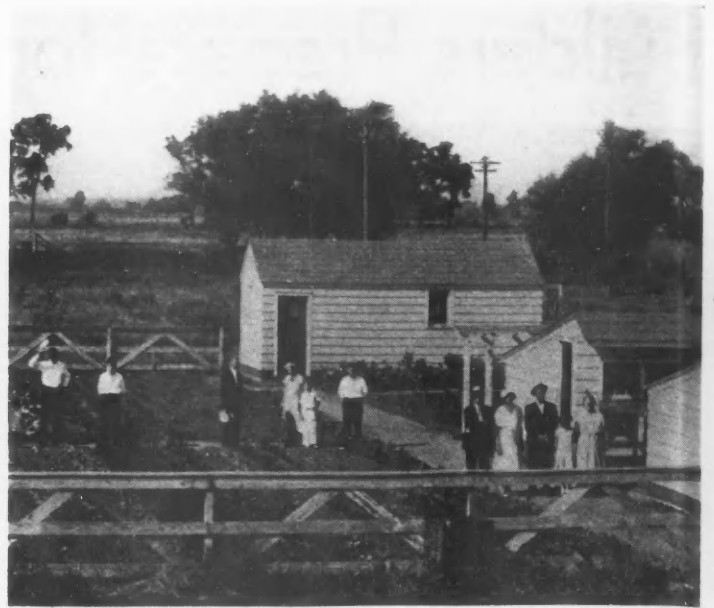
Treasury official predicts ample supply of long term mortgage money at lower rates. New liquidity given mortgage loans by Banking Act of 1935.

Rising rentals driving families to home building. Vacancies down to less than 2 per cent in moderate priced houses.

Biggest summer and fall building season in years indicates banner year in 1936.

"Off the Pavement" Homes Need Financing Too

CHICAGO BUILDER says largest home market goes begging because of total lack of long term financing.



UNCLE SAM, Henry Ford, Abraham Lincoln and other potent names are quoted by Fred J. Walsh of Chicago, in pointing out the advantages of a "little farm" home on the outskirts of the city. The Walsh tract is located at 159th and Kedzie streets within reach of the industrial sections of Chicago. The land is being sold at liquidation prices, making it possible for prospective home builders to buy a lot for as little as \$1.00 a week. According to Harry M. Quinn, Construction Manager of the Walsh Company, the semi-suburban home of this type constitutes one of the largest markets in Chicago today. Yet the man who wants to build a home in such a project, or who wants to build any kind of a house "off the pavement," finds it almost impossible to obtain financing.

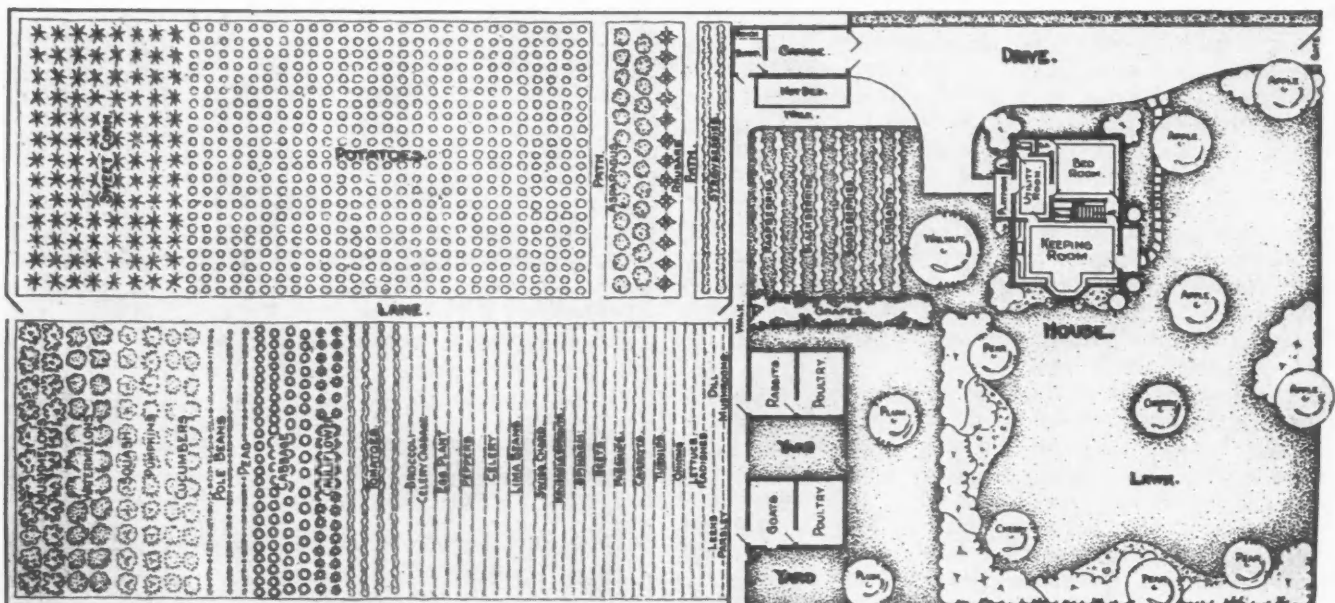
"Knowing he is limited in capital and income, the 'off the pavement' home owner is willing to sacrifice luxuries and frills in order to get a home now when the children are growing up," declares Harry Quinn. "He is a man with an income from steady employment, a few hundred

dollars in cash and an income of from \$1,000 to \$2,500 a year. He wants to build a house costing from \$1,500 to \$3,500 on the outskirts of the city where the price of land fits his income, and taxes are low.

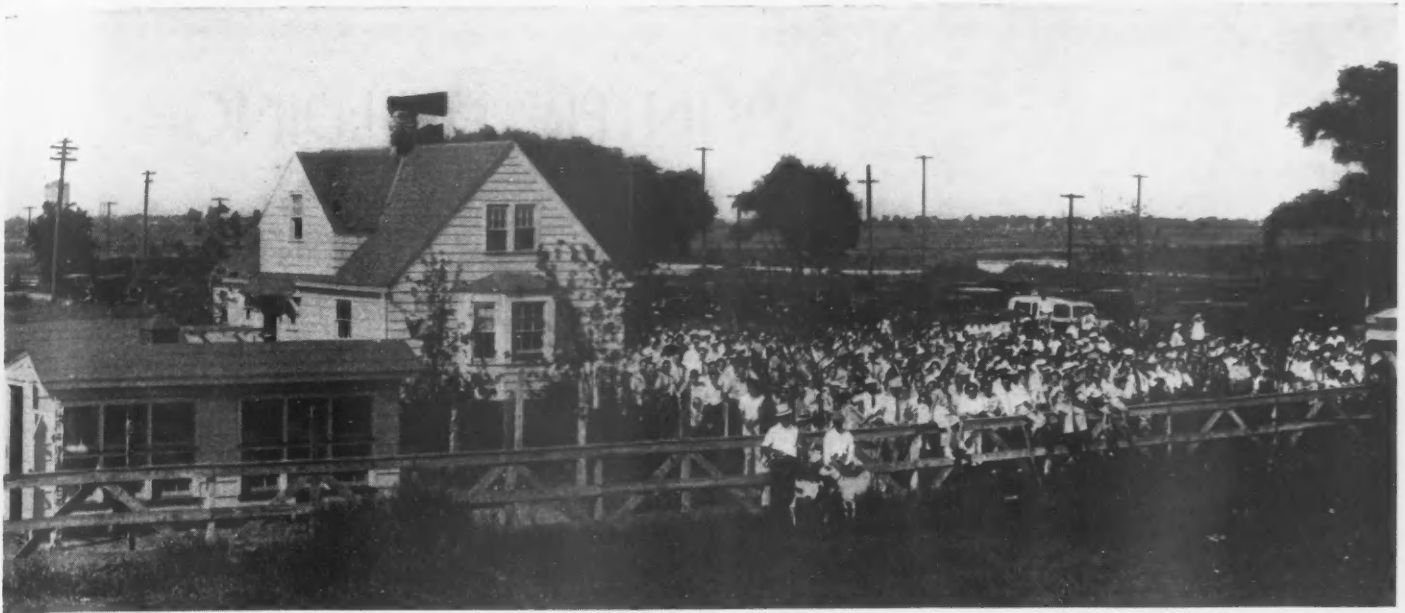
"This 'off the pavement' home owner does not need expensive paved streets and other utilities. He is willing to do without central heating, extra rooms, air conditioners and other luxuries until he can afford them with his own money,—not borrowed money.

"I have talked with hundreds of such people, and it is hard to explain why they cannot obtain financing for their homes when people who are not willing to sacrifice conveniences and comfort or be as frugal and careful as they are, can obtain all the money they want."

Quinn points out that a loan of \$2,000 would finance most of the "off the pavement" homes so much needed by low income people. They could pay for such a house at the rate of \$15.60 per month, retiring the loan in 20 years. Such monthly payments would not squeeze the last penny from their income but would leave them



LAYOUT OF A TYPICAL "LITTLE FARM" on the Fred J. Walsh development on outskirts of Chicago.



OPENING DAY on the "little farm" on outskirts of Chicago in Fred J. Walsh tract. The house, poultry buildings and garden layout are well planned, low in cost.

enough to raise and educate their families in a decent American way.

"Why should the 'little fellow' be compelled to live in an apartment and pay \$30 to \$35 a month rent, with the near prospect of higher rents?" asks Quinn.

Sales of lots in the Walsh project have been very successful and many of the owners are working on plans for their own little farm homes. Quinn predicts that at least 100 homes would be started in 30 days if financing were available. Quinn continues:

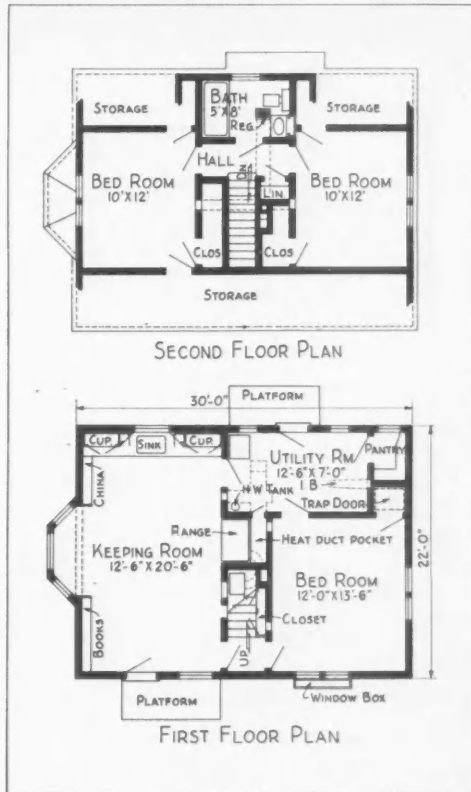
"These low priced home builders get the same answer from Federal Savings and Loan Association,—they will loan money for a bigger house in a built up section, where there are high taxes, and with all the extras he knows he cannot afford, but they will not go into the district that he can afford.

"If this man and the other hundreds like him could get the financing he needs, you would see these homes going up by the hundreds all over the Chicago district. In the last thirty days I have talked to close to four hundred families who have just purchased this kind of property, and want this kind of home. They cannot understand why they, when buying a home of this kind—one that no decent American family would be ashamed of—cannot get financing.

"I have been associated with this low cost housing field for some time, and two districts stand out as examples of what happens when financing is available and when it is not.

"In the first district I was able to procure from private sources financing for these home builders, and 50 homes have been erected,—well constructed, well planned, good size rooms, complete plumbing, well kept lawns, gardens and landscaping. A credit to the community.

"In the second district no financing available, but the urge for a home of their own that could not be suppressed. The result, with their small savings, help of their friends labor, second hand materials, etc. and small credit they were able to obtain—50 eyesores, shacks families crowded into 2 small rooms, no plumbing, none of the ordinary everyday necessities, primitive in every sense of the word, a district ruined for years to come. These people would sooner live there than go back paying rent. But what a scandal in this day and age to have American citizens live and raise their families like this, because they are independent, not on relief, not



FLOOR PLANS of the country residence pictured above. House has all modern conveniences, is inexpensive to build.

objects of charity, but decent, honest, law abiding people, who want freedom from worry on the two main necessities of life—food from their garden and chickens, and shelter.

"It is estimated that 80% of the wage earners receive less than \$1,800.00 per year. No building for the last 7 years has created a tremendous low cost need.

"All these people need is small mortgage financing, they are the finest kind of credit risk. Why cannot these false standards, set up by the F. H. A. be revised to include the very ones the laws were passed for?"



WITH proper protection, winter work can go ahead at lower cost due to more plentiful supply of labor and materials than in summer.

THE unusually strong fall residential market is making it profitable for many builders to start construction this fall, doing the work this winter and having the house ready for occupancy early in the spring or before. New developments in materials and methods make winter construction practical and feasible. Due to the plentiful supply of labor and materials, costs can be kept at a minimum.

"Dry construction" does much to eliminate the troubles and difficulties of plastering in cold weather. This leaves the only division that requires special care—concrete and masonry work—for special attention. A few of the basic principles are as follows:

Protection and Heat Required

Protection—When the temperature is below 40 degrees F., mixing mortar and aggregates should be heated and the freshly placed concrete protected by housing or covering and heating. Tarpaulins should be arranged so that heated air can circulate freely between the tarpaulin and the freshly placed concrete.

Heating—Heat may be supplied by salamanders or special boiler equipment which will maintain a temperature of not less than 50 degrees for a period of 72 hours after placing.

Heating Materials—Concrete, when placed in the form, should have a temperature of not less than 70 degrees nor more than 100 degrees. Either aggregate or water or both may be heated, using steam coils or other devices. Aggregate containing frozen lumps should be independently heated, and no materials containing frozen lumps, ice or snow should be allowed to enter the mixer.

Preparation of Forms—Forms for the concrete or any surface with which it comes in contact, such as the reinforcements, should be heated so as to remove any ice or snow. Concrete should not be placed on a sub-grade that is frozen or on one that contains frozen materials.

WINTER BUILDING—*

Improved Methods and Materials Speed Up Cold Weather Work. More Homes to Be Built in Anticipation of Good Spring Market.

Use of Calcium Chloride—Recent tests by the National Bureau of Standards show that the use of calcium chloride in proper amounts is a definite aid in cold weather concrete work. Addition of the calcium chloride increases the early strength and increases the flow—two important considerations in cold weather work. However, the addition of calcium chloride is not a substitute for adequate protection, which should be maintained as recommended above.

Two pounds of calcium chloride should normally be used for each bag of cement.

The common method of using is to fill a 50 gallon barrel about two-thirds full of water and put in 200 pounds (two bags), stir until the calcium chloride is thoroughly dissolved. Then add enough water to fill the barrel. This will produce 50 gallons of a standard solution having 4 pounds of calcium chloride in a gallon, or 1 pound in a quart.

After the solution has been prepared, mix the batch of concrete or cement mortar in the usual way, except that for each bag of cement used, add the necessary amount of calcium chloride solution with the gauging water. This amount may be changed to suit conditions.

The gauging water generally used in plain concrete should be reduced when using calcium chloride. It should be cut down by a volume equal to that of the calcium chloride solution used.

The following report of the recent tests by the National Bureau of Standards on the effect of calcium chloride on cold weather concreting is of interest:

"Results of the tests show that mortar containing 2 per cent of commercial calcium chloride has a strength approximately 15 per cent greater than plain mortar at one year; the strength at one day is practically doubled by the use of 2 per cent of commercial calcium chloride.

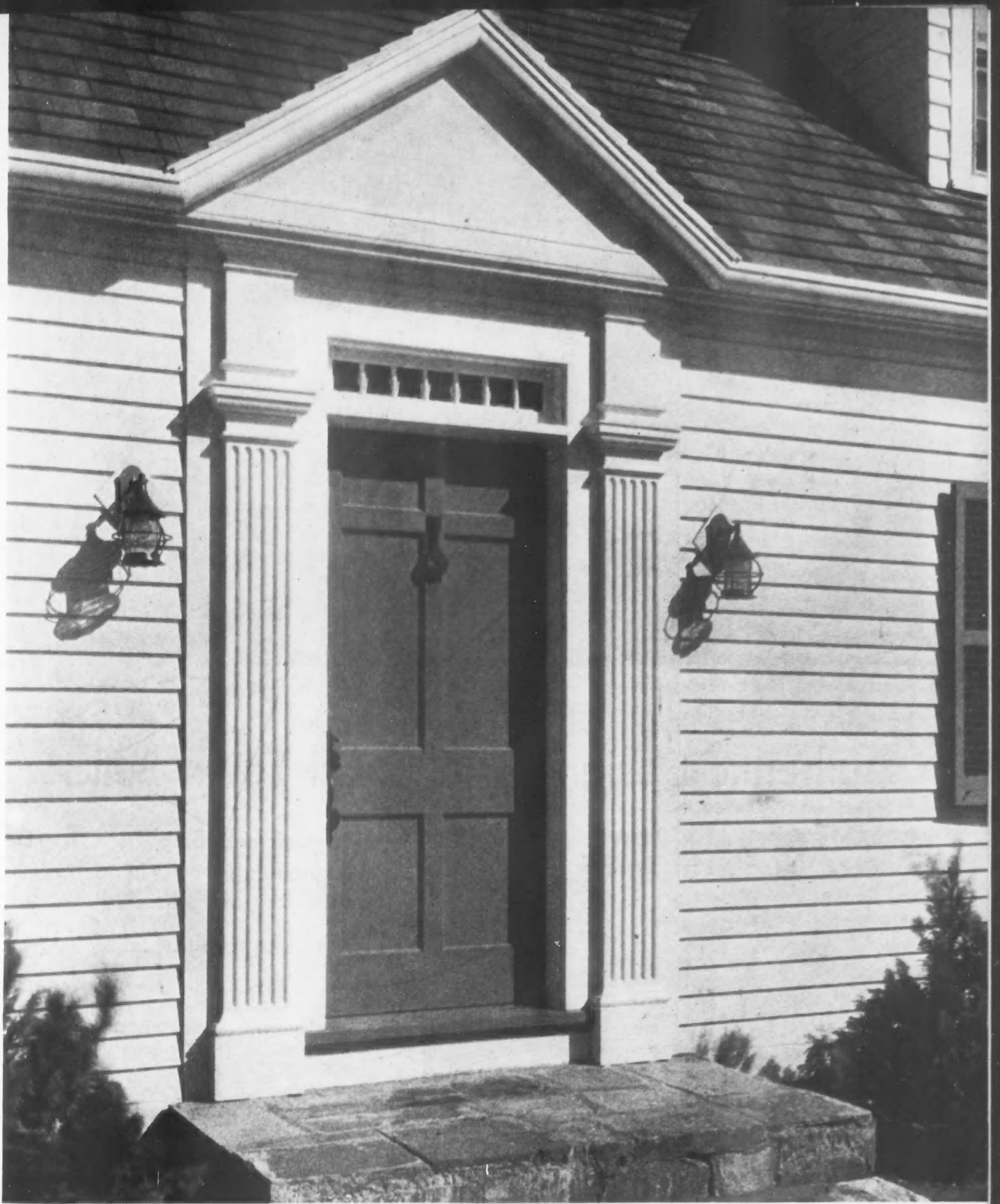
"There was an increase in the average flow (of concrete) from 29 to 41 with the addition of 2 per cent commercial calcium chloride. This increase in flow indicates increased workability.

"All concretes with calcium chloride have greater strength than the plain concrete at all ages tested.

"Calcium chloride not only greatly increases the early strength, but also appreciably increases the three year strength of the concrete.

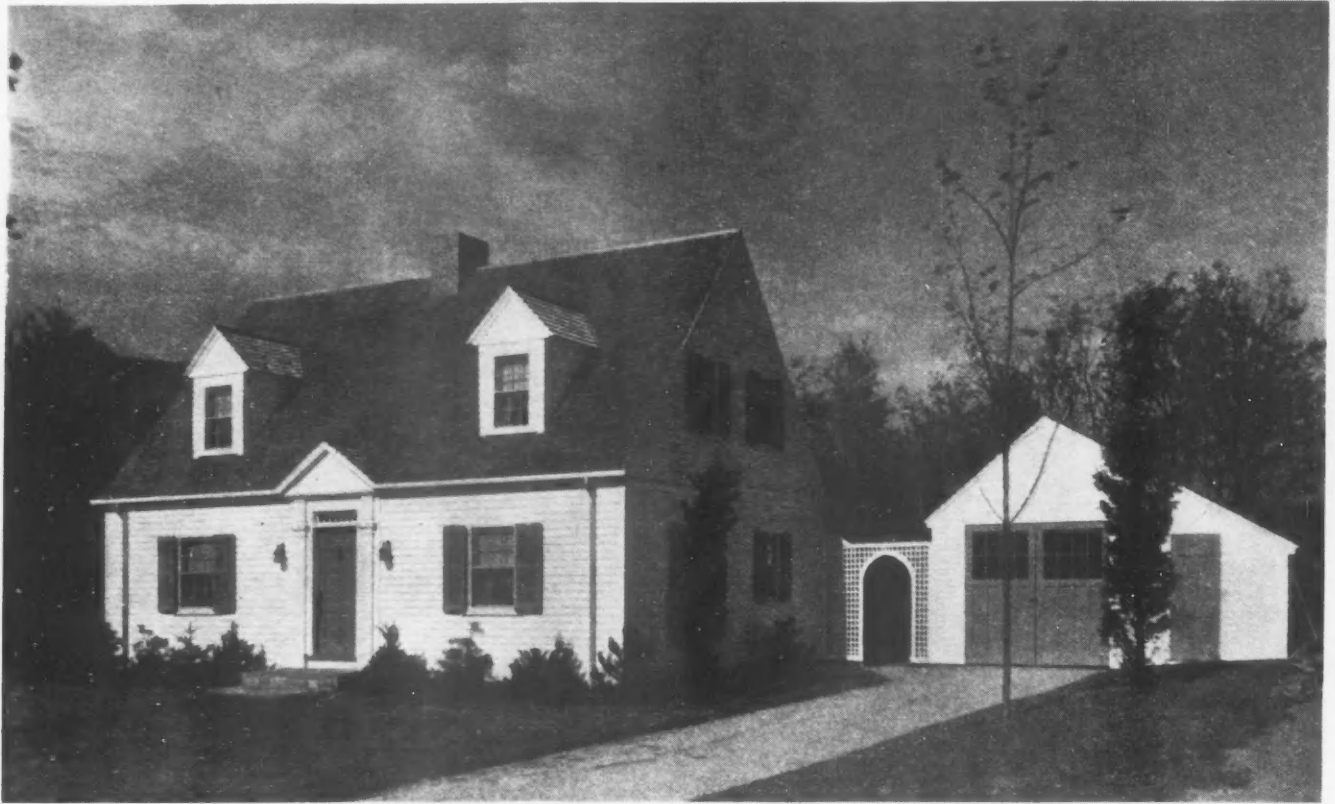
"The strengths of the mortars were increased for all percentages of calcium chloride added for the three storage conditions—40, 70 and 90 degrees F. Greatest increase in strength due to the addition of calcium chloride is obtained at low temperatures and early ages.

*Editor's Note: A number of excellent technical folders on winter concreting have been prepared by the Portland Cement Assn., 33 W. Grand Ave., Chicago, which are available free to contractors on request. These include "Doing Your Part This Winter," "Concrete in Cold Weather" (No. ST21—including specifications) and "Winter Concrete Work."



Front Cover Thanksgiving Home

THE COLONIAL ENTRANCE details of the House of the Month Thanksgiving Home are unusually good in the simple handling of cornice and trim. Further illustrations and plans on the following two pages show a well designed home with a good sized dining room suitable for a family gathering at the harvest-time Thanksgiving dinner.



CHARLES RASQUE, Kent, Conn., builder, designed and built this attractive Colonial house to fit in with the historic architecture of his section.

Authentic Design By A Small Town Builder



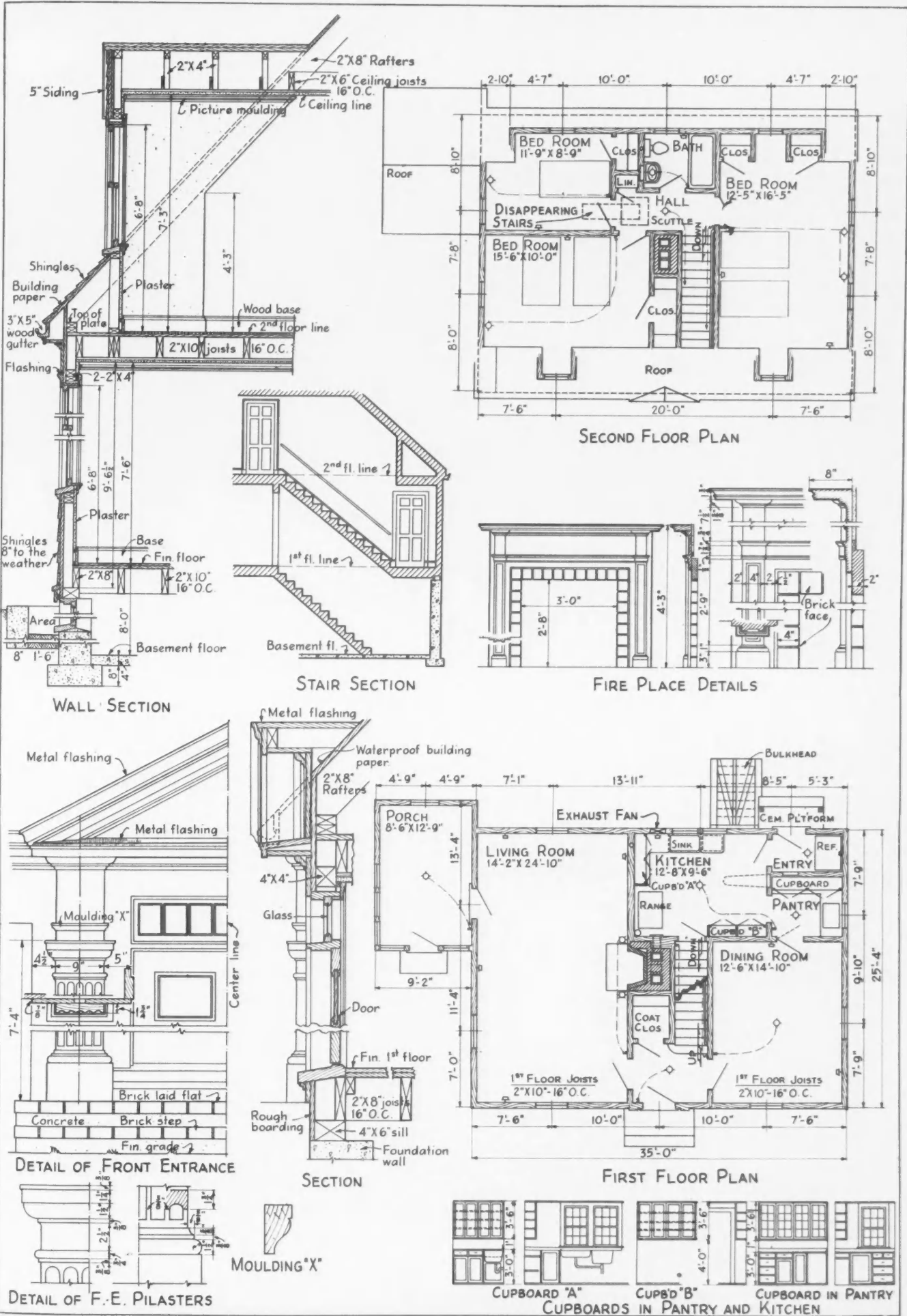
Designed and built by Charles Rasque, Kent, Conn., in accordance with history of his locality

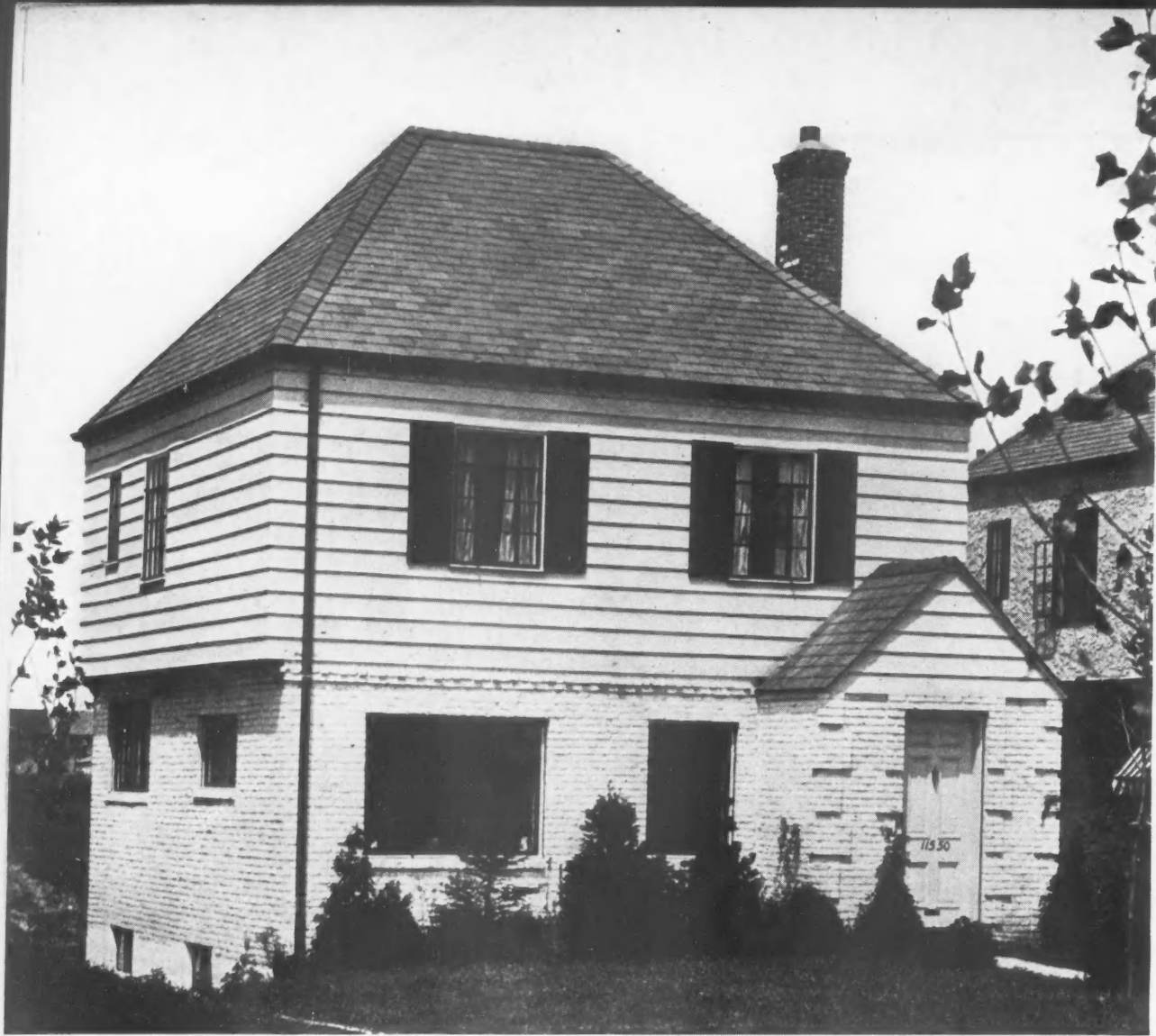
Cost Key is 1.694-142-887-38-20-15

CHARLES RASQUE has been in the carpentry and contracting business in Kent, Conn., for more than twenty years. He is a typical small town builder who plans his own jobs, buys all the materials locally himself and does a large part of the work himself. In the house above he has chosen a style of architecture that is thoroughly in keeping with the historical nature of the Connecticut countryside. The house is well built and has proved exceptionally popular.

AT LEFT is shown a porch detail which illustrates use of a partially enclosed porch that is very attractive.

DETAILED DRAWINGS of this house are shown on the opposite page and are worthy of careful study. The front entrance, cornice and porch details are given authentic Colonial appearance without use of expensive special moldings or trim. They are simple in effect but unusually attractive.





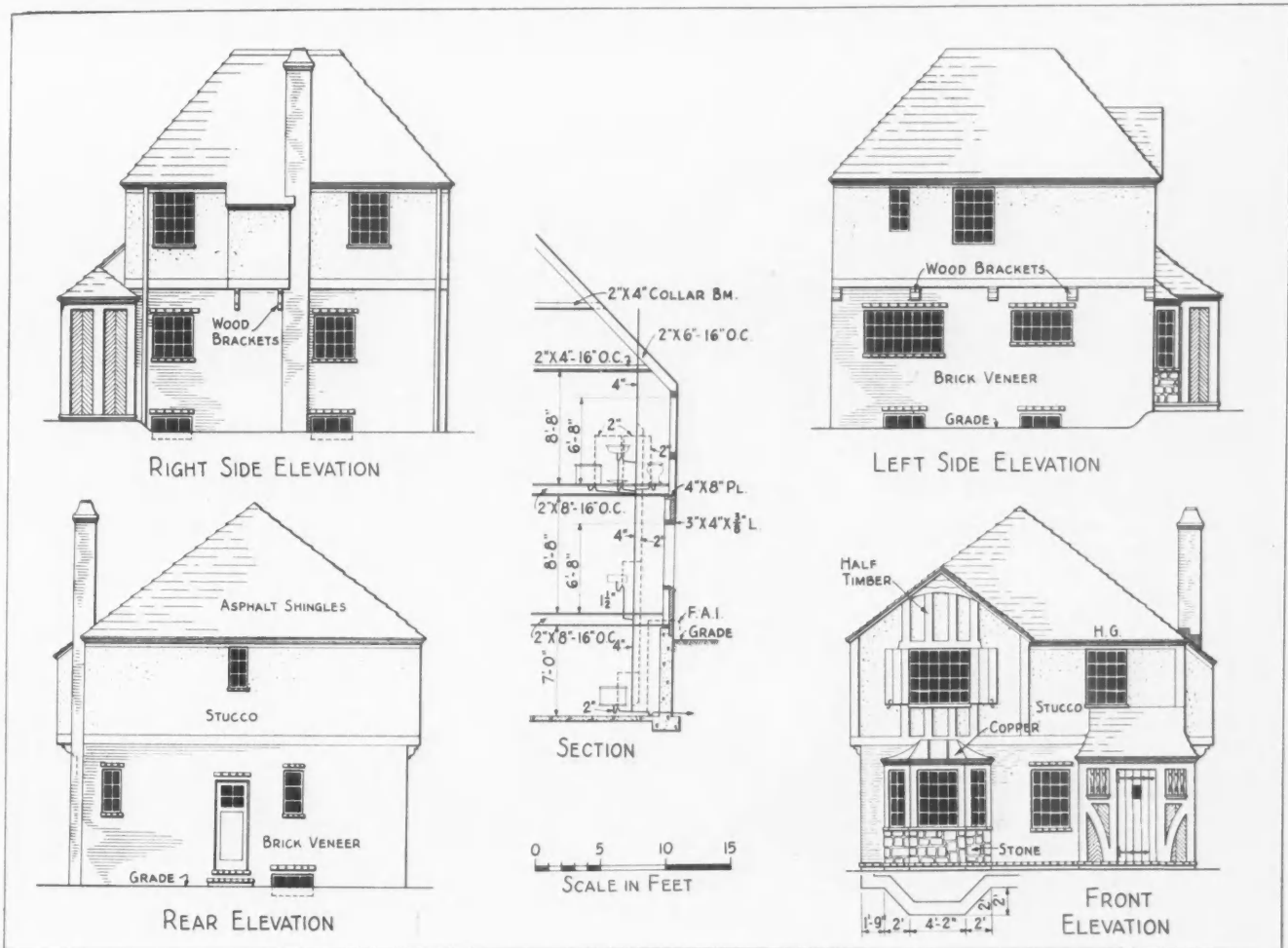
Two Popular Houses Selling Under \$5,000

TWO SPLENDID EXAMPLES of the quality work being done by operative builders at low cost, are shown on this and the opposite page. These are two of the hundred houses being built at St. Albans, on Long Island, by Alvin B. Wolosoff, a builder of long experience in this section. They are sold under the name of Aladdin Homes, and the two models illustrated sell for slightly under \$5,000 including lot and landscaping.

Cost Key is 1.344-112-657-28-20-11

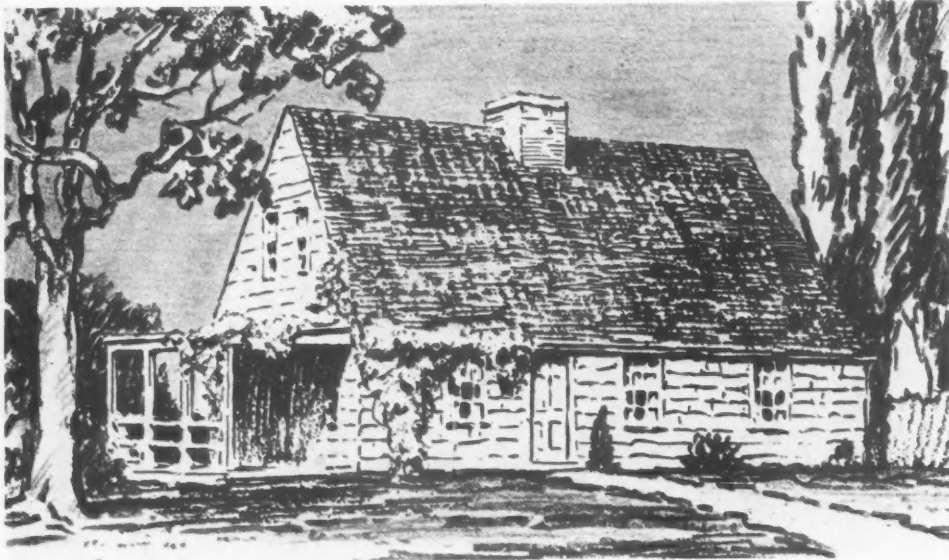


THE FLOOR PLAN of these two small homes is worthy of study. First floor dimensions are 25 x 25 ft. Yet due to the scientific planning, Wolosoff provides a 12' 7" x 20' 2" living room, 10' 7" x 13' 9" dining room, ample kitchen and three bedrooms. This floor plan has proved immensely popular as have the exterior designs created by Wolosoff. These houses are soundly built with 12 in. concrete basement, 3 x 8 joists on 16 in. centers, steel casement windows, lifetime slate roof, copper metal work throughout.

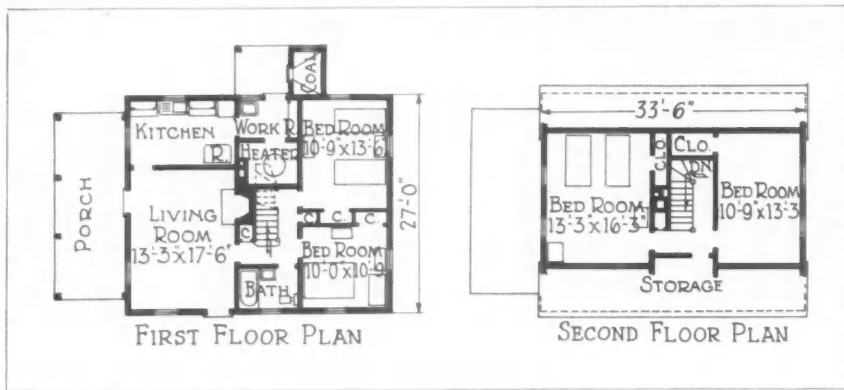


AN ENGLISH STYLE model built by A. B. Wolosoff, which has proved particularly popular. First floor area is only 25 x 25 ft., yet rooms are ample, well lighted and planned. Photograph below shows house built from reverse plans. Cost Key is 1.377-114-670-28-20-10





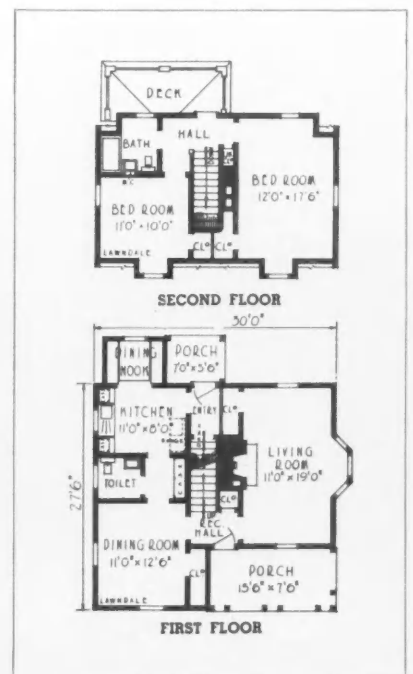
THE SIX-ROOM, story and one-half, basementless house shown at the left is Subsistence Homesteads PLAN-614. Four bedrooms are included in this small plan which has little waste space. The living room may be used for dining as there is direct access from the kitchen. Heating plant is located in central space on the first floor for economy. Cost Key is 1.530-121-(904) - (38)-14-18

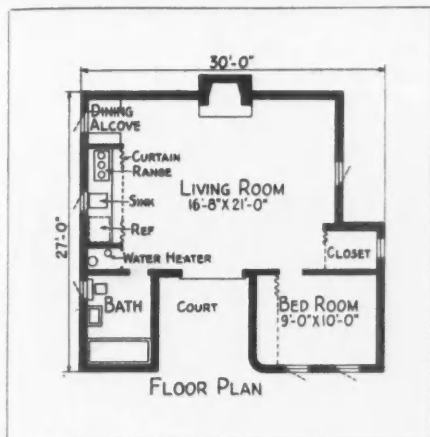


Four Compact and Efficient Home Designs

THE CHARMING small home below is the Lawdale from National Plan Service. The dining room can be used as a bedroom or guest room and the second floor later when more space is needed as the family grows in size.

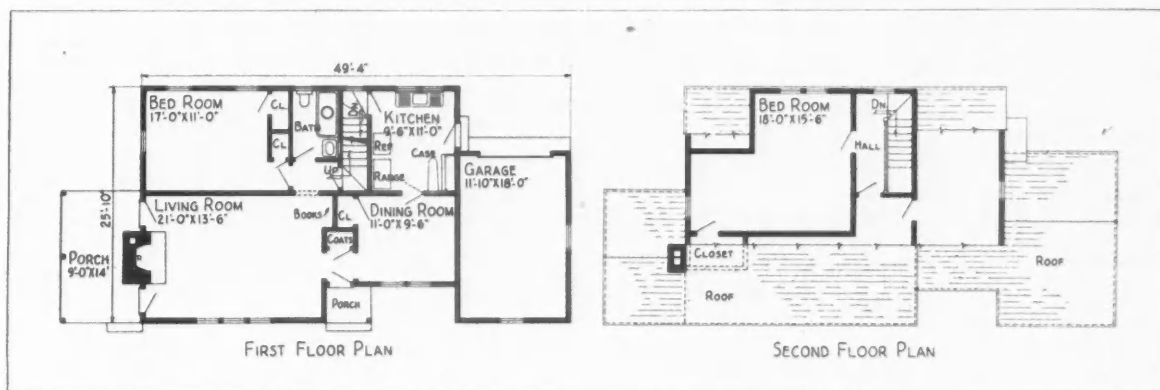
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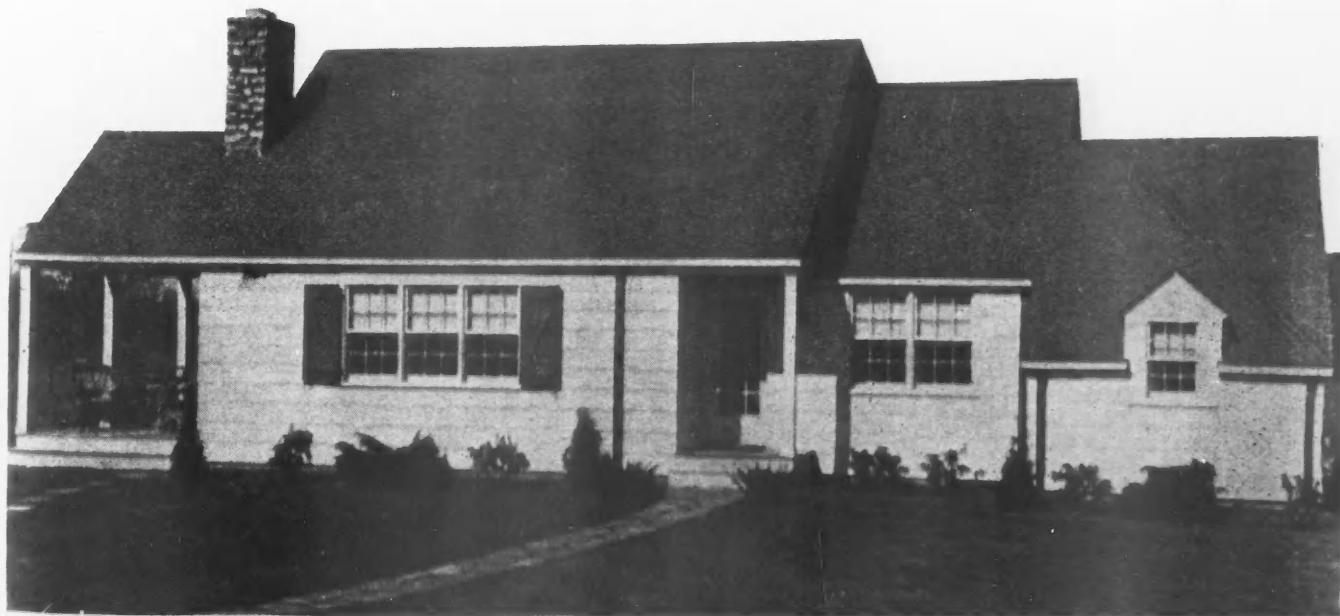


FOR THOSE WHO like modern, the small apartment home above offers compactness for a family of two. This concrete home located at Williamsville, N.Y., was designed and built by Franklin Brill and is included in Portland Cement Association's "22 Low Cost Concrete Homes."

DESIGNED BY THE Small House Advisory Service of New Jersey, and built by Edward Croot at the Basking Ridge, N.J., project of Ellsworth Dobbs, the garden home shown below is the answer to those seeking city convenience and country surroundings in an efficiently planned Colonial home.



Cost Key is 1.781-150-929-40-19-17



New Developments in Housing Field

A Survey of Methods and Materials Used in Recent Dwelling Construction Experiments and the Names of the Companies Concerned

U *RECOGNIZING that a marked lowering of dwelling costs or a radical change in accepted materials and design would have an influence upon the level of value of existing property and upon the rate of obsolescence of existing dwellings, the Technical Division of the Federal Housing Administration has prepared Technical Report No. 2 on new developments in dwelling construction.*

It is with the development of factory fabrication and with the materials and methods of assembly used in such fabrication that this report is principally concerned. Although every effort was made to make it comprehensive, the widespread experimentation now taking place, together with the secrecy with which it is frequently characterized, makes such assurances impossible.

A *STUDY of the many new methods of construction and assembly, and of the materials used in them, leads the Technical Division to conclude that the present is definitely a period of experiment. Urged on by the desire to be ready to meet the anticipated demand for new homes, manufacturers are almost daily putting out new forms of materials and new methods of using them. These are still in the exploratory stage. Experience records in their use are so limited that it is too early to tell which have definite merit and will result in hoped-for better construction and lowered costs.*

The newer techniques in building construction have not yet resulted in lowered costs, and an immediate lowering of cost is not to be anticipated. Comparative cost studies made between quoted prices for ready-to-erect houses and houses built in the usual way, equivalent in size, plan, durability, fire resistivity, insulation, and quality of finish and equipment, show no cases where the ready-to-erect construction has resulted in a saving in total cost. In almost every case such construction has been more costly and, compared with wood frame construction, it has usually been appreciably more expensive.

The higher cost limits sales to those few who are attracted to this type of construction, and who do not know or do not mind that the cost is higher.

There are many obstacles in the way of obtaining the mass production on which most of these methods base their hopes for lowered costs. The immediate demand is small and it is difficult to gauge the coming market. This limits volume of manufacture and the planning of production is almost impossible.

In this country the public has been slow to favor the modern International style of architecture so largely used in the newer construction. The materials and large panels of this construction lend themselves readily to this style of architecture and designers have favored it, believing that the public will accept it. Stimulated by the example of the recent Chicago "Century of Progress,"

people have become interested in modern design and it seems reasonable to believe that it will gradually obtain the widespread favor which it has obtained in Europe. The complaint against standardization is unfounded—as evidenced by examples of skillful treatment—and fairly pointless when the dreary monotony of some low-priced subdivisions is considered. Still this feeling tends to defer widespread public acceptance. The question of modern architectural design has been treated at greater length in Technical Report No. 2, "Modern Design."

Since, in its ultimate development, the assembly of all the parts of the factory-fabricated house above the foundations could be handled by a few skilled mechanics, it is evident that craft distinctions now existing in the building trades would be broken down and that many of the men now engaged in building construction would have to look to the factories for employment. The labor organizations in the building trades are fighting hard to prevent the introduction of methods which will reduce the amount of job labor. This attitude is in many ways retarding the introduction of factory-fabricated units.

Building in urban localities has varying and often rigid building codes. In many places building codes and building officials are slow to recognize new materials and methods of construction. The introduction of any revolutionary development in building construction must await considerable code revision.

Expect No Sudden Change

Thus faced with a fourfold handicap of high cost, unfamiliar appearance, labor opposition, and unfavorable building codes, the widespread adoption of considerable changes in our methods of constructing dwellings is not to be immediately anticipated. Such obstacles, however, may not be insurmountable, and the apparently ample capital available for experiment and the increasing ingenuity being displayed by inventors leave little doubt that the effort to overcome them will be vigorously pursued.

The handicap of cost is the most critical. If a method were devised which would result in the construction of houses at appreciably lower cost than at present, public acceptance would doubtless be forthcoming in spite of the tendency to cling to the familiar, and the resistance due to craft practice and building codes would gradually be broken down. While, as has been said, this prospect does not seem to be immediate, the advantages of rapid erection, flexibility, convenience, comfort, and low maintenance which several of the new systems seem to offer, will probably, in the meantime, create a slowly expanding market.

In considering the possible reductions in costs which might be obtained through the development of ready-to-erect construction, the following figures showing the approximate distribution of costs will be helpful. The selling price of the average new home is made up of the costs of land, its improvements, and the utilities which serve the building, the construction costs of the building, financing and selling expenses, and profits. Of this total,

the construction cost of the building is about 70 per cent, divided into 50 per cent for the structure and its finishes and 20 per cent for equipment and accessories. Only about 25 per cent of the total selling price goes to direct labor on the job.

The reduction in cost to be anticipated from the use of factory-fabricated methods must largely be found in savings in the labor of erecting the structural enclosure. This saving, together with additional economies, which may be made through efficient and concentrated management and purchase of materials may reduce the total

selling price in the neighborhood of 15 per cent. Such savings would, however, at the present stage of development seem to be offset by unfamiliarity of labor and management with this type of construction, the higher costs of materials used, the tendency to increase equipment and accessories, and the distribution of overhead expenses over a very limited production.

In the present inconclusive stage of development, only a few months time may make a considerably difference in the prospect. The situation is, therefore, one which merits close and continued attention.

LIST OF COMPANIES ENGAGED IN RECENT DEVELOPMENTS AND A DESCRIPTION OF THE CONSTRUCTION OFFERED

STEEL AND OTHER METALS

ALUMINAIRE HOUSE, Syosset, L.I.—Exterior walls of ribbed aluminum sheets secured to steel frame. One house built at Syosset, L.I., N.Y. Experimental.

AMERICAN HOUSES, 570 Lexington Ave., N.Y.C.—Steel frame of specially shaped studs and trussed floor joists. Exterior walls between studs are panels of insulating material covered both sides with asbestos cement. Sub-floors and partitions are of gypsum plank. This concern markets and erects a complete housing assembly and has built over forty houses.

BEMIS INDUSTRIES, Inc., 40 Central St., Boston, Mass.—Experiments with steel construction of various kinds.

BERGER MFG. CO., Div. of Republic Steel Corp., Canton, O.—Rectangular strip steel wall frame units of 16 gauge channels and bracing welded together, and strip steel channel floor joists. Two houses built near Washington, D.C.

COLUMBIAN STEEL TANK CO., 1401 W. 12th St., Kansas City, Mo.—Structural enclosure with 18 gauge galvanized steel pan walls, strip steel frames for partitions, and floors and roof of ordinary wood frame construction.

COPPER HOUSES, Inc., 10 E. 40th St., N.Y.C.—Structural steel frame. Exterior walls and roof covered with copper sheets. Two houses built near Washington, D.C.

CORKANSTEL, 270 Madison Ave., N.Y.C.—Structural enclosure with a structural steel frame covered on the exterior with an insulating sheathing of cork slabs; sub-flooring of a precast slab of concrete with a cork aggregate and partitions of the same material. A number of such houses have been built.

GENERAL HOUSES, Inc., 220 S. State St., Chicago, Ill.—Structural enclosure with 14 gauge steel pan walls, carrying load and acting as exterior finish. Steel floor and roof joists. Complete housing assembly furnished with interior finishes. About a dozen houses built. Also experimenting with a house having a steel frame of specially shaped steel studs and 16 gauge steel roof joists, with wall and roof panels composed of two sheets of plywood glued to a light wood frame with insulation contained between plywood sheets. This concern markets and erects a complete housing assembly.

HOUSING CO., 40 Central St., Boston, Mass.—(See Bemis Industries, Inc.)

HOUSES, Inc., 570 Lexington Ave., N.Y.C.—A holding and financing organization to promote the use of General Electric equipment. Now behind American Houses, Inc.

INSULATED STEEL CONSTRUCTION CO., Middletown, O.—Structural enclosure of panels made of 19 gauge rectangular steel cells. Steel may or may not be left exposed as wall surface. Several houses built by this method.

EDWIN M. LURIE, Metal Lath Mfrs. Assn., 208 S. La Salle St., Chicago, Ill.—Structural enclosure having a structural steel frame; inner and outer wall surfaces formed with furring channels and metal lath to receive stucco and plaster; metal lath and plaster ceilings, ribbed lath and concrete sub-floors.

MARTIN-PARRY CORP., York, Pa.—Structural frame of strip steel members which slide together and are secured by clips, eliminating bolts. Interior finish secured by special moldings.

McKAY ENGINEERING CO., Builders Exchange Bldg., Cleveland, O.—A standard structural steel frame enclosed within double walls of any standard materials. Attached by special clips.

NATIONAL HOUSES, Inc., Grand Central Palace, N.Y.C.—Structural enclosure of 14 gauge steel pan walls; steel frame partitions, steel joists for floors and trusses for roofs.

H. H. ROBERTSON CO., Grant Bldg., Pittsburgh, Pa.—Panels of keystone shaped steel cells which can be used for wall and floor construction. In use for sub-flooring for some years.

PALMER STEEL BUILDINGS, Inc., Los Angeles—Sales and engineering service for structural enclosure of Robertson Keystone cellular steel panels. One or two such houses built in Los Angeles.

REYNOLDS CORP., 19 Rector St., N.Y.C.—Framing members of galvanized strip steel in hollow shapes filled with a cement composition to hold nails. "Ecod Fabric," a wire lath combined with paper which is sometimes backed with aluminum foil, is also put out by this company as a backing for stucco, brick veneer, and plaster and recommended by them for use with this frame. They propose to furnish specifications for a complete housing assembly and to arrange for mortgage money.

SOULE STEEL CO., 1750 Army St., San Francisco—Rectangular steel wall frame units of pressed steel studs welded to transverse steel members. Trussed steel floor joists.

STEEL HOUSING CORP., 134 N. La Salle St., Chicago, Ill.—Structural enclosure with walls of special strip steel shapes holding steel plates in three layers with air spaces between; partitions similar with two plates; floors of "I" beams, plates and pans. Panel heating by warm air circulating in hollow walls and floor construction, wall and ceiling plates acting as radiators.

STEELASCO SYSTEM, (R. F. Berryman), Orlando, Fla.—28 gauge steel sheets for walls, sub-floors, and roof, on wood framing; sheets are covered with bituminous protective coating.

STEELOX CO., 59 W. Austin Ave., Chicago, Ill.—Walls and sloping roof of 20 gauge galvanized iron interlocking pans. Material for complete housing assembly is furnished. One house at Middletown, O.

STRAN-STEEL CORP., 6100 McGraw Ave., Detroit, Mich.—Strip steel framing members, usually channels, with webs crimped and spaced slightly apart to receive nails.

STRUCTO, Inc., 1015 E. 63rd St., Kansas City, Mo.—Structural enclosure of 14 gauge steel pan walls; steel frame partitions, steel floor joists and roof trusses.

WALTER H. STULEN, Carnegie Institute of Technology, Pittsburgh, Pa.—Structural frame of specially cut strip steel units welded to light steel channels. Experimental.

C. L. VAN NESS, Akron, O.—Tubular steel wall columns and 14 gauge strip steel channel floor joists. Inner and outer walls, floors, and ceilings of 20 gauge steel pans. Hollow wall and floor construction used for air ducts and as radiating surface. Experimental.

VARIPLAN, S.S. & G.H. Godley, 307 E. Fourth St., Cincinnati, O.—A complete housing assembly using a steel frame and steel sheets for exterior finish.

WOOD

DALLY CONSTRUCTION & ENGINEERING CO., Lloyd Bldg., Seattle, Wash.—Structural enclosure of glued up plywood structural units joined by splines. Light roof trusses of wood using timber connectors.

FOREST PRODUCTS LABORATORY, U. S. Department of Commerce, Madison, Wis.—Structural enclosure of glued up plywood structural units, joined by splines. Experimental.

HASKELITE MFG. CORP., 208 W. Washington St., Chicago, Ill.—Structural enclosure of plywood. Inner and outer walls, floors, and ceilings held together and stiffened by 18 gauge strip steel channels and "I"'s whose flanges fit into grooves in the edges of the plywood sheets.

HODGSON CO., Boston, Mass.—Structural enclosure of panels made of wood frames covered with a wood finishing material on one side and insulation board on the other. Additional insulation and waterproof paper may be included in the panel. A large number of such houses built over a considerable period of years.

JASPER WOOD PRODUCTS CO., Jasper, Ind.—Structural enclosure of glued up plywood structural units, bolted together.

CORWIN WILLSON, 418 Welch Blvd., Flint, Mich.—Structural enclosure of plywood concealing a wood frame specially designed to transmit loads to corners of building. Asphalt composition pressed on to plywood for floors and exterior surfaces. One house built at Flint, Mich.

CONCRETE

DEXTONE CO., New Haven, Conn.—Precast slabs resting on precast joists.

JOHN J. EARLEY, 2131 G St., N.W., Washington, D.C.—Large precast wall slabs fastened to poured in place studs. The concrete is made from colored aggregates with the aggregates exposed on the outside surface as a decorative finish. Two houses built near Washington, D.C.

GOLDSMITH METAL LATH CO., Cincinnati, O.—Panels of metal lath secured to metal pans which act as forms for poured in place columns, beams, and floor joists and slabs. Stucco and plaster is applied to the metal lath.

HACO CONSTRUCTION, Harry Cole, 4954 W. Pine Blvd., St. Louis, Mo.—Small precast slabs with steel channel flanges cast in the slabs, bolted to steel framework.

INSULROCK, John F. Downing, 150 Hughes Ave., Buffalo, N.Y.—Precast slabs for inner and outer walls and ceilings used as plaster and stucco base and secured to precast studs and joists.

MAKECO, Matthews & Kenan, Smith-Young Tower, San Antonio, Tex.—Double bearing walls of large thin slabs tied together.

ARTHUR H. OLMSTED, Rye, N.Y.—Precast studs around which concrete exterior wall is poured and to which interior finish is fastened.

J. A. TWACHTMAN, Connecticut Precast Building Corp., Greenwich, Conn.—Precast slabs and studs. One house built at Greenwich, Conn.

REINFORCED BRICK

HOLSMAN & HOLSMAN, 140 S. Dearborn St., Chicago, Ill.—Reinforced brick walls made of precast panels.

JUDSON VOGDES, 334 S. 19th St., Philadelphia, Pa.—Reinforced brick columns, beams, and curtain walls.

FOREIGN PRACTICE—GREAT BRITAIN

THORNCLIFFE IRON WORKS, Newton Chambers & Company System, Sheffield—Exterior of cast iron plates, combined with a wood frame.

G. & J. WEIR, LTD., Glasgow—Steel sheet on wood frame. A great many of these built.

ATHOLL STEEL HOUSES, LTD.— $\frac{1}{2}$ in. steel plates with angle and tee frames. About 650 such houses built.

BRAITHWAITE AND CO., Telford System, West Bromwich— $\frac{1}{8}$ in. steel plates on wood frame.

DOORMAN, LONG & CO., Middleborough—Gunite on wire mesh and steel frame.

FRANCE

FORGES ET ATELIERS DE COMMENTRY-OISSEL, Paris—Cellular concrete blocks combined with steel frame.

SOCIETE DES FORGES DE STRASBOURG, Paris—Units of corrugated steel sheets on steel frame.

SOCIETE DE CONSTRUCTION MULTI-CELLULAIRES, Paris—Panels of cellulose, asbestos, and silica on corrugated steel box sections, filled with sawdust insulation with interior panels of sawdust and binder.

SOCIETE DE CONSTRUCTIONS METALLIQUE, FILLOD, Paris—Story high steel pans with steel tubing, frame, and sawdust insulation.

M. M. MOPIN—Exterior walls of precast reinforced concrete panels secured to steel frame.

GERMANY

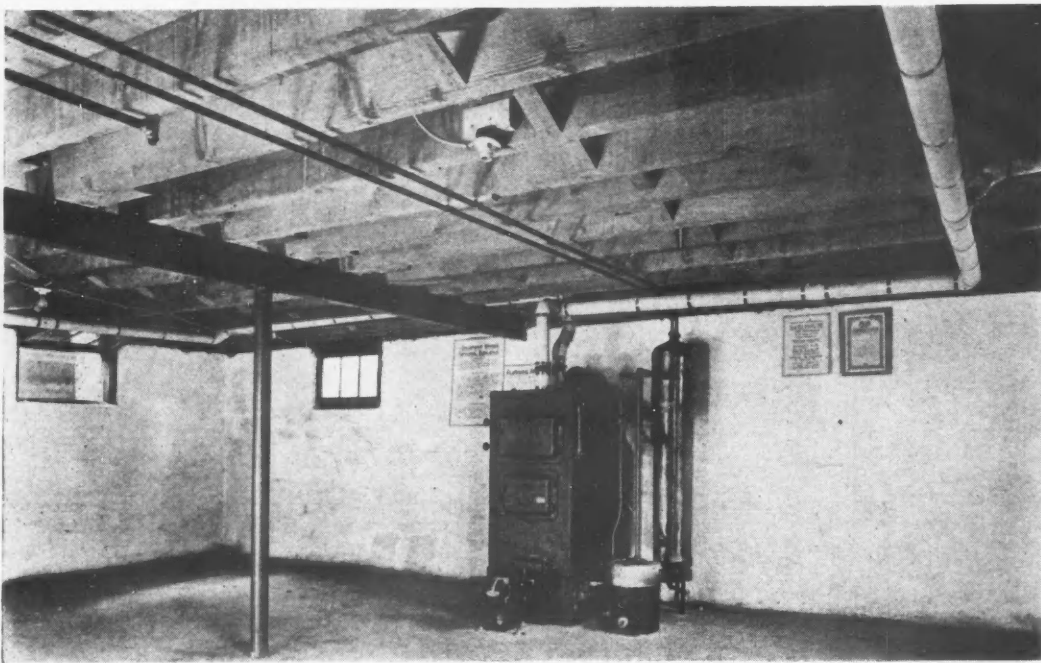
HEINRICH BLECKEN, Duisburg— $\frac{1}{4}$ in. steel pans and steel framing. Over 700 houses built.

UNITED UPPER SILESIAN IRON WORKS CO.—Steel sheets on steel frame.

HIRSCH, KUPFER & MESSINGWERKE, Finow, Hamburg—Copper sheets on wood frame.

OPERATIVE BUILDERS

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



QUALITY basement details include 12-inch concrete foundation whitewashed; 3x8 floor joists firmly bridged; steel beam with steel lally column; guaranteed heating system with pipes thoroughly insulated; brass piping, copper hot water tank.

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SEWERS	TILE BATHROOM WALLS
DRYED CONCRETE STREET	TILE BATHROOM FLOOR
SLATE ROOF	PARQUET OAK FLOORS
COPPER LEADINGS & BRITERS	WHITE PORCELAIN WASHING
BRASS PLUMBING	STEEL CHURCH
STEAM HEAT	LINCOLN
COPPER HOT WATER BOILER	SURETY BOND GUARANTEE
COPPER FLASHINGS	FOR STEAM BOILER
NEW BRICK EXTERIOR	GRASSING LANDSCAPED
(NOT SECOND HAND)	INDIVIDUAL UNIVERSITY
COLOR PLUMBING FIXTURES	

LONG TERM FIRST MORTGAGE
NO RENEWAL FEES

GOVERNMENT INSURED
20 YEAR MORTGAGE

THIS LARGE SIGN tells customers about Bellerose quality features in the \$4395 1936 Model Home.

Quality Details Sell 200 Homes

GET HIGH FHA RATING

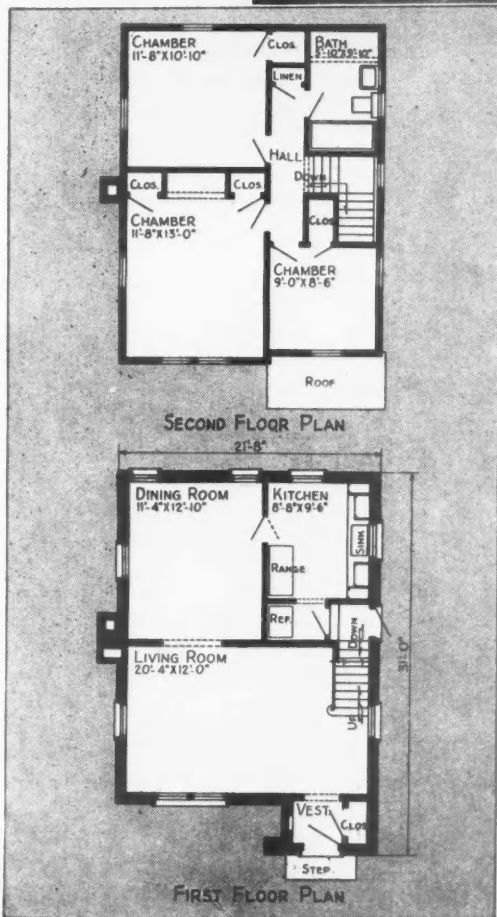
IN the first eight months of this building season the Bellerose Housing Corporation on Long Island, N. Y., sold more than one hundred and fifty houses—practically all financed by long-term FHA insured mortgages. Fred C. Lemmerman, president, and Max Gross, treasurer, say that the small extra expense of quality materials and methods is the best investment a builder can make.

Lemmerman and Gross expect to build and sell two hundred houses this year in Bellerose Manor. They credit the FHA for a large part of their success.

"In the FHA the government has done the best piece of work of any of its recent activities," Mr. Gross told *American Builder*. "Its service to the public and to the builder has been 100%. The mortgage insurance men in this section are speedy and efficient—



THIS 1936 Model Home featured by Bellerose Housing Corp. sells for \$4395. It has a slate roof, 12-inch concrete foundation, guaranteed heating system, heavy framing members throughout. Cost Key 1.338-105-617-27-22-9.



THE FLOOR PLAN below is remarkably compact; foundation area is only 21'8" x 26'4". Second floor overhangs slightly providing space for three bedrooms, large bath and four closets. There are plenty of windows for cross ventilation.

they put loans through faster than any title company we have dealt with."

Building and selling homes on Long Island is a highly competitive business. FHA quality rules have set up standards that have helped stabilize this business. The Bellerose Corporation is proud of the good rating its houses have received from FHA, and they play up this fact extensively.

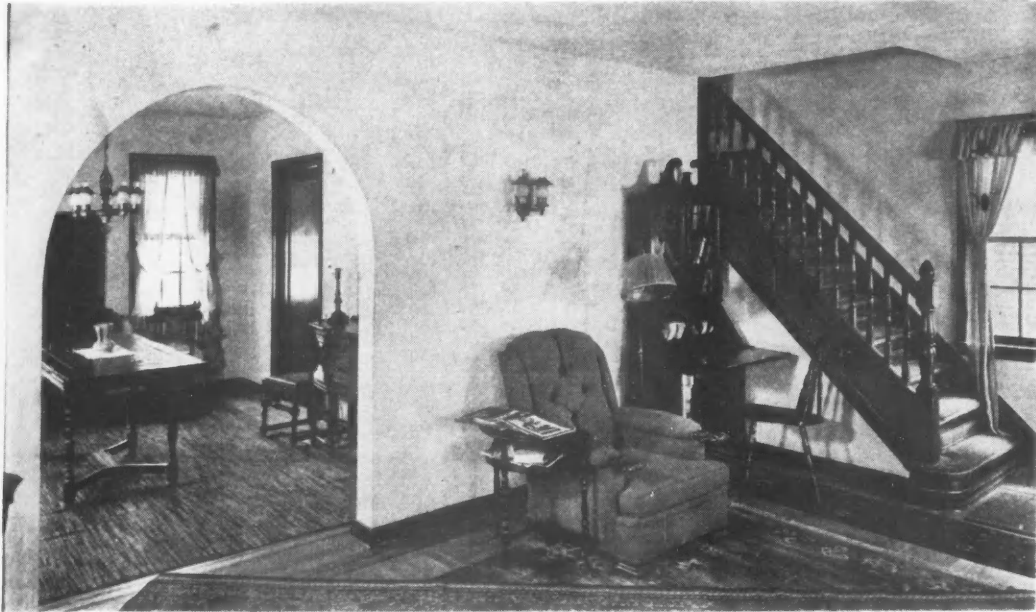
Practically all Bellerose homes are financed by FHA insured mortgages running for twenty years, which are taken by local savings and loan institutions. The following finance plan is used:

Price of house.....	\$4,395.00
Cash purchase payment.....	1095.00
FHA insured mortgage.....	3300.00
Monthly payments:	
Interest and principal.....	\$22.63
Taxes (estimated)	9.00
Water	1.25
Insurance40

Total monthly carrying charge.....\$34.28

One of the first houses opened to the public by Bellerose was the house featured on this page which is widely advertised as the "1936 Model Home." The English architectural style and floor plan is followed throughout the development, but slight changes in exterior treatment are made.

This little house provides six livable, well lighted rooms with an unusual number of closets and a fine kitchen, bathroom and



REAL SPACIOUSNESS is achieved in the Bellerose Model Home. Living room is 12' x 20'; dining room 11'4" x 12'. No space is wasted.

basement. The floor plan is so skilfully arranged that with a first floor size of only 21'8" x 26'4", the builders provide a 12' x 20' living room, 11'4" x 12'10" dining room, entrance vestibule and closet, three bedrooms, an unusually large bathroom. The floor plan reduces waste space to a minimum yet provides ample closet and storage space. The materials and equipment featured in the Bellerose 1936 Model Home are as follows:

BASEMENT—12-inch concrete foundation, clean dry concrete floor, whitewashed interior, steel window frames.

FRAMING—3 x 8 floor joists on 16-inch centers, supported in center by 8-inch steel I-beam and steel lally column. Good quality bridging, each piece tightly nailed with 2 nails at each end. 2 x 6 rafters, best quality lumber millwork and carpentry.

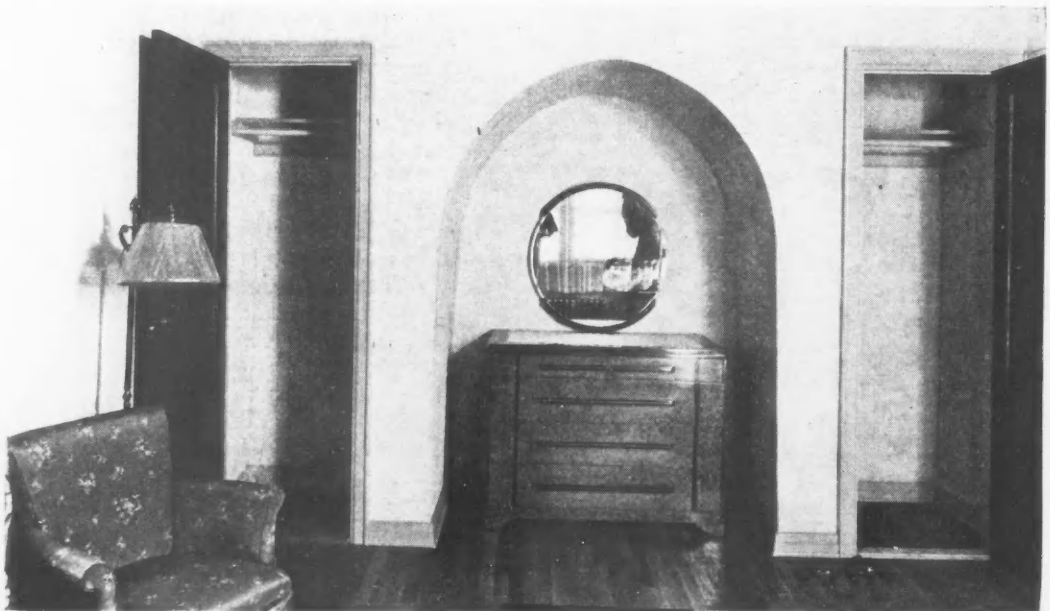
HEATING PLANT—National insulated jacketed boiler for use with either coal or oil. Double steam outlet, with all risers direct. Pipes heavily insulated with Johns-Manville asbestos covering. Norge oil burner. A \$250 surety bond guarantees heating system to pro-

(Continued to page 70)



HALF TIMBER WORK, water table, windows are copper flashed; face brick skilfully laid over waterproof paper, the work carefully done.

ANOTHER QUALITY FEATURE—the 1936 Model Home bedroom has two closets, with an arched recess in between for a dressing table. Size of master bedroom is 11'8" x 13'. Ample electric outlets are provided. Floors are best oak.



Quality Details That Sell \$4395 Model Home

WELL EQUIPPED KITCHEN, large tiled bath with colored fixtures, ample well lighted rooms, best in heating and construction have given these builders high FHA rating. It has also been of the greatest help in selling. The kitchen, at right, is well planned, nicely lighted, has a tile work area. See specifications and floor plans for further quality details.



SOUND CONSTRUCTION indicated above includes 12-inch concrete foundations, 3 x 8 floor joists on 16-inch centers, supported by steel girder. Framing is sound, built for permanence.

SPACIOUS BATHROOM has colored fixtures, tub built into arched recess, tile six feet high. An arched recess is provided opposite tub (see plan) for location of dressing table or baby's bathinet. This is a popular feature and one which helps make sales.

MODERNIZATION

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

Restyles and Rents Southern Home

An Old Frame House in Corinth, Mississippi,
Remodeled Into Apartments Now Looks
Like a Modern Norman Castle



BEFORE remodeling the old frame house had the run down appearance shown above, having been little occupied during the past seven years.

A FRAME HOUSE of the style of the late nineties, well constructed, in excellent condition, except for the enormous amount of wasted space and lack of a central heating plant, had stood practically closed for seven years. The owner, Judge T. H. Johnston, felt that it should at least pay its own way, and provide him with more compact, comfortable quarters. This was a simple matter since the Judge's son, Thomas H. Johnson Jr., is an architect. J. E. Meek & Co., was the general contractor.

It was decided to let it be converted into three apartments, two on the first floor, each containing five rooms, and the owner's and son's apartment on the second floor, each apartment to have huge closets taken from the central hall and likewise to provide a sound void between.

The first step was to remove all the old porches



AFTER the porches were removed, exterior stuccoed and rooms added, the modernized structure containing three apartments presents the pleasing French style exterior illustrated on the right.

and clean the salvaged material for later use. The tower was the deciding feature as to the future appearance of the house. With this as the starting point, the French Provincial style of architecture was adopted. The roof lines and present roof were left undisturbed, except to raise the gable on the east elevation to enlarge the future bedroom, and to match the old roof where the new addition was placed on the rear. The entire exterior was sheathed with insulated metal lath and three coats of stucco were applied. It received two coats of Bondex cement paint a warm buff color, so that it would harmonize with brown creosoted stained half timber and gables of rough cypress. The pegs add a convincing touch. The siding was stripped from the old walls, reversed, stained and used in the new dormers and gables.

The next step was to excavate a basement using the dirt to level off and grade the lot. A stair inside was constructed leading to the owner's apartment from the old hall. A service entry was likewise provided on the east elevation to the outside. An air conditioning heating plant with blowers, filters and a temperature control was then installed in the basement.

It was necessary to build an addition to the rear to provide two bedrooms and a bath for the east apartment and one bedroom for the west apartment. The original bath was used on the west side, as can be seen from the plans. Two new open porches were added to balance the composition, one for each apartment constructed of rough pecky cypress and pegged.

A stone wall of local fieldstone was used to veneer the former walls that supported the old porches, enclosing the front entrance with a flagstone terrace. The frame of the front door was constructed of discarded warped, oak cross-ties from the railroad and the original door was re-used. The entrance foyer for all three apartments is about ten feet in diameter and paneled in walnut-grained Sheetrock, finished natural. This foyer was taken from the former front hall of the old home.

Both apartments are provided with a separate service entry. The interior throughout was repaired, replastered as needed, papered and all the woodwork done over. Bright colors were used wherever possible, as yellows, reds, and in the kitchen, particularly, with canary yellow walls, cabinets jet black and red enamel, and black

marbleized floors of tile. Original pine floors were re-used, machine sanded, stained and waxed. All windows and exterior doors were weatherstripped with grooved metal weatherstripping. Copper screens on wood frames were used and painted a vermilion red.

The owner's apartment on the second floor is reached from the new foyer by way of the old stairs in the hall that were left intact.

The entire ceiling was insulated with rock wool. At the opposite end of this living room, casement doors open out onto a screened balcony porch that gives full sweep to the prevailing southern breezes. The north wall is paneled with the old heart pine folding doors taken from the old rooms on the first floor.

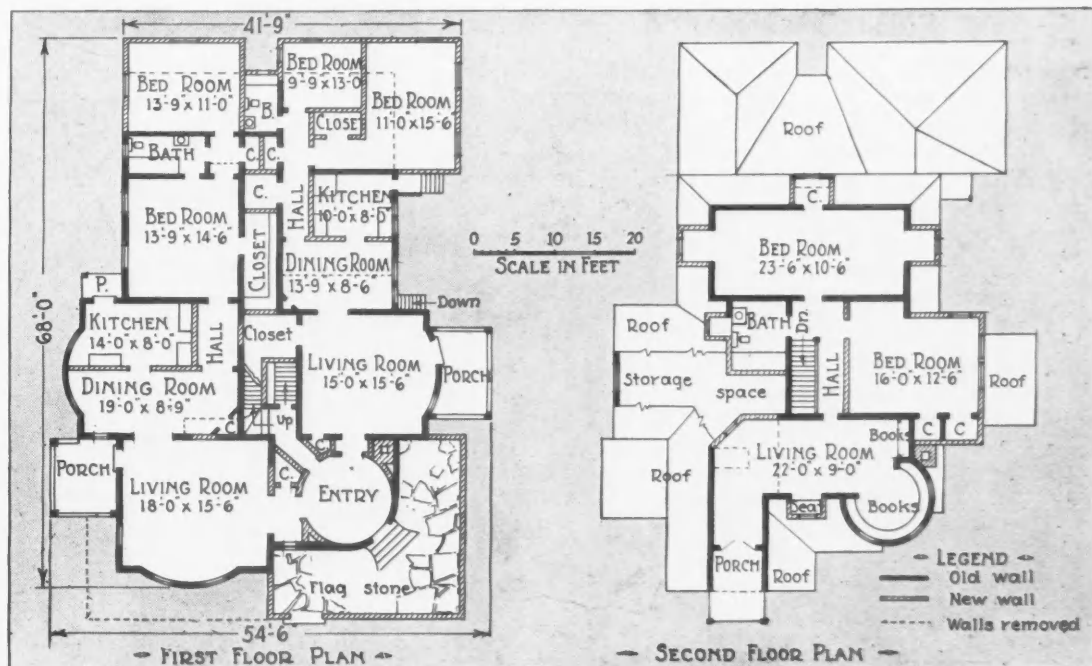
Both apartments on the first floor have been rented at \$35.00 per month to old friends, and so an old house with its face lifted has proved pleasant and profitable.

SPECIFICATIONS

Metallated lath, Reynolds Corp.; Genasco composition strip shingles, Barber Asphalt Co.; asbestos Walfite, Ambler Co.; asphalt floor tile, Azrock Floortile Co.; walnut grained Sheetrock, U. S. Gypsum Co.; paints and paper, John Lucas Co.; plumbing fixtures, Crane Co.; cement: portland (for stucco work); mortar: Brixment, Louisville Cement Co.; brick, Corinth Brick Co.; stone: local fieldstone, B. M. Hill, mason; finish trim, doors, windows, etc., Galyean Bros., Corinth, Miss.; sheet metal work: No. 26 ga. galv. Cop-R-Loy metal, Wheeling Corrugating Co.; weatherstripping: doors and windows, Master Metal Weather Strip; framing material and all miscellaneous lumber obtained from local mills.

ITEMIZED COST OF REMODELING

Millwork, labor, lumber, tile, etc.	\$2,370.73
Brick and concrete work excavating	400.00
Painting and decorating	500.00
Stucco	240.75
Plumbing fixtures, pipes and fittings	245.57
Labor for wiring and plumbing	412.30
Stone work	33.00
Heating plant (Lennox de luxe, air conditioned plant, blowers and filters, humidifier, automatic temperature control) sheet metal work	743.00
Light fixtures	30.00
Finish hardware	25.00
Total	\$5,000.35



RIGHT: Plans showing old work, walls removed and additions made in converting old house into modern apartments.



Veneering Job Brings Happy Ending

WHEN RENTS FELL off and vacancies became permanent in a forty year old store building located in Homewood, Ill., the verdict was that the old property was apparently hopelessly out-moded. It was down to its last tenant, a tavern on the ground floor corner. The store building had been empty for months, the upstairs unoccupied for years.

Then began a slow but steady transformation that not only has a happy ending, but is interesting because of the ingenuity that went into the work, and because it employed a new material. Contractor Arthur Mullins of Homewood was idea man, "architect," contractor, and business manager of the enterprise.

The first step in its rehabilitation was to get the building down to sidewalk level, for people will no longer walk upstairs to enter a store. The structure was shored up while an average of 36 inches of the old limestone foundation was knocked out. This left an irregular wall that was leveled off by pouring a concrete cap on top of the old foundation. The concrete was extended four inches outside the old wall to provide support for pre-cast slabs that were later to form a new ornamental base around the outside walls.

The structure proved to be a substantial one, for while it was being lowered 32 inches on jacks to the new foundation wall it developed only one plaster crack. The old wooden gingerbread and other external embellishments were removed. The old siding was removed to 36 inches above the foundation to make room for the ornamental base of pre-cast slabs, (illustration on opposite page) which were cast on the job. Each slab is four inches thick at the base, stepped back to 2½ inches at the top. Each was cast in a wooden form, and when completed was 32 inches long by 28 inches high. Corners were cast with a 12-inch return.

Ribbon strips were cut into one edge of eight-inch bands of heavily galvanized sheet metal. These strips were spread alternately then were cast three inches into the top of each block. The projecting portion was bent into an "L" and formed a nailing strip for fastening the top of the slab to the old sheathing.

The base of each slab was bedded in cement mortar on the projecting ledge that had been cast over the old



TOP OF PAGE: New brick veneer material gives old Homewood, Illinois, business corner a modern exterior which attracted tenants.

ABOVE: Building as it appeared after 1903 when picture was taken showing new living quarters added above corner general store.

foundation wall. Lowering of the building had taken the first-floor joist below the grade level. The faces of the cast slabs were, therefore, coated with liquid asphalt up to grade level. The slabs were spaced a half-inch apart, calked with a gun filled with a waterproof plastic asphalt cement, then pointed up with portland cement. Nailing strips at the top of the slabs were then fastened to the sheathing, as described.

The outside of the building was veneered with reddish-buff Hytex brick slabs made by the Hydraulic Brick Company, St. Louis and Chicago. Vertical furring strips were nailed 16 inches O.C. over the old siding. Galvanized "anchor" strips were next nailed horizontally on the furring. Brick slabs were "hung" on these anchors and buttered with Brixment mortar.

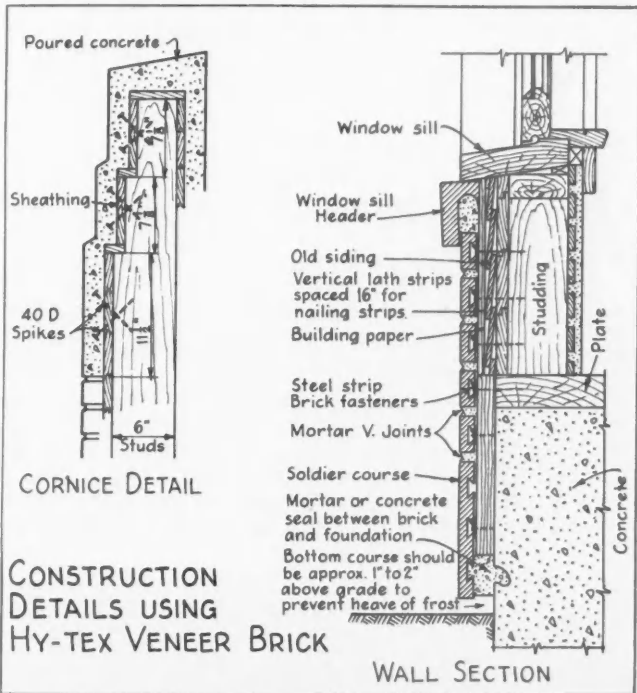
Each slab is 1 by 2½ by 9 inches. Corner slabs are 9½ inches long with a 4-inch return, and have no dove-

tail. They are set in place with mortar. Half-bricks are also supplied.

The combined thickness of furring strips, galvanized anchors and brick slabs added 2½ inches over the old siding, which called for an O.G. molding around windows and doors. New concrete sills were poured.

Recessed ground-floor entrances were lined with metal lath and finished with cement stucco over rough plaster. The new door arches, edged with cast cement slabs (in dimensions that correspond with brick courses) carry out the simple motif in masonry trim that gives the building a thoroughly modern appearance.

A similar series of set-backs may be seen in the cornice treatment. The old fire wall extended from 18 to 36 inches above the roof joists. It was cut down to an average of 12 to 14 inches above the roof line and a new concrete coping was poured. Projecting ends of the six-inch studs were recessed, as shown in drawing, and 40D spikes were driven in at angles to provide an anchor for the concrete. Forms were built so that concrete was poured over and around the studs to form a protective waterproof cap over the entire fire wall.



While changes were taking place outside the building an equally thorough transformation was taking place inside. The old hotel rooms which strung along a corridor in Pullman car style were successfully broken up into apartments with a central approach from a new octagonal "foyer" in the center of the building.

A central heating plant was installed, together with modern plumbing throughout. A central stack was utilized for the entire upstairs. It comes up in the center of the foyer at the head of the stairs, then branches off to the apartments on each side. Bath and kitchen fixtures in the pair of apartments on the east and west are placed against the same partition wall, thus cutting piping and stack costs in half.

The old 1¾-inch paneled pine doors of the former living quarters and hotel were made into modern slab doors by the simple but ingenious expedient of dressing them down, facing each edge with a white pine binder strip to cover old lock and butt mortises, then gluing a sheet of pressedwood to each face.

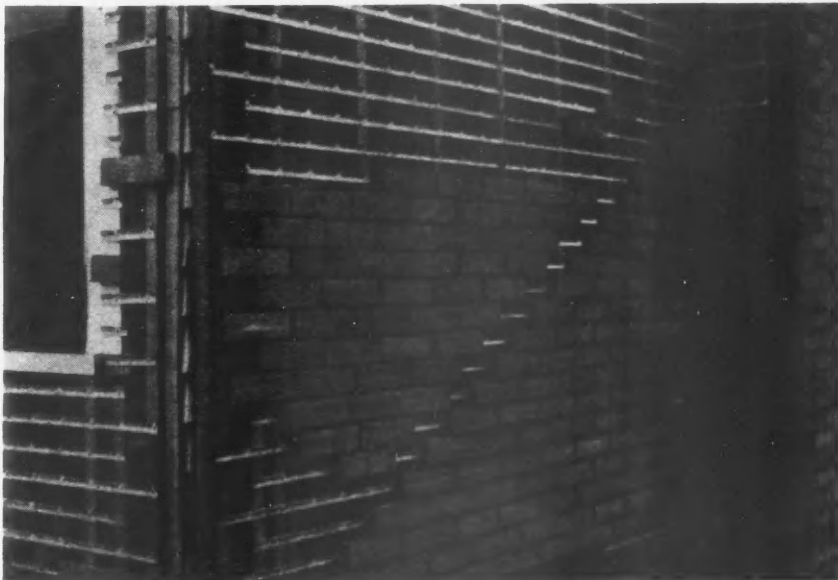
The store windows downstairs formerly were ordinary window glass in rather small wood sash. They were replaced with modern plate glass set in bronze moldings.

At the back of the building a 7 by 56-foot screened porch was added.

Cost of the entire project is surprisingly low. The Hytex brick slabs cost \$34 a thousand, metal anchor and furring strips included, and approximately \$28 a square in place on the walls, Chicago prices. The total remodeling cost was \$4,000, financed by the owner without a loan.

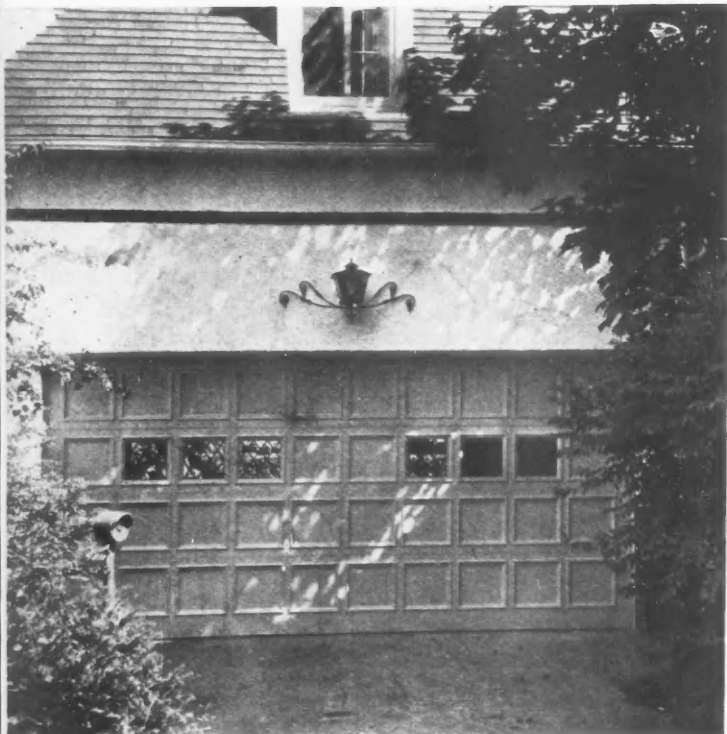
And now for the happy ending. The old building which was down to its last tenant has staged a comeback. The tavern remains in its corner location. A Royal Blue store occupies the other half of the ground floor. The one completed apartment upstairs has been rented and is occupied. Prospective tenants have "hounded" the owner for the others, all of which are spoken for, and will be occupied immediately on completion. Thus every foot of rentable space will be occupied, and an attractive, modern structure has replaced a building that apparently was hopelessly out of the running.

LEFT: Drawings show cornice treatment of poured concrete and details of veneering (the standard soldier course as shown in drawing was replaced by a precast base on this particular job). BELOW: Brick veneer hung on steel strip fasteners ready for mortar; Contractor Mullins points to nailing strip in foundation slab.





ABOVE: The County Garage on Baldwin Road, South Hempstead, N.Y., has large steel Float-Over doors using the equipment of Cornell Iron Works, Inc. Below: Key operated switch seen at left controls the Rol-Top Kinnear doors from the drivers' seat.



Garage Market Seen in Volume Motor Sales

WITH AUTOMOBILE and truck manufacturers looking forward to continued large sales next year and the outlook for residential construction for 1936 bright, the prospects for new vehicle housing are likewise improved. Government activity in road construction with the necessary motorized equipment should require additional facilities in the nature of county road department buildings and government garages built with funds allotted for such purposes.

Continued business advances make more money available for delayed buying in both production and consumer fields. Private industry planning expansion in motor equipment and home builders needing shelter for their cars will continue to swell the market for garages and accessory equipment.

In the latter field attached motor rooms seem to be gaining in popularity. Recent designs of houses built



LEFT: Originally designed for a three-car garage, lack of space for three separate doors was overcome by using one double and a small door with Overhead Door Corp. equipment. Owner, Wellington Burt; architect, L. J. Sarvis; contractor, D. L. Murray; location of job, Battle Creek, Michigan.

APPLETON, WIS.,
home of C. Daniel;
Smith and Brandt,
architects; Fred
Hoepfner Sons,
builders; National
Mfg. Co., hardware.

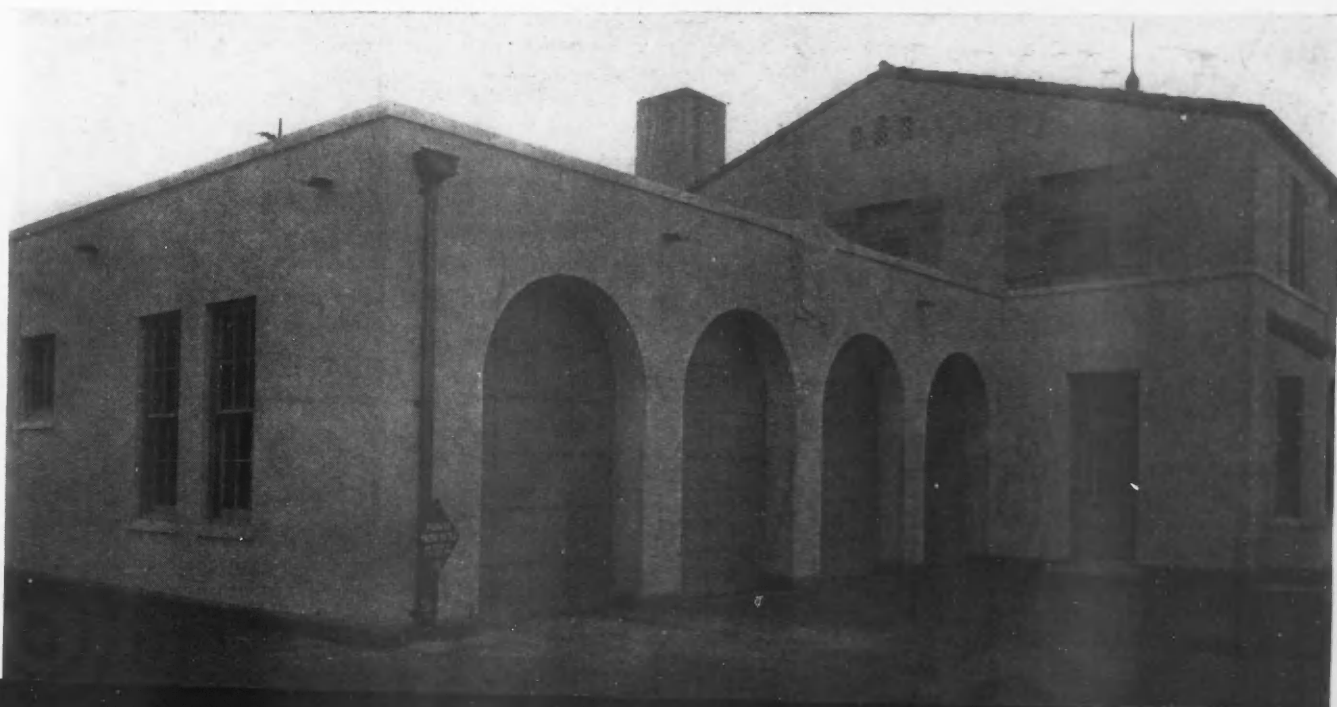


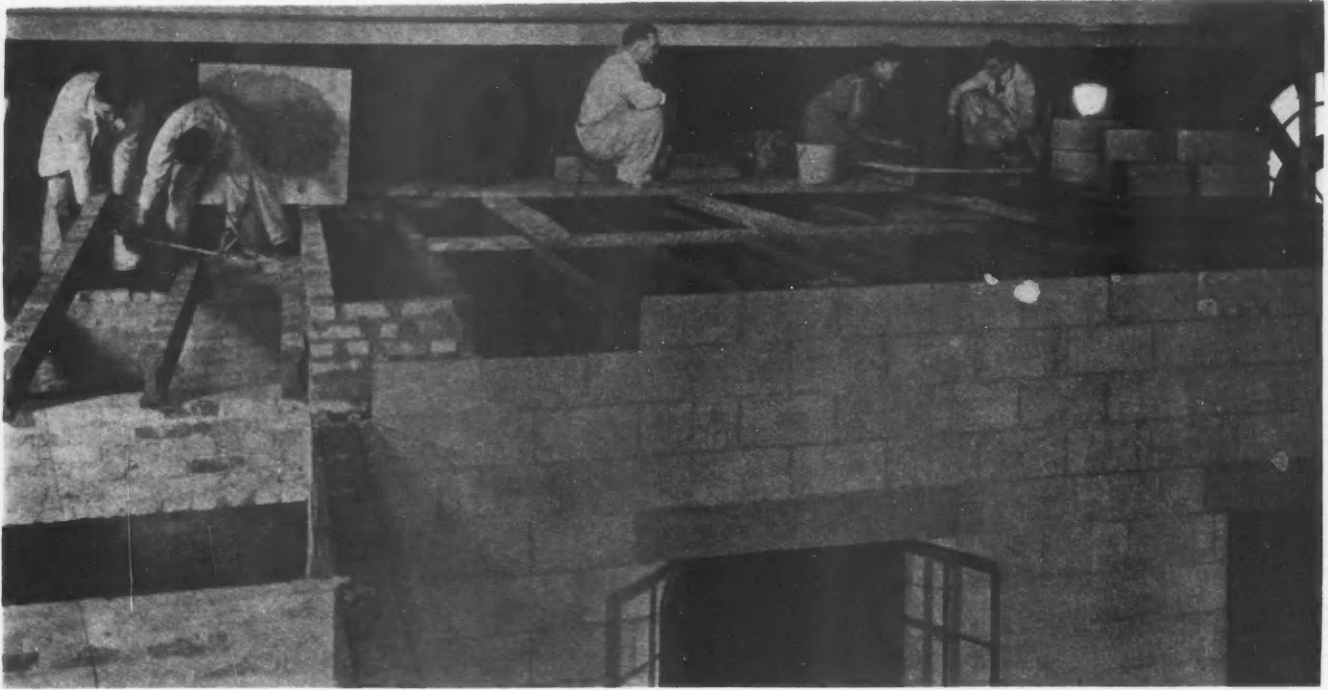
without basements show a portion of the garage used as a location for the heating equipment while others feature a combination garage and laundry. Some still prefer the detached garage if it can be placed properly on the lot and not require extensive driveways and inconvenience. Fire hazard in case of building restrictions is a factor in some localities.

In all garage construction good door equipment is important but this is particularly so when additional uses require weathertight closures. Appearance is another point not to be overlooked. Doors facing the street are more likely to be kept shut to eliminate unsightliness if easy action makes closing a simple task.

RIGHT: Residence of Samuel Plant located on the St. Louis Country Club grounds, showing basement garage door supplied by Frantz Manufacturing Company.

BELOW: Department of Labor inspection station at San Ysidro, Calif. The arched openings of Spanish style have "Ro-Way" doors made by Rowe Mfg. Co. Robert McKee, El Paso, was the contractor.





Young Builders Learn New Methods

THE IMPORTANCE of training young builders in the use of the improved materials and practices developed during the last few years has been cited by those who foresee the possibility of a shortage of such men. In some localities during the modernization program pushed this year there was reported a deficiency in the number of men available for some building crafts.

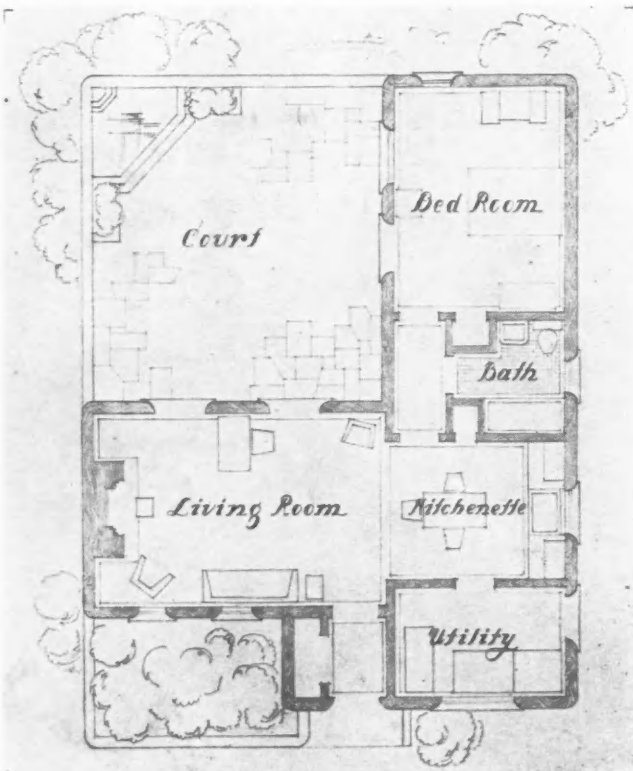
The lean years in the industry made it necessary to curtail programs of apprentice training which had as-

ured a supply of new men for the field. With the improvement this year and an expanding amount of activity forecast for the future, any progress towards resuming such training is of great interest.

The Federal Committee on Apprentice Training has been promoting a program for general craft training while colleges are offering instruction in practical methods. The work of the young men enrolled at one of them is told in this article.

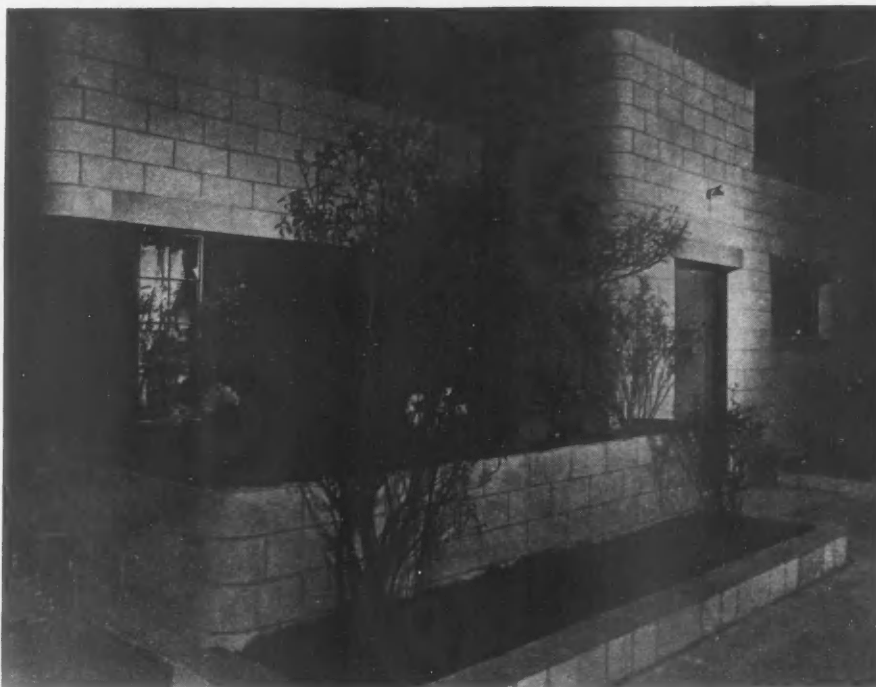
For a number of years students in the Department of Civil Engineering, Building Construction option, Carnegie Institute of Technology, have been erecting small homes as examples of practical construction. These homes in the past years have been four, five, and six rooms, bungalow type. They were constructed in the Masonry laboratory and were of brick, tile, and stucco. The work was done again this year and the project was in the nature of a technical research problem, with the introduction of new and modern materials. The result of this study is a new type of home with new ideas of living.

The theory behind the design of this bungalow type home was one that would utilize fully the property, thus eliminating unsightly waste space; and one that would incorporate the use of fireproof materials that are pleasing in appearance, and which would meet the purse of the average home builder. These results were obtained in a concrete structure of L-shape, surrounding an open patio. To the passerby the exterior has single horizontal lines with small fenestration. The exterior walls are of Haydite concrete units with smooth waterproof colored exterior finish. On the interior, plaster was effectively



LEFT: Floor plan of the problem house designed by Samuel Linton, senior architectural student at Carnegie Institute of Technology.

OPPOSITE PAGE: Civil Engineering students setting precast ceiling joists in the construction of a masonry house project built this year as a research problem.



RIGHT: Exterior view of the completed house designed to include the use of modern materials and methods of construction.

applied, colored and lined to carry out the modern motive.

The living room was especially attractive. It had precast concrete joists supporting the ceiling of fibrous thermax and a concrete slab. A cast concrete fireplace and a colored floor and base completed a room where material and structural members played a major part of the decoration scheme. The kitchenette, utility room, bedroom, and bath were constructed in like manner with appropriate color scheme to add charm to the use of cement and concrete.

An outstanding change from the usual planning was the placing of the utility room on the front of the house. This room contained the heating, ventilating, and air-conditioning equipment. Such equipment would have

detracted from the charm of the patio, had the utility room been placed in the rear. As was the case, the patio became the beauty spot. Bounded by a high wall it contained romantic charm, hidden in the cast concrete pool, garden furniture, and flower boxes. It opened only to the living room and main bedroom. All in all the home was small, accessible, modern, economical, and contained added possibilities for additional rooms which could be constructed above on the flat slab roof. The design of the house was the work of Samuel Linton who is a senior majoring in architecture. The work was done under the direction of Charles W. Larkin, Head Instructor in Masonry, and the department is headed by Professor McCullough, in charge of Civil Engineering.



RIGHT: Living room showing treatment of exposed joists and the cast concrete fireplace.

Clean Heat for the Cold Weather

Factors in Construction and Equipment Determine the Quality of the Air That Is Delivered from Any Heating System

By V. L. SHERMAN

Department of Mechanical Engineering,
Lewis Institute of Technology, Chicago

FROM THE TIME the draftsman lays pencil to paper until the time the family is settled in the new house, there are likely to be changes in the plans. These changes are not always of a serious nature, but it must be remembered that any change is an added expense. But there is a curious thing about these "added expenses." So few home owners calculate beyond the first cost of a house. This cost may be increased or decreased in the planning and building and the owner's mind seems to rest easy. But unless the house is built with a sale in view the owner will find that it is not the first cost which is so important as is the cost of the twenty years to follow.

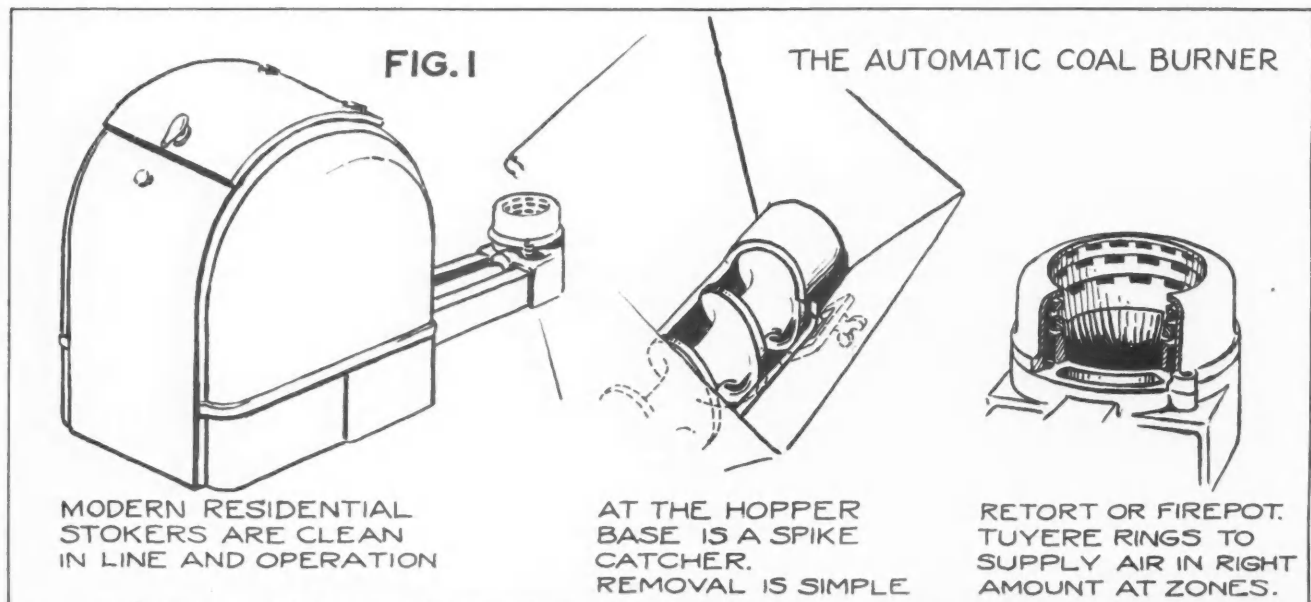
The wise provision of the Federal Housing Administration that the cost of the house shall be considered in a single long-term mortgage of twenty years maturity and with a low interest rate impresses the anticipating owner with the fact that a house built well at a somewhat greater expense is really less expensive than a cheaper house not so well built and equipped. And unless the contractor rates his reputation at a pretty low figure he will not fail to impress the owner from his own experiences.

There is one factor in all homes which does not get its deserved share of serious attention at the start. The question of clean heating does get some consideration, but it does not get the fullest attention that it should. There is too often the feeling that this or that kind of heat is not as clean as some other sort. Therefore we are safe in using the last type. The matter seems to be lightly settled. It may have been settled by prejudice or hear-say or gossip. But the matter of clean heating will not be settled for any particular owner until his heating equipment has had a chance to prove itself over a period of years, and the construction of his home has shown itself sound in all the details of its building.

The dirt, which shows itself on the ceilings and walls of a house, is usually the mark of air currents. The more discrepancies there are in temperatures along the walls and ceilings the more marked will be the dirt. It might just as well be called dirt because that is what it is. If one could visit a house which had not been redecorated for a number of years the various air currents could be read as one might read a navigator's chart.

The fact that the house air contains dirt to some extent is no great surprise, but the amount of dirt coming into a house and never leaving it until cleaned out is quite a surprising amount. One of the chief dirt traps is the small eddy in the air current which deposits the dirt in a resting place. Since the formation of these currents have been due to marked differences in the air temperatures it would be a sensible thing to provide against these differences. One of the first things to present itself as a solution would be the thorough insulation of the walls, and the use of double windows. (The coefficient of heat transmission through single glazing is 1.13 British Thermal Units per hour, per square foot, per degree difference in the inside and outside temperatures. For double windows, that is, secure storm-sash, the coefficient is .47 B.T.U.)

Everyone knows the marks of a cold-walled house that is kept at a warm temperature in the winter. These walls are clammy, picking up all the moisture possible from a probably too-dried air. If the air is kept properly humidified then the walls are still more damp. In by-gone days they held it was the weather or the climate or the night air or the basement air. But many owners insisted on storm sash for the winter months just because they didn't like to mop up the sills when the frost melted from the glass. With the wall and ceiling areas far exceeding the glass it is of greater importance that the moisture ac-



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ARCHITECT:
HARRY L. WAGNER
CONTRACTOR:
R. L. FALKENBERG &
COMPANY
DEALER:
FRANK PAXTON LUMBER
COMPANY

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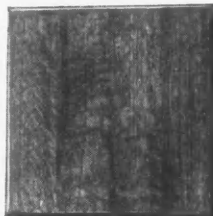
That is the new way to sell flooring jobs. Of course, it isn't quite as simple as we've made it

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MECHANICAL EQUIPMENT FOR 20-YEAR FINANCED HOUSES

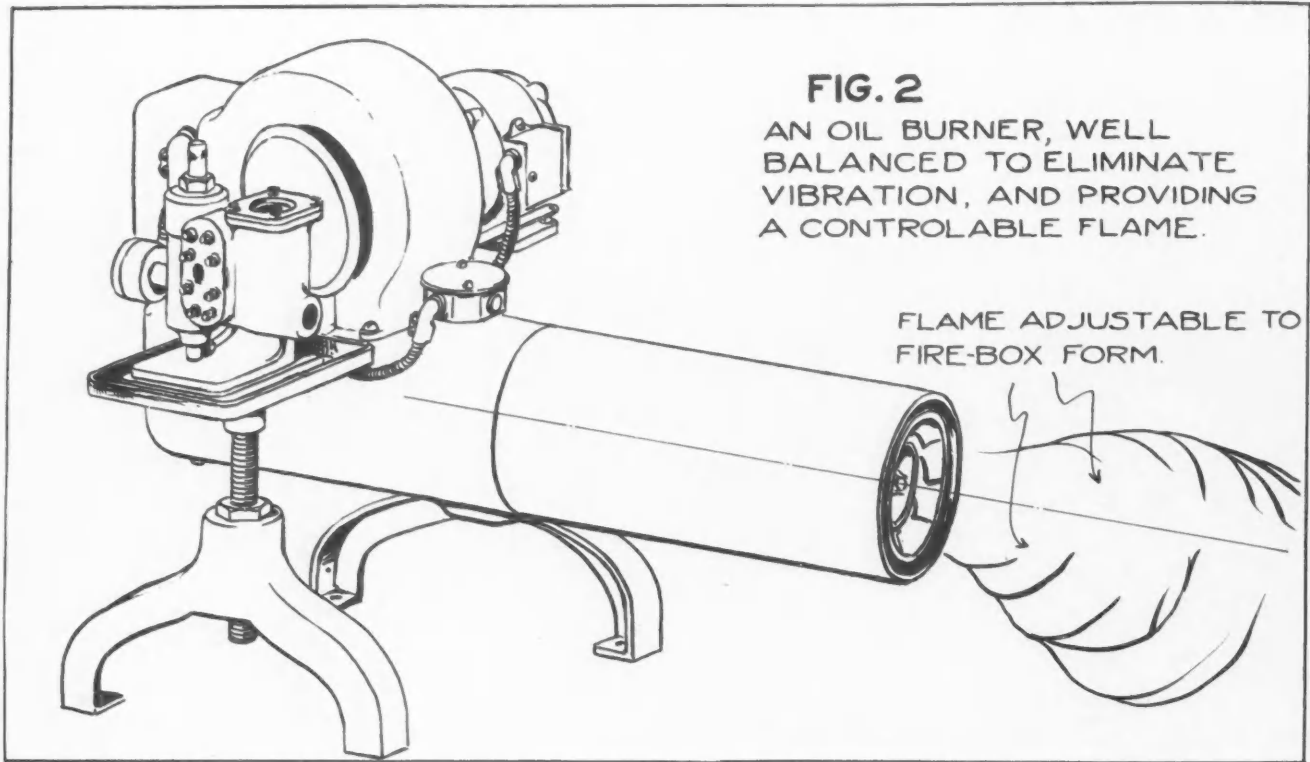


FIG. 2
AN OIL BURNER, WELL
BALANCED TO ELIMINATE
VIBRATION, AND PROVIDING
A CONTROLABLE FLAME.

FLAME ADJUSTABLE TO
FIRE-BOX FORM.

cumulation be prevented on these larger surfaces.

With cold walls there is an uncontrollable down-draft along the exposed walls of a house. This starts at the hot upper level along the wall edge where the increase in the air's density is marked, and shows in short streaks beneath the picture mould. The backs of pictures along these walls are dirt traps with likely streaks below. Projections of any sort along these walls will form eddy currents sufficient to hoard a noticeable shadow of dirt within a short time. And yet no one could, with any reason, say that the air of the house was very dirty.

In order to prevent these objectionable air currents it is necessary to keep the room at as even a temperature through its whole volume as can be done. If the walls and windows are built to do their share the next thing is to see that whatever means for furnishing heat is used there is a delivery so controlled as to prevent streaky currents along the walls or ceilings. For instance a steam or hot water radiator when standing open against a wall will soon mark the wall. But, as is often the case, when that radiator is provided with a suitable enclosure to direct the warm air stream into the room the dirt is no longer deposited on the wall and the efficiency of the radiator is increased because directed air currents through the radiator increases the so-called convection. This convection plays an increasing part right along. Directed air flow over a heating element and into the desired spaces through the proper design of radiators, coils, casings and cabinets has done a great deal to improve the powers of heating units, and it has done as much for cleanliness.

With warm-air heat there have been exceptions taken since I can remember. The registers in the floors were in the way of the rugs, they were dirt catchers in the summer months and dirt geysers in the winter months. As one critical person said, "what goes down must come up." When the registers were placed in the base-board some said the walls were still more streaked. But I

would like to suggest this. In those good old days of hot-air heat it was common practice to run the delivered air temperatures up to the top of the column in order to provide circulation through the furnace casing and to deliver heat within chilly walls. That 185 degrees heat felt good to the feet and legs on getting up to dress in a cold house, but the immense difference between the temperatures of the delivered air and that of the room provided an inverted cataract along the wall which may have helped to dust the rugs but did not help to keep the walls clean.

The arguments still go on although it is many years since most of us broke away from depending on the stove and fireplace for heat. But our arguments are more sensible or we, through learning a few things about air qualities, are more reasonable. I asked a builder a while ago why he did not place the warm-air grilles closer to the ceiling. In this particular house there was to be an air conditioning unit with positive circulation of air, the walls were thoroughly insulated, and everything was ship-shape. His answer was that he was afraid of streaking the ceilings above the grilles. He still clung to former experiences when he knew that he was dealing with milder air, filtered and washed air, that too low a delivery level would leave something of a pocket for hot air along the ceiling. I would wager that with the house and plant he has provided the grilles with suitable louvers could be placed at the ceiling level with little risk. I think he had the grilles too low for summer cooling when the volume of air delivered must be increased and the more noticeable temperature differences are apt to strike us. Anyway he is building a clean heat house regardless of the fuel.


In modern homes there are oil, gas, and coal as common fuels. In some localities electricity is available for heating at reasonable rates. Of the first three there are now a great many boosters. And for the use of coal, gas, or oil there are many modern heating units of high standards. I could better agree with the encomiums of the different

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HEATING—AIR CONDITIONING—PLUMBING AND WIRING



FIG. 3. BONDED GLASS-FIBER MATS FOR USE IN FILTERING AIR.

boosters if they did not so often try to emphasize their praise for one by disparagements of the others.

While I shall not at present prepare any brief for the use of gas heating units I would like to remark that at the recent exposition of the American Society for Metals I saw gas burners and gas furnaces of wonderful efficiency. The burning of coal is no new thing, but the manner in which coal is now burned and the effectiveness of the modern designs is so far in advance of the old styles that a long story could be made of it. One of the greatest faults with the older methods, especially true with hand firing, was the escape of the various gases and their loss to full combustion.

When, as in Figure 1, the coal is fed in automatically by a screw or helical conveyor from a hopper and the baking coal beneath the combustion zone gives up its gases they have a chance to ignite and add their heat. When the necessary air is forced in at a regular pace the proper amount for complete combustion is provided. There is all there need be and not so much as might chill or stall the fire. When the combustion area is precise and even there are no sluggish spots in which clinkers from the melted ash can solidify. I think the modern residential stoker has come for a long stay.

In Figure 2 is shown an oil burner. I regret that the space did not permit of a longer flame in proportion to the unit, but this fault in the drawing leads me to point out a feature

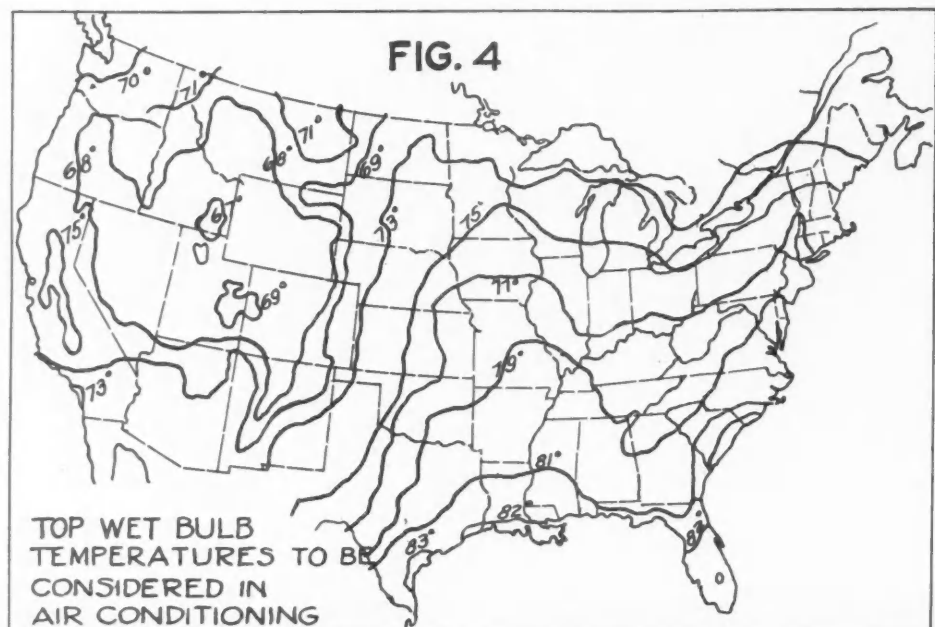
in the modern burner that escapes us sometimes. The flame in this burner can be adjusted to the shape and size of the fire-pot. For the best results in using oil for fuel it is necessary to have the flame come closely to the walls but in no case should the vapor strike the walls. The vapor must be thoroughly mixed with air for complete combustion. The vapor must be in the air and not against the walls.

Going back again to cleanliness in heating there is the glass-fiber filter shown in Figure 3. It is true that air currents along the walls and ceilings will deposit dust and dirt from the air within. But it is also true that air delivered for heating purposes should be clean when delivered. This particular filter is made up of a series of coarse and fine mats of glass fiber. These mats are bonded together to form a nearly rigid single mat. The adhesive used for the dirt catching in the filter has a melting point higher than 500 degrees, and is effective well below zero. Air filters, too, have come to stay. Wash the air, filter the air, do both. At any rate have the delivered air clean.

Lest the subject be too quickly laid aside I want to add a little about summer air cooling. Discussions will progress during the winter months but those prepared in the spring will get next summer's business. I want, again, to refer to the remarks of Doctor Lloyd Arnold in the September number of *American Builder*.

The increase in the drop of the dry-bulb, or ordinary, thermometer is not the most essential point in cooling. If it is out of proportion to the temperature it is sometimes a dangerous thing. But with an effective air conditioning unit the decrease in the readings of the wet-bulb thermometer is so easily possible that the dry-bulb temperatures can be ranged where they should be.

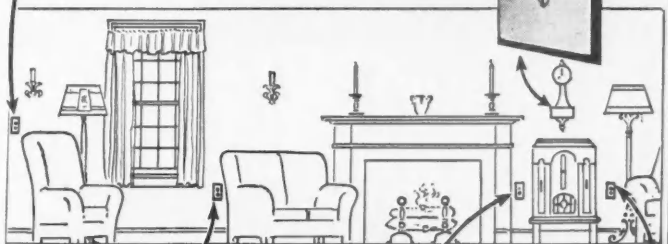
Figure 4 gives an idea of the top temperatures on the wet-bulb thermometer that must be contended with in various localities. An air conditioning unit of worth does not have to lower the dry-bulb temperatures to a point where a temperature shock is felt. The heat can be taken out of the air by reducing the moisture content of the air. Reputable manufacturers insist that a severe drop in the dry-bulb temperature is most unreasonable for comfort, and is dangerous if made at the expense of taking out the air moisture to an excessive degree.





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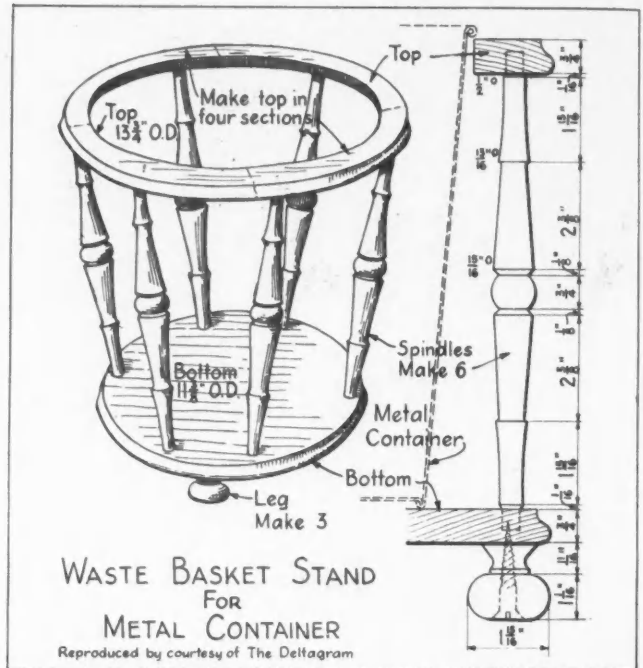
The SHOPCRAFTER'S Corner

A Workshop Department of Things To Build for Profit or Pleasure

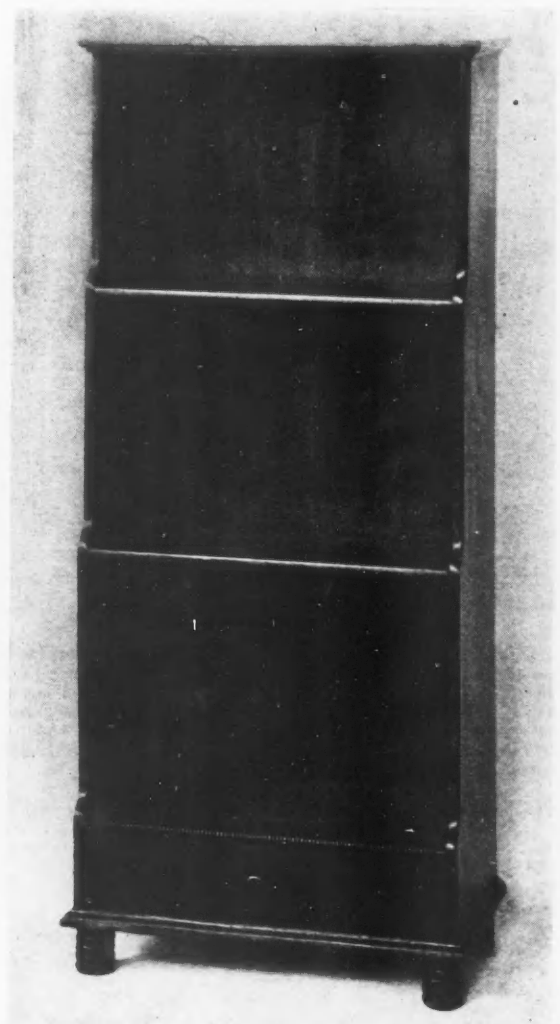
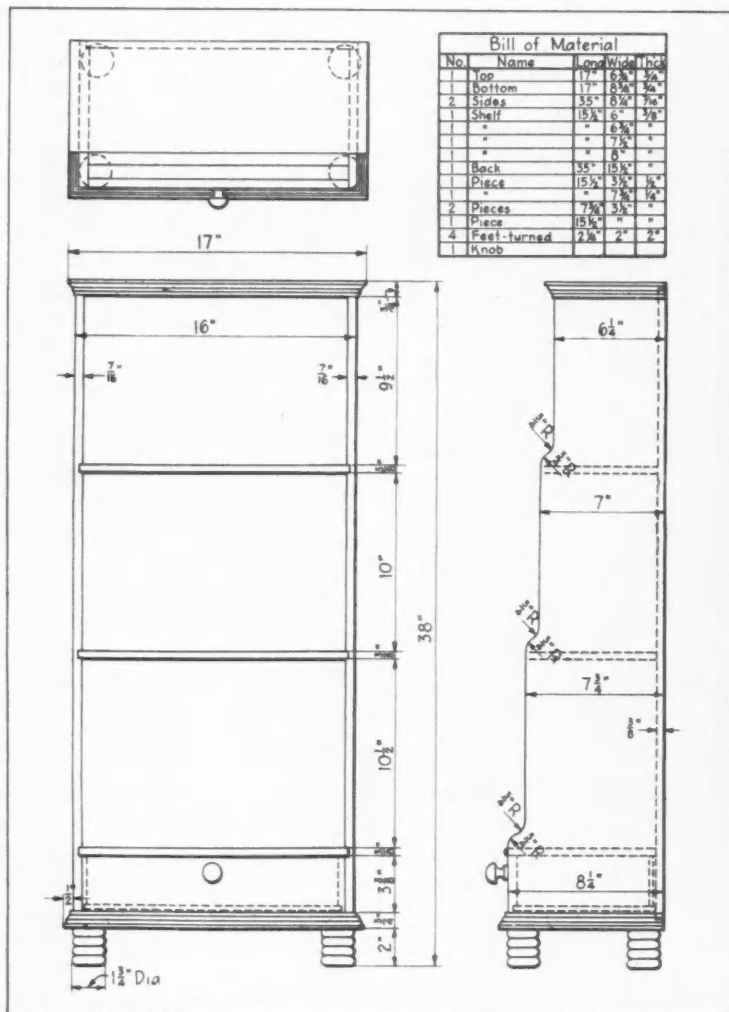
AS ATTENTION is turned from outdoor activity and centered inside the home, with the approach of cold weather, this department offers projects suitable to the season. The two pieces of home furnishings shown this month would make good Christmas gifts and plenty of time remains to do a fine job of cabinet work and finishing.

The turned waste basket frame will dress up the ordinary metal container and prove a useful as well as good-looking addition alongside a writing desk or secretary. Of course the metal basket should be bought first and the frame made according to its size.

The Colonial type bookcase is of graceful design with a handy drawer in the base. Setback shelves give interest to the ends and the beading along the edge of the bottom shelf adds a touch of fine craftsmanship. These two pieces of furniture will bring joy to every woman who wants to brighten up her living room.



BELOW: Photo and plans of a graceful Colonial type open bookcase. Above, working drawings for making a turned waste basket frame.



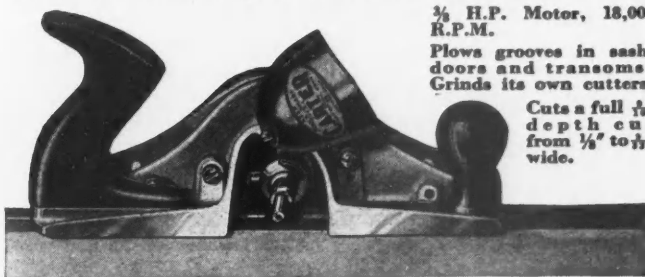


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CARTER DOOR BOTTOM WEATHERSTRIP GROOVER

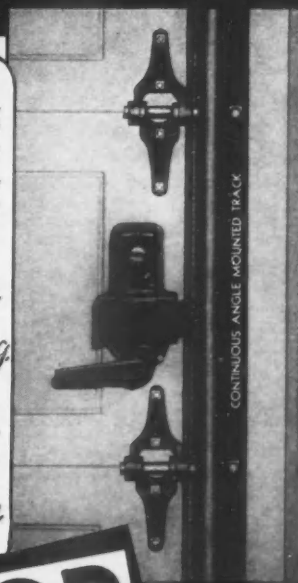
Grooves or rabbets door bottoms easily and quickly. Its speed of 18,000 R.P.M. produces smooth, clean cuts. Using a 3" saw, it cuts from $\frac{1}{2}$ " to 1 $\frac{1}{2}$ " deep and is adjustable from flush to $\frac{3}{4}$ " from the face of the door.

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Also, it is well to remember that careful, accurate installation of strips is all-important. If they aren't tight, and don't stay tight year after year, their efficiency decreases year after year. For the best and longest service, the recommendation is bronze.

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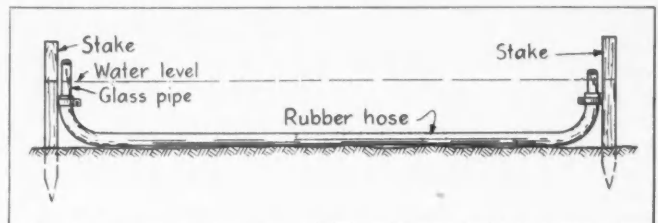
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Method for Accurate Leveling

FOR LEVELING foundations and the like, there is a more accurate system than the water-level as generally used by carpenters, which is shown below in the hose-level. I connect a glass pipe (as used for steam-gauges) to each end of a ½-inch rubber hose, fill the hose full of water with 1 inch play and plug the ends of the pipes with rubber stoppers.

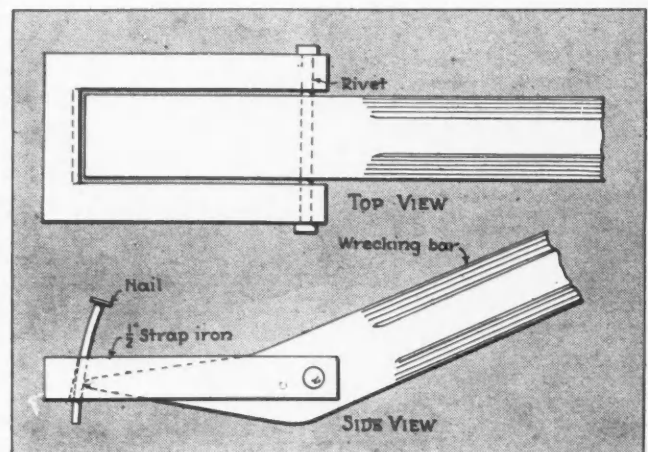


Layout for Leveling with Hose

When leveling I drive a stick in each point to be leveled and attach one end to one stick, marking the wanted height on the stick. Then a helper holds the other end at approximately the right height on the other stick, we remove the stoppers, keeping the water from running out with the thumb and raise or lower the other end, until the water inside this pipe indicates the proper level. In the final adjustment both ends have to be unplugged.—WERNER KRAATZ, Builder, White Plains, N.Y.

Nail Puller on Wrecking Bar

ENCLOSED is a sketch of one of the best wrecking bars I have ever seen. Both ends are flattened to the regular wedge shape common to one end of all bars. At one end is a half-inch square iron hinged with a rivet. This can be done at any good blacksmith shop at a small cost. This bar will pull a nail head first or point first, and will get into closer places than the regular bar. If you can use this idea please send me your book, "369 Practical Job Pointers."—HERBERT YOUNGBLOOD, Carpenter, Augusta, Ga.



Nail puller attached to wrecking bar.

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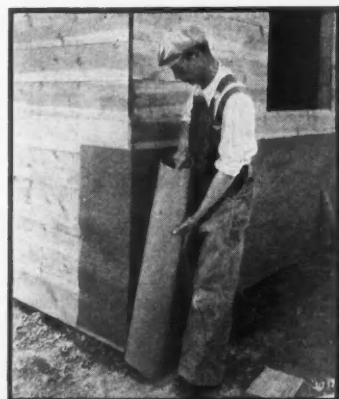
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Unbroken Protection— Even when applied by one man, and in spite of careless handling, whipping in a wind, or dragging over ground and scaffolds, Sisalkraft's tough re-enforcement resists ripping and puncturing. The air and moisture proof protection you see in a sample is carried, unbroken, into the wall.



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before setting the frames. The strength of the paper avoids tearing along the edge of the opening as would be likely with ordinary paper.



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back from the corner on the first wall. This double protection at corners stops many serious leaks after the lumber has dried and opened up cracks.



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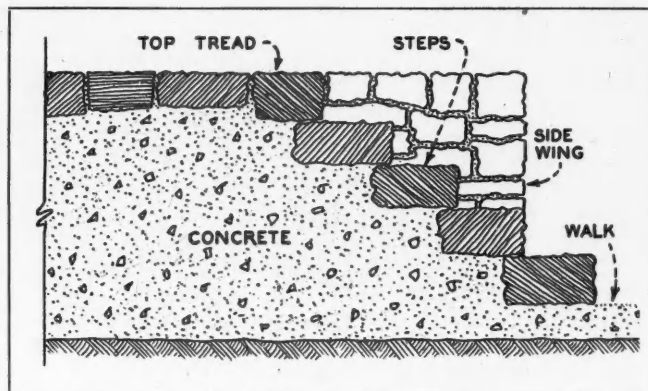
STRAN-STEEL
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Building Stone Steps

THE RUSTIC beauty of natural stone is appreciated by some home builders to such an extent that they insist on walks, steps, foundations, fireplace chimneys, etc., being made of this material. And there are conditions and types of homes where no material could be better suited.

The steps shown below are simple in design and are easily constructed. They present an inviting appearance. The side wings are built up level with the foundation and extend out about 6 feet from the house. The side wings should be about 12 inches wide. The step treads are 12 inches wide with 5 or 6 inch risers. The conditions will, of course, alter these measurements as each job is different from another.

The first tread or step is laid in front of the side wings on the surface of the walk. A 1-2-4 concrete mixture is used to fill the foundation under the steps and the stone is laid in cement mortar. Care must be used to get the corners straight and the stones laying level. Limestone is a good material to use in this type of work as it is quarried in flat square edged pieces that are easily fitted into place.—HAROLD JACKSON, Kankakee, Illinois.



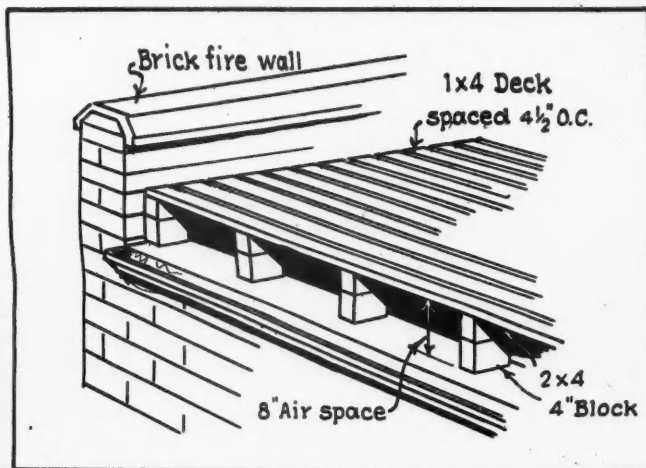
Cross section drawing of stone steps.

Roof Deck Gives Cooler House

HERE IS a practical method for your Job Pointer column—an inexpensive way to make a house cooler that can be used on hip roofs but is more practical on flat roofs. The drawing will about explain itself.

Put 1 x 4 deck over roof with about 8 inches of air space between roof and deck, using 2 x 4's placed 16 inches on center and supported where necessary by blocks cut from short pieces of studding and placed on edge to raise the deck enough to allow for air circulation. Paint the top of deck with aluminum to lessen the absorption of radiant heat and reflect the sun's rays.

This method is particularly useful for the modern flat roof type of house. Besides keeping down the amount of heat going through the roof, it gives a deck for walking on when this area is used for other purposes.—WILLIAM RODGERS, St. Louis,



Method of placing cooling deck on roof.

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NEWS OF THE MONTH

Building Activities and Meetings

Central Housing Committee

FORMAL establishment, with the approval of the President, of a Central Housing Committee, representing the leading Federal agencies engaged in activities affecting housing or home finance, has been announced by Mr. Frederic A. Delano, chairman of the Committee, as the outcome of its recent meeting, at which the participating agencies were represented as follows:

Treasury Department, T. J. Coolidge and Peter Grimm, new Assistant to the Secretary of the Treasury; Farm Credit Administration, E. F. Hill; Federal Emergency Administration of Public Works, Horace W. Peaslee; Federal Home Loan Bank Board, John H. Fahey and Ormond E. Loomis; Federal Housing Administration, Stewart McDonald and Miles Colean; National Emergency Council, C. H. Cotter; Reconstruction Finance Corp., E. B. Schwulst; Resettlement Administration, John Lansill; Works Progress Administration, Jacob Baker.

Real Estate News

AN "IDEA DRAFT" of a suggested state statute which would authorize the creation of Neighborhood Protective and Improvement Districts, to rehabilitate blighted urban areas and conserve existing home regions for a stable and protected family life, has been prepared by the National Association of Real Estate Boards after more than a year of study and consultation.

The proposed districts would enable collective action of property owners to improve the character of the district. This is action for which no present instrument exists.

Herbert U. Nelson, Chicago, secretary of the Association, in a foreword stated:

"This draft of an act is submitted to make more concrete the discussion of one of the most vexed and difficult problems in modern city life. It is recognized that any act must have many adaptations in order to fit into the legal structure in different communities and states."

* * *

Urban real estate sales for September set a new recovery high, according to reports compiled for the National Association of Real Estate Boards from major cities scattered from coast to coast. The compilation is of number of voluntary transfers, and is corrected for seasonal variations. It shows total number of sales for September to have been 48.5 per cent of the 1926 base figure.

Construction Volume Figures

THE FIRST HALF of October residential contract total for 37 eastern states, according to F. W. Dodge Corp., amounted to \$29,192,500, indicating a volume for the entire month of about \$60,000,000—EQUAL TO OCTOBER, 1931—which would be the largest figure in the last four years.

37 Eastern States	Oct. 1-15, '35	Oct. 1934	Sept. 1935
Residential	\$29,192,500	\$ 26,299,800	\$ 41,810,800
Non-Residential	28,473,900	43,685,600	49,420,100
Pub. Wks. & Util.	28,126,200	65,239,400	76,145,300

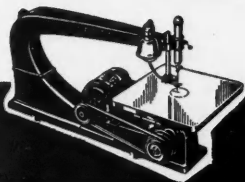
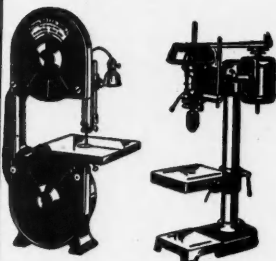
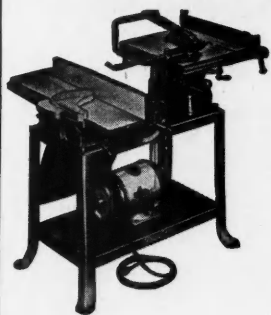
Total \$85,792,600 \$135,224,800 \$167,376,200

Totals for the third quarter of the year, reported by private financial institutions doing business under the Federal Housing Administration's Modernization Credit Plan and Mutual Mortgage Insurance Plan, reached \$167,986,593. The previous high, established during the second quarter, was \$115,491,060.

Included in the record-making volume were 222,685 modernization and repair notes, having a value of \$75,727,777; and 24,302 mortgages selected with appraisal fees paid, valued at \$92,258,816.

For the initial nine months of 1935 the contract volume totaled \$338,907,500 as against only \$188,080,100 for the corresponding period of 1934. This gain of about 80 per cent in home building between the two years was entirely due to improvement in private activity as distinguished from public housing undertakings.

NEW TOOLS FOR CONTRACTORS



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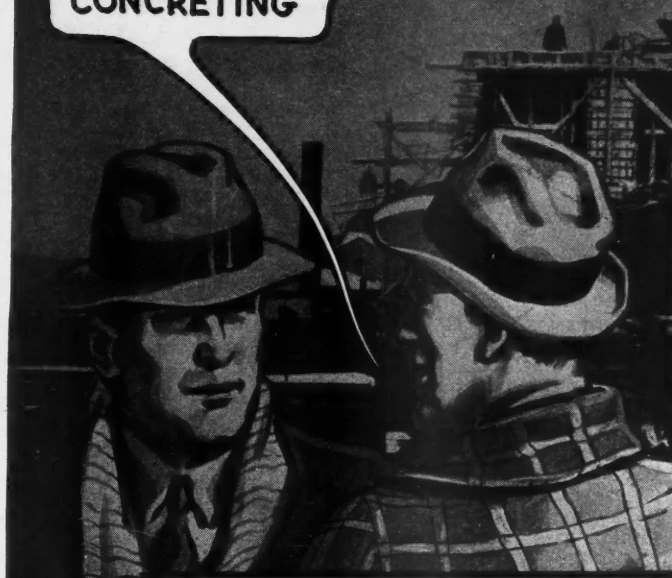
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SUBSIDIARY of UNITED STATES STEEL CORPORATION

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- 2 Decreases time during which protection is required.
- 3 Permits earlier removal of forms.
- 4 Increases ultimate strength as well as early strength.
- 5 Produces denser, tougher, more waterproof concrete through increasing workability and thereby permitting reduction in water-cement ratio.
- 6 Works equally well with standard or high early-strength Portland cements.
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LETTERS from readers on all subjects

Facts, opinions and advice welcomed here

Believes We're Both Right

Berkeley, Calif.

To the Editor:

I appreciate heartily your article on page 25 of the September issue, particularly the statement that lower wages by the hour would result in larger earnings for building trades mechanics by the week, month and year.

At the State Building and Loan Convention in Coronado last June, Mr. Morton Bodfish, executive vice-president of the United States Building and Loan League, told us that a house has always cost too much and building trades and material people would be a thousand times better off with a volume of business at lower unit prices; that the general good would be better served by letting our old friend "competition" operate on both building wages and material costs.

I believe you are both right. I might add that financing costs have been too high in the past. The administration has been engaged in propaganda and considerable legitimate effort to reduce these, though I regret that it has been mainly in the interest of the debtor and without the least thought of being fair to both the debtor and the savers of the country. Many of the latter are elderly people who have denied themselves during the greater part of their lifetime so that they might be independent in their old age. I have handled the funds of scores of such people, none of whom could be called rich, but who, collectively, are the backbone or the majority of the so-called capitalistic class.

The saving in interest rates and financing costs has not been reflected in the reduced cost of home building. Labor and material dealers have more than made up any savings in financing. There is still work for you and ourselves to do before we get this whole question settled.

F. R. PEAKE, Executive Vice-Pres.,
Community Building & Loan Assn.

Framing Overhanging Second Floor

Providence, R. I.

To the Editor:

We are preparing plans for an American Colonial Home, but with the front wall of the second floor rooms, projecting about 10" beyond the first floor walls. Examples of such homes have often been illustrated in the *American Builder*.

Our problem is the overhang of 10". The living room will be 13'-4" x 28'-0" and we are unable to lay out the second floor joists, to run from the front to the back of the living room, without putting a steel beam in the living room ceiling.

What we are trying to do is to frame the second floor joists so that a beam of any kind will not be necessary. Is it possible to frame the second floor joists to provide good construction, and yet do away with the beam?

INNES-FIRTKO COMPANY
Frank J. Firtko, Assistant Manager.

Answer:

Dear Sir:

Your letter asking the best way to frame the floor joists to provide for overhanging second floor in the Early American style was referred to R. Harold Zook, architect, Chicago, since he has handled a good many houses of this design. He has just reported back and I am able to pass the information along to you.

Mr. Zook states that the best way to handle the problem is to run the second floor joists the short way of the room and 2½ feet back from the wall that is to have the overhang, double a joist to act as a header. Then the short pieces can be framed out from this to overhang the wall to the required amount on the cantilever principle. Sometimes for extra security, he spaces these overhanging joists 12 inches on centers where the regular

(Continued to page 66)



INSTALL The TRACK That Brings 'em BACK ... For More

This is not a claim, but a fact based on the experiences of thousands of Builders throughout the country . . . every time you recommend or make an installation of Hangers and Track bearing the Frantz name . . . whether it's "Glide", "Shedwel", or "Rollaway" . . . you assure yourself of a fully satisfied customer.

Frantz Hangers and Tracks are all unique in their simplicity of design . . . their ability to give extra years of trouble-free service . . . and in the ease with which they can be installed. Yet these good-will building features cost no more. Write today for complete information and prices on the Frantz line. FRANTZ MANUFACTURING CO., Sterling, Illinois.

"GLIDE"
THE
ORIGINAL
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TRACK

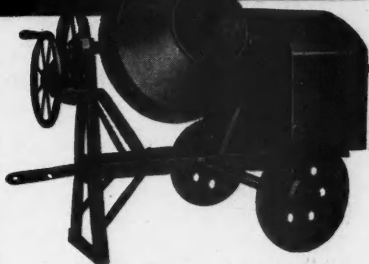
Pictured here is the No. 1 "Glide" roller-bearing Hanger, with hinged drop strap. Hanger No. 2 has vertical adjustment feature to lift doors if frost raises floor or building sags.

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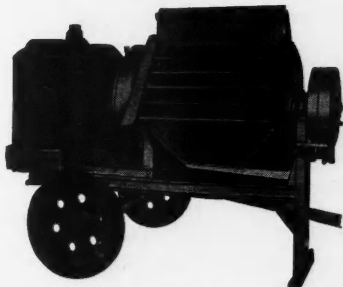
Guaranteed BUILDERS HARDWARE

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Full anti-friction bearing. Light weight. Skip shaker. Automatic water tank. Spring mounting. Sizes: 3½-S, 5-S, 7-S, 10-S.



3½-S Trailer — Roller Bearing — Spring Mounting.



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time-saver!
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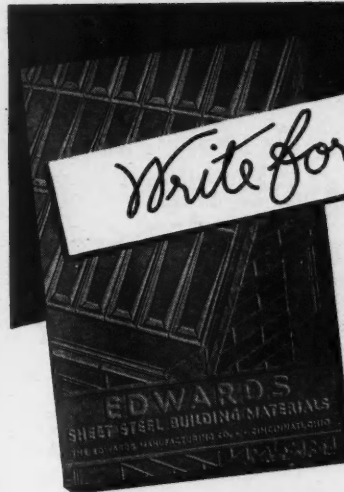
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450 W. 24th St.,

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Letters from Readers

(Continued from page 64)

spacing for the other joists is 16. The short pieces are toe nailed into the header.

This method gets away from the need of a steel beam across the middle of the living room.

B. L. JOHNSON.

Another Builder of Popular "Economy House"

Van Wert, O.

To the Editor:

I am enclosing a snapshot of our home built from the plans in your February issue of the "Economy House," thinking that you might be interested in seeing the changes made and how the house actually looks. We have had a great many compliments on our home and are very well pleased with it. It is located on a corner and so of course the plan of the dining room porch is ideal. (Illustrated below)

Of course the changes are very small and the general plan was carried out in almost every detail.

The changes to the exterior are as follows:

Instead of the combination in the exterior as shown on your plans, we used light gray shingles, for the vestibule as well as the rest of the house, with cream colored window trims and a vivid green flower box. Our roof is of Carey composition shingles mottled, with rose predominating. Our chimney is built in a rustic effect with different colored bricks and stones in no special design and with mortar ragged around the bricks. On our terrace and our porch off the dining room, we have used large rose and white blocks of concrete in a design.

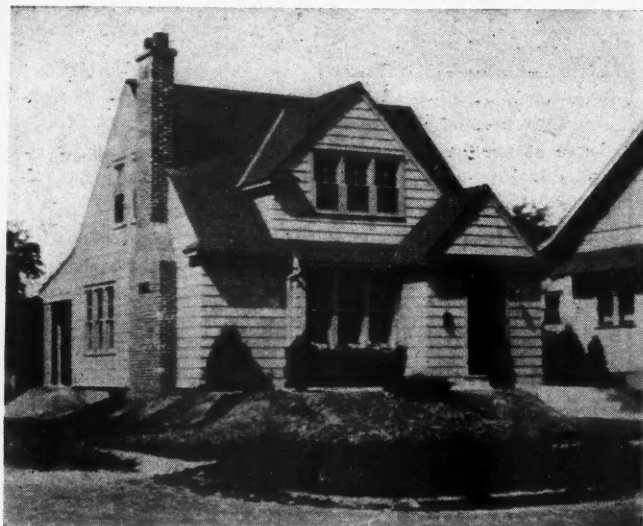
In the inside of the house we have followed the general plan almost identically. However, in the kitchen we reversed the stove and refrigerator plan, using the built-in cupboards on each side of the sink and put the stove right next to the cupboard in the place marked "refrigerator." Then we moved the doorway between the dining room and kitchen to accommodate this change and put the refrigerator in the space marked "stove," and built a cupboard over it.

In our living room we made the fireplace of brick and then plastered over it with the same color as our walls, leaving the red face brick exposed around the opening in a design. We painted the mantel cream as near the same shade of the walls as possible.

Then upstairs we combined the two wardrobes in the front bedroom and made one large wardrobe with a slightly larger door. In each of the bedrooms and in the bathroom we made a gable cupboard using a small door and in this way we have a great deal of storage space and the looks of the rooms are not harmed in any way.

We are very proud of our home and think that after the shrubbery and yard are all fixed up, we will have one of the loveliest homes in Van Wert. The house was started on the 4th of March and we moved in on the 6th of July.

NORMAN R. CONN.



"Economy House" as built by N. R. Conn

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... and build a reputation for laying floors that satisfy.

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STATEMENT of the ownership, management, circulation, etc., required by the Act of Congress of March 3, 1933, of AMERICAN BUILDER AND BUILDING AGE, published monthly at Chicago for October 1, 1935.

State of Illinois,
County of Cook,

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared B. L. Johnson, who, having been duly sworn according to law, deposes and says that he is the editor of the AMERICAN BUILDER AND BUILDING AGE and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, American Builder Publishing Corp., 105 West Adams St., Chicago, Ill.

Editor, B. L. Johnson, 105 West Adams St., Chicago, Ill.
Managing Editor, Joseph B. Mason, 30 Church St., New York, N. Y.
Business Manager, Robert H. Morris, 105 West Adams St., Chicago, Ill.

2. That the owners are:

Simmons-Boardman Publishing Company, 30 Church Street, New York, N. Y.;
Simmons-Boardman Publishing Corporation, 30 Church Street, New York, N. Y.;
Stockholders of 1 per cent or more of the total amount of stock are:
I. R. Simmons, 15 Hillcrest Dr., Pelham Manor, N. Y.; P. A. Lee, Hopatcong, N. J.; Henry Lee, Hopatcong, N. J.; E. G. Wright, 398 N. Walnut Street, E. Orange, N. J.; S. O. Dunn, 105 West Adams Street, Chicago, Ill.; C. E. Dunn, 3300 Sheridan Blvd., Chicago, Ill.; L. B. Sherman, 375 Sheridan Road, Winnetka, Ill.; Mae H. Howson, 105 West Adams Street, Chicago, Ill.; Spencer, Trask & Company, 25 Broad Street, New York, N. Y. General partners of Spencer, Trask & Company are: E. M. Bulkeley, Acosta Nichols, Cecil Barret, C. Everett Bacon, William B. Bassett, F. Malbone Bloodlet, Henry S. Allen, Henry M. Minton, William Kurk-Beckers, Arthur H. Gilbert, all of 25 Broad Street, New York, N. Y. Percival Gilbert, William E. Stanwood, both of 50 Congress Street, Boston, Mass., are General Partners, Henry A. Colgate, 25 Broad Street, New York, N. Y., Special Partner, and S. Bayard Colgate, Special Partner, 15 Exchange Place, Jersey City, N. J.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

BERNARD L. JOHNSON,
Editor.

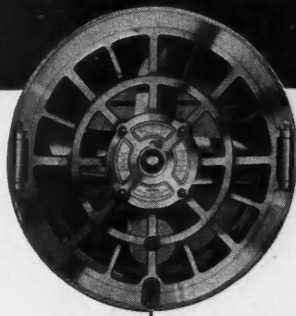
Sworn to and subscribed before me this 30th day of September, 1935.

ANNE A. BOYD,

[Seal]

(My commission expires Dec. 10, 1935.)

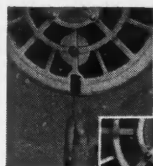
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For Both New and Old Homes!

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DRIVER TILTING ARBOR SAW

TABLE SIZE "48x30"

CUTS FULL 3" STOCK

Removable Insert For Dadoing. Tilts to 45°

LOW OPERATING COST SAVES TIME



SPECIFICATIONS
SKF Ball Bearing equipped. Endless "V" belt drive. Gearing 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.

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. All angles are cut by simply tilting the combination saw and motor unit. The top is laminated maple 1 1/2" 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.

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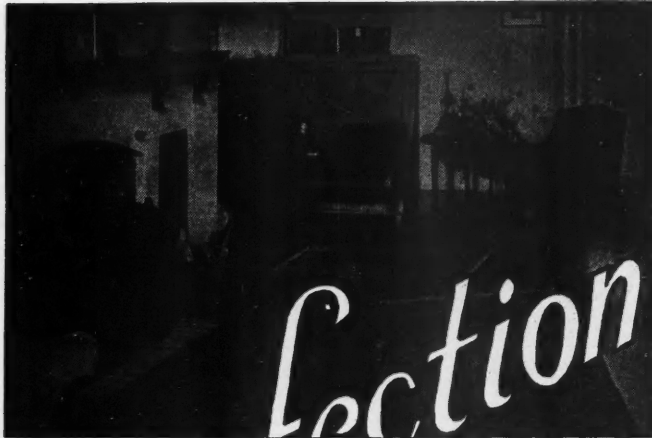
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INCREASE YOUR STORAGE SPACE

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METAL WEATHERSTRIPS
Do You Want To Make More Money?

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Don't waste valuable time. Write today for details—we will help you get started in this profitable business.

Federal Metal Weather Strip Co.

4620 Fullerton Ave.

Chicago, Ill.

Record Home Building

(Continued from page 25)

(2) These mortgages may be discounted with the Federal Reserve and are therefore liquid assets. This most important feature is included in the Banking Act of 1935 and is an epochal step forward in transforming mortgage loans from frozen to liquid assets.

(3) These mortgages may be sold at any time. Under a recent ruling, the Reconstruction Finance Corporation has agreed to buy them. They may be sold to approved purchasers, such as large mortgage companies and banks. They may be sold to insurance companies which, according to Mr. Grimm, are actively in the market for such insured loans. He reported conferences with presidents of leading insurance companies who stated that they have not been able to get a sufficient supply of insured mortgage loans. One insurance company sent a representative to a large number of banks, seeking to buy such loans, and could not obtain an adequate supply.

All these considerations, and others not yet revealed, will stimulate the flow of private capital into residential construction at increasingly low rates, according to Grimm. As the value of these mortgage loans becomes more and more appreciated, competition for them by financial institutions will tend to drive the interest lower.

Housing Shows Planned

Another important consideration pointed out by the Treasury Department is the profitable return available to banks and financial institutions in financing construction from the time the job is started until the long term mortgage loan is taken after the house is completed. It was pointed out that a most profitable revolving fund can be set up for making construction loans. The interest rate of 5½ per cent is attractive and, in addition, the rapid turn-over of money, estimated at from two to four times a year on this type of loan, should permit a gross yield to the lending institution of from 7½ to 9½ per cent.

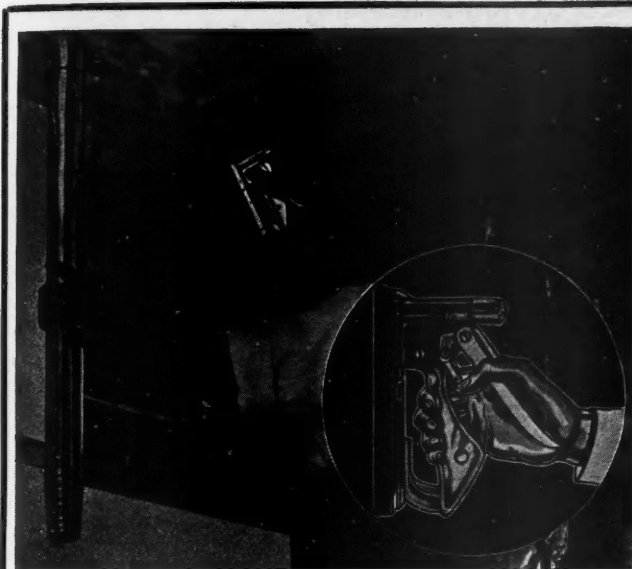
To supplement the financing activities, a vast program of education, promotion and home salesmanship is under discussion. Such a program would again be the co-ordinated activity of all the housing divisions of the Government, working towards the end of better homes for all classes of people. A series of home shows in every principal city of the nation conducted by private industry, but co-ordinated and assisted by the Federal Housing Administration, is already laid out. This work is now in the hands of a Housing Display Conference organized at a meeting in the Treasury Building on Oct. 19, of 33 representatives of the durable goods industry. Russell G. Creviston of the Crane Company, Chicago, is chairman, and Marshall Adams of the American Radiator & Standard Sanitary Corporation of New York is vice-chairman of the group which is studying plans for a series of country-wide exhibits to stimulate home building.

Many Encouraging Factors

Attending the conference, which was called by Peter Grimm, were Stewart McDonald, FHA Administrator, W. G. Flanders, Deputy Administrator, Henry Guthrie, in charge of FHA exhibitions, and the officials and representatives of key manufacturing and producing industries in the building industry.

An important fact brought out at the conference was

(Continued to page 70)



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Thickness of lumber _____ Width of Cross Cut _____

Name _____

Address _____

City _____ State _____

Record Home Building

(Continued from page 68)

the report that not less than half of all the building activities in this country during a given year normally take place in communities of 5,000 and less. The importance of housing promotion in such communities was brought out and methods discussed.

Many other encouraging developments are revealed by a survey of the field entirely unrelated to government activities. The volume of residential construction continued through the summer months and through September and October at a high rate, doubling and tripling the volume of last year. August building permits in 748 cities were the highest for any month since October, 1931. Business of many builders has been so good this fall that they are continuing activities through into the cold weather.

From numerous cities come reports of building operators large and small purchasing land for future construction. In the New York territory, practically every important large operator has announced the opening or the proposed opening of new residential tracts. This is one of the best indications of an active program next year. In addition, sales of single lots to thousands of smaller operators who put up two, three or a half-dozen houses in the course of a year, are reported from various sources. When the rank and file of small builders gets back into the picture, there is assurance of a sustained building program.

A sharp increase in requests for plans and for building information by readers of *American Builder* is a further indicator of the fact that many builders are laying plans for increased activity next year. For the first time in history, hundreds of model homes have been opened in the fall by builders who refused to wait until spring to take advantage of the strong home building sentiment. In one week end recently in New Jersey, more than two hundred model and demonstration homes were opened simultaneously with ceremonies and record crowds. These fall demonstrations are strong indicators that the statistical, financial and political factors described above are being translated into action by the practical building men who, in the last analysis, will make or break the program.

Quality Details Sell Homes

(Continued from page 40)

vide 70° at zero temperature without forcing boiler.

PLUMBING AND BATHROOM—Best quality Standard Pembroke fixtures in tang red color, built-in tub, pedestal lavatory, Chase brass pipe, chrome fittings. Tile bathroom floor, and walls tiled six feet high. United Metal Box Co. medicine cabinet.

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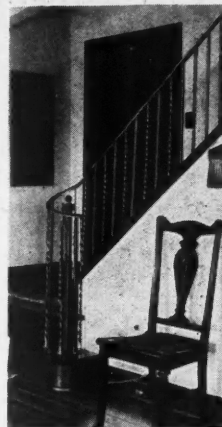
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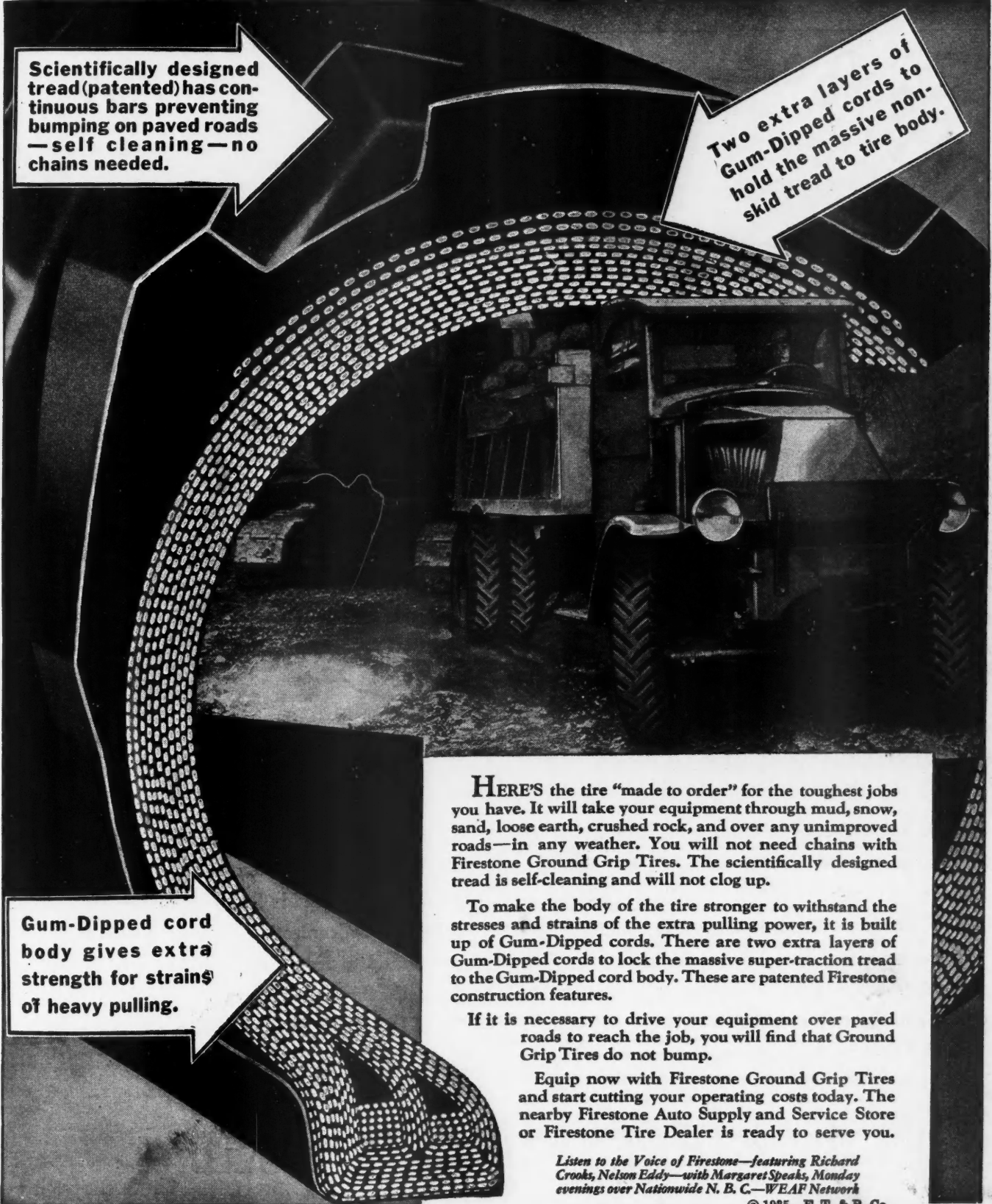
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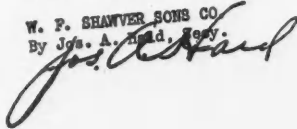
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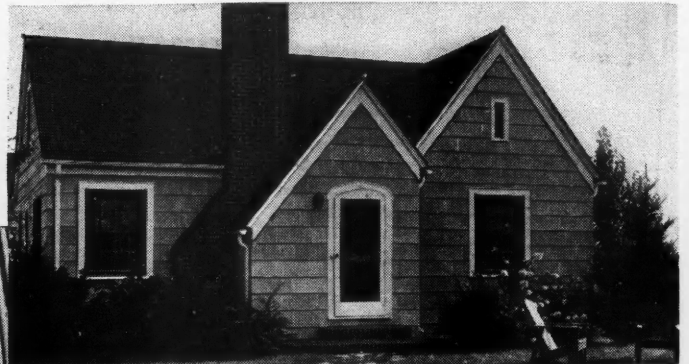
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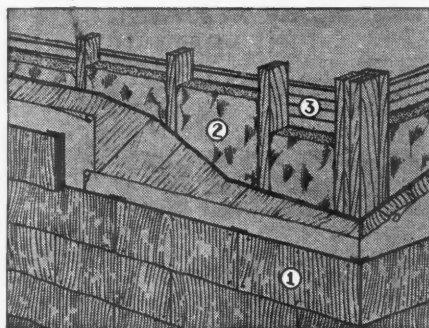
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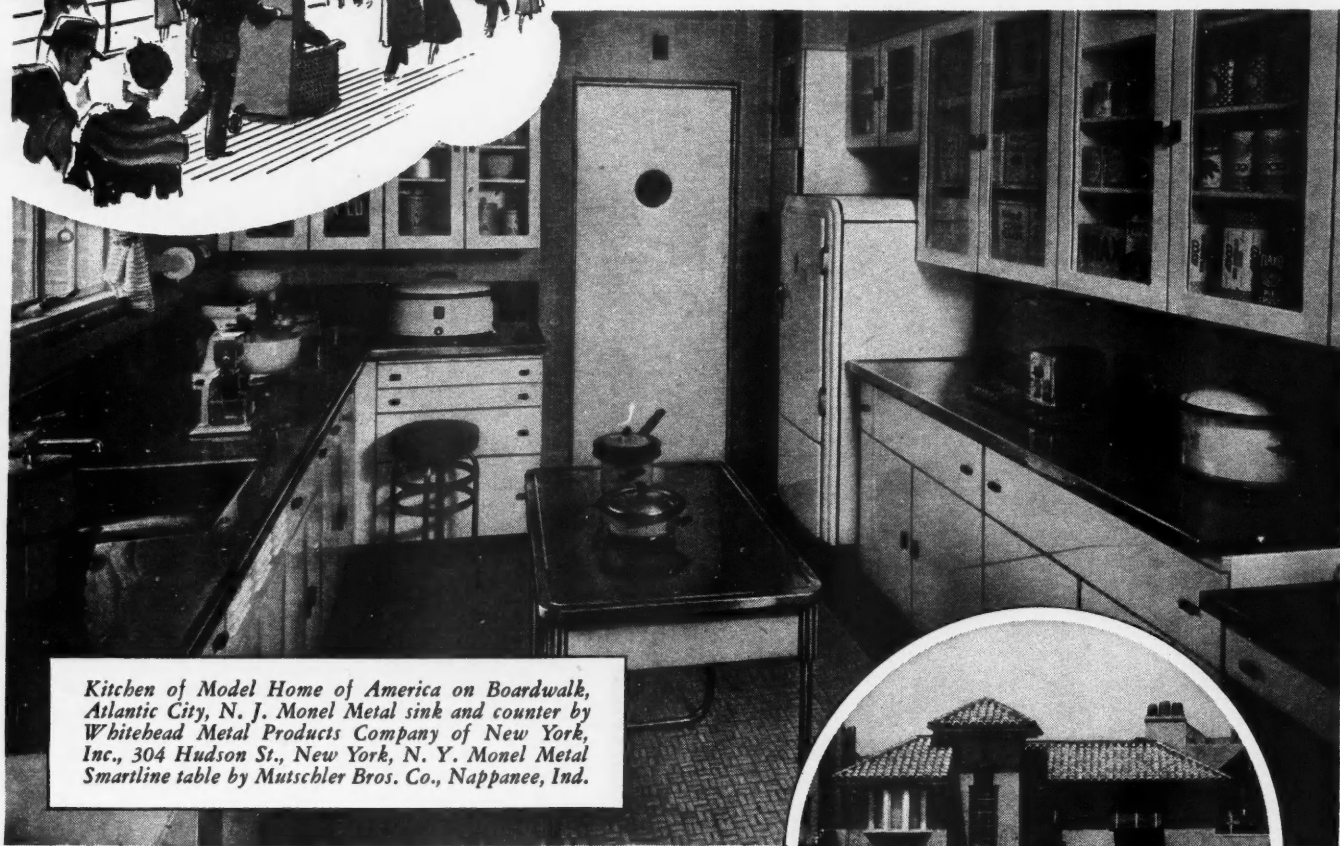
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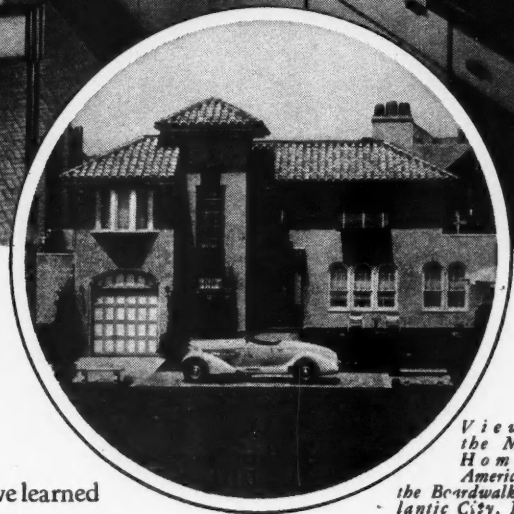
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View of the Model Home of America on the Boardwalk, Atlantic City, N. J.

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the grief of
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Contractors can heave a big sigh of relief and forget about paint troubles. A remarkable paint test made on a whole community settles the question once and for all. It proves what house paint will stand up best under all conditions.

The test was made in a northern Indiana mill town. The 100 homes in the community were divided into 3 sections. Each section was painted with a leading kind of paint. In a short time,

two of the paints had cracked, peeled or discolored badly. They had to be touched up within two years. During the same period, the third paint—100% Eagle Pure White Lead—showed little sign of wear. The houses in this section did not need repainting until 5 years later!

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Remarkable paint test was made here

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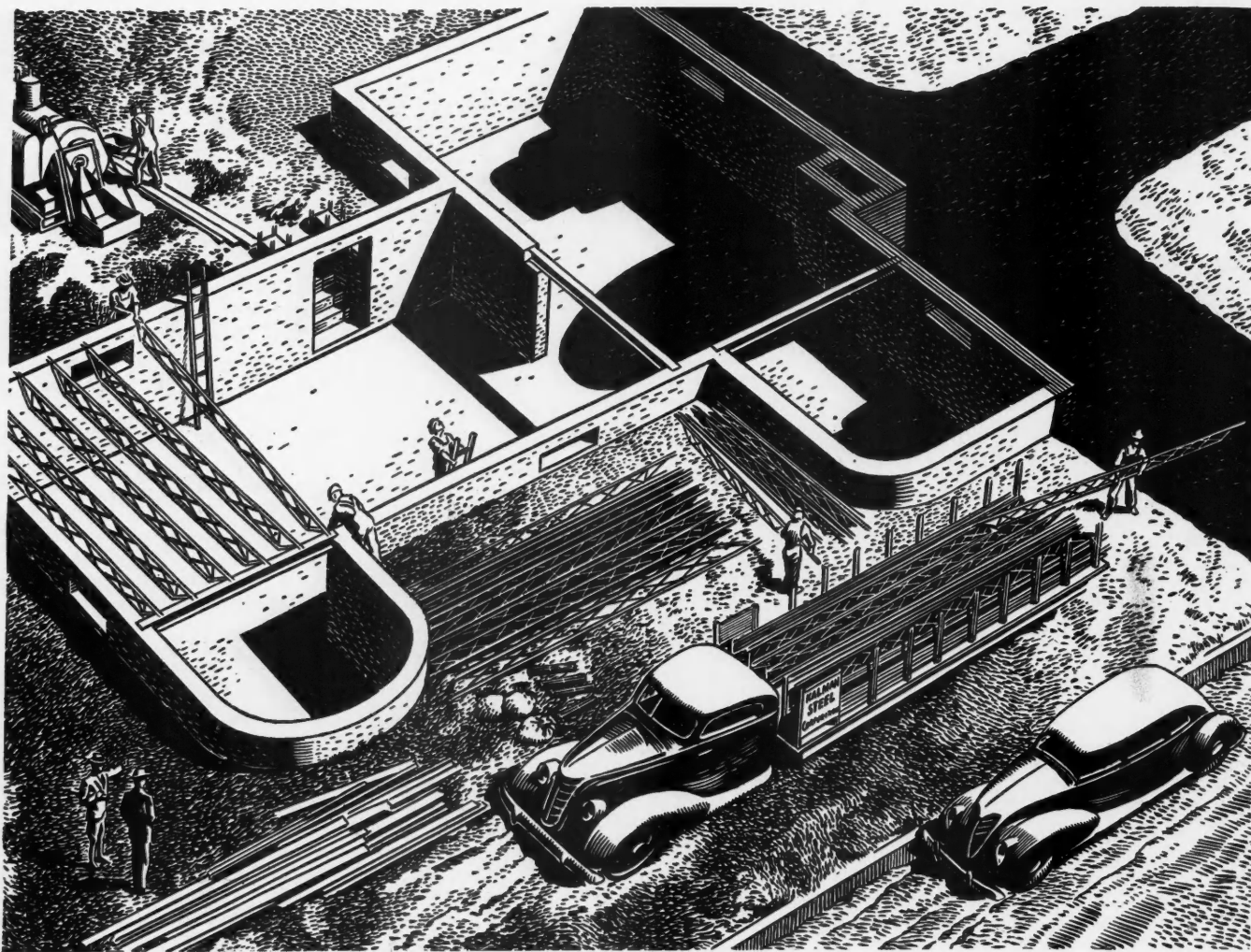
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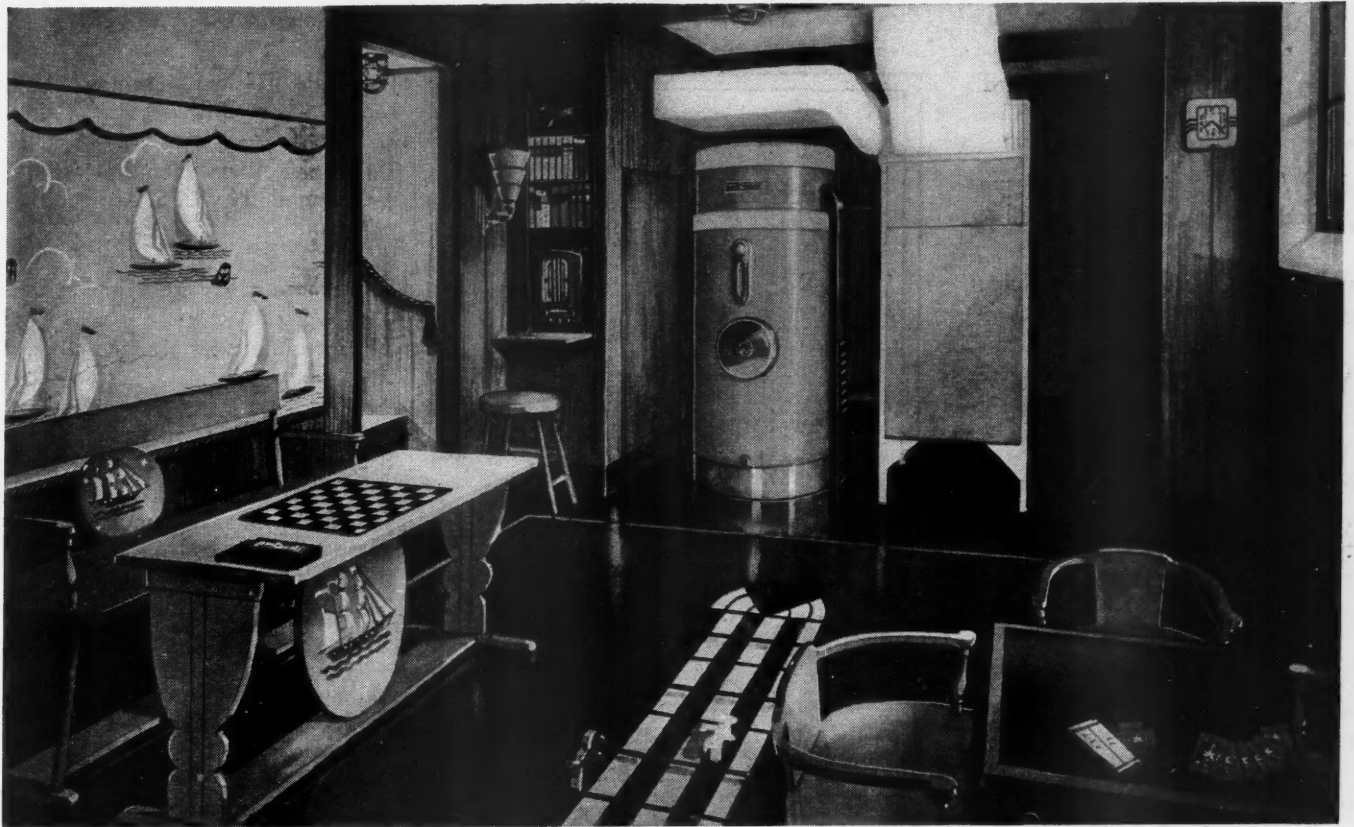


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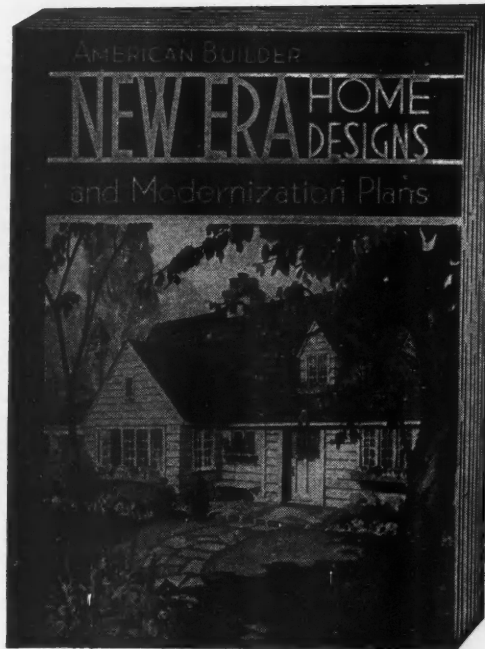
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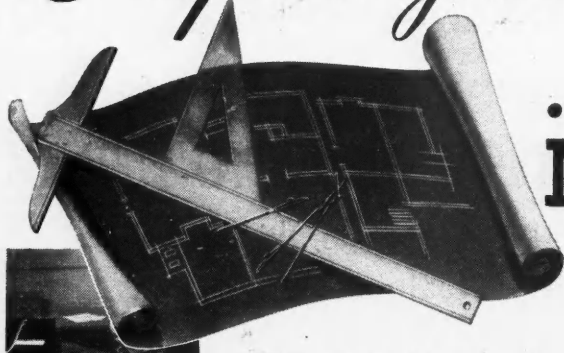
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