

# AMERICAN BUILDER

## THE WORLD'S GREATEST BUILDING PAPER

Vol. 42.

CONTENTS FOR NOVEMBER, 1926

No. 2.

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Published on the first day of each month by American Carpenter and Builder Co.; Wm. A. Radford, *President, Treasurer and Editor-in-Chief*; Wm. A. Radford, Jr., *Vice-President*; E. L. Hatfield, *Vice-President and General Manager*; Bernard L. Johnson, *Vice-President and Editor*; Roland D. Radford, *Secretary*; S. C. Kellenberger, *Dealer Service*; Delbert W. Smith, E. B. Wolfrom, C. R. W. Edgcombe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, H. P. Sessions, J. J. Dubro, Glenn Mills, *Advertising Staff*.

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**SUBSCRIPTION RATES**—One year, United States, Canada, Mexico, and U. S. Possessions, \$2.00; six months, \$1.00; single copies, 35 cents. Foreign countries, \$4.00.

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**MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS**

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# New Standards of Popularity and Approval

Construction of National Demonstration Model Homes, Already Under Way in 16 City, is Attracting Attention Throughout the Country

**34 LEADING MANUFACTURERS AND ASSOCIATIONS CO-OPERATE TO SHOW HOW BETTER HOMES SHOULD BE BUILT**

By L. PORTER MOORE

*President Home Owners Service Institute*

CONSTRUCTION is now under way on sixteen of the first series of model demonstration houses to be built in cities from coast to coast by the Home Owners Service Institute; and builders throughout the country who are not yet allied with this remarkable campaign are making haste to fall into line.

Good construction practice is becoming so popular in the cities where these houses are being built that local builders are as impressed as the general public. They are eyeing the lucky builder who was chosen to bask in the warm publicity spotlight so carefully turned on this undertaking by the Home Owners Service Institute and they are deciding that what has been done once can be done again.

These other builders already realize that these demonstration houses, when completed, will be the most saleable products in town. And why not, with the public being assured on the front page of their leading newspaper, day by day, that these houses are well nigh perfect?

The specifications laid down by the Home Owners Service Institute are public property. The institute is only too anxious to promote the wide use of these specifications which were drawn with more care than has ever before been accorded small house specifications. They are published in the local newspapers sponsoring the demonstration

houses in the various cities scheduled in this campaign. They were published in the October issue of the AMERICAN BUILDER. There is nothing to stop other builders from adopting these specifications and boasting that their houses are similar to the much discussed demonstration houses, and there is everything to encourage such a practice.

Construction is rapidly progressing on the houses in Buffalo, Detroit, Cleveland, Pittsburgh, Wantagh, Long Island (New York), Teaneck (New Jersey), Westfield (New Jersey), Boston and Houston and negotiations are being completed as this issue goes to press with builders in Chicago and Miami.

As a part of the carefully organized publicity campaign that is making for the success of this undertaking, impressive ceremonies were held in each city when ground was broken for the houses. The mayors, the publishers, editors of the co-operating newspaper, the presidents of the local real estate boards and other prominent people viewed the turning of the first spade of dirt and spoke at length on the merits of home ownership and the advantages of using standard, nationally known materials and equipment. These words were duly recorded on the front pages of the newspapers and pictures published of these first citizens, with the builder occupying a prominent position in the group.



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



## Approved Materials and Equipment for the



Mayor Edwin O. Childs, of Newton, Boston, Mass., Breaking Ground for The Home Owners Service Institute Model House To Be Built at Oak Village. Arnold Hartman, builder of the Boston house is standing behind the Mayor. The other members of the group include officials of the Boston Sunday Advertiser, which is sponsoring the model home, and the Real Estate Board.

Photographs of the breaking of ground for the Buffalo demonstration house appeared on the front page of the Buffalo "Courier Express" early in September. William J. Connors, Jr., publisher of the paper; Burrows Mathews, editor, and Albert J. Kinsey, past president of the Buffalo Real Estate Board and president of the Kinsey Realty Company, builder of the Buffalo house, were shown at the opening ceremonies with a story announcing the undertaking and describing the part to be played by the Kinsey company as the builder.

Early in September the Detroit public read in headlines across the entire top of the front page of the Detroit "Free Press" that, "Mayor Smith Turns Ground for Standard House; Free Press Begins New Better Homes Service." Below appeared a photograph of Mayor John W. Smith, of that city, turning the first spadeful of dirt on the model home site, with Guy W. Ellis, past president of the Detroit Real Estate Board; Arthur S. Storm and George W. Miller, members of the firm Miller-Storm Company, builder of the Detroit houses, with E. D. Star, publisher, and William B. Lowe, managing director of the "Free Press," in the group.

The Detroit public who have not

already had dealings with these builders will forever after have confidence in them because of this spectacular but good publicity. Furthermore, any builder in Detroit who

hereafter announces that he is using the same materials and equipment in his homes as were used in the "Free Press" house will gather some of the profits of this co-operative effort. The design used for the Detroit house (901-X) was published in the AMERICAN BUILDER October issue.

The William J. Mitchell Company, builder of the Cleveland house, was mentioned in the first paragraph of the story announcing this movement in Cleveland on the front page of the third section of the "Plain Dealer," one of the leading publications in the country. The same issue carried a three-column picture of the Cleveland house, the same design as that being used in Pittsburgh.

The Fort Pitt Real Estate Company, builder of the demonstration house in that city, received similar publicity in the main news section of the Pittsburgh "Press" of September 5. Headlines, announcing the campaign in Pittsburgh, referred to this company which already enjoys a reputation for using nationally known, standard materials and products in its residence construction. The Pittsburgh house will be open about December 1.



C. J. Shoemaker, President of the Fort Pitt Real Estate Company, Pittsburgh, Pa., Who Is Building the Pittsburgh Model Demonstration House.

# for the National Demonstration Model Homes



Similarly in New York City, where this movement was started by the Home Owners Institute four years ago, with the co-operation of the New York "Herald-Tribune," eight-column streamers continue to appear on its now famous "Small Home" page in connection with the New York houses now being built at Wantagh, Long Island; Westfield, N. J., and Phelps Manor, N. J. Alexander T. Saxe, Inc., is building the Wantagh house; George H. Riley, famed for "Riley Built Homes" throughout northern New Jersey, is building the Westfield house, and William Pritchard & Sons, Inc., is building the house at Phelps Manor (Teaneck, N. J.).

While the foundation was being laid for the first demonstration model home at Oak Hill Village, Newton, Boston, the Boston Sunday "Advertiser" announced a second demonstration house to be built at Tam Worth Hill, in the beautiful Greenwood section of Wakefield, Boston. Arnold Hartmann, Oak Hill Company developer of Oak Hill Village, will build the first Boston house (No. 903X). William J. L. Roop, engineer and builder, will build the second Boston house. Mr. Roop probably builds more houses in greater Boston annually than any other builder. He averages 45 houses a year. In accordance with the plan of this campaign both these builders will construct nine other houses of the same standard of trade-marked nationally known materials and equipment, specified by the Home Owners Service Institute.

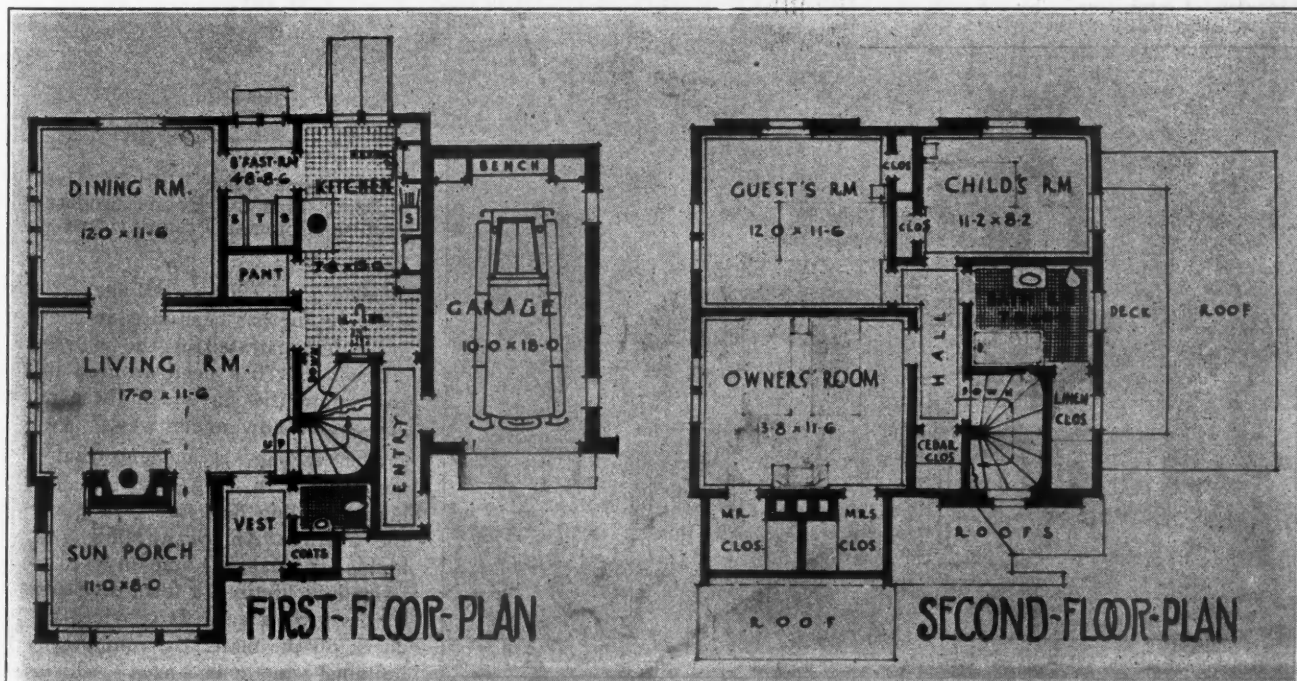
Under the supervision of W. C. Guthrie, Fort Worth builder, and a local architect, one of the plans assembled by the Home Owners Service Institute for this campaign is being adapted to meet Fort Worth climatic conditions,



A Six Room, Elizabethan English, Half Timbered, Stucco House of Frame Construction With Common Brick Veneer and Wood Trimmed Exterior from the Plan Shown Below.

and construction will begin this month. The Fort Worth "Press" is the co-operating newspaper in this city.

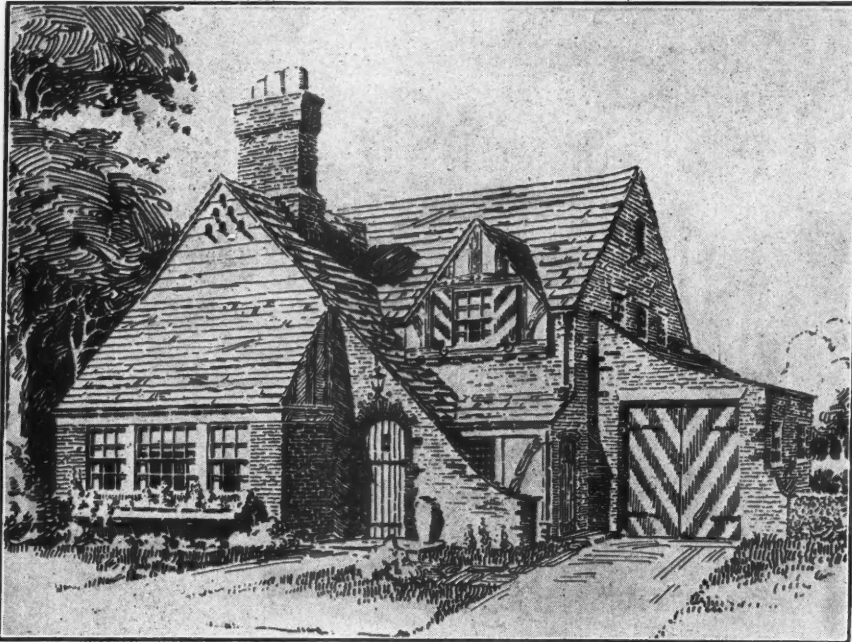
The Chicago "Herald-Examiner," with more than 1,100,000 Sunday circulation, has begun to publish the weekly syndicate service of the Home Owners Service Institute and the New York "Herald-Tribune" syndicate and its "Small House Page," and construction of the three Chicago houses will begin in the near future. All the co-operating newspapers in this campaign are using this weekly syndicate, which consists of articles by various authorities on home financing, planning, building, furnishing, and landscaping.



Floor Plans for the Series of Houses Illustrated on This and the Following Page, the Master Plan for Which Was Designed for the Home Owners Service Institute by Henry G. Jefferson, Architect, of Bronxville, N. Y., the Original Eight Room Plan Being Redesigned by Floyd Yewell and Arthur Bates Lincoln, Consulting Architects, of New York City.



## Approved Materials and Equipment for

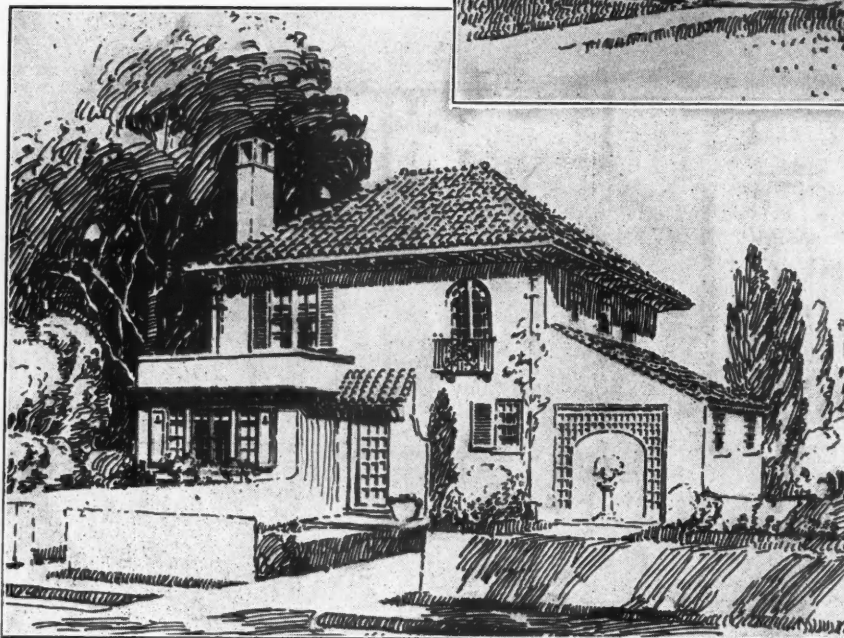


Another House from the Plans Shown on the Preceding Page Is This Six Room, Elizabethan, Half Timbered Dwelling with Walls of Common Brick.

In connection with the announcement of this project in Chicago, Henry K. Holsman, A. I. A., past president of the Illinois Chapter of the American Institute of Architects, a nationally known housing expert, has been appointed to supervise construction of the Chicago model houses. And, one of the first official acts of Mrs. H. W. Hartough, recently appointed chairman of the "Chicago Better Homes in America Committee" by Secretary



The Same Plan Will Be Used in Building This Six Room, Modernized, English Colonial Frame House.



Still Another Exterior Design for the Plan Shown on the Preceding Page, Is This Six Room, Modified, Italian Villa, Construction of Portland Cement, Stucco on Hollow Tile.

Hoover, was to congratulate the Home Owners Service Institute on the inauguration of this campaign in Chicago.

In every way this far reaching campaign for better residence construction has progressed as rapidly as its organizers had hoped and much has already been accomplished toward the avowed purpose of the institute to create the desire for better built homes and to raise the standard of the American house by teaching the comparative values and qualities in home making.

That the method of teaching this subject by actual demonstration, by showing real better homes being constructed and demonstrating them to the home seeker by interpreting and explaining the sound reasons for everything that is done during the planning, building, equipping, decorating and

furnishing of each model home, is an effective one has been already convincingly demonstrated by the widespread interest that has been aroused in the 16 communities in which these model houses are now under way.

The feeling is evident that this method fills a long felt need in the home building field and that it affords the average American family, which builds or buys a home only once or twice in a lifetime, a form of insurance for its investment. It provides a sure check on the materials, equipment and building methods used which is vouched for by leading building authorities and can be applied to any home that is to be purchased or built.



## To Serve Our European Subscribers

**W**E are pleased to introduce here to all of our readers Mr. Frederick J. Radford, of London, England, who

is the authorized and only representative of Radford Publications, *AMERICAN BUILDER* and "*Farm Mechanics*," throughout Europe.

Seeing the necessity of having a reliable representative in Europe, we induced Mr. Radford to make a trip to the United States and familiarize himself with our publications so as to properly represent us in Great Britain and the Continent. He is authorized to arrange for subscriptions and advertising.

The purpose of Mr. Radford representing us in Europe is that he may be of assistance to possible subscribers and advertisers and also that he may assist advertisers in *AMERICAN BUILDER* and "*Farm Mechanics*" in getting

in touch with those who want information regarding the products of American manufacturers, both in materials and equipment.



Frederick J. Radford of London, England  
European Business Representative of American Builder.

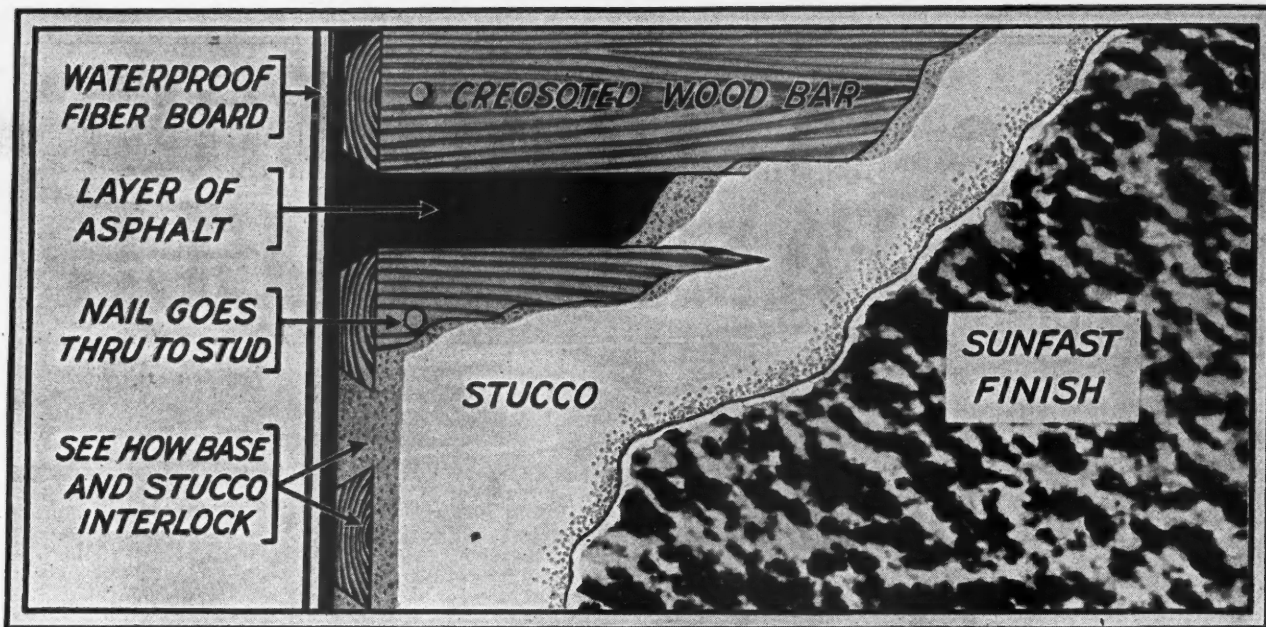
We will greatly appreciate any courtesies our European subscribers may extend to Mr. Radford, and we hope that having a representative in London, where he may be consulted from time to time, will prove to be of mutual benefit.

Do not hesitate to make *AMERICAN BUILDER* and "*Farm Mechanics*" your market place for any of the goods advertised; write to our advertisers for any catalogs or booklets you may think are

beneficial to your business.

EDITOR

RADFORD PUBLICATIONS,  
*AMERICAN BUILDER*,  
*FARM MECHANICS*.



See how the stucco keys itself into the dove-tail grooves, and is supported between the studs. The result is a solid UNIT WALL.

# 6 times the strength at 3/4 the cost!

## An improved reinforcement for permanent stucco

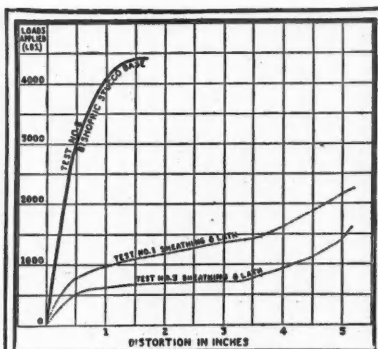
You accomplish a double purpose when you build with Bishopric Reinforcing Base. First, you get a stucco wall of super strength. Second, you save 25% on labor and materials.

Bishopric Base is stronger because it is made scientifically. Bone dry creosoted wood bars are embedded under great pressure into finest quality fibre-board heavily coated with asphalt mastic. The result is a sound-deadening, vermin-proof, fire-resisting base of unusual strength.

Actual tests show that Bishopric Reinforcing Base is over 6 times as strong as lumber sheathing. (See chart at right.)

With Bishopric Base you save one-fourth the usual cost—

—in labor, because Bishopric Base comes complete to the job in rolls, is quickly cut to size, and can be laid by one man;



Test conducted by Robt. W. Hunt & Co., of Chicago, Illinois—one of America's foremost engineers.

### WHAT THE CHART REVEALS

The results graphically portrayed in this Chart show that by actual test Bishopric Stucco Base stands twice as much weight strain as wood sheathing and ordinary lath, with less than one-third the distortion of the base.

Bishopric will thus stand a far greater strain than any stucco base would ever be subjected to!

—in reinforcement, because Bishopric Base, being super-strong in itself, can be laid direct to studs, requiring none of the sheathing used to reinforce ordinary construction;

—in materials, because the dove-tail construction of the Base requires less stucco, on either interior or exterior plastering. And the heavy fibre-board prevents any of the stucco from falling down the spacing between the inner and outer walls.


Send for NEW BOOKLET

If you want the most up-to-date information on how to get excellent results with stucco every time, send for our new booklet "Looking Behind the Stucco."

It is free to you. Simply sign and mail the coupon below.

**The BISHOPRIC MANUFACTURING CO.**  
ESTE AVE. CINCINNATI, OHIO

**The BISHOPRIC MFG. CO. OF CALIFORNIA**  
LOS ANGELES

<p>THE BISHOPRIC MFG. CO. 711 Este Avenue, Cincinnati, Ohio.</p>	 LOOKING BEHIND THE STUCCO	<p>PRINT NAME AND ADDRESS PLAINLY</p>
<p>Please send me without charge your new booklet, "Looking Behind the Stucco."</p>		
<p>.....</p> <p>.....</p> <p>.....</p>		

# B I S H O P R I C

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE





# AMERICAN BUILDER

Formerly AMERICAN CARPENTER AND BUILDER

1827 Prairie Ave., Chicago—250 Park Ave., New York City

## September Construction

SEPTEMBER construction contracts in the 37 states east of the Rocky Mountains amounted to \$562,371,400, according to F. W. Dodge Corporation. These 37 states are said to include about 91 per cent of the total construction volume of the country.

The most important items in the September contract record were: \$225,516,300, for residential buildings; \$98,166,800, for public works and utilities; \$97,378,300, for commercial buildings; \$49,112,700, for industrial construction; and \$34,531,600, for educational buildings.

New construction started in 37 eastern states during the past nine months has amounted to \$4,809,779,800, being an 8 per cent increase over the corresponding period of 1925. The showing made by the contract records this year has, for several reasons, been rather better than the showing of the building permit records for larger cities of the country. The principal reason for this apparent difference is that the contract records include public works and utilities projects, which have had a big increase this year. This class of work is not included in the permit records.



## The Red Cross Roll Call

A SPECIAL Building Trades Section, with Dwight P. Robinson, of the Dwight P. Robinson Company, at its head, has been organized as a part of the campaign for the annual Red Cross Roll Call. This campaign for funds to carry on the work of the Red Cross will open on Armistice Day, November 11, and the Building Trades Section has been enlisted to insure a representative support from this industry in a work which is deserving of the support of every citizen of the United States.



## Economics in House Building

"MILLIONS of dollars will be saved the housebuilder, and millions of feet of lumber now often wasted will be diverted to useful purposes, if the recommendations of the construction sub-committee of the National Committee on Wood Utilization, Department of Commerce, are followed by the consuming public," says a statement issued by the committee.

"This sub-committee," continues the statement, "has assembled a mass of material on house construction, including farm dwellings. The study is by far the most complete of its kind ever undertaken, and has developed methods whereby the prospective home owners can specify such sizes as, in many cases, would save one-third of the lumber bill. When it is realized that about 35 per cent of the cost of the average house covers lumber, and that we have just passed through a \$6,000,000,000 building activity, it may readily be seen that the sub-committee's work will save a very substantial sum to the American home owner.

"Another feature, perhaps even more important, is the maintenance of reasonable lumber prices for all time to come. This, the committee believes, can best be done by

educating the public to purchase its requirements cut as nearly as possible to exact sizes needed, instead of buying long lengths which can be obtained only with difficulty and at an extra cost, cutting these lengths into shorter stock on the job. This is considered one of the most important questions on the program of the National Committee which has, for its object, to find a use for every inch of the tree.

"The sub-committee on construction held a meeting on October 1 in the Department of Commerce for the purpose of considering the report which is now ready, and to decide on the method of acquainting the public with its findings."



## Build Against Fire

THE pressing need for construction which will afford a maximum protection against fire, which is evident from the annually increasing fire losses, has been given a new and more emphatic emphasis by recent court decisions in a half dozen or more states. These decisions foreshadow a day when our laws will take a more definite notice of the losses from communicated fires and the responsibility therefore.

In Ohio, Texas, Michigan, Alabama, Louisiana and Tennessee, the courts, within the last year, have rendered decisions awarding damages to fire sufferers who were able to prove that fires were due to carelessness on the part of their neighbors. While the court decisions mentioned would not be in accordance with the laws of many states it can be expected that the coming years will see such modification of existing laws as to permit the placing of responsibility. With such laws fire safe construction will, from the purely mercenary point of view, be a decided economy.

In Cincinnati, Ohio, a property owner who has negligent of fire safety was required to reimburse the city for the expense of extinguishing his fire. The latter procedure is quite common in European countries and it is not improbable that it will eventually be adopted in this country.



## Building in Winter

"ANALYZING the Success of Winter Construction" is the title of a pamphlet which has recently been published by the Portland Cement Association. This pamphlet quotes a number of impressive authorities to show that the effects of winter weather on construction have been greatly over-estimated and that, with reasonable precautions, construction can proceed as well during the winter months as at any other time. It is even stated that there are as many days during the summer season when rain interferes with work as there are days in winter when weather conditions interfere.

This pamphlet goes on to point out the successfully tested methods by which contractors can meet the problems involved in year around construction and overcome the seasonal depression which has in years past placed such a heavy burden upon the building industry.



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DECEMBER.							JANUARY.						
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FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

### How Big Will Your Profits Be This Winter?

Whether the winter months will be months of profit for you depends largely upon whether you allow cold weather to interfere with building plans.

Today winter concrete is more practicable than ever before. During cold weather, materials must be kept at a warm temperature and the structure protected from freezing. Use of High Early Strength *Universal* Concrete shortens the period in which protection from freezing is necessary. It makes possible early removal of forms. It hurries completion of the job.

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**Concrete for Permanence**

# Building As a Vocation

By GERHARDT F. MEYNE

Vice-President, Associated Building Contractors of Illinois

**T**HE building and contracting business is probably the oldest known vocation. Before there were means of conveying thoughts and handing down such thoughts to posterity in script, creating habitations and security against the elements and enemies, and creating edifices of worship had become one of man's handicrafts. Earliest history tells us of such temples and cities, and as our race of man became more gregarious and had the feeling of security, he set out to embellish his habitation, his place of worship, and his cities. Numerous examples of this work still exist. The history of architecture tells us about this. A little study in archaeology will prove this and be most interesting. However, the purpose of this article is not directed to architecture, but to building as a vocation. The early architect was as much dependent upon the artificer of his day as is the architect of today—and probably more so—for the early architect knew little of strength of material as we know it, knew little about stresses, and we often wonder, when studying his structures, how many slaves, artisans and public were killed by collapses before he learned to make his structures substantial enough.

## What the Vocation Offers

The builder's life, as is the life of everyone following the building vocation in any one of its numerous branches, be he journeyman, foreman, superintendent or employer, is full of romance. No two hours' work in a day are similar. New problems are constantly presenting themselves to be solved. New designs and new constructions must be continuously developed. No two projects of buildings are alike. Inventive genius and ingenuity are called on continuously. Most of the work is outdoors, and therefore healthful, and altogether interesting. A big source of satisfaction is that each day the artisan may see the results of his labor, and, in the course of time, see the entire project completed, come back to it in later years, look it over again, take pride in his achievement and accomplishment, bring his children to boast about his skill and prowess. The builder's achievements speak for themselves. They are a monument to his enterprise and labor.

There is nothing menial or servile in any portion of the building vocation. Every craft has its peculiar part in making up the habitable whole. Every craft is as impor-



The Builder's Life Is Full of Romance. No Two Hours' Work in a Day Are Similar.

tant as any other craft (although not necessarily as skilled or as hazardous), just as all parts of the human body are necessary to make up functioning man, and just as every part of the human body responds to the brain, so do all parts of a building grow under the co-ordination of that master-artisan and enterpreneur, the building contractor.

Let us consider in perspective, a view of the artisans employed, and take, for example, the bricklayer. The poets and writers of the ages have praised the bricklayer's skill. The monuments of all new and old countries proclaim his art. The comfort and beauty of the schools, private and public buildings tell you of his craftsmanship. His art was practiced in Babylon and ancient Egypt. Some examples have been found that are the work of 4000 B. C.

### One of the Oldest Crafts

The stone cutter has existing monuments 3,000 years old. Let us look back to the art of old Greece, Rome, Alexandria, the Gothic tracery, figures and churches of Western Europe. The stone cutter's art was developed with the invention of the tempering of metal tools, made by old Tubal Cain himself. Much drudgery has been lifted from him these days by the invention of machinery so that the stone cutting mechanic has only the finer and better work to do. Surely the history of building, architecture, sculpture, and art cannot be written without credit for the stone cutter.

Carpentry has been practiced since the early ages, especially cabinet work. The great Nazarene helped his father, a carpenter. Moses mentions carpenters in his instructions for building the tabernacle. In today's complex construction problems, the carpenter is the first craftsman to come on the project and leaves with the painter. He turns over the keys. Surely there is a romance to go through it all and know you are a part of it. His artisan skill is equal to any craft, and his knowledge of construction is superior to any other craft. Could a modern or ancient human habitation be built without a carpenter?

Must we not be grateful when we consider health, sanitation and comfort, that such an inventive genius as the plumber exists? His place in our complex city life is near the doctor, for by his vocation he helps to reduce the death rate of the population, minimize the spreading of disease and plague. He and the steamfitter have made a tenderfoot out of every city dweller.

### Modern Phases of Building

The electricians and steamfitters are very new in the building vocation. They are doing their part to make the habitation more livable, so that mankind can produce more

efficiently at all hours and in all seasons. Their art is still considered in its infancy.

The beauty of the interiors of our modern buildings would not be, were it not for the plasterer, nor could we be comfortable without him in our climate. His handiwork gives us the coffered and groined ceilings, the cornices and panels in public halls, churches and theatres. We sometimes forget the plasterer when we see all of his handiwork beautifully decorated by the painters in multi-colors and in gold. The painter's art dates back to the ancients. It seldom occurs to us to give much thought to the men who provide ways and means that properly conduct the rain water so that we may keep our houses and merchandise dry in all seasons—who provide the daylight in the middle of buildings in the way of skylights, windows protected from fire, and fireproof exits. Surely the city dweller cannot get along without the sheet metal worker. Craft after craft could be mentioned, and its importance lauded, but none is more necessary than the others, and all must perform their proper function.

### The Standing of the Builder

The standing of one engaged in the building vocation is important and equal to the standing of those in the professions. It is not lightly acquired. It takes time and application to absorb building knowledge. Throughout the centuries, the builder was considered as one outstanding in his community. The builder's vocation is remunerative. The building craftsman has always enjoyed superior wages, salary and prosperity. A determined young man who is endowed with ability and is willing to practice self-denial, and thrift, can become in this great America one of the captains of this industry. It is hard work, of course, but is anything worth while that does not require effort?

As the great monasteries of Western Europe from the 8th to 11th centuries taught the arts and crafts, and were the inspiration and beginning of the building apprentice system of the past centuries, so will the public high school of the present and future be the agency in giving fundamental knowledge of building as a vocation to that vast army of young men and boys who do not go to college, yet who do not wish to do menial or servile labor. Opportunity is open to all who will but look about.



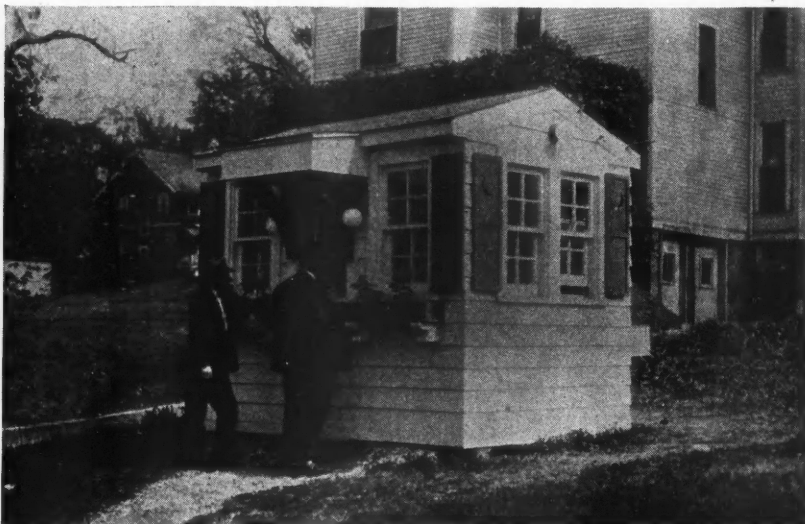
### An Attractive Pop Stand

THE ordinary pop and ice cream stand is an eye-sore in a well-to-do neighborhood. Usually made from scrap lumber and adorned with crude lettering or gaudy signs shouting the wares, too often the young boy or girl are not permitted to operate one because neighbors might regard the enterprise as a nuisance.

Yet there is a pop stand so different from the common variety that it is shown here and proves that, properly built it is actually a neighborhood advantage instead of objection.

Built in Dutch Colonial style, the stand is 8 feet long, 6 feet wide and has six foot posts. The windows (there are six) have imitation shutters and the paint used is green and white. Of course the main objection from a typical prospect is the cost. But when one considers the neighborhood and the amount of extra patronage that will come because of the appearance, this should not stand in the way.

DALE R. VAN HORN.



Little Objection Will Ever Be Made to an Ice Cream Stand in Any Neighborhood if It Is as Attractive as This One.

# REAL ESTATE AND SUBDIVISION WORK



## Make the Tract Office Artistic

**P**REPARING and submitting for sale the modern real estate subdivision necessitates specialized attention to many details that were formerly thought superfluous, or were not thought of at all. As important as any of these new-fangled ideas for selling lots is the matter of an attractive office right on the grounds.

The cost involved for the construction of what is now thought a suitable tract office, however, is an item that has caused more or less worry in the minds of subdividers. Many schemes have been tried that it was hoped would adequately care for this expenditure, but none have been as satisfactory as the following two ideas.

In the case of the Normandy cottage office of Baufour Company, Inc., La Jolla, Calif., the structure was so planned that it will eventually be added to and will become a complete house. It is so situated on the lot that it will be sold as a residence and the planting will not need to be disturbed.

The office, as it stands now, consists of one main, arched ceiling room and a smaller private room in the wing. The stucco is light gray in tone, and the exterior woodwork is finished in a sea-green. The wood shingles are a darker moss-green. The small porch is floored with brick, and a coping of brick tops the porch wall.

Not only will the original cost of this office be procurable from its sale, but the owner may even expect to derive a profit. And, consequently, he has had the use of it as an office for nothing.



When This Artistic Office of the Baufour Company, Inc., Has Served Its Purpose in Opening a New La Jolla, California, Subdivision, an Addition Will Be Made and It Will Become a Complete and Salable House.

Another good scheme to "write off" the cost of the expensive tract office has been evolved by the Pacific Building Company. The Spanish type of office that so picturesquely decorates their subdivision seems to have been planted right where it is for life, but it wasn't. When the need of it, at its present location, is ended, screw-jacks hoist it bodily to the height of an automobile trailer, and it is loaded and whisked away to a new location.

Built on heavy timbers, and well reinforced, the attractive office is moved from place to place. Its brown stucco walls, hand-made Spanish tile roof, hand-hewed timbers, and decorative blue tiles under the front studio window, all just go en masse to a new location miles away. Thus, by spreading the cost of the office over several subdivision overheads, it is no longer a disturbing item of expense.

Being builders, as well as land sellers, these concerns make what might be termed subconscious appeals along the building idea with their attractive offices. A customer imagines just such a house on the very lot that the salesman is showing to him. If the type of house suggested by the particular architecture does not appeal to the customer, it at least sets his mind to working along the visionary lines of some type of house. He doesn't just see a vacant lot in his mind's eye. J. H. HAWKINS.



The Pacific Building Company Has So Designed This Attractive Spanish Style Office That It May Be Hoisted on Screw-jacks and Moved To a New Location When Business Demands.

# A Million Dollars Worth of Homes in Two Years

**E**IGHT years ago, at the age of twenty, Clyde Nelson, of Birmingham, Ala., graduated from the chemistry department of the University of Alabama and was prepared for the world to step up and offer him the marvelous position his college degree entitled him to. The world not doing so, and it being necessary for him to start earning money—among other needs he had finished college \$1,500 in debt—he went to work at the first thing he could get to do. This was a job in an iron foundry and his work was designated as “riveting” for which he received 39 cents an hour.

Today, at the age of twenty-eight, he is one of the most successful builders in Alabama. He is the head of the Nelson Real Estate & Investment Co., of Birmingham, which regularly employs twenty-five salesmen, office workers, foremen, etc., besides the dozens of workmen on the daily payroll. He has carried out \$1,000,000 worth of building in the past two years, which consists largely of palatial homes in his beautiful subdivision, Hollywood. This subdivision is unique in that in addition to the usual restrictions as to size and cost, it is further restricted to homes of the English or Spanish type—one section being set aside for Spanish type homes and another section for houses of English style.

To attain the success Mr. Nelson has at his early age has not been entirely easy sailing. There were difficulties of financing, the hard job of “getting started,” and many obstacles to overcome. But Nelson has had excellent preparation for carrying on a successful business since early childhood.

At the age of six his father died, and it was necessary for the boy to help out wherever possible in the family finances. He first went into business for himself at the age of twelve, when he established a cleaning and pressing

shop in the little Alabama town where he lived. His partner was a young colored boy, and the equipment of the shop consisted of two 20-pound pressing irons and a charcoal furnace. The boys paid their rent by doing cleaning and pressing for the owner of the shop. Young Nelson's part of the partnership was to solicit, deliver and collect for the cleaning and pressing, while the other partner did the work in the shop.

Later, when he started to high school and continuing while attending college, Mr. Nelson paid his expenses by selling aluminum ware to housewives during vacations. During this period he learned the value of advertising and has never wavered in his belief in this value. It was his plan to gather together a group of women for a demonstration and the difference in the sales he made when this demonstration was preceded by thorough advertising and when it wasn't taught him an unforgettable lesson.

After working for some months in the iron foundry Nelson went to work as a salesman for a roofing company and from there joined the sales force of a real estate company of Birmingham.

He had always been interested in building beautiful things—while he was in school he built many pieces such as telephone stands and book cases for sale—and while he was working for the real estate company, he built his first house for sale. This house was financed in the following way:

His room mate owned a lot and he himself had some money from his selling commissions. Building the house, he sold it with \$1,000 profit for himself. That was enough for young Nelson. He fully made up his mind to get into the building business. While still connected with the real estate firm, he built two other houses, and then five



Clyde Nelson, 28-Year-Old Builder of the Beautiful Hollywood Subdivision of Birmingham.



“English Circle” Is a Group of Houses, in the Hollywood Section, All of Which Are in English Style. With this picture of which Mr. Nelson, as their creator, has reason to be proud



The Homes in Hollywood Are All of Either Spanish or English Design and Are Effectively Grouped According to Style. The house is typical of the Spanish style homes to be seen among the pines of this residential section.

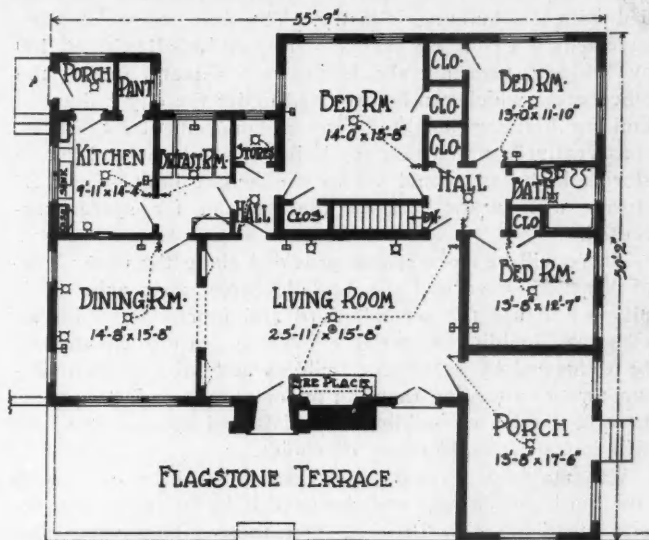
years later started his present business with a paid up capital of \$5,000.

"I have always been a plunger," said Mr. Nelson when speaking about his start, "and when I decided to go into business, I selected the very best location available for my offices, regardless of the fact that it was very expensive. Folks predicted that I couldn't make it go, but it turned out that the large expense was money well invested."

Two years ago his biggest piece of work, the developing and building up of the beautiful sub-division, Hollywood, was begun. Realizing Birmingham's need for another high class suburban residential section he took advantage of the naturally lovely setting afforded by the acreage he planned to use, and decided to make his sub-division truly distinctive by building in it only homes of English or Spanish type. Part of this land was a natural pine grove, and in this, of course, he built the Spanish type houses.

Using brick and stucco and a native Alabama stone—which has a lovely pink tint, affording many artistic possibilities,—young Nelson started building the type of high class English and Spanish homes for which he wanted to make Hollywood famous. The public came, saw, and was conquered, and, as has been said, he has done a million

*(Continued to page 151)*



The Floor Plan of the House Pictured Shows How Much Excellent Designing Has Gone Into the Interior as Well as the Exterior of These Homes.



broad sweep of lawn, their magnificent setting among fine old trees, their perfect harmony of style and design, they form a pride and which is proof of the unusual quality of his work.

# Chicago Builders to Have Imposing Office Building

Site to be at LaSalle Street and the New Double Decked Wacker Drive

**T**HE old proverb about the shoemaker's children going without shoes will not find a parallel among the builders of Chicago, who are about to do some building on their own account. From the perspective drawing reproduced in our Art Supplement, it is to be a worthy headquarters of one of the foremost organizations of employing builders in the United States.

The Book Tower at Detroit and the Fred F. French Company building in New York City, also shown in this month's supplement, are notable even in these days of mammoth structures.

## Building Construction Employers' Association Building, Chicago, Illinois

Graham, Anderson, Probst and White, Architects

The builders of Chicago are to be congratulated upon their present plan to have a permanent headquarters which will also provide office space for many interests closely allied with the building industry. The fine site which they have acquired fronting Wacker Drive at LaSalle Street, 150 by 100 feet, certainly should insure a demand for all the office space which can be provided under the city ordinance limiting building height. First announcements, however, conservatively stated that the building would be at least 15 stories high but would go to the height limit—about 22 stories without set-back—if the demand for space warranted.

There will be store spaces provided along the upper level of Wacker Drive and the LaSalle Street approach. It is planned to use the second, third and fourth floors for an elaborate building material exhibit—a feature which will be welcomed by architects, builders and prospective building owners affording them an opportunity to see a comprehensive display of building materials and equipment which will include a wide range of choice.

The upper floors will be divided into office space with fine finish and fittings and the good light and air which the site insures. It is believed that these offices will prove extremely attractive to allied manufacturing and building interests. Many trade organizations are expected to locate their headquarters here and hold their meetings in the building and, for this, special auditoriums and conference rooms will be provided.

## Young Men's Christian Association Downtown Building, St. Louis, Missouri

La Beaume and Klein, Architects

This is to be a ten-story building of steel and reinforced concrete at the southeast corner of 16th and Locust streets on a site about 138 by 155 feet in size.

The building will be faced with Indiana limestone for the first two stories, and same material will be used around the openings of the third story. Above this point, a light colored mat brick will be used and simple rectangular windows will indicate the dormitory floors. The aspect of the building will be simple and dignified, appropriate to the domestic and club purposes of the structure.

Accommodations have been provided in some 350 bedrooms for about 400 men. The main entrance for men will be in the center of the Locust Street facade and the entrance for boys in the center of the Sixteenth Street facade. Both entrances will be supervised from a central point. The Locust Street entrance will lead directly to a large foyer or lounge about 40 feet square. Billiard room, reading room and music room for men are provided for on the Locust

Street frontage, and social rooms for boys are arranged on the Sixteenth Street frontage. A refreshment bar occupies a space adjacent to the main lounge. The rear of the first floor, comprising about one-third of the entire area of the lot, is taken up with locker rooms which serve the swimming pool in the basement and the two gymnasias on the second floor. In the basement also is provided space for the cafeteria and kitchen, tailor shop, barber shop and additional social rooms. The rear of the second floor is occupied by a large gymnasium about 55 feet wide by 80 feet long and a smaller gymnasium about 40 feet wide and 60 feet long.

## The Book Tower, Detroit, Michigan

Louis Kamper, Architect

This is one of the finest and most impressive skyscrapers in the United States, towering 475 feet above the street level. In spite of its great height, it is well proportioned and harmonious in outline while its interior is magnificent in its finish, fittings, decoration and effects.

The weight of the building is said to be 40,000 tons, carried on 40 concrete caissons going down 120 feet to bed-rock. The architectural design of the building found its inspiration in the style of the Italian Renaissance. It is faced with New Hampshire granite and above with Indiana limestone. The third floor is richly ornamented with carved marble. Above the thirteenth story, the tower walls are of stone, terra cotta and brick. Near the summit of the tower—from the thirty-second story upwards, there is a wealth of decoration. Great rounded pilasters in pairs support arched capitals which gracefully span the intervening space. Fluted pillars stand at the corners. Mouldings, entablatures and medallions abound. Rising from a platform at the thirty-seventh floor level, is the three-story mansard roof, which is entirely sheathed with copper, jade green in color. This roof entirely encloses all tanks and penthouses so that their outlines do not mar the skyline of the building. This copper roof covering is well calculated to withstand the elements for centuries, should the building stand that long.

## The Fred F. French Building, New York City

Fred F. French Company, Architect and Builder

This 35-story building, being erected at 551 Fifth Avenue, is a striking combination of set-back and tower, even in New York where these features are common. The site, which is at the northeast corner of 45th Street, is about 78 by 200 feet and the cubical contents of the building will be 4,924,191 feet. The plans were examined by a committee of the National Association of Building Owners and Managers who pronounced them "the most complete we have ever seen."

Construction consists of a steel frame with reinforced cinder concrete arches and brick walls. The facades of the four lower stories are of Indiana limestone.

The plans provide for a main entrance from 45th Street, about 100 feet east of Fifth Avenue. A hall or vestibule, flanked by stores on one or both sides, extends back from the entrance about 25 feet. Five stores will occupy the Fifth Avenue frontage. As now planned, seven additional stores will be laid out along 45th Street.

In the equipment it is proposed to include 12 gearless traction type passenger elevators, divided into three groups, each serving a separate zone. These cars will have a speed of from 650 to 700 feet per minute.

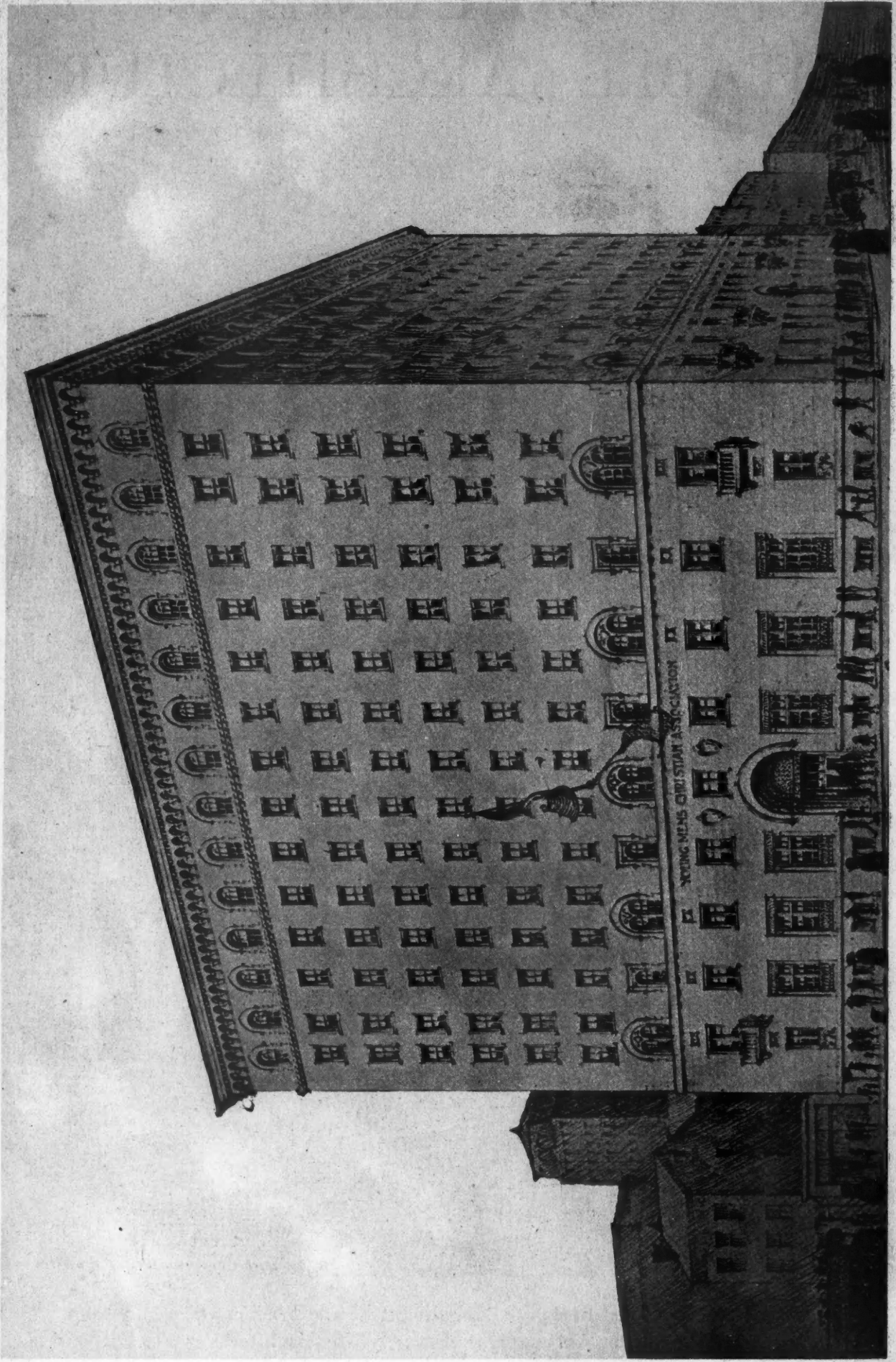


# ART SUPPLEMENT of NOTABLE ARCHITECTURE

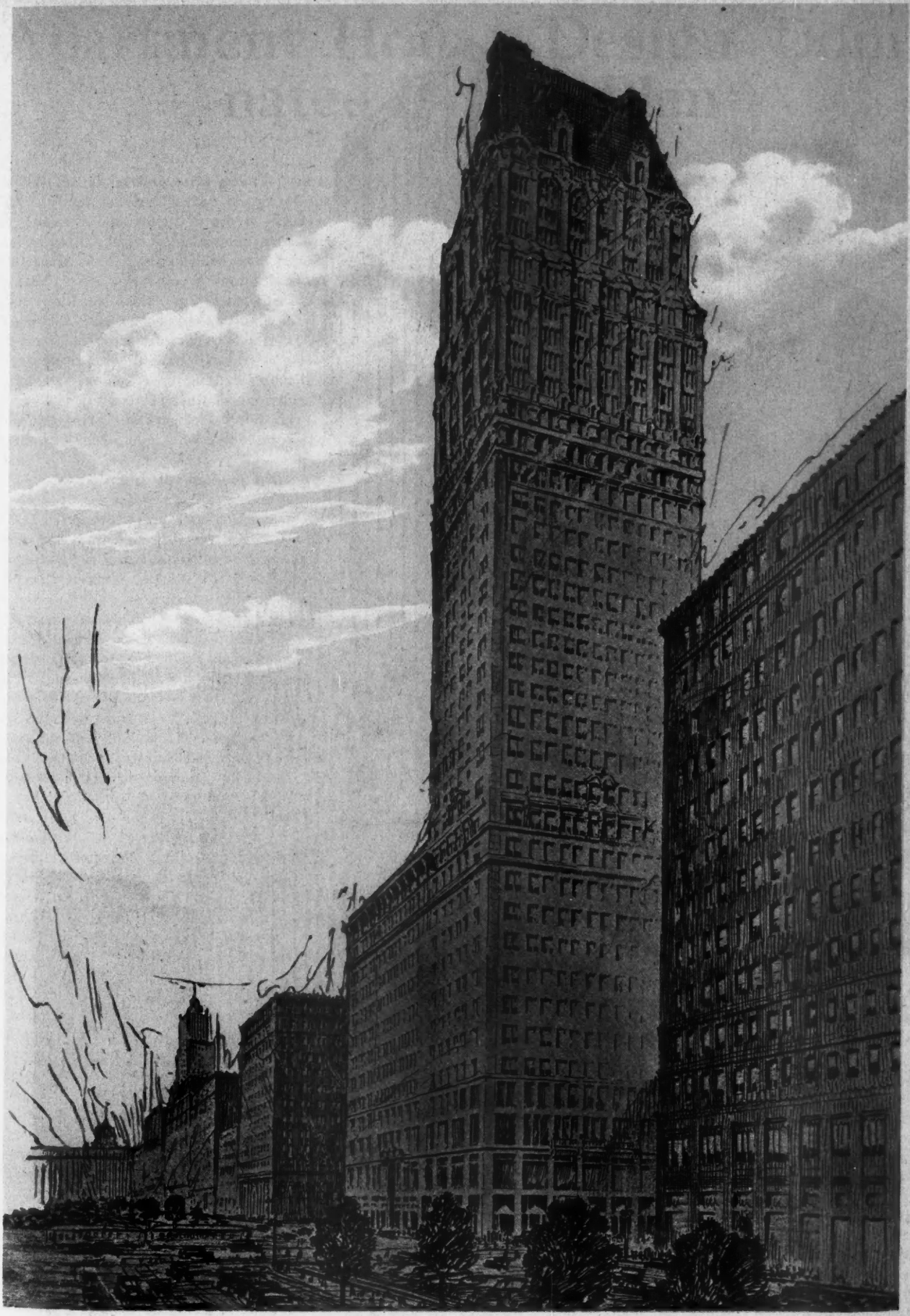


PLATE 109

*The CHICAGO BUILDERS' BUILDING, LaSalle Street and Wacker Drive, Chicago,  
Graham, Anderson, Probst & White, Architects.*



The New Downtown Y. M. C. A. Building for St. Louis, Mo.,



*The Book Tower, Detroit; Louis Kamper, Architect.*

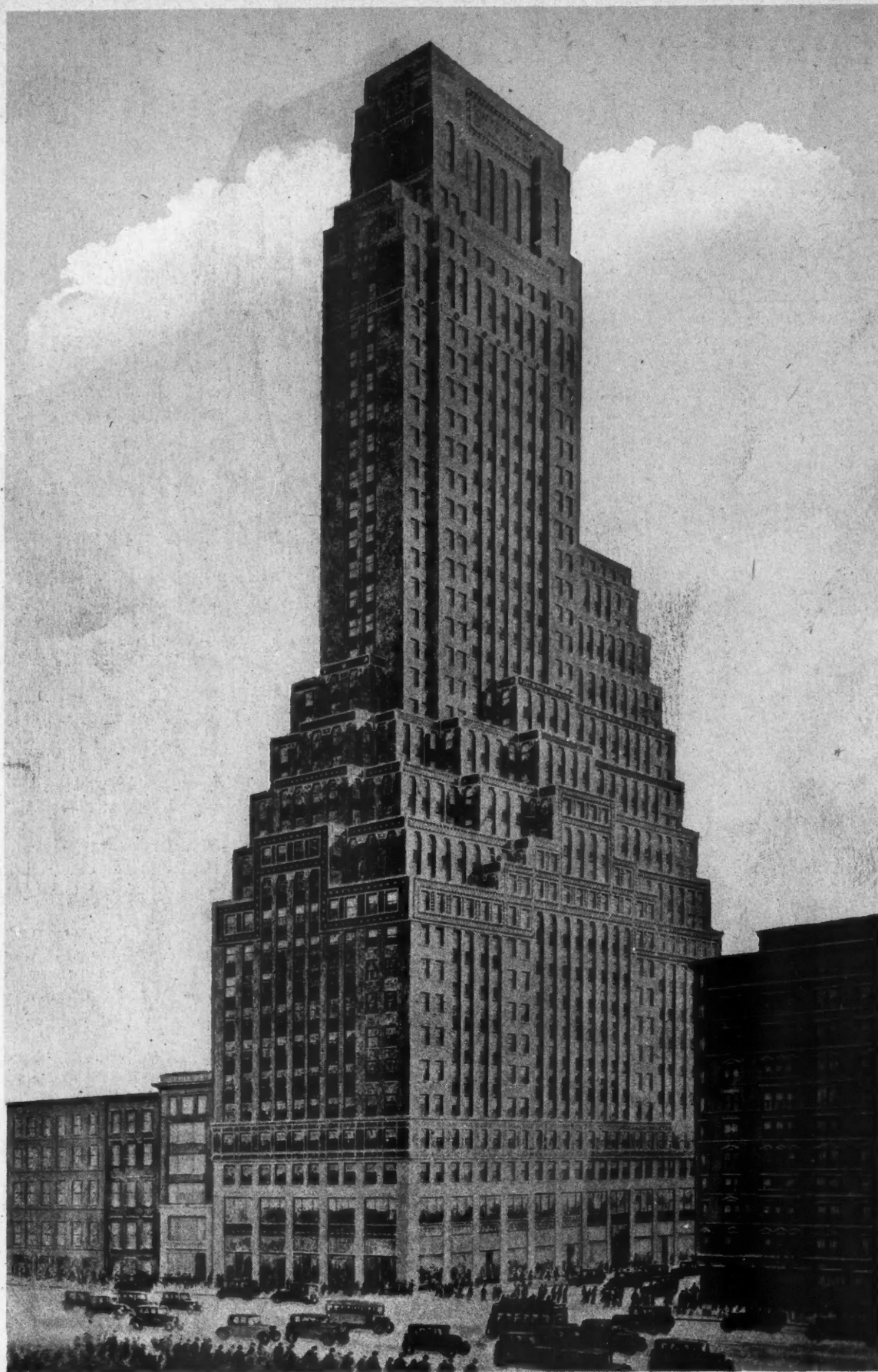


PLATE 112

*The FRED F. FRENCH BUILDING, 5th Avenue and 45th Street, New York City;  
Fred F. French Co., Architect and Builder.*

# Apartment House Design Dominated by the Plan

By R. W. SEXTON

FROM an architectural point of view, at least, interest in the design of the modern apartment house is centered on its plan. It is in its unique plan that the apartment house has aided so materially in solving the perplexing economic and social problems which confront the large American cities of this generation, and any success that it has attained in this regard is primarily due to its plan. In fact, the plan dominates the design to such an extent that interest in the exterior suffers accordingly. The design of the exterior of the average apartment house stands as evidence of this fact.

Exterior design of the modern apartment house becomes solely a problem in fenestration. Windows are located with particular reference to the interior walls which they penetrate. It is necessary to retain a symmetrical arrangement of the interior wall in order to allow of correct placing of furniture and window dressing. This fact must be kept foremost in mind in establishing the location of windows throughout the entire building. There is little consideration given to the effect of these openings on the exterior design. Entirely lacking in character and individuality, interest in the design of the exterior lies solely in the windows—their proportions, the grouping, and their relation one to another and to the whole.

The tendency in the plan of the modern apartment house is to allow direct daylight into as many rooms as possible. This has resulted, quite naturally, in a maximum number of rooms to a floor, allowing a window in one of the narrow walls of each room. Basing the size of the room on the ratio that the size of the window shall be ten per cent of the square area of the room, it is obvious that all rooms tend towards elongated rectangles in plan, of awkward proportions, awkward to decorate and awkward to furnish. In the process, the exterior fenestration is taking shape, sometimes necessitating the changing of the location of a window a few inches one way or the other, to allow of better design and still not appear to affect the symmetry of the interior wall.

Personality, on which successful architectural design is so dependent, is entirely lacking in the design of the apartment house. To be sure, the architect is designing a home for the tenants, but it is in the fact that there are fifty or a hundred tenants in the building that his difficulties arise. Privacy is the feature of the home. It is actually in its privacy that it is a home. One can readily appreciate, then, the difficulty in designing a home for fifty or a hundred families under one roof. It vitally affects exterior design.

In the first place, the architect does not know the tenants. He cannot introduce the personality of the tenant or occupant into the design of the exterior. And he could not, probably, if he had an opportunity to know his



This Building, Designed by Parker, Thomas & Rice, Architects, of Boston, Mass., Is Typical of the High Class Modern Apartment, Suggesting "Class," Simplicity and Refined Dignity.

clients. Each floor would be a different style of architecture. The idea is ridiculous. Personality must be eliminated altogether. Instead of being the material expression of the individuality of the occupant, as the exterior design of the private house should be, the design of the exterior of the apartment house must be void of individuality.

It stands to reason that should one style of architecture be adhered to in the exterior design, certain prospective tenants who have a dislike for that style will be unconsciously prejudiced against taking apartments in that house. But the exterior design can suggest on thing. It can suggest "class," simplicity, absence of stylistic tendencies, but dignified and refined in every detail.

A well-known architect in New York City, a specialist in the design of high class apartment houses, admitted that the less said about the design of the exterior of the average apartment house, the better. He suggests the



In the Modern Apartment, the Entrance Door Is the Center of Attraction, as Is Evidenced in Beekman Mansion, New York City, Van Wart & Wein, Architects.

elimination of ornament and fussy details, confining elaboration of design to pilasters, columns and band courses. He claims that the prospective tenant is more interested in the class of house in which he resides than in the character or style of its architecture. The tenant, he says, desires that the exterior of the house in which he lives and has his home suggests that he lives in a refined house.

Ornament is generally confined to the first floors of the building. The entrance door is the center of attraction. But it must not be pronounced in style or character. Another important consideration, in order to bear out the suggestion of "class," is the quality of materials used and class of workmanship. A few extra dollars thus spent will soon pay for themselves in the list of rentals. An iron door, for example, must be of the best design and workmanship. Otherwise, do without it. It is quality, not quantity, that counts.

The foregoing paragraphs concern especially the design of the city apartment house. The design of the suburban prototype is governed by more definite conditions. The suburban apartment house is not merely to provide a home for its tenants, but to provide them a home *in the country*. It is in that phase that the suburban apartment house gets its inspiration. Its exterior design should retain, in so far as is possible, the character of the private country house.

This is frequently brought about by the introduction into the design of gables, dormers, chimneys and other elements which lend distinction to the house of the country. The suburban apartment house, too, was originally much smaller than the city house, and there was discernible more of a feeling of personal ownership as a consequence. The tenant took more of a personal interest in the house and its design. This was all taken into consideration by the architect in laying out the design.

The great advantages of the suburban apartment house—offering all the comforts and conveniences of the city in a country environment—were readily appreciated by dwellers of apartments, with the result that, although devised originally to relieve the congestion of the city, the future development of the apartment house seems to lie

in the suburbs. To date, the apartment house has reached its highest stage of development in the "garden" apartment. This was originally an idea for the suburban house. As much as fifty per cent of the area of the plot was devoted to park, walks, playgrounds for children, tennis courts, and, occasionally, individual gardens for the tenants.

The idea proved to be such an attraction that it was soon taken up by designers of city apartments, so that the city "garden apartment" is even now a reality. Due to the higher value of land in the city, it is impossible to devote as much space to park walks and playgrounds as in the suburbs, but it has tended to "open up" the city apartment, avoiding, to a great extent, the suggestion of congestion, which has, up to now, always featured city buildings.

The garden apartment has proved to be a great aid in the design of the city type. The garden frequently allows greater opportunities for direct daylight in every

room, and furthermore, gives to many of the rooms an attractive outlook which would otherwise not be possible. It is even possible to disassociate oneself from the noise and dust of the city street by means of the inside garden. In fact, the future of the city apartment lies in the further development of the garden idea. It would almost appear that the function of the city apartment house of the future might be to provide a home for its tenants with opportunities for country life in the city.

Great progress has been made in the development of the apartment house during the last few years, but it is still in the experimental stage. Thirty years ago, the "dumb-bell" plan was in vogue. Its name was derived from the plan of the individual apartments. The living room was located across the front of the house, the dining room across the back, and a narrow, dark corridor connected the two rooms. Off this passageway, to the left and to the right, opened bedrooms, bath and kitchen. The living room had windows on the street. The windows of the dining room may have opened on to a court, but the only means of light in the kitchen, bath and bedrooms was from an air-shaft. This was unhealthy, gloomy, and anything but homelike.

How different is the up-to-date apartment now, with direct daylight in every room, many rooms opening onto an attractive garden, occasionally certain rooms opening on a court, but air-shafts entirely eliminated. Yet all the



The Scarswold Apartments at Scarsdale, N. Y., Townsend, Steinle & Haskell, Architects, Is an Excellent Example of the Suburban Apartment Suggestive of the Private Country House.



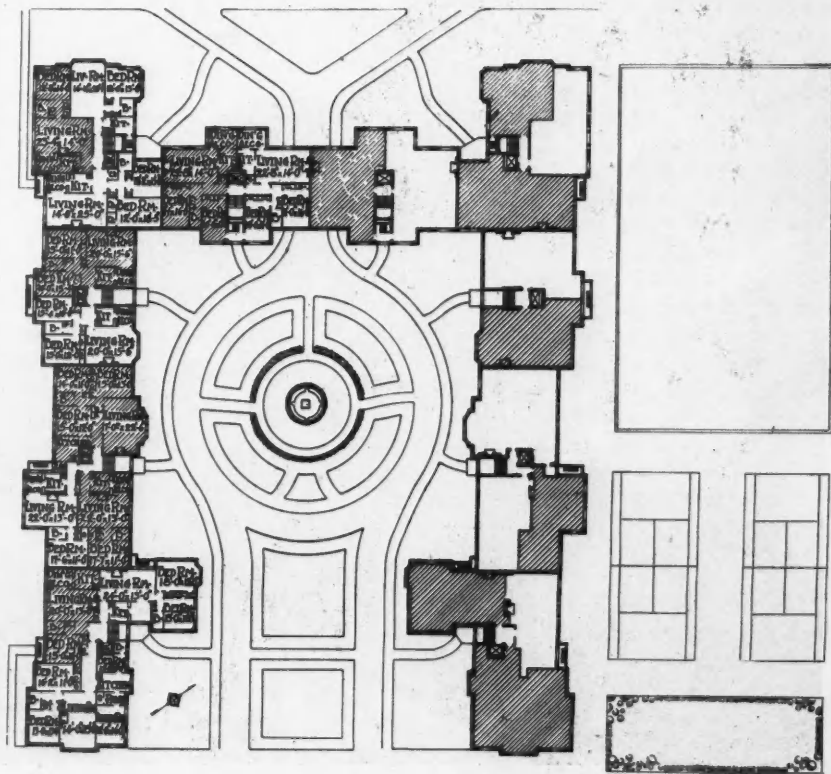
At Blind Brook Lodge, Rye, N. Y., Van Wart & Wein, Architects, Can Be Seen the Manner in Which the Garden Apartment Type of Design Is Being Used to Increase the Attractiveness of Such Buildings and at the Same Time Afford Greater Opportunity for Direct Daylight.

progress that has been made during this quarter century and more has had to do with perfecting the plan. With all the front windows in one room, the fenestration of the exterior was not so difficult. In fact, although many of the details of the old-fashioned apartments of twenty-five years ago were unsightly, owing to their mid-Victorian origin, it is true that, from an architectural viewpoint, the exterior design of the city apartment of a generation ago was given greater consideration and more study by architects than it is today.

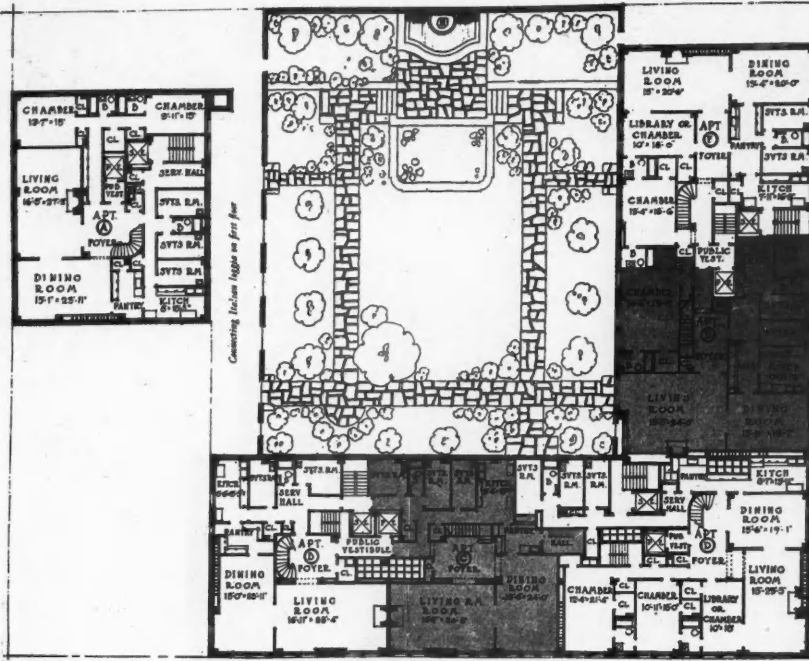
To what is this due? Would not the building be given even greater economic value if its exterior design were more considered? Is the plan of such importance that exterior design is entirely overlooked? Or, is the plan so far from perfection that all efforts are still bent on its development?

I assume the latter condition to be responsible. The real estate agent appreciates the importance of the plan. He understands that it is a good plan that rents an apartment, and not an interesting exterior design. A good plan is one which successfully makes a home of "three rooms and bath." The problem is far-reaching and one of no mean proportions.

Consideration must be given first, perhaps, to the saving of space. This is of vital importance as it affects rent, as



As Seen in This Plan, Blind Brook Lodge Includes Not Only the Central Garden Court, But Also Tennis Courts and Recreation Grounds at the Side.



A Typical Floor Plan of a Modern City Garden Apartment. This Building, at 1088 Park Avenue, New York City, Was Designed by Mott B. Schmidt, Architect.

well as reduces footsteps when properly applied. For one of the greatest assets of the apartment is in relieving the housewife of many of the cares and worries of house-keeping. When properly planned and effectively equipped, with modern appliances, the housewife may accomplish the same results today in half the time and half the space, with half the energy. Instead of the twelve by twelve kitchen and adjoining pantry, a part of every house

having a southern exposure.

Yet all these considerations have to do with the plan. It is evident, then, that the plan is of the utmost importance, and quite natural that interest be centered on it. It also will be seen that all these efforts bent on perfecting the plan can be traced to the idea of making the apartment more like a home. As an example, your attention is called to the fact that a year or two ago, more or less, in an

twenty-five years ago, the modern house-keeper does her work in a seven by seven kitchen and adjoining dining alcove. Yet this is only one of the details to be considered.

Intercommunication is an important factor in the plan of the modern apartment. If there is a dining room, it is best that it adjoins the living room so that the two rooms can be thrown open into one large room, if more space be needed. Then, it should not be necessary to pass through the master portion of the apartment to reach the foyer from the kitchen. The size of the rooms, too, is important. There should be one good-sized bedroom. The living room should be as large as possible. Cut down as much as you like on all other rooms, but keep the living room large.

Exposure is another consideration. The main bedroom and the living room are given first consideration. They should have a southern exposure. The dining room is used so little during the twenty-four hours of the day that its exposure is of the least importance. The southern exposure is the most desirable. Apartments with south windows actually rent for 10 to 15 per cent more than those not



The Gardens of the Cambridge Court Apartments, at Jackson Heights, N. Y., Andrew J. Thomas, Architect, Illustrate How Effectively the Inside Garden Can Be Used To Disassociate Oneself from the Noise and Dust of the City Streets.

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effort to conserve space in the apartment and small house, the combination living-dining room was originated.

This was one large room, planned so that it could be used for a dining room at meal times, and a living room at others. Certain furniture seemed perfectly suitable for the living room which could be used for serving meals, as corner cabinets, gate-leg tables, Windsor chairs, and so forth, and the room was converted again into a living room after meals with little or no effort. But the idea lacked something. It lacked homelikeness. It was artificial. It had always been customary to go into another room for meals. The idea of remaining in the same room and having your meals brought to you there did not take.

As a consequence, the dining alcove was devised. Actually, one end of the living room, but separated from it, although opening directly into it, even without doors, it is a separate dining room. The idea is to convert the wasted space of a large dining room into a real living room, and retain for the service of meals only as much space as is actually necessary. This the dining alcove does to perfection. It has the further advantage of acting as another room, something after the idea of a den, when properly furnished, between meals.

And there are other difficulties to be met with which tend to make the problem still harder. The tenement house law, for example, must be complied with. It stipulates, among other things, that there must be two means of exit from every apartment in a fire-proof building. One must be a main stairway, the width

of which is governed by the number of families in the house. The other must be another stairway, a smaller one, a fire tower, or a fire escape. There are certain stipulations, too, which control the location of these exits.

Then there is the service problem which must be considered. One passenger elevator will frequently conveniently serve four apartments on a floor, but, again, in certain plans, it is necessary to have one elevator for every two apartments. Similarly, the service elevators. Each additional elevator increases the rent. The automatic elevator, a modern invention, thus becomes an important factor. It allows of better service without greatly increasing rent. And service is, after all, of vital consequence.

What the tenant of the apartment house loses in homelikeness, she expects to make up in service. That is about the size of it. The kitchen in the modern apartment house is a model in service. Small and concise, everything is within easy reach. Cabinets, designed to meet every need of domestic science, artificial refrigeration, incinerators, and tables and benches which fold up into the wall when not in use, these are a few of the modern inventions which render unusual service in the small apartment.

And so we might go on, enumerating various details by

which the plan of the apartment is being developed and perfected. Under such conditions, it seems inconceivable that any consideration at all can be given to the exterior design. The plan not only controls the exterior design, as it does in all architectural problems, but, in the case of the apartment house, it actually dominates.

The building laws, too, have their say in the design of the exterior. A cornice, when used as a capping for the building, is allowed a certain projection. When, however, a cornice appears above a row of columns or pilasters at any other point in the design, it may only project about half that distance. A balcony, too, is allowed by law a satisfactory projection, but if the balcony is carried across the full width of the building, it becomes a cornice under the law and is subject to regulations governing cornices.

One architect stated the situation very clearly when he said that the real estate man is pushing us out all the time when the law is pushing us in just as hard. The design of the exterior is immediately shred of its architecture. Real estate and the law have little use, unfortunately, for architecture. Under the circumstances, the architect is not to be blamed for taking such little interest in the exterior design. What he might do to improve it by grouping the windows would interfere with the number of rooms on a floor, and the owner is set on maximum number of rooms to a floor.

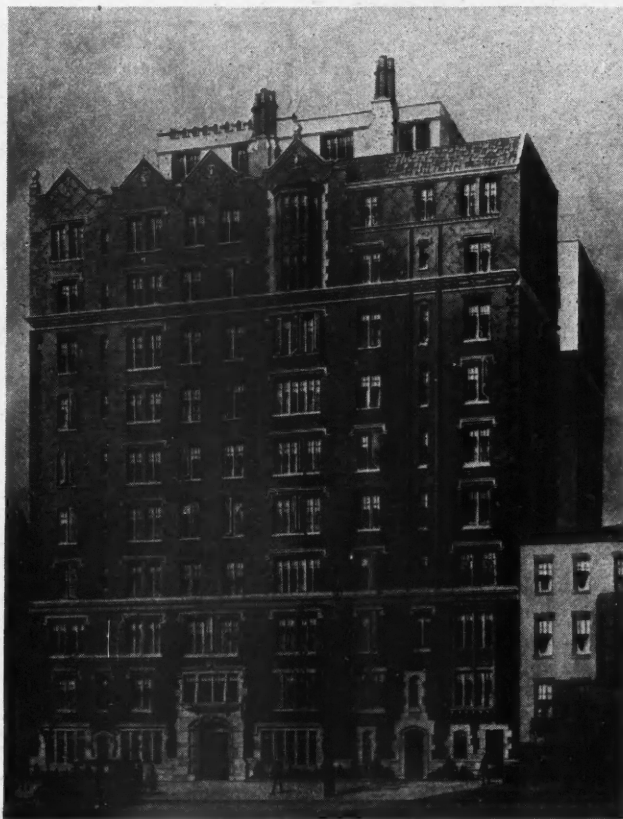
Efforts to eliminate a window here and there are not allowed because they destroy the slogan that there is direct daylight in every room.

A little interest in the design

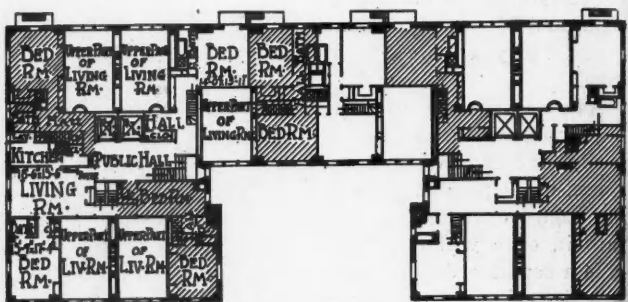
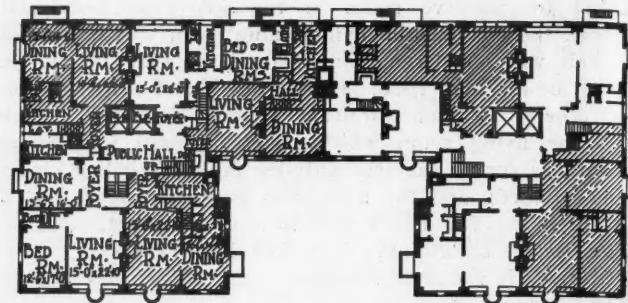
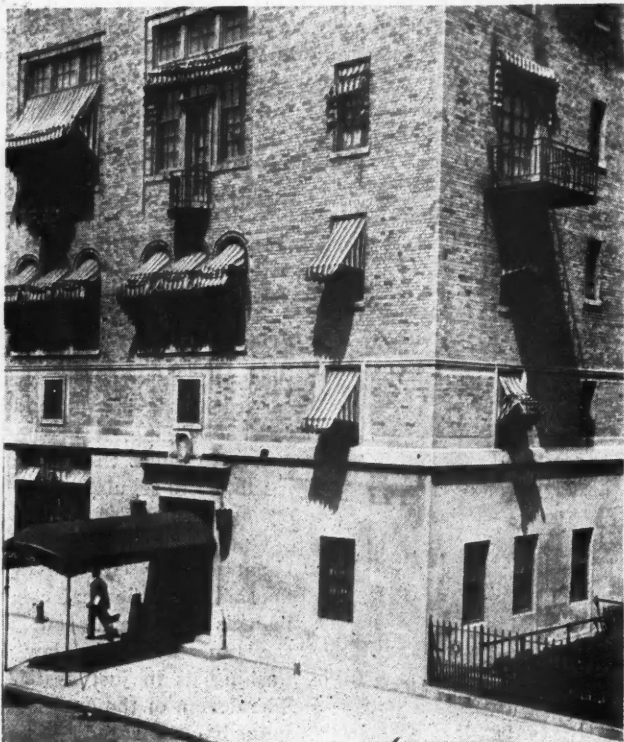
by occasional projecting of band courses and cornices is prohibited by law. The design is soon stripped of architecture altogether. It must be the best that existing conditions afford. But the best is none too good.

Certain architects have made great efforts to relieve the situation by carefully studying out the fenestration. In a new building on West 9th Street, New York City, designed by Sugarman & Berger, their rendering of which is reproduced here, this is especially evident. Again, Helme & Corbett, architects, have enlivened interest in the fenestration of the new apartments they designed at 35 and 45 East 9th Street, New York City. Actually their purpose was to raise the ceiling height in certain of the larger rooms.

This is done by introducing duplex apartments, the front or living room of alternate apartments being a studio room. As a consequence, however, greater interest is evident in the exterior design. It is inconceivable that an equal ceiling height be carried out throughout every room of an apartment. A room seven by seven feet has the same ceiling height as one sixteen by sixteen feet. This is contrary to all the laws of proportion and composition, and the architect finds himself confronted with another problem. The duplex apartment makes a bold



Unusual Interest Is Shown in the Fenestration of the Windsor Arms Apartments, in New York City, Sugarman & Berger, Architects, the Result of Careful Study.



In This New York City Apartment, the Architects, Helme & Corbett, Have Enlivened Interest in the Fenestration and at the Same Time Accomplished a Raised Ceiling in Each Living Room as Indicated in the Plans.

attempt to overcome the difficulty, but it is not always desirable and practical to introduce duplex apartments.

Another architect, Pleasants Pennington, has worked out a scheme in a house on East 79th Street, New York City, whereby the floor level of every other floor is broken, creating a higher ceiling in the front half of one apartment and in the back half of the next throughout the entire building. In order to give the living room the advantage of the higher ceiling, this necessitates placing the living room on alternate floors in the rear of the house. There is a certain objection to the plan seen in this situation.

Summing up, then, it appears true that the prevailing imperfections in the plan must be ironed out before the design of the exterior can hope to receive further architectural consideration. The plan, I repeat, is of the utmost importance. After it has been perfected as far as the tenant is concerned, it is the architect's problem to perfect it architecturally. In other words, revise it, if necessary, so that from it will arise an exterior mass which will be a fit subject for architectural design.

The garden apartment seems to possess possibilities from which this idea may be developed. Perhaps the city apartment house of the future will be entirely built around an inner garden, planted and laid out with park walks, and in other ways suggestive of the country, and the faces of the buildings fronting on this garden will carry out in their design the character of the private country house as some of the better type of suburban houses do today. The facades fronting on the city streets will be of minor consequence; they will actually be the rear walls of the apartment house. Their design will be in keeping with surrounding city architecture.

Twenty-five years will, perhaps, tell the story. Architecture has not yet failed in its commissions. It may be depended upon to come through in style in this case, as it has always done before.



### Practical Pick-ups Tools

**T**HROUGH carelessness or through thoughtlessness tools are misplaced, then forgotten, and eventually become lost. Very few carpenter tools are worn out.

Most of the carpenter tools that go out of use are lost while they are still good for many years of service.

The carpenter who forms the habit of picking up his tools at every quitting time and mentally checking them over loses very few tools. He usually knows just where each of his tools is all the time. Besides preventing loss of tools and saving the expense of buying new ones, this little memory trick saves him a great deal of time when he is in need of a certain kind of tool.

On the other hand, the careless mechanic must spend more or less time locating the particular tool that he wants. Of course, he gets as much pay when the day is done as the other men do, but sooner or later the disfavor that will gradually and surely grow in the mind of his employer will tell, and then is where the careless man loses. Carelessness and thoughtlessness grow onto an individual in the form of habits, like weeds in the garden, if they are not kept down.

Keeping tools bright amply pays for the time that it takes to keep them so by keeping the favor of the boss and the men with whom one must work. Another advantage bright tools have is the fact that better work can be done with them than with tools that are rust covered. This is particularly true of saws and of steel squares. A little time during the noon hour, ordinarily, is all that is needed to keep the tools clean. Every carpenter should have a piece of pumice stone in his kit of tools so he can lay his hands on it when a tool needs brightening and an opportunity for doing the work is at hand.

Much of the work required for brightening tools can be eliminated by preventing tools from becoming rust covered. If the tools become wet they should be dried and oiled with a good grade of oil. Poor oil often causes rust instead of preventing it. Never place a kit of tools in a damp place. If a kit of tools must be set on wet ground block it up so as to prevent contact with moisture.

Every carpenter should have at least two cut-off saws in his kit of tools, and at no time should both of them be in bad condition. The same thing is true with chisels. By systematizing one's tool sharpening, it is possible to keep tools in fairly good shape all the time.

—H. H. SIEGLE.

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# A "Mushroom" Service Station

## Odd Architecture Is Effectively Used to Attract the Passing Motorist



This Odd, Mushroom-Like Building Is a Filling Station, in the Shadow of the State Capitol Building, at Little Rock, Arkansas. Its novelty proves an effective lure for motorists who pass that way.

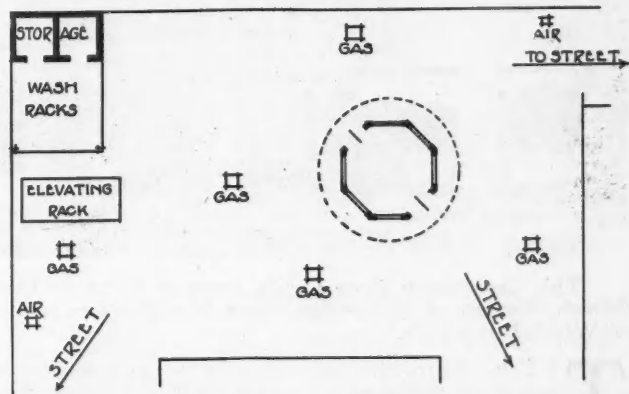
I AM not sure if it's a known fact or not that giants eat mushrooms, but it is dead sure that, if one were hunting about in the reaches of Arkansas for some of the delicious fungi, he would most surely hesitate in the locality of Tom Gay's service station in Little Rock.

Where one buys his gasoline depends mostly upon whim. Ideas vary as to just how to make a motorist stop. Seldom does he stop because he is out of fuel. Between the time he thinks that he ought to buy some gas and the actual necessity of replenishing his tanks, he probably passes 10 to 30 gas stations.

The use of an attractive service station building, however, seems to have become the most satisfactory method of getting the business. These buildings apparently divide themselves into two general types, both attractive. One is the structure of good architecture, well built, and properly maintained. The other is an edifice of odd architecture. It is this latter that Mr. Gay has made use of for his station.

As intimated above, the odd part of the station is the mushroom-like building that is placed in the approximate center of a large corner lot, paved solid with concrete. The base of the "mushroom" is octagonal, curving outward at about 15 feet from the floor to a round form which loses itself on the inside of the cone-like roof or dome. The base has a wainscot of black glossy tile up to about 3 feet high.

Above the tile work there are pairs of casement windows glazed with diamond shaped leaded glass, and above each pair of casements is a half-circle transom with leaded glass in a fan-shaped design. The window and door frames are painted white, each frame with a wide black stripe running



The Apparently Random Layout of Gas Pumps Is Really a Careful Plan to Give Increased Service for Five Cars at a Time.

from one end of the sill up over the transom and down to the other end of the sill. The effect is noticeable and striking.

From the top of the window frames to the termination of the octagonal part under the rim of the dome, the exterior is natural gray stucco. Over each half-circle transom there is an indentation in the form of a Gothic arch in the center of which is a round black ornament. The dome-like roof is covered with shingles laid in a thatched fashion. The effect is excellent, the apparent unevenness simulating the texture of a mushroom.

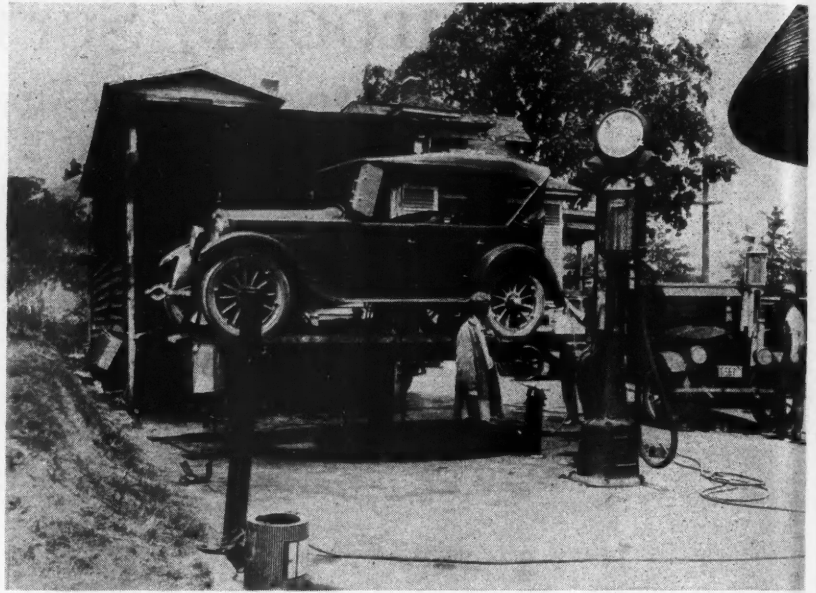
Perched atop the dome is an ornament the lower portion of which resembles a huge glass insulator. An arrow

cuts through the insulator pointing down at the ground presumably directing one to the gas pumps below. And mounting the very top of this strange structure is a light that might have been borrowed from some movie-plot lighthouse.

The locations of the gas pumps are unexpected. There are five of them scattered about, apparently at random, but close observation will show that each one is available for a different car at the same time. Each gas pump has its accompanying water hose. Oil is dispensed from quart jars in wire baskets that are carried about. Oil drums are kept inside the building, as well as a supply of tires and accessories.

A storage shed occupies one corner of the lot, and under its extended roof are wash racks. Greasing is also done nearby, an elevating mechanism raises the car up to where it is easily accessible. Gas and water and air are all handy, so that no time need be wasted if the owner of the car undergoing the greating process is in a hurry.

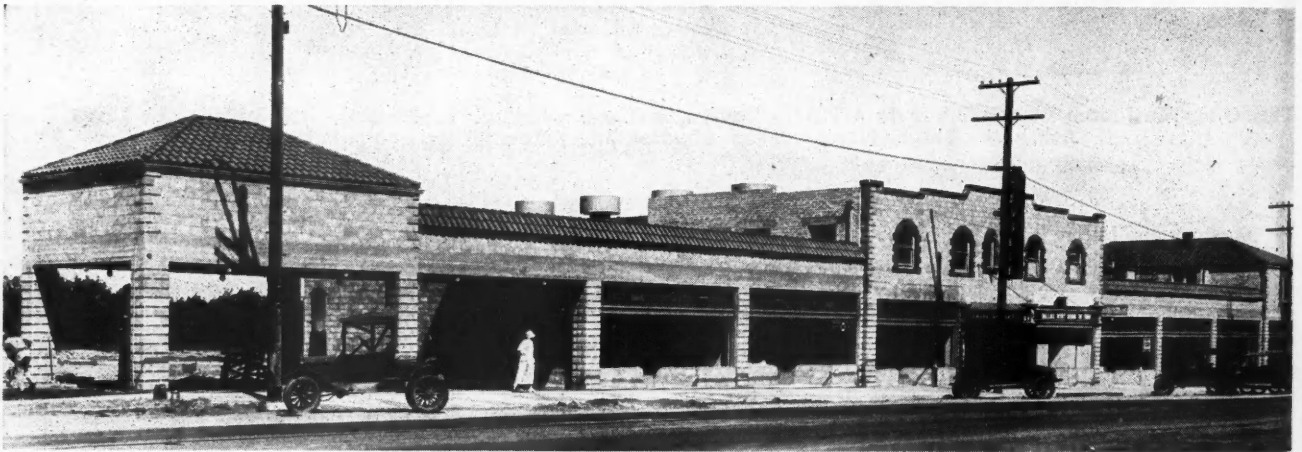
—J. HAROLD HAWKINS.



An Elevating Mechanism Is Used to Raise the Car for Greasing and with Water and Air Close at Hand No Time Need Be Wasted.

# The Community Store Group

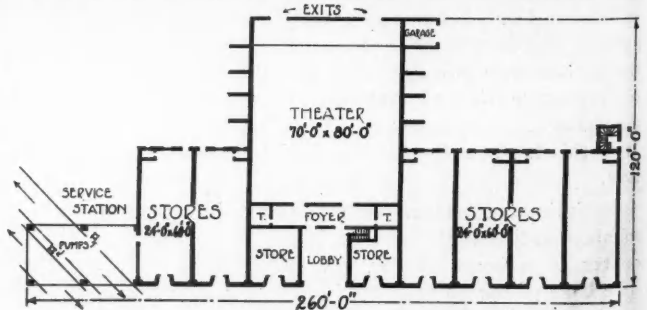
Such Buildings for Housing Business in Outlying Neighborhoods Possess Many Advantages Including Greater Economy and Better Appearance



This Community Store Group, Done in Concrete Block, Tile and Brick Makes an Attractive Appearing Building Which, Because of Its Design, Does Not detract from the Tone of the Residence Neighborhood Which It Serves and of Which It is a Part.

**T**HE rapid growth of our American cities has brought out many problems concerning building in general, not the least of these being the problem of retail store location. The high value of centrally located building sites often prohibits the erection of structures suitable for small retail stores because the legitimate income from the small shop will not stand the necessary pressure of high rent. If all of the people who go to make up the population of a city traded at the stores in the downtown section, then the merchant might meet his rent, but this is not the case.

A large percentage of the population of a city lives on the outskirts in communities that are almost self-supplying. Here, the rents are not so high, and the retail shop has a chance to survive. The individual store building in these out-lying districts is fast giving way to the, so-called, community store group. Such a building has many advantages over individual structures. For one thing, the cost per store is less than in individual buildings. And another



In Addition to the Theater, the Building Provides Six Large Store Spaces, Some of Which Are Divided in the Middle, Two Small Shops and an Automobile Filling and Service Station.

thing that is important nowadays is the effect on the appearance of the community as a whole. A well designed store group helps the beauty of the locality without question.

The Howe community group of stores is an excellent example of this group idea. It was designed by the Consual Construction Company, of San Diego, California. The building was erected by day labor under the supervision of Mr. W. D. Wentworth, and the excellent concrete work, which is the backbone of the structure, was executed by Mr. Joseph Wittingham, of Chula Vista, where the building is located.

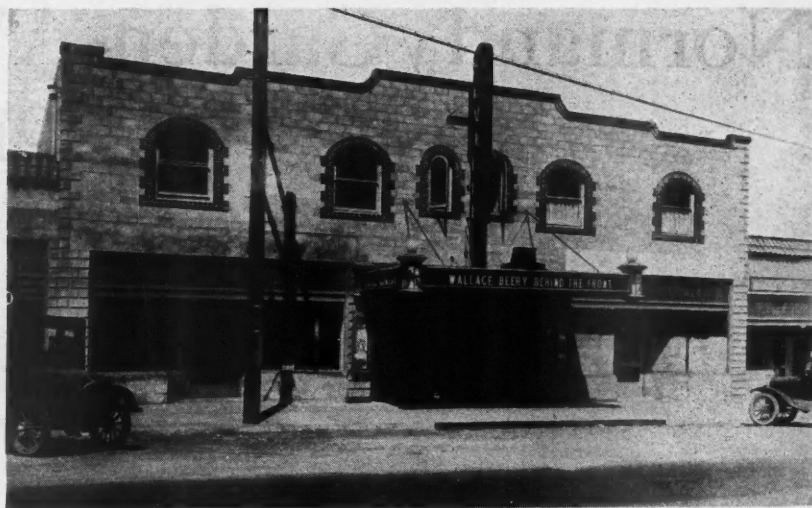
The entire building has a frontage of 260 feet, the stores being about 60 feet deep. There are six large stores, some of which, although not shown on the sketch of the floor plan, are divided down the middle by a partition, and each has a separate front door between the show windows. The undivided stores are about 24 feet wide. In addition to the six large stores, there are two smaller shops one on each side of the theatre lobby.

Gasoline stations are now more common than the former blacksmith shops, and Mr. Howe, the owner, will indirectly get a revenue from the automobile, as well as from its passengers, for he has a service station in one end of his store group. Vying with the vendor of gasoline for regular patrons is the movie theatre. This modern fad of the populace may also be satisfied without going to the city.

The theatre is up-to-date in every respect, its decorations being as bizarre as any in Hollywood although, perhaps, not as elaborate in detail. The plaster is rough, and finished in a gold color. The roof construction is a new type of arch and network construction without trusses. The high ceiling is a perfect arch and very pleasing to the eye. Reinforced concrete abutments against the outside walls support the outward pressure of the roof. The seating capacity is 500, and the floor slopes gradually down toward the stage. There are two large exits at the rear of the theatre.

The construction of the building is cement block and brick. The cement blocks under the windows are filled full of concrete up to the sills. All of the piers are full of concrete, poured in after the blocks were laid. Over every opening, which is nearly the entire length of the front of the building, are reinforced concrete beams. All square-topped windows also have reinforced concrete lintels.

Usually a building of concrete blocks, left bare, is any-



The Ornamentation of the Central Facade, with Its Theater Entrance, Is Sufficient to Be Attractive, but Avoids All Suggestion of the Flashy.

thing but pleasing in appearance, but here there have been applied deft touches that take away the usual somber, factory-like aspect. The mortar is dark pink or light red. The tiles on the roof are the same shade, and the brick trimming around the windows and the coping of the center section of the group is also light red. The combination is pleasing and attractive.

Besides the stores and gasoline station, there is an income due from the offices over the front portion of the theatre. Here are four front rooms, two toilets, and a wide hall. The entrance is from the lobby of the theatre up a flight of stairs.

The end store is carried up two stories and an apartment was arranged in a very neat fashion. It consists of a front living room, two bedrooms, bathroom, kitchen and small dining alcove. A straight hall runs the entire length from the entrance at the rear to the living room across the front. A pair of French doors open from the living room onto the roof, and there is also one from the dining alcove that leads to the roof.

Like the diversifying farmer, Mr. Howe has many different propositions for rent, and surely the average income ought to run well above that which might be derived from an equal number of individual places. The community store group idea is a good one from any angle, and has come to stay.

J. HAROLD HAWKINS.

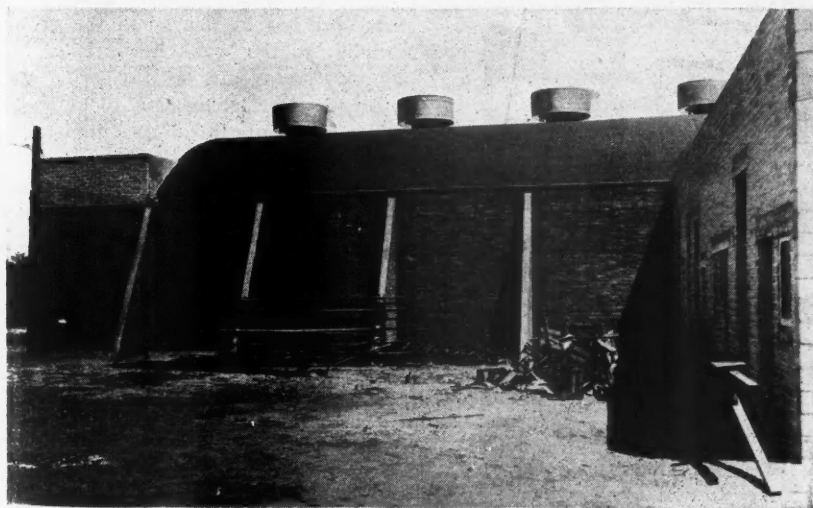


### Clinker Brick in Demand

TEN years ago the clinker brick, so-called because it frequently came out of the kiln with the fused appearance of a real furnace clinker, was a total loss to the manufacturer and usually was chucked into the rubbish heap or the dump. Today clinker brick are used in the construction of the most attractive brick houses and sell at a higher price than the run of kiln brick. The percentage in any kiln is small and they are so difficult to obtain that some manufacturers are experimenting with a view to increasing the clinker brick output.



THERE is no better way to keep mud out of the house next winter than to lay a few good cement walks around the home this fall.



The Theater Is Built with a Trussless Roof of a New and Interesting Type, the Load of the Roof Being Carried by the Reinforced Concrete Abutments Shown Here.

# Normandy Garden-A Well Planned Home Development

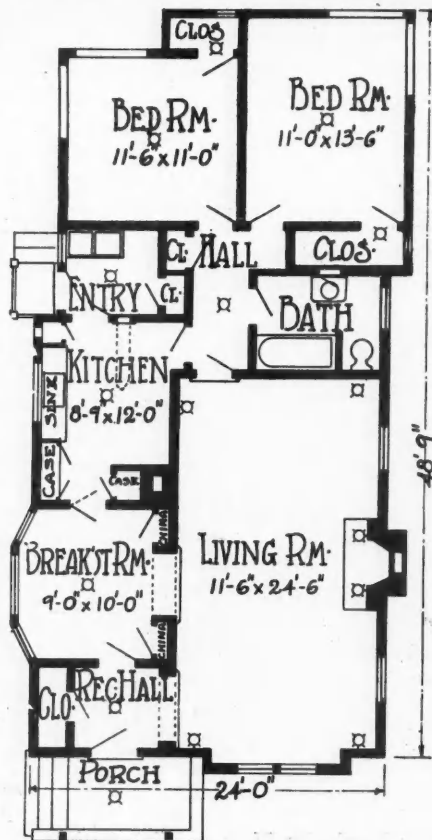


The "Villa Arcadie," One of the Completely Equipped Homes Built by Hillen & Dixon, of Oakland, Calif., in Their Normandy Garden Project and Opened for Public Inspection.

SINCE the World War, the influence of European architecture has become pronounced in many of the newer types of residences in this country. While this influence had formerly only shown itself in the places of ultra-rich, its entrance into the designing of homes of moderate cost is now beginning to make itself shown to a marked degree.

Homes which adhere strictly to the fundamental principles of line and harmony will always remain architecturally good. The decidedly awakened enthusiasm for homes which combine the artistry and charm found in the exterior of the northern European peasant style of dwelling with the five and six-room modern interior house arrangements, enhanced further by the installation of the latest and most standard equipment for good house-keeping, has made a strong appeal to the discriminating home purchaser.

To build such homes as these, to keep them within the financial bounds of the average salaried man, yet to make them, withal, not alone homes out of the ordinary, but spots of restful beauty founded on highest workmanship has been the goal which R. C. Hillen and W. W. Dixon, Oakland, Calif., have reached in their recently



Floor Plan of the "Villa Arcadie" Is Typical of the Normandy Garden Homes.

opened residence tract, "Normandy Gardens."

Having purchased a site of ten acres from a well wooded estate, these builders had a natural background for the homes which were to be erected. Exteriors typical of the rural English, French, and Norman dwellings have been reproduced, yet so skillfully worked out, that each house is individual to itself. Further than that, great care has been used in the group planning so that each house is so set upon its lot as not only to bring out its own distinct charm but to heighten the artistic appeal of the homes on either side of it.

Messrs. Hillen and Dixon have demonstrated their purpose and success in building truly and to highest ideals by the three tracts which they have opened in recent years, each an asset to the development of fine home units in the city.

Since the opening of Normandy Garden last December, 30 homes have been built and sold in this tract. While the first ones were built as demonstration homes, others have been built to order. Every home erected in the tract is planned by Mr. Dixon, and all features are in keeping with the general type of architecture used in Nor-

mandy Garden and the minute supervision of the building job insures its thorough construction.

Attractiveness, comfort and convenience are the essentials found in Hillen & Dixon built homes. While stucco is used for the exterior of the Normandy Garden homes, in some cases weathered brick has been added as a decorative scheme. Roofs of English slate and chipped shingle have been used with excellent results and in keeping with the Old World motif.

The interior walls of the homes in Normandy Garden show plaster effects obtained by rough trowel work. There are also those plaster finishes gained by patting and the broad swiping of the plaster with



The Reception Room, in the Administration Building at Normandy Garden Strongly Suggests the Foreign Architectural Influence which Inspired Its Design.



The Principal Rooms in These Houses Are Connected by Arched Openings, Instead of the Squared Opening with a Solid Door, Permitting a View of Adjoining Rooms.

brushes while it is still soft. The use of plastic paints gives a delightfully restful texture and a heightened color tone to the living room walls.

In these large studio living rooms which are a feature in the Normandy Garden homes, cathedral beamed ceilings and arched and barrel ceilings, lend themselves especially to the specified architectural designs.

The doors and woodwork of the living room, dining room and hall in the individual homes are either of southern gum or genuine mahogany, according as they



The Administration Building Is Typical of the Architecture Seen in Normandy Gardens. Besides containing Mr. Hillen's offices, it includes two, complete, five-room apartments and two garages.



Another Well Planned Home Which Combines the Charming Design Taken from Normandy with all the Modern Conveniences Found in the Best American Homes.

work in with the color scheme. The sunken studio living rooms are unusually attractive and measure 14 feet by 26 feet with a floor drop of 7 inches below the standard floor height used in the remainder of the house.

A new feature introduced into the Normandy Garden homes, is the dinette. This is a miniature dining room designed to take the place of breakfast room and dining room and is situated between the living room and the kitchen. An iron grille, similar to a low gate and fitted into the archway, separates the dinette from the living room.

The kitchen in each Normandy Garden home is fitted with every modern convenience. Heavy inlaid linoleum is cemented to the floor. The refrigerator is built in and has outside icing door. The sink back and side trays are of tiling and one faucet over the sink serves for both hot and cold water. A helpful feature is a spray attachment which fastens to the faucet for the rinsing of dishes. Concealed ironing board, broom closet, large cupboard space and many drawers give ample opportunity for ease in housekeeping. All conveniences are included in the sale price for a Normandy Garden home.

The electrical work in each of these homes is very complete, having central lighting fixtures in all rooms and outlets for all electrical appliances.

The Normandy Garden homes range in price from seven thousand to ten thousand dollars each. Messrs. Hillen and Dixon are not speculative builders, but are men who believe that their work truly "lives after them" and who can look back upon their former building projects with that satisfaction which comes from having happy and satisfied purchasers who continued thoroughly satisfied with the workmanship in their homes many years after the purchase was consummated.



### Radio in Foreign Lands

THE steadily increasing popularity of radio throughout the world is strikingly revealed in a trade bulletin made public by the Commerce Department. While the United States is still supreme in the radio field—having three-fifths of the world's broadcasting stations and five times more receiving sets in use than any other country—foreign nations are awakening to the immense possibilities of radio as a medium of education and entertainment. Last year radio equipment exported from the United States was

valued at \$10,000,000, which was 80 per cent more than the value of shipments in 1924 and ten times the figure for 1921.

Broadcasting stations, according to the report, are now operating in every corner of Europe; there are stations in the larger cities of South America, Australia and South Africa. Japan and India in Asia also have broadcasting stations, although radio development naturally has not been so great in these countries as in other parts of the world. These broadcasting stations range in power from 16,000 watts at Daventry, England—a superstation built for foreign broadcasting—to numerous smaller stations of 1,000 watts and less scattered throughout the world.

The United States, the report points out, is the only important country where the radio fan can listen in free of charge. License fees exist in almost every country, ranging from the nominal one franc per year in France to \$18 in Salvador and \$13 in Lithuania. In the British Isles the

fee is 10 shillings; in Sweden, about \$2.70; Japan's fee is 80 cents, and the Union of South Africa, \$1.25.

Along with license fees in many countries there exist rules and regulations of various kinds in connection with radio broadcasting and reception. In Greece, for example, only a Greek can own a radio set and even he is subject to government restrictions; Germany does not allow persons of Slav origin to own radio sets; the Latin-American countries have also numerous regulations.

Next to the United States, the report shows, the United Kingdom has gone the furthest in radio development with 35.6 sets per thousand population. Sweden ranks next with 30.3 sets per thousand population, followed by the Union of South Africa, Denmark, Austria, Germany and France. The development of radio in Sweden has been outstanding, the report reveals. Up to about the beginning of 1924 there was practically no market at all for radio equipment, largely because of the total lack of broadcasting and government restrictions. On March 31 last not far from 200,000 sets were licensed throughout the country.

The type of matter broadcasted from the various foreign stations varies widely. Much attention is given to music and there is a general absence of "jazz." The programs differ from those of this country in that much more attention is given to current news and there is a tendency in some sections to use the radio for advertising. In Brazil a radio society is preparing to broadcast daily all the latest coffee news together with quotations.

In northern and central Europe the climate is ideal for continuous radio reception. The German in Berlin can tune in without trouble and listen to a musical program broadcasted from Rome; getting Paris is no feat at all and the stations of northern Europe may be easily heard. The Frenchman and the Englishman likewise find the whole of Europe at their beck and call. The rapid development of radio indicates that it is following the course of the automobile, the phonograph, and other modern inventions which have added to the pleasure and comfort of mankind.



### Skintled Brickwork Is Popular

SKINTLED brickwork, a departure from old line brick laying which was inaugurated six or seven years ago in Chicago, is winning instant favor wherever it is introduced. Within the last six years there have been some 1,500 brick houses built of common brick in Chicago and its environs, more than half of them skintled, and ranging in price from \$15,000 to \$150,000.

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# A Model House In Rustic Style

AULER AND JENSEN, Architects

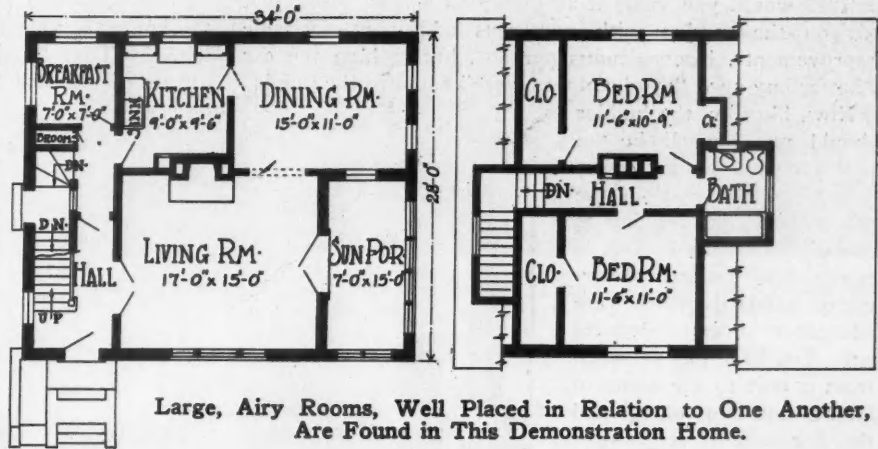
**O**F special appeal to those whose fancy turns to the rustic is the brick house pictured below. The irregularity of the outer brick surface and the graceful sloping roof possess a charm all of their own. The brick used in the exterior construction is of the rustic cream colored type. Dormers, of which there are two, are of stucco. The trim roof is of composition giant shingles, asphalt saturated felt with green slate. The walls and roof are thoroughly insulated. The interior is plastered over metal lath which is assembled on the inner brick surface. This method forms an air space which provides additional insulation for walls.

The house has a frontage of 34 feet and a depth of 28 feet. It is equipped with a full cellar and two complete floors. Interior woodwork is of spruce, enameled, with doors of birch.

While the dimensions of the house are conservative it will be seen from the plans of the two floors that large airy rooms are the keynote of the plan. Ideal placing of the rooms in proper relations is another feature found in

this house. The same idea of planning is carried out on the second floor.

The home was built by the Cook & Brown Lime Company, of Oshkosh, as a model brick home to demonstrate the artistic appeal that can be found in rough brick. It was built at an estimated cost of \$11,000. Auler and Jensen, Oshkosh, were the architects. C. H. EDWARDS.



Large, Airy Rooms, Well Placed in Relation to One Another, Are Found in This Demonstration Home.



The Rough Textured Walls of Cream Colored Brick Give a Rustic Tone to This Home While with the Sweeping Roof Lines and Shuttered Windows It Possesses Unquestionable Individuality and Charm.

# Home Adequately Wired for Labor-Doing Appliances

By WM. W. AYRE,

*Of the Staff of The Society for Electrical Development*

**S**OME builders are inclined to conclude that there is little connection between the increased sale of houses and such apparently inconspicuous improvements as adequate wiring for electric service. Is this a fact? If you were the owner of an automobile which was made in 1920 would you value it as highly as a new model just put on the market with numerous additional desirable improvements, inconspicuous perhaps, but making the car a better buy once the advantages were known to the public?

Now, likewise, the builder should put himself in the position of a home owner. Try to put yourself in the place of a woman living in one of your houses which is equipped with electrical wiring of standards which were adequate several decades ago. You have just returned from a visit to the home of Mrs. Smart. You have heard that her home is very up-to-date, but you never expected that in comparison your own home would be so far behind the times.

The first superiority of the house you have visited was the lighting. As a woman you would have marvelled at the charming lamps and fixtures everywhere creating delightful studies in lighting throughout the house. You incidentally remarked that there were no ugly makeshifts of wires running to overhead fixtures. Each portable lamp had its own outlet nearby. Mrs. Smart was a firm believer in modern improvements. Electric labor-saving devices were installed to take the burdens of housekeeping from her shoulders which gave her a real command over her household details.

The laundry was spick and span, very business-like looking. The efficient washer and ironer installed seemed to challenge the heaviest laundry demands which might be made on them.

The kitchen was a dream. In the first place it was well lighted and there was an electric range and a built-in dishwasher which solved your wonderment as to how Mrs. Smart managed to keep her hands in such good condition. You expected to find an electric refrigerator and you were not disappointed. It was in the pantry chilling the food with a dry hygienic cold which eliminated the mess incidental to ice and the everlasting watchfulness which is an essential part of an older method of refrigeration.

But it would be too long a story to relate in detail how a home which is adequately wired for electric service outranks one which, from the outside perhaps, appears to be equally modern and attractive. The housewife who has

been put through such an experience feels that she has been cheated in the purchase of her home because it will never fully compare with one which has been initially adequately wired for the convenient use of electric service.

With this picture in mind don't you think that there should be something done to assure future buyers that the home they are purchasing from you will be adequately wired? That "something" can best be accomplished by means of the Red Seal Plan which has been described in two articles appearing in this publication in previous issues.

The Red Seal is the mark of identification of service performed in behalf of public interest. This service consists of the establishment and maintenance of a standard of adequacy in the installation of wiring and other equipment designed to facilitate the use of electric appliances now available as they are developed and improved, from time to time, in the progress of electrical science and invention. The Red Seal Plan does not identify the wiring job or the materials used or the man who did the work. It identifies the house that has been wired according to the standard established by the local Red Seal specifications.

Electrically operated appliances have been invented and improved over a long period of time and every year sees new developments in the domestic electrical appliance field. It has been repeated time and again

that the average small home owner has more servants at her command than formerly were found in the homes of the wealthy.

For instance, electricity has lightened the burdens of washing, ironing, cleaning, cooking and dishwashing. It makes it possible to ventilate the home in the hottest weather at a trifling cost. In damp and chilly weather it can be depended on to throw out warm electric rays from portable heaters which operate without dirt or trouble—by the turn of a switch.

Consider the important subject of refrigeration. It is a well-known scientific fact that foods rapidly deteriorate if they are not kept at a temperature of between 40 and 50 degrees. Moreover this temperature must not vary greatly as rising temperatures permit the rapid multiplication of bacteria. Electrical refrigeration has proved very capable of keeping foods at such temperatures. Foods may be left in the cooling receptacle for days and will be found fresh as when placed within. Surely a home to be considered strictly modern must provide for the introduction



**The Completely Electrified Kitchen and Laundry Are Places Which No Longer Mean Drudgery for the Housekeeper. They are spick and span and entirely businesslike.**

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of electrical refrigeration, this latest scientific contribution to home-making. Adequate wiring alone can provide this.

Electric cookery is another improvement in domestic progress which is increasing in popularity. There are thousands of communities whose low cooking rates make it possible for the householder to utilize electricity for this purpose at a very reasonable cost. Special wiring is provided for the electric range. This, very patently, can best be done while the house is being erected as later additions to the electric service are both costly and inconvenient.

But there are one hundred and one various useful electric appliances, from table cooking devices which permit the housewife to prepare a full meal at the table to the health-giving electric devices which are now being found in many modern homes. A woman who has used an electric vibrator for certain ailments, the electric curling iron, or the hair dryer after a shampoo, will expect to find adequate provisions in the new home she is inspecting, which will make it possible for a continuance of the use of these devices.

The modern laundry is electrically equipped. There are a great many types of electrical clothes washers on the market and millions of homes find them a great aid in lessening wash-day burdens. The electric iron and ironer are also found in up-to-date homes. Built-in dishwashers will catch the eye of a future home buyer as an evidence of progressiveness on the part of the builder. All these appliances to be truly convenient must have adequate convenience outlets available nearby. Makeshift connections to lighting outlets only spell trouble and criticism of the house and its electrical planning.

The builder will find a gratifying sense of receptivity on the part of the home buyer when he explains the electric service possibilities of Red Seal wiring. It will not take long for him to sense the fact that the home wired according to Red Seal specifications is the answer to the housewife's questions regarding the utilization of the marvelous products of electrical invention which have been so extensively advertised.



With Electricity in the Home the Family Sewing Can Be Done Easily and Quickly with the Aid of an Electric Sewing Machine.

All women living in Red Seal homes which provide adequate facilities such as convenience outlets, lighting outlets, switches, spare circuits, and other essentials for the convenient use of electric service are really "wired up" for the fullest realization of their dreams of comfort, beauty, and freedom from the incessant drudgery of house-keeping.



## A Subdivision Beautiful

(Continued from page 131)

dollars' worth of building in this sub-division. He sells lots as well as building houses to sell and building them to order.

Mr. Nelson employs an architect and also a construction superintendent. This superintendent has charge of the actual construction of the houses, letting the sub-contracts and employing the workmen. As Nelson is a young man himself, he likes to work with young men, and most of his employes are young college men.

The Nelson company advertises extensively, and somewhat uniquely. In the beginning of Mr. Nelson's business career he decided to tie up with one of Birmingham's daily papers exclusively and has ever since advertised only in that paper. Because of this, this paper has given him much publicity, whenever possible, and features his building activities in Birmingham.

ALINE NORVELL HANDLEY.



## Watch the Thermometer

MILD autumn weather can build up a false sense of security in the mind of the concrete contractor that may easily prove his undoing. Without warning the mercury can, and often does, drop sharply. The contractor who has freshly placed concrete is in difficulty unless his tarpaulins are in place and his salamanders are ready to fire. Freshly placed concrete hardens more and more slowly as the temperature approaches the freezing point and there it is damaged. It pays to be on guard as the thermometer begins to read in the fifties, forties or thirties.



Well Prepared, Warm Breakfasts Are Possible with Little Effort Where Electric Equipment Is Provided in the Dining Room.



# Homes in COLORS

## *The Well Built Houses Weathered the Storm*

By **WILLIAM A. RADFORD**

*President and Editor-in-Chief of the American Builder*



AS the reports come in from those parts of Florida hit by the big storm, we are impressed with the fact that it was the poorly constructed buildings which suffered most. As the superficial wreckage is cleared away the substantially built homes are found to be much less damaged than was feared. Flimsy construction went down in total wreck and added to the general confusion and the hazards of the storm, whereas the more solidly constructed buildings proved for the most part a safe refuge.

We recall that this was the case also a few years ago in the Santa Barbara earthquake, that upheaval of nature which taught the lesson of solid construction and the importance of reinforcing. Builders and architects throughout the country, whether in the so-called earthquake regions or not, learned a valuable lesson from that demonstration, and since have been planning and building in a way to withstand these infrequent but destructive storms and strains of nature when they come.

After the Florida storm we read with a thrill of pride and admiration of the reporters in the newspaper tower at Miami watching the storm in safety from their high retreat in that modern, steel frame, concrete anchored office building. This well-built structure along with many others, stood the test.

Of course, there are always freaks of destruction in every big storm—combinations of forces that seemingly nothing can withstand. However, it is the general rule that flimsy construction is what suffers most, while the well-built structures stand and suffer little or no damage.

Builders should not be blind to these lessons nor slow to make use of them in advising with their clients and customers and in the handling of their own construction work.

You are familiar with the methods and details that make for good construction and you know that practically every class of construction materials has its own proper use and place in the building field. These remarks are not intended as a recommendation for any particular kind or class of material nor do they condemn any. As a matter of fact, we have studied the surveys of the Florida storm area made by each of the national associations of building material manufacturers, and each finds that its own particular product stood up well when properly used. All of these reports and surveys drive home the importance of good construction.

Southern Florida probably had more than its share of very cheap and flimsy construction due to the rush of winter home seekers during the past few years. This class of construction was, of course, practically wiped out wherever the full force of the storm struck. This worked a hardship on the individual; but it will prove a benefit to the state, provided the lesson is learned of building better.

Less attention will probably be paid in rebuilding to the strange and fantastic ornamental effects which were all for show and had no structural honesty; and more attention will be paid to roof forms that will turn the water and to doors, windows and walls that will stand fast when needed.

Even in the South and throughout the country generally, good, solid, well-insulated construction is not only a good storm and accident policy but also pays dividends the year round in increased comfort, coolness in hot weather, warmth in cold weather; freedom from noise and vibrations and the satisfaction and security of the thoroughly well-built home.

Homes may be built to sell but also they must be built to live in and to give a lifetime of security, safety and comfort to the ultimate owner.

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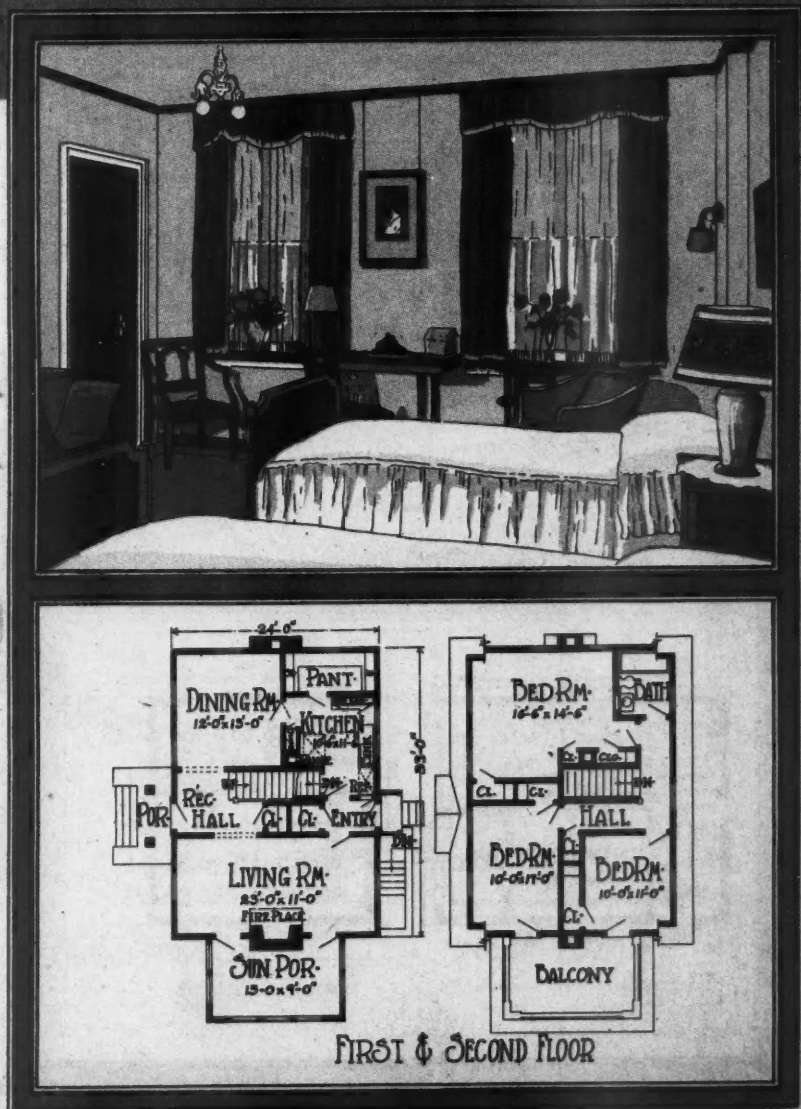


### The AFTON

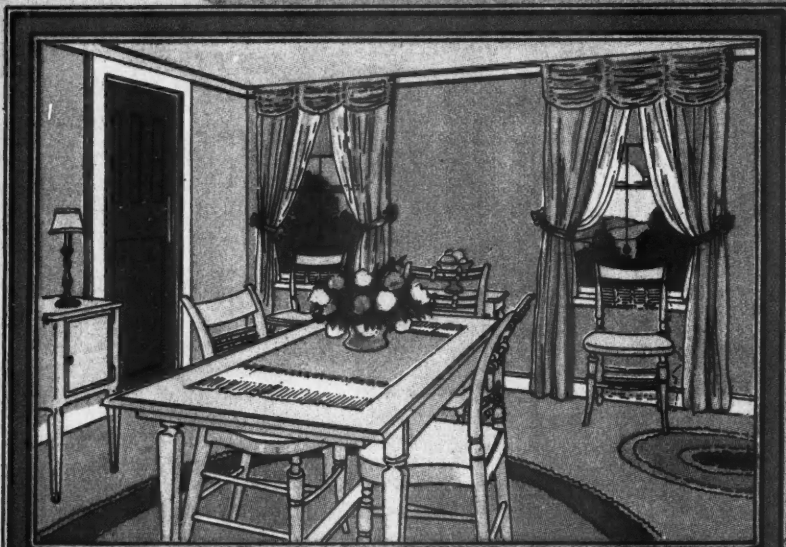
A POPULAR Dutch Colonial design of six rooms, sun parlor and bath. Size 24x33 feet not counting the porches. Color sketch at right shows the large rear bedroom well furnished.



Detail of Window with Ornamental Shutters.



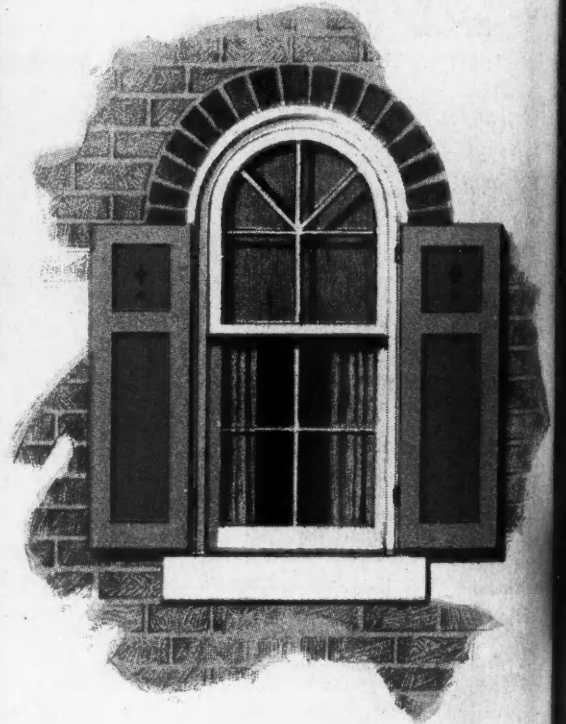
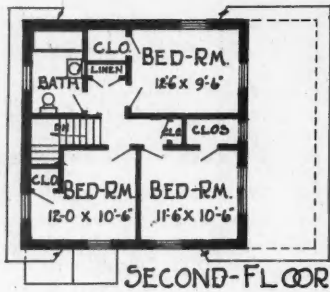
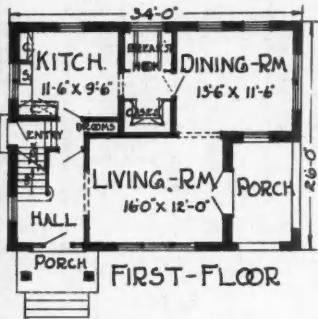
Pat. March 15, 1921 and Sept. 29, 1924.  
Copyright 1926, Wm. A. Radford, Chicago



## The ADELPHIA

A MODERN brick house with graceful sweep to roof in the English style. Six rooms and breakfast nook are contained in 26x34 feet. Sketch to the left shows the dining room.

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Detail of Ornamental Attic Window with Shutters

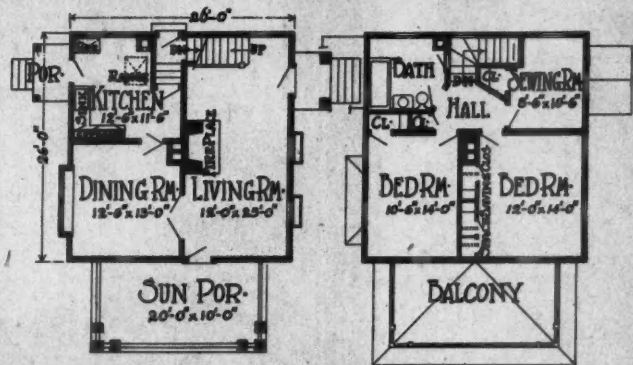
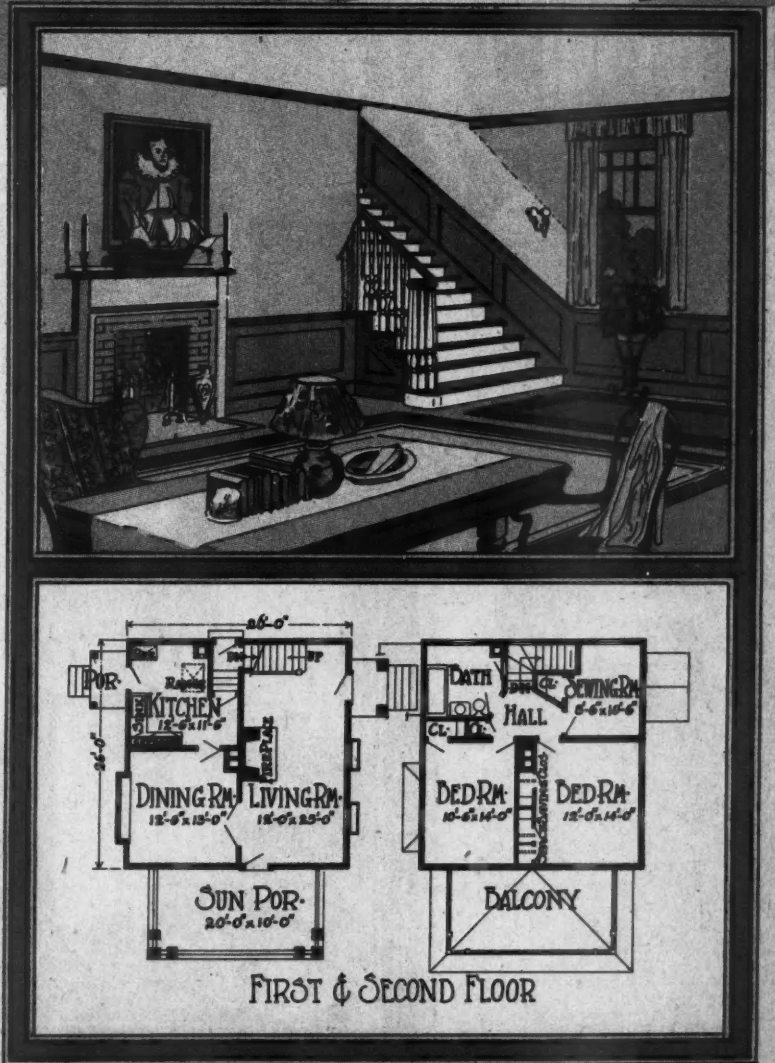


### The ABBOTTSFORD

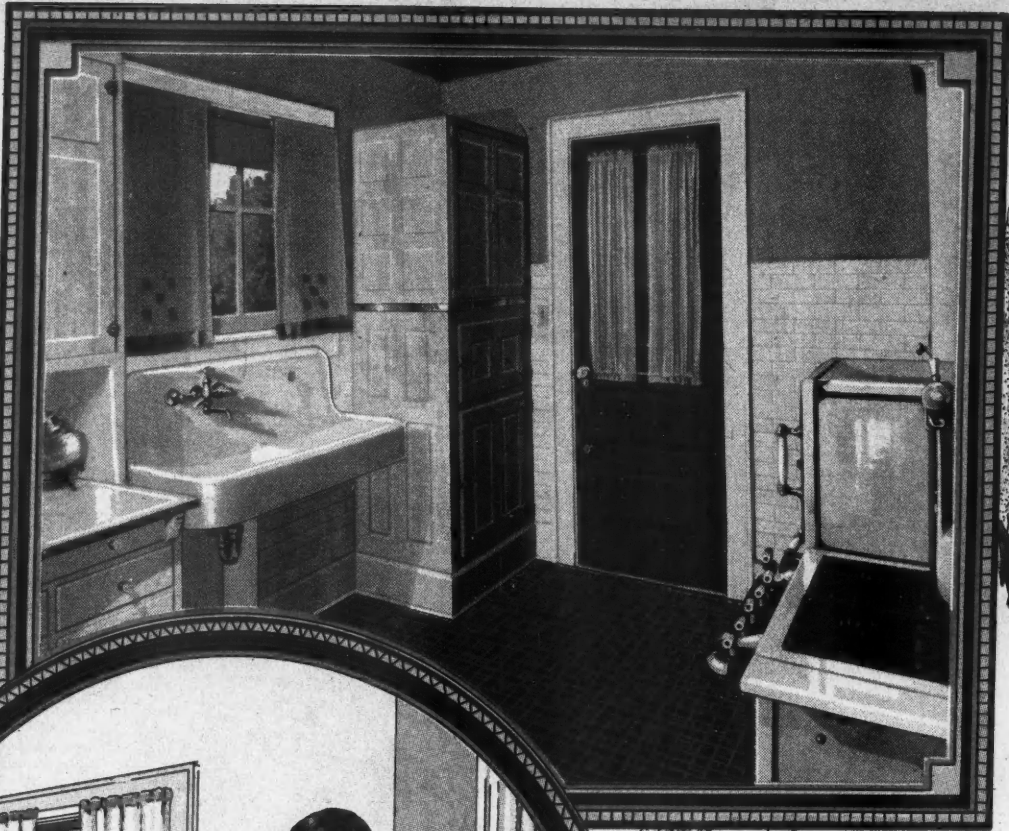
STURDY little Colonial home in perfect taste containing six rooms and bath. Dimensions 26x26 not counting the porches. The stairs go up out the living room as illustrated in the color sketch to right.



Detail of Entrance Porch.

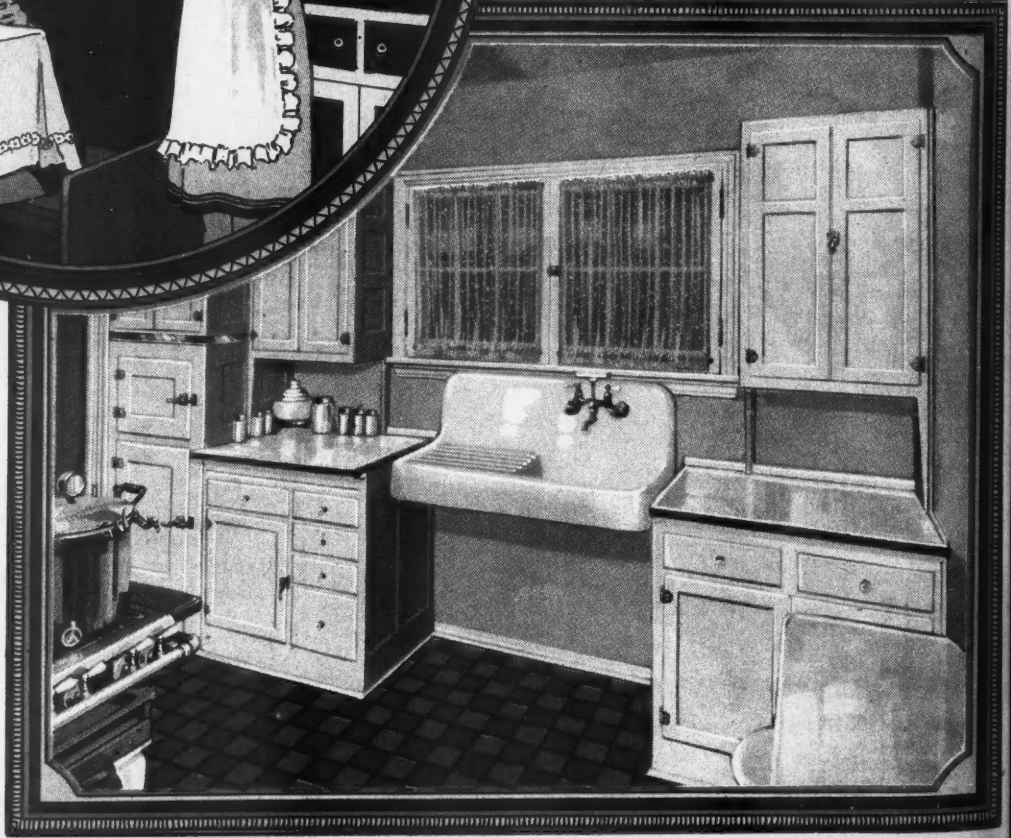


FIRST & SECOND FLOOR



### Modern Kitchens

**T**HE present-day kitchen is a joy to the house-wife, compact, cheerful, immaculate. Architects, builders and equipment manufacturers have combined their ideas and service to make the kitchen the show place of the modern home.



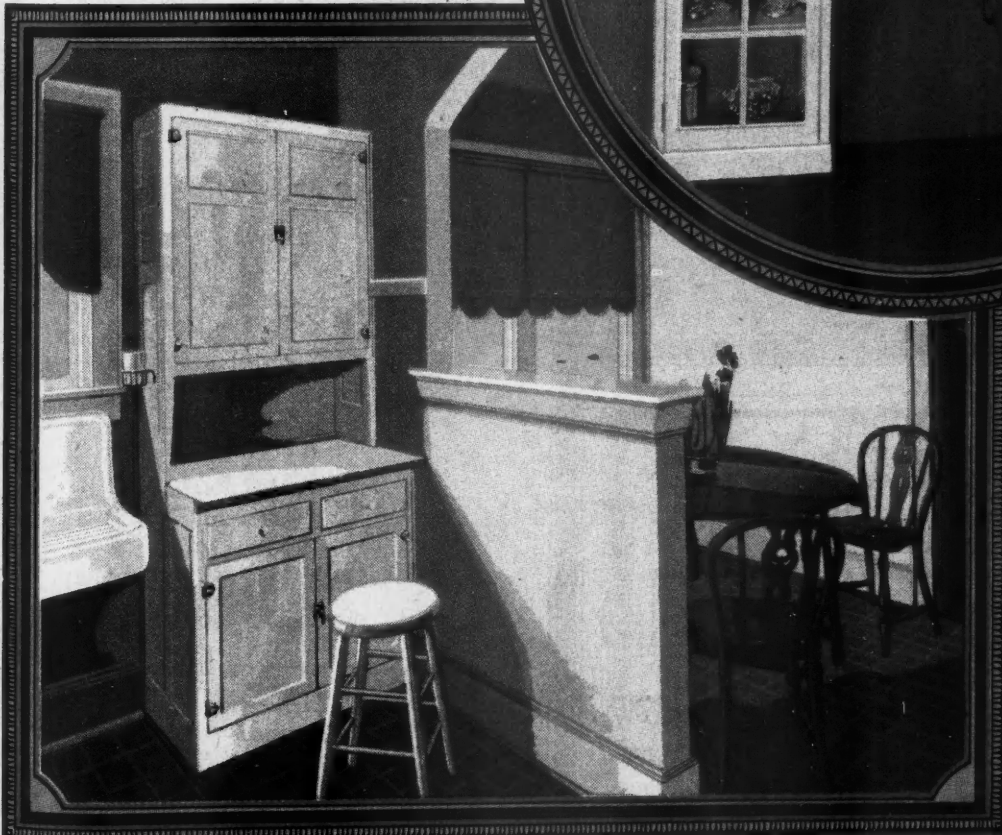
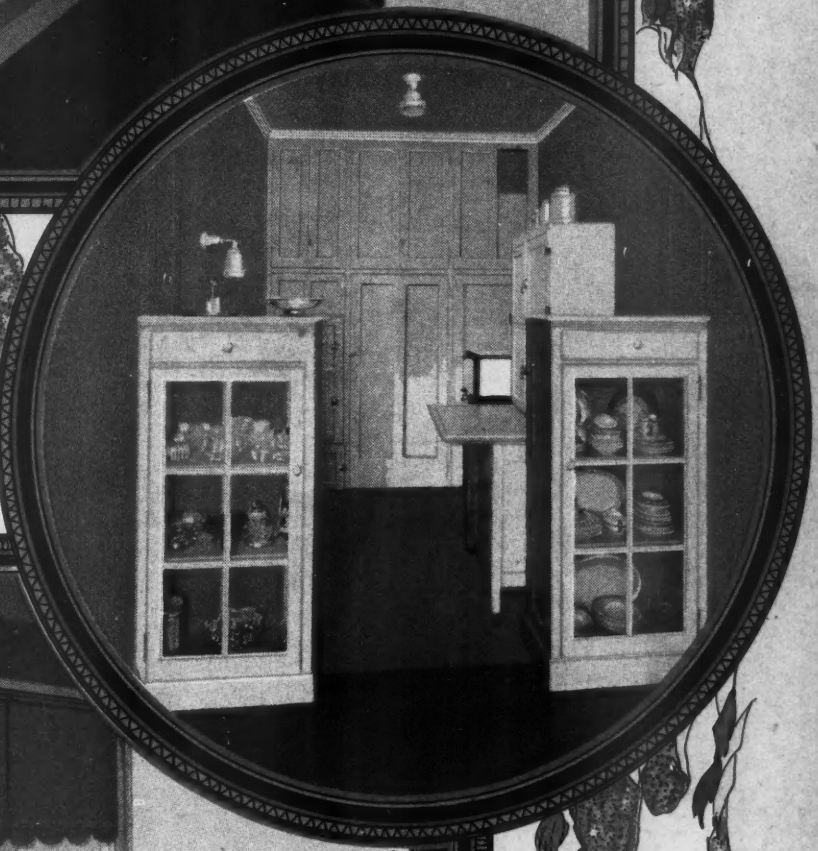
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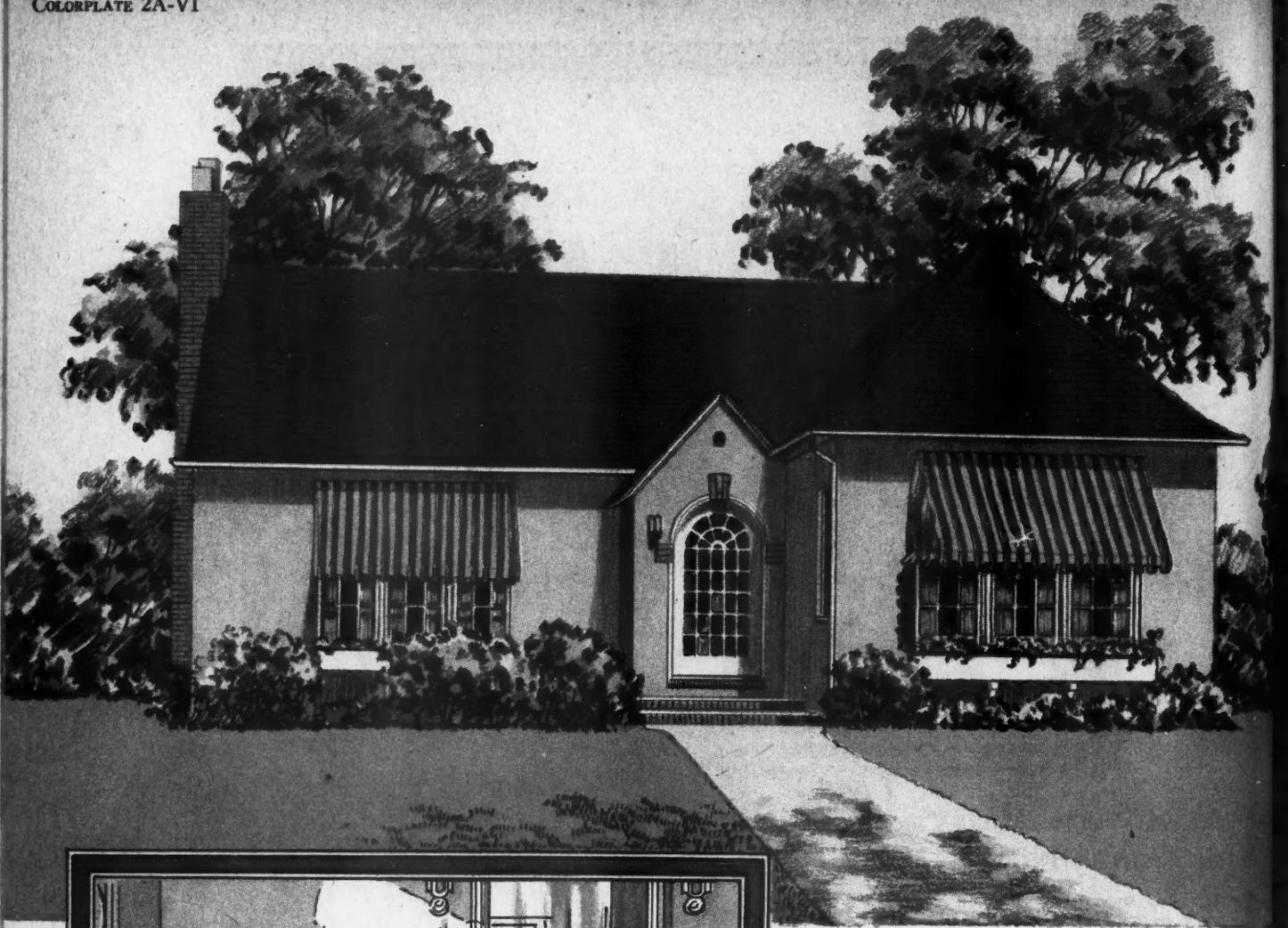




**With Dining Nooks**

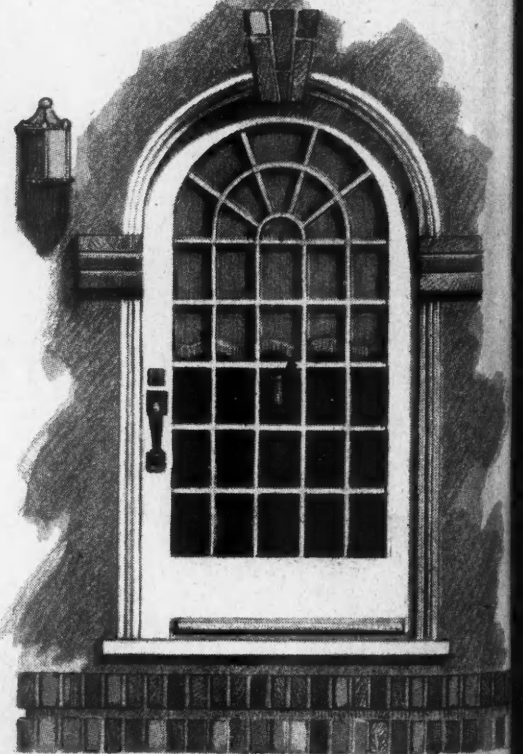
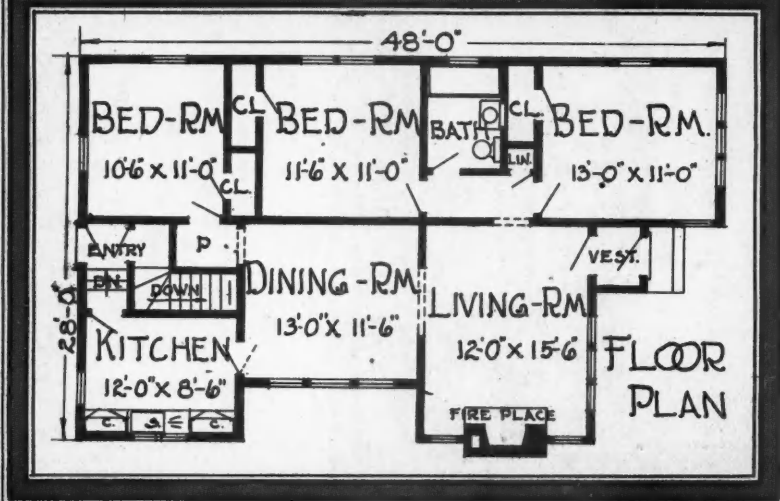
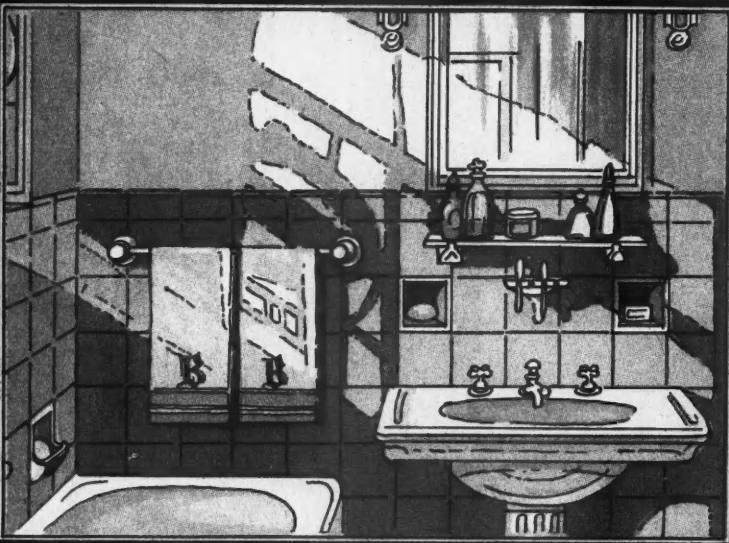
A DINING or breakfast nook as a part of the kitchen is a great convenience. Here we show three different examples of this idea.



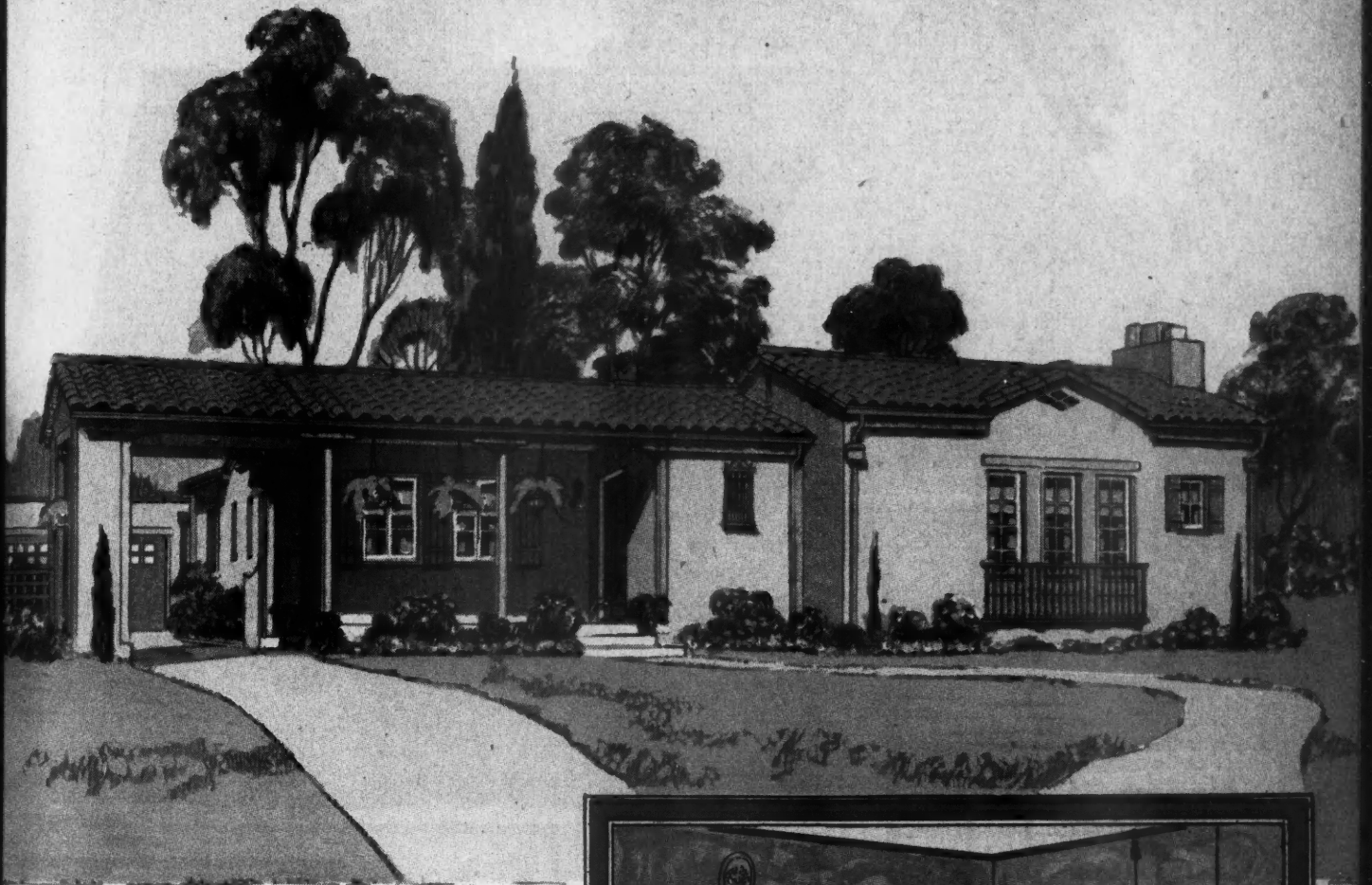


## The ALDA

A DELIGHTFUL cottage designed in the French style and built of masonry covered with stucco. Six rooms and bath are contained in 28x48 feet. The sketch to the left shows the tiled bathroom.

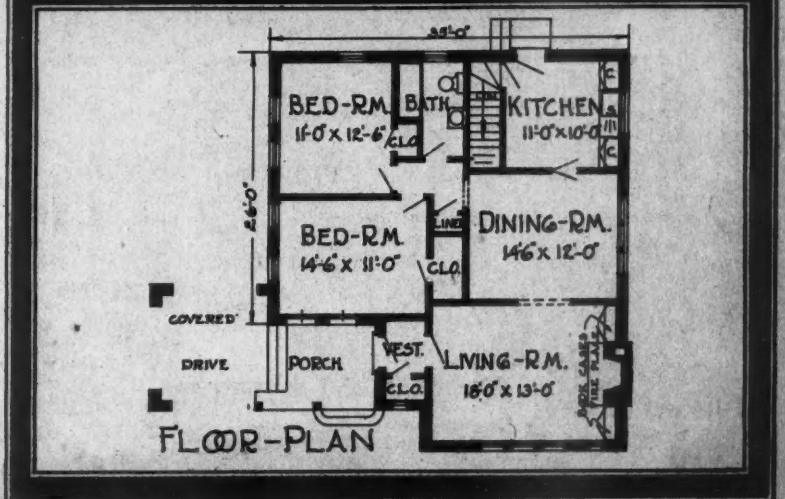
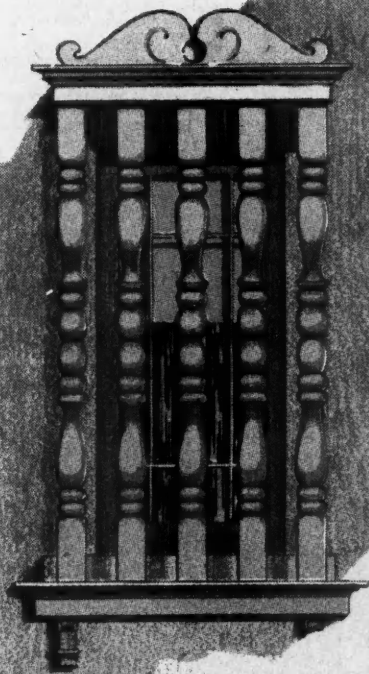


Detail of Entrance Door.

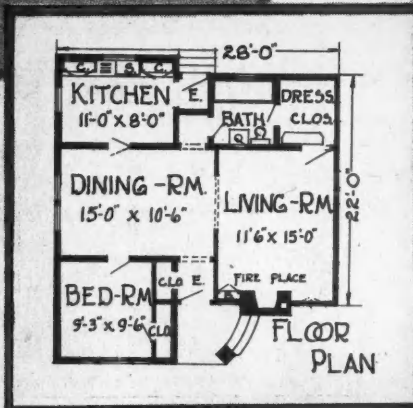


## The ALAMO

AN intriguing Spanish bungalow design with low, broad front, broadened still more by the covered drive. The house proper measures 35x42 feet and contains five rooms and bath. Color sketch to right shows the comfortable, well furnished living room

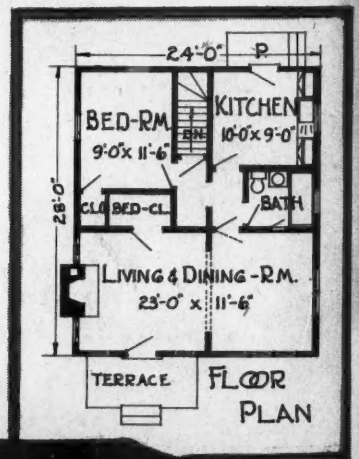


Detail of Wood Grille at Vestibule Window.



### The ALABAM

ABOVE and to the left we present a four-room English cottage of five-room efficiency. Size 28x28 feet.



### The ADDINGTON

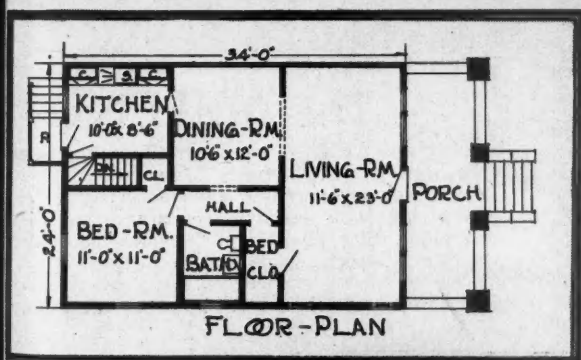
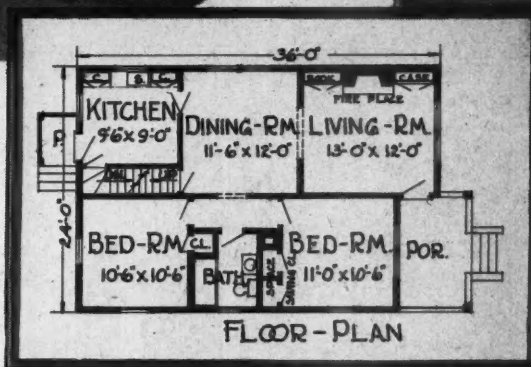
BELOW and to the right is a charming four-room cottage 24x28 feet.





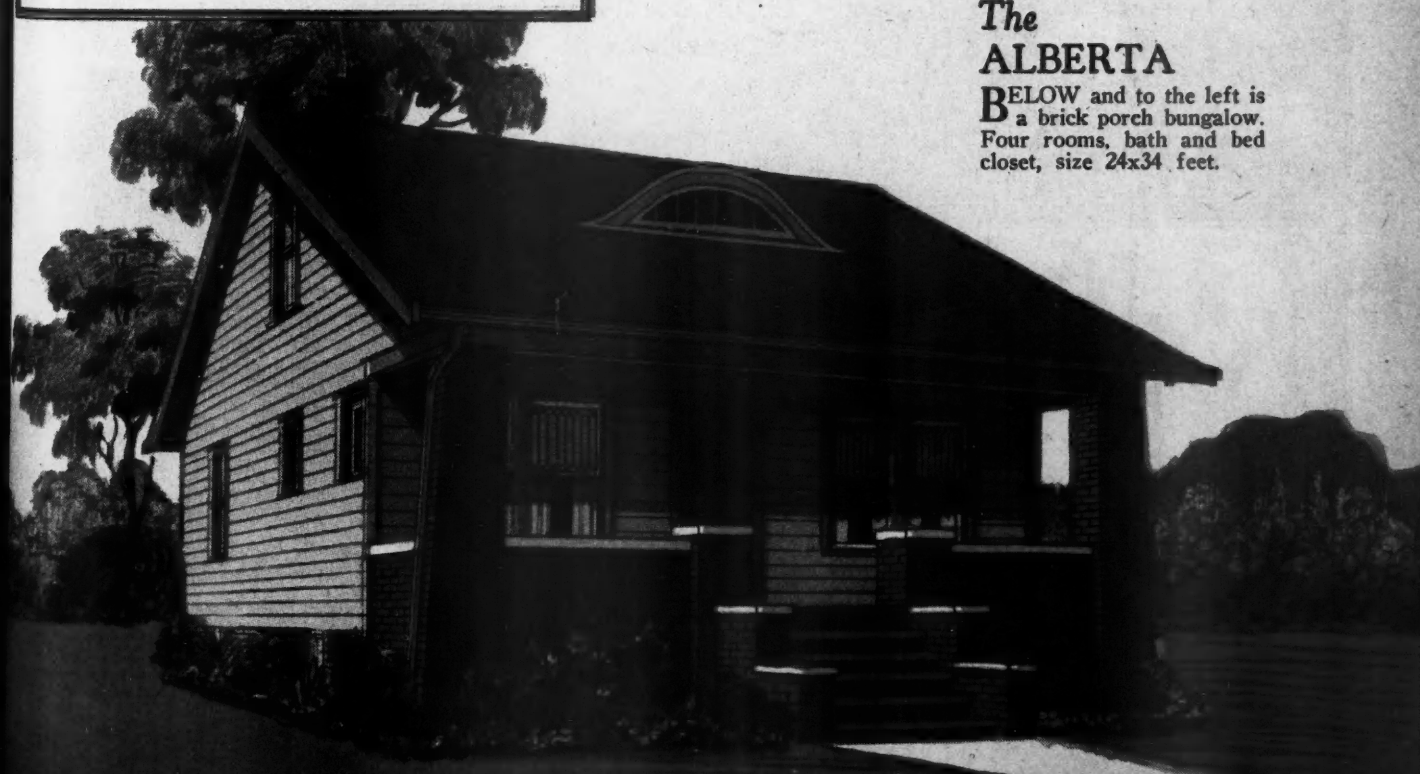
**The ALBEE**

ABOVE and to the right is an inexpensive but well arranged five-room cottage 24x36 feet.



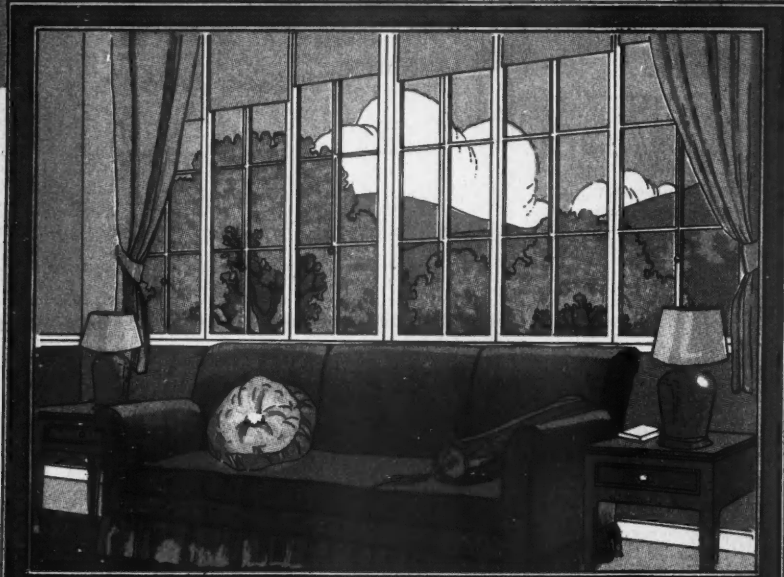
**The ALBERTA**

BELOW and to the left is a brick porch bungalow. Four rooms, bath and bed closet, size 24x34 feet.



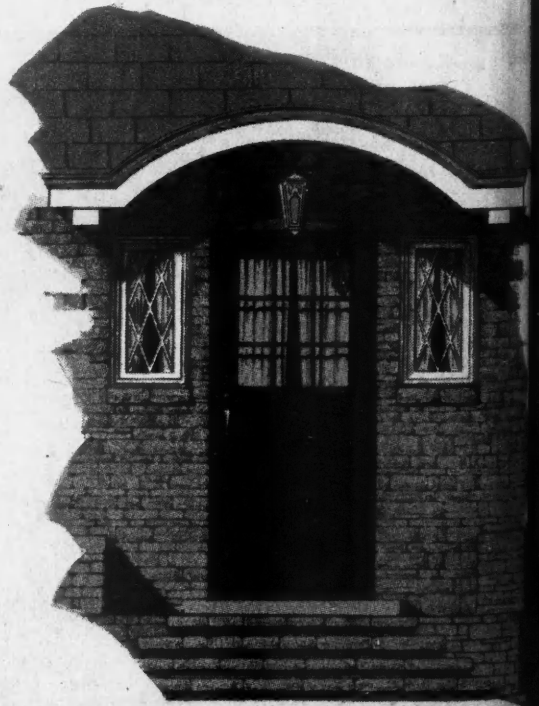
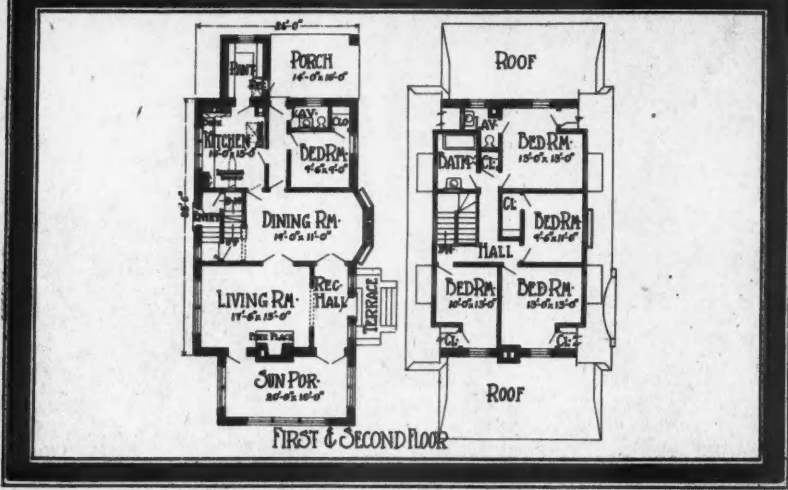


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## The ABILENE

A SUBSTANTIAL stone dwelling of charming sign in the Pennsylvania manner. Where stone is obtainable nothing could be better. Eight rooms, sun parlor, bath and two lavatories are contained in this plan. Size 26x38 feet 6 inches, not counting sun porch which measures 10x20 feet. Color sketch to the left shows the cheerful sun porch which is both out of the living room and the reception hall.



Detail of Graceful Front Entrance with Side Windows and Canopy.

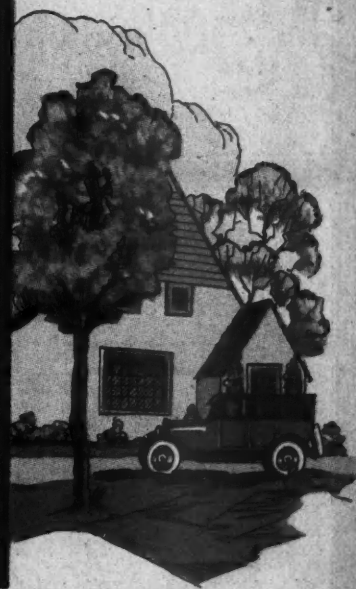
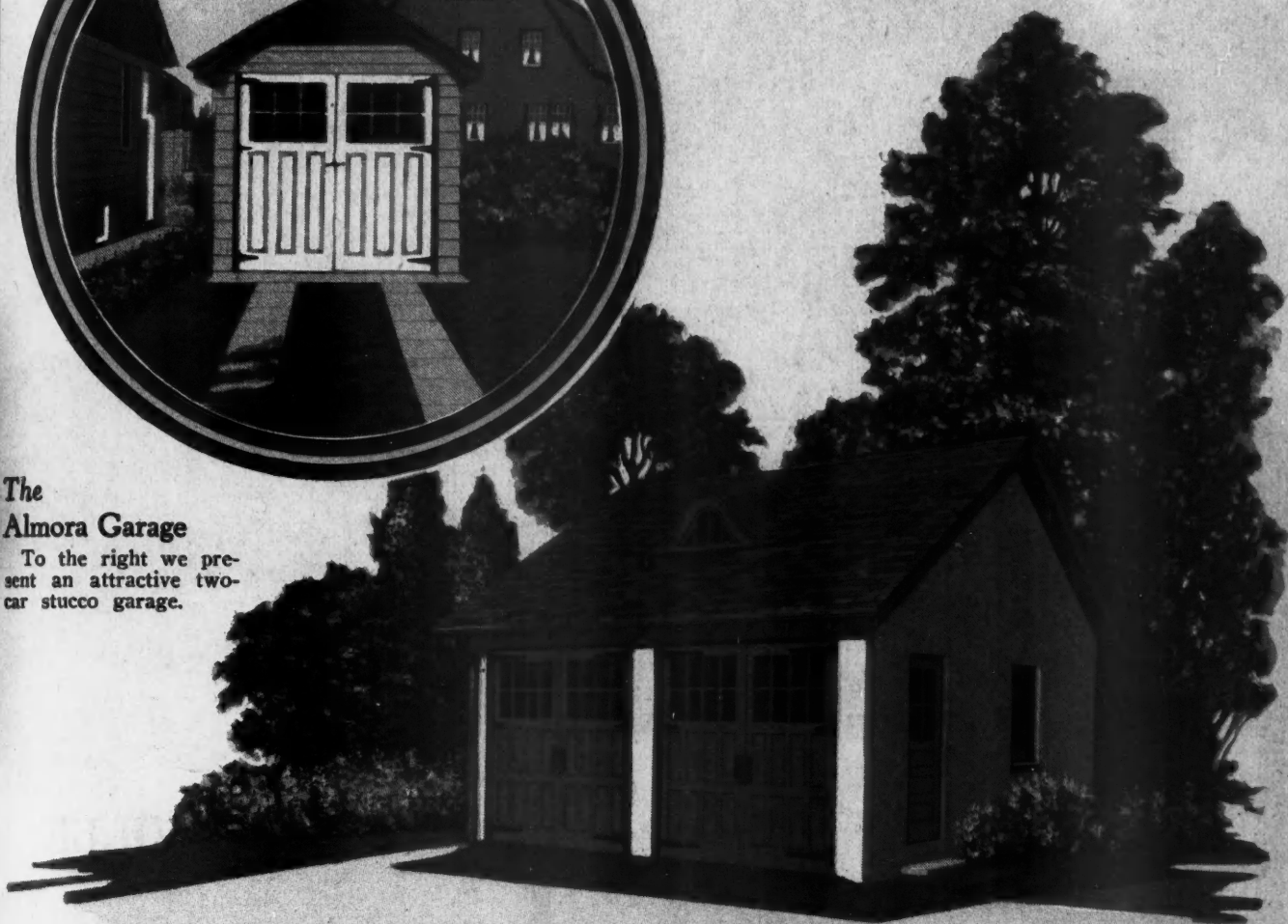
**The Allport Garage**

To the left we present an inexpensive one-car garage.



**The Almora Garage**

To the right we present an attractive two-car stucco garage.



**The Altman Garage**

Above and to the left is an attractive two-car brick garage.

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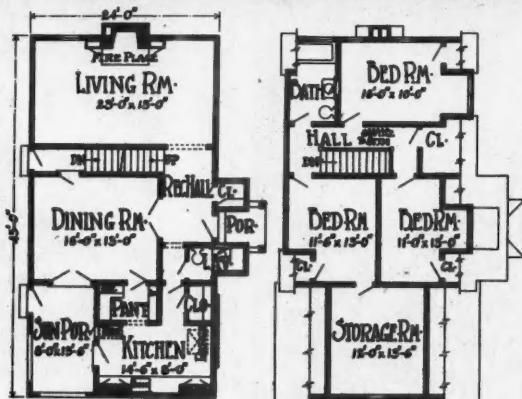


The simple graces are ample in the

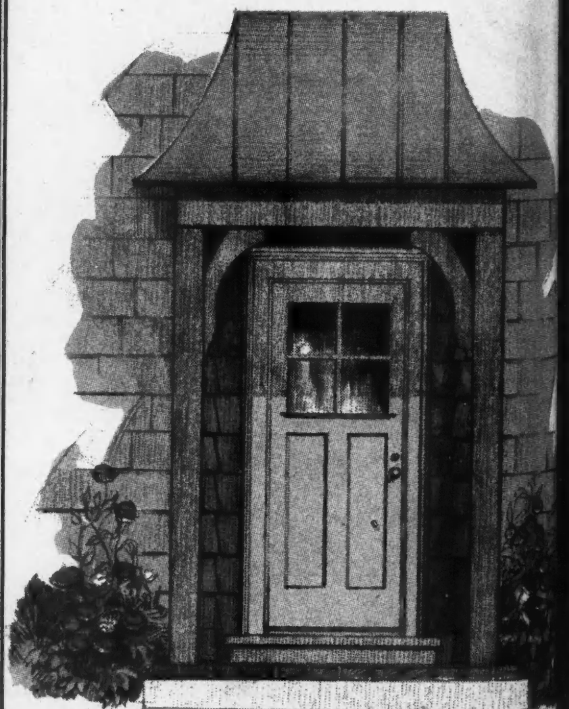


## The AIRVILLE

A VERY interesting design in shingles with a decided English flavor. The house is 24x45 and contains six rooms and bath besides the storage room. Color sketch to the left shows one of the bedrooms.



FIRST & SECOND FLOOR

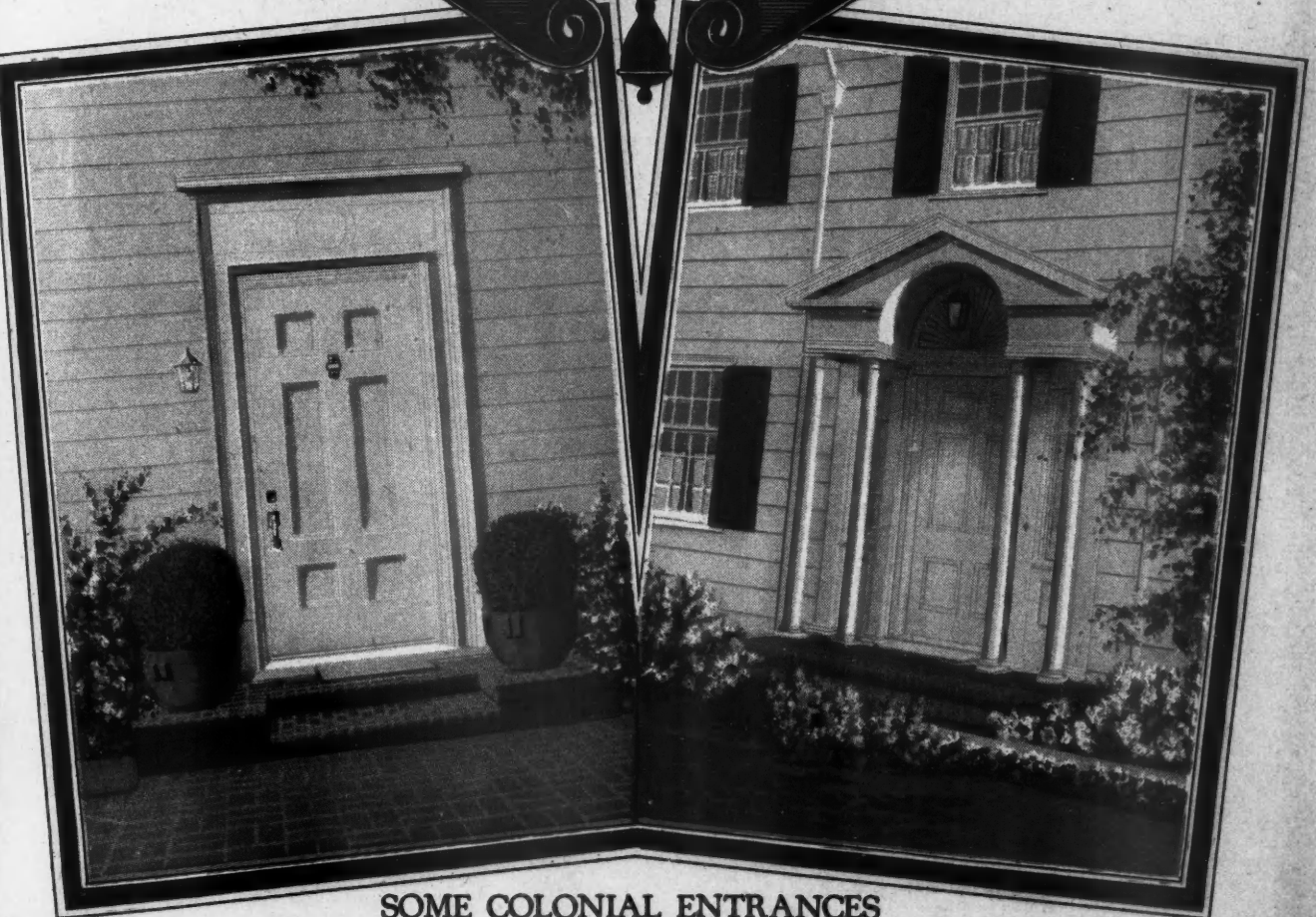
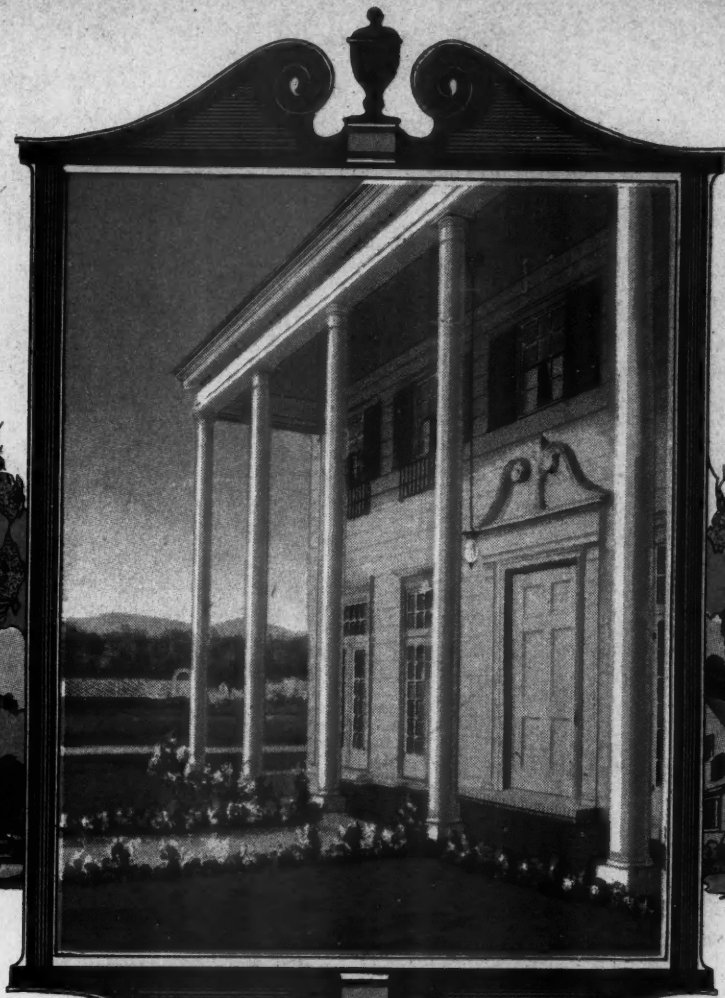


Detail of Entrance with Rough Hewed Posts and Quaint Hood.



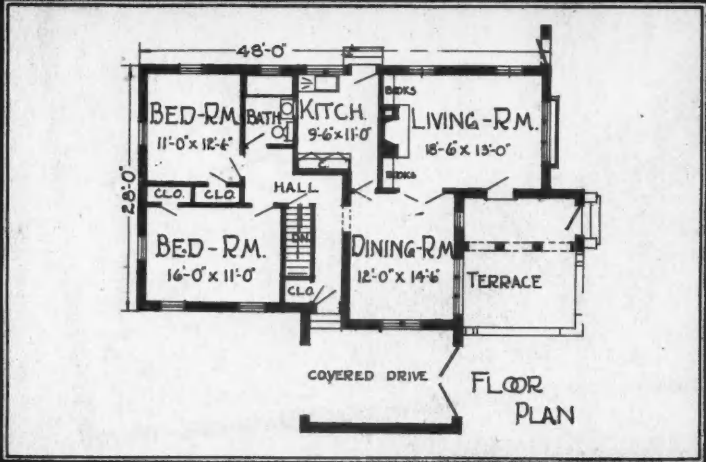
**T**HE charm of the Colonial lies in its simplicity and clean cut graceful lines. Below are illustrated two examples, one with columns and shallow hood, the other plain.

**N**OTHING approaches the Southern Colonial with its tall, graceful columns for dignity and impressiveness. The example to the right is excellent.



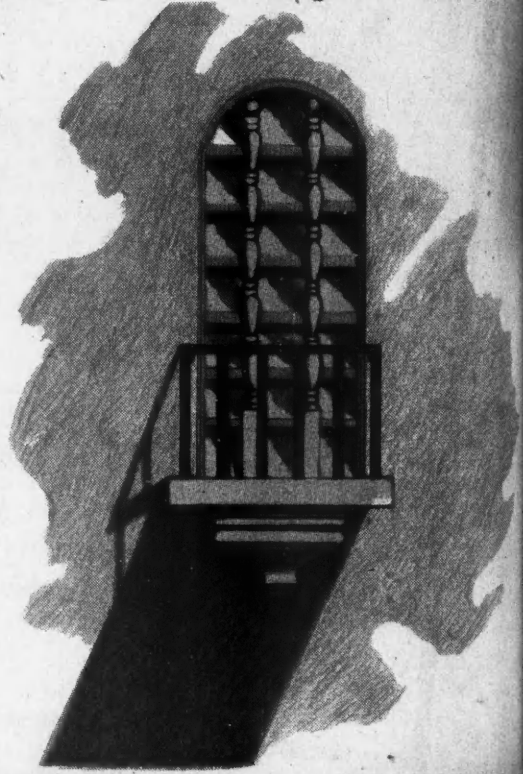
SOME COLONIAL ENTRANCES

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## The ACADIA

A SPANISH bungalow of distinction containing five rooms and bath. Size 28x48 feet. The covered drive and the walled garden are interesting features of this plan. Color sketch shows a glimpse of the dining room.

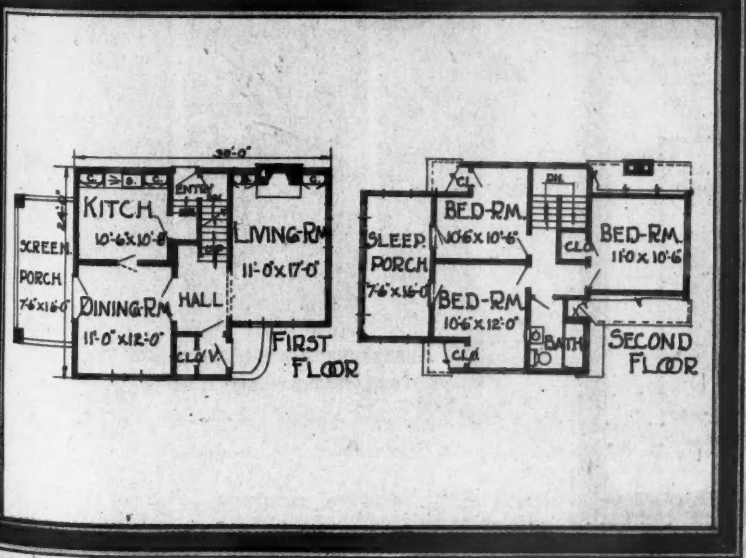


Detail of Louvered Opening with Ornamental Balcony in the Gable.

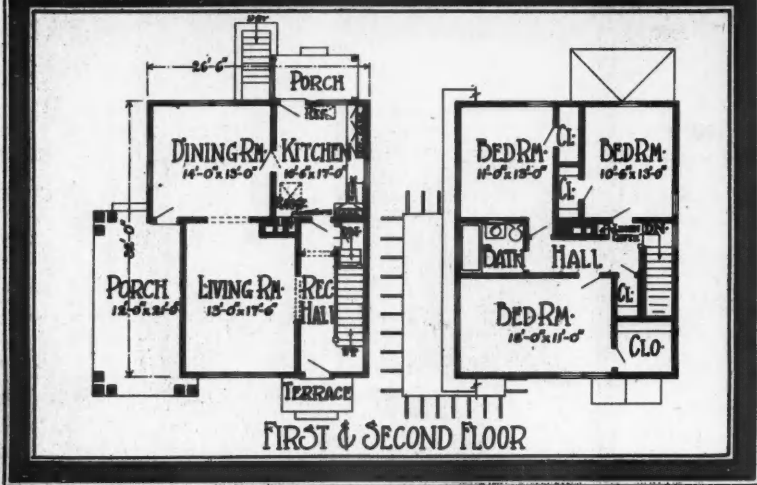
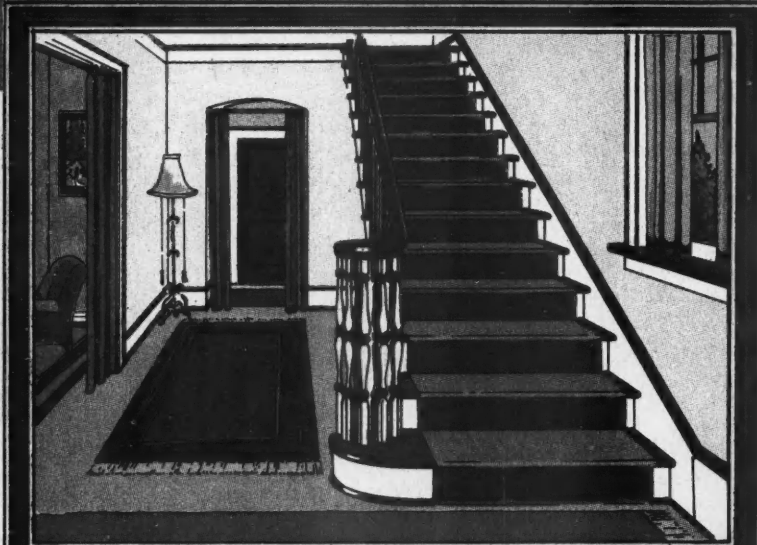


## The ALBRIGHT

A DISTINCTIVELY English design containing six rooms, sleeping porch and bath. This is not a large house, measuring only 24x30 feet not counting the rear porch addition. Color sketch suggests attractive furnishings for the sleeping porch.



Detail of Quaint Entrance with Antique Hand-Forged Hardware.



## The ACORN

A VERY attractive and practical six-room home measuring 26 feet 6 inches by 32 feet. Color sketch shows the attractive Colonial stairway and reception hall.



Detail of Front Entrance.



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# OUR FRONT COVER HOME

*This American Adaptation of the French Peasant Style Makes a Highly Distinctive Home with an Air of Quaintness*

**M**ORE and more the designers of our modern American homes are going to the older recognized architectural styles for their inspiration and adapting them in plan and equipment to the demands of the present day home builder. On every hand we see Spanish, English, Italian, Dutch Colonial and New England Colonial homes. Less frequently we see a home designed after some other of the recognized European styles and because of this fact such a home stands out with a distinctive individuality in its neighborhood.

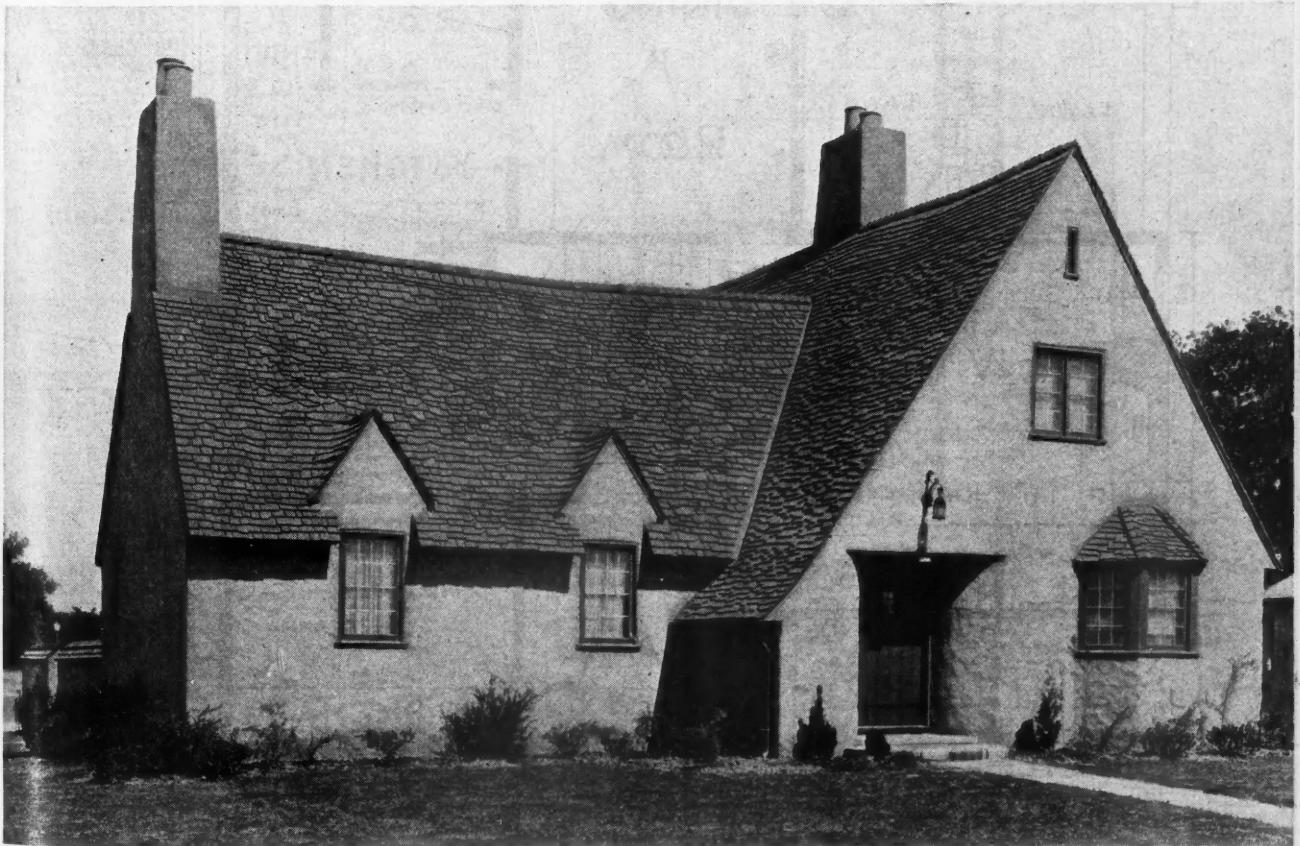
Such a house is Our Front Cover Home, pictured below and in full color on page one. Its design has been inspired by the houses of the French peasants and the quaintness which is characteristic of these simple dwellings has been ably retained while the plan has been adapted to the needs of the American family and provided with all the accessories and conveniences which are now considered necessary.

Simplicity is the keynote of the exterior, the only orna-

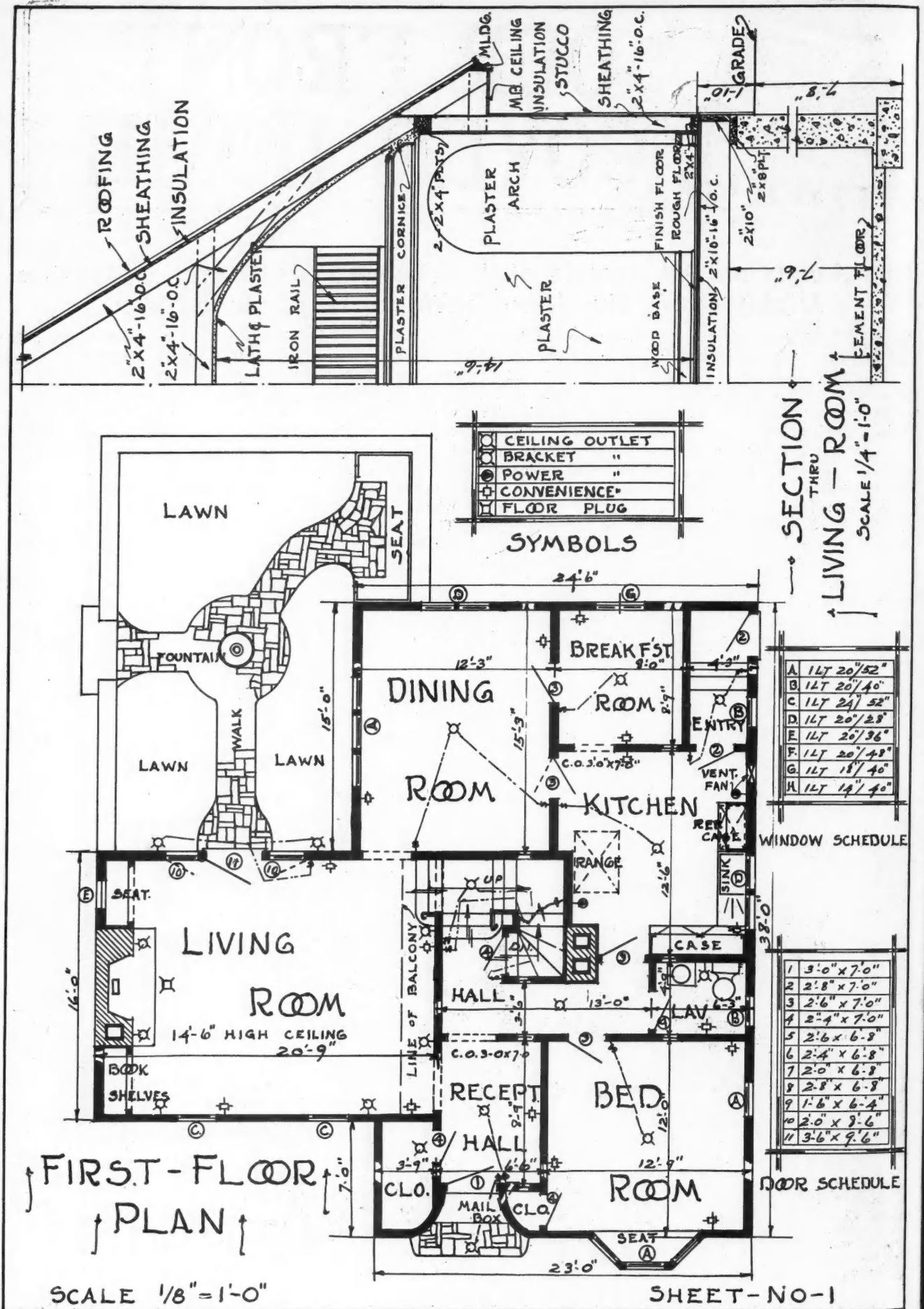
mentation being found in the treatment of windows and entrance, the chimney pots, the irregular shingles covering the roof and the rough textured walls.

Conspicuous in the interior arrangement is the high ceiled living room, the arched ceiling extending to a height of 14½ feet. At one end of this spacious room is a great fireplace while opposite it is a charming balcony opening from the hall on the upper floor.

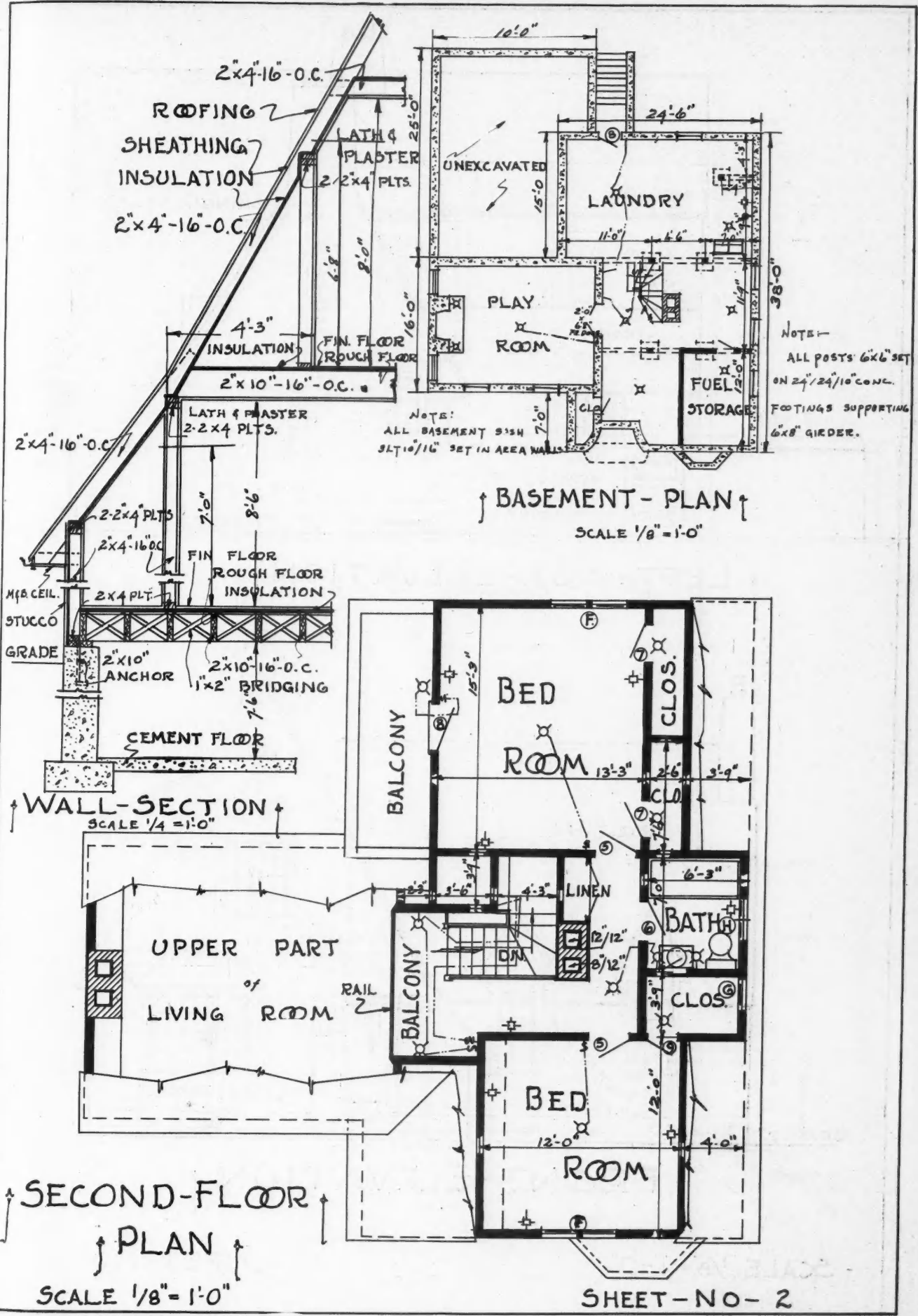
Other rooms on this floor are a dining room, kitchen with adjoining breakfast room, a bed room and lavatory. The entrance admits one to a reception hall which also contains the stairway leading to the upper floor. On this floor there are two bed rooms and a complete bath room. The arrangement of these rooms is one of marked convenience. Just how it has been handled can be seen by referring to the pages which follow this. Here are shown not only the floor plans, but also details which carry the whole story of this home.



An Air of Quaintness Pervades This Charming House Which Has Drawn Its Inspiration from the Peasant Houses of Sunny France and Has Preserved the French Characteristics While Incorporating the Modern Improvements Which Are Demanded by the Present Day American Home Owner.

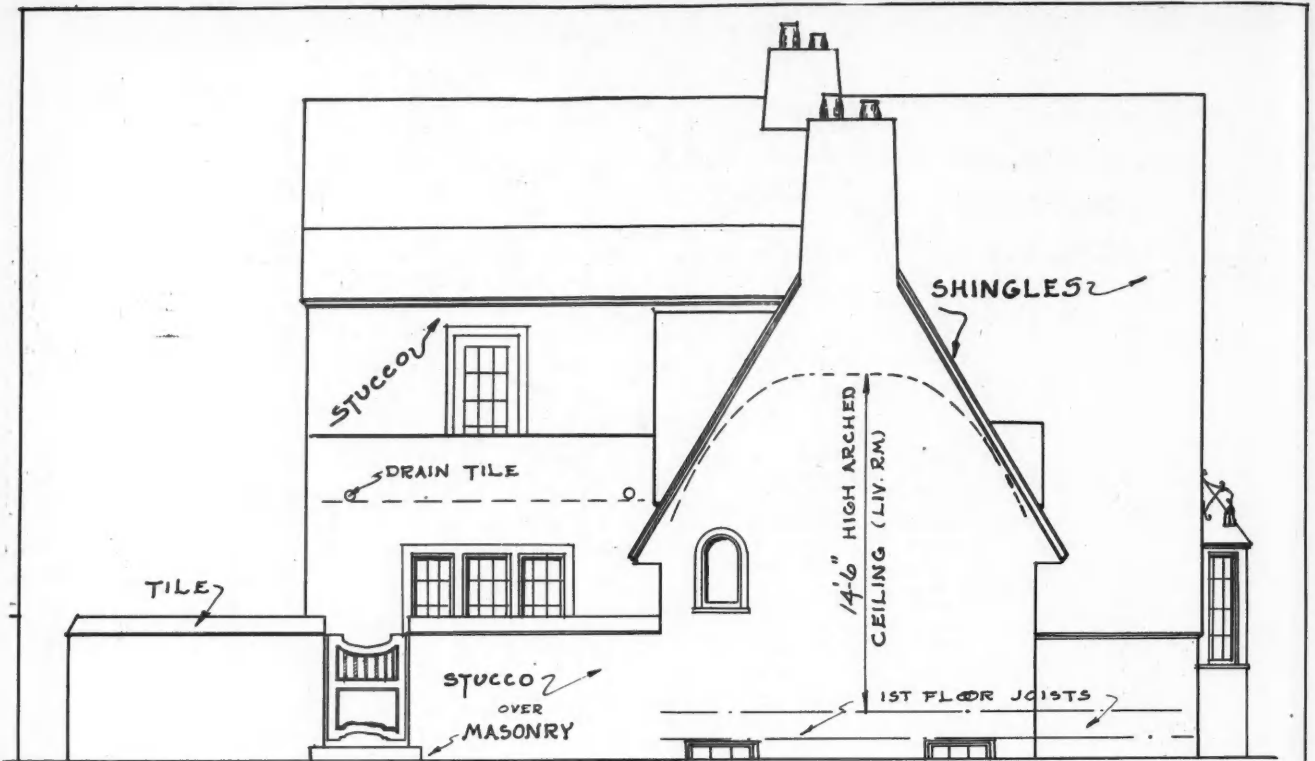


The First Floor Plan of Our Front Cover Home Shows Us How the High Ceiled Living Room with Its Balcony Occupies One Whole Wing. Above is a sectional sketch showing wall and roof construction.

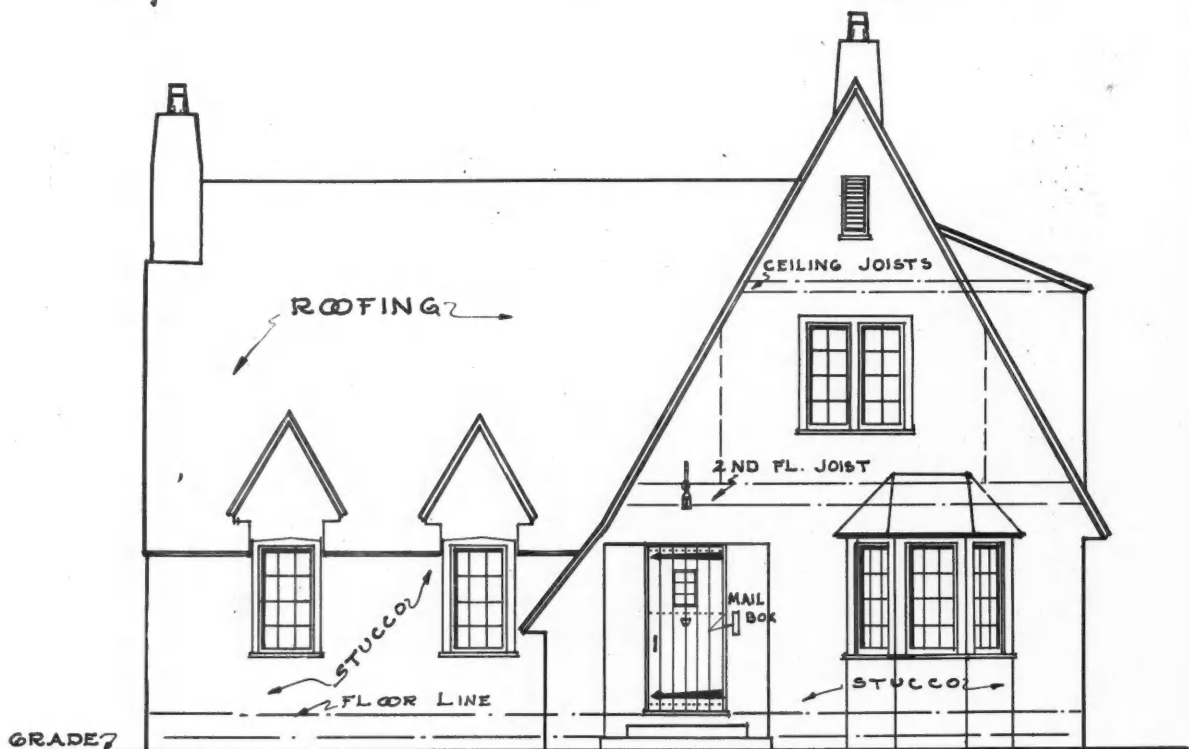


On the Second Floor of This House There Are Two Bed Rooms in Addition to the One Below Stairs and Also a Complete Bath Room. Details of construction and basement plan, above, are supplemented by elevations on the pages which follow.

SHEET-NO-2



LEFT-SIDE-ELEVATION



FRONT-ELEVATION

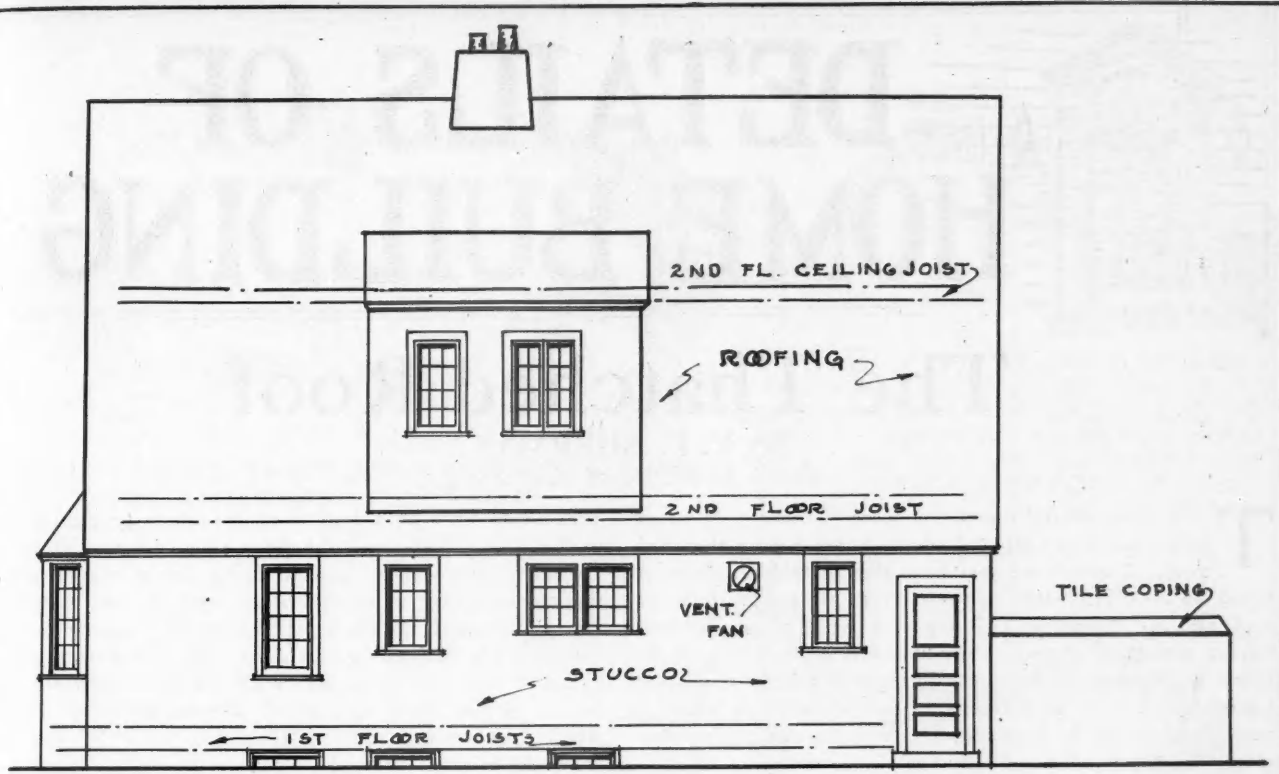
SCALE 1/8" = 1'-0"

SHEET-NO-3.

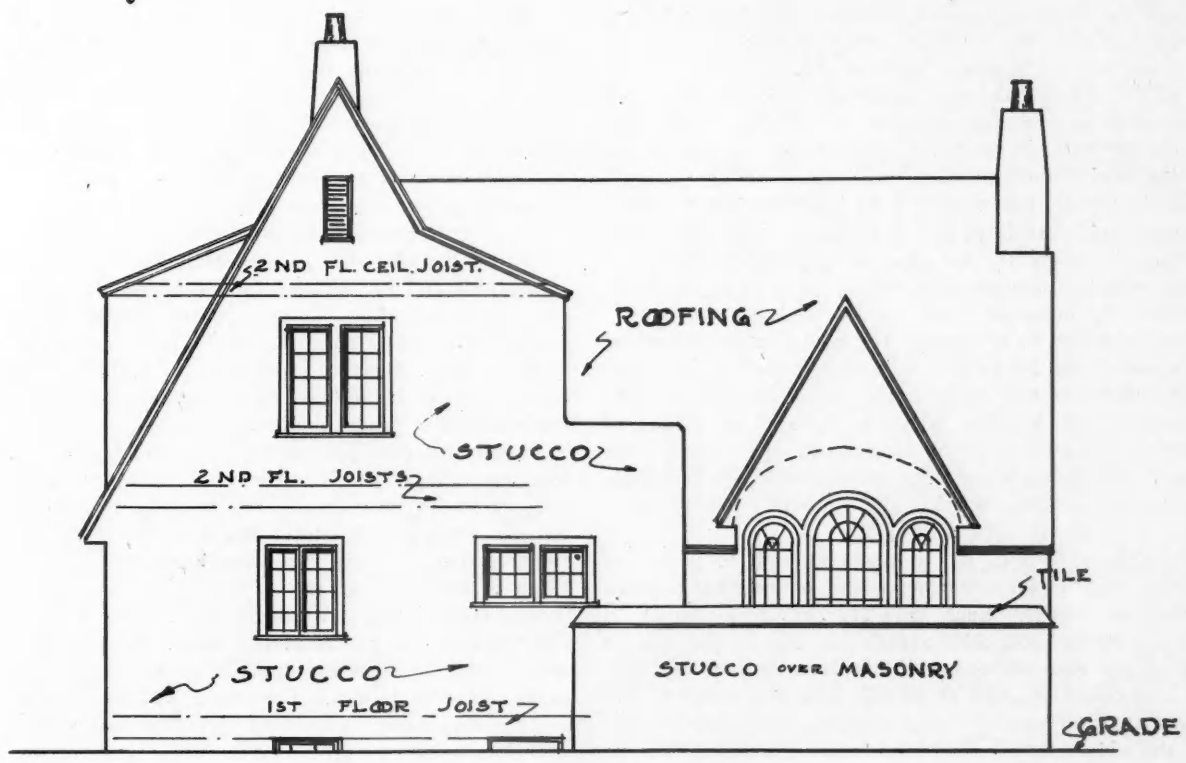
Front and Left Elevations of Our Front Cover Home Are Seen on This Page Showing the Line of the Arched Ceiling in the Living Room and the Placing of Windows.

And





↑ RIGHT - SIDE - ELEVATION ↓

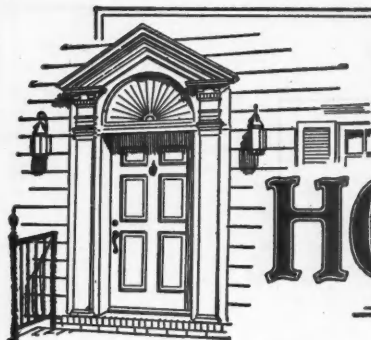


↑ REAR - ELEVATION ↓

SCALE 1/8" = 10"

SHEET - NO - 4.

And Here Are the Rear and Right Side Elevations Which Complete the Elevation Views of Our Front Cover Home and Furnish the Remainder of Working Drawings for This Charming House.



# DETAILS OF HOME BUILDING

## The Thatched Roof

By V. L. SHERMAN,  
*Lewis Institute of Technology*

THE folks around the corner were to build a six-room brick and half timbered stucco home with a thatched roof. I wondered just how they would go about it being no little interested in the modern American thatched roof and its diversities. I say this with all seriousness having seen the extremes of my likes and dislikes and everything in between. Lately my interest has become all the keener on finding that regular straw thatch has taken a new lease on life in England, a fact which may refute the claims of those who say that thatching, imitation or real, denotes punky moss without and mildew within. So far as looks are concerned well thatched roofs are in a class by themselves.

The success of a thatched roof depends largely on the shape of the roof. To demonstrate more clearly let us take the roofs shown in Fig. 1 and Fig. 2. The first is that of an ancient cottage, still flourishing. This thatch with all its curves is fairly integrated, forming a whole which stands as one roof, a cousin in the rick in the field. Its components are bound into one mass. In Fig. 2 we have a gable roofed bungalow of brick. Its size is such that an imitation thatch roof must have prodigious edges to support unbroken lines to any purpose. But, being conservative, the cornices (for that is really what they are) lose the effect altogether and, except for a first class job of roofing, the imitation thatch is a total loss.

A thatch should be uniformly irregular. In the American shingle-thatch the irregularity or serated effect at the edge is well attained in the irregular cut of the shingles and the gathering of the weather edges to form a wavy line of shadows. This is shown to some extent in Fig. 7. But in Fig. 2, the lines are not only very regular and relatively sharp but are emphasized by gutters which follow every eave to a corner.

Getting back to Fig. 1. It might be well to point out that such a cut-in for a dormer is not entirely satisfactory in American homes. Such cuts are prevalent enough in the old country and add greatly to the effect, but in shingling for that cut a heavy overhang is required (excusable in short lengths of eaves), and the windows are exposed to stiffer weather conditions than would be thought of in the old country. The true straw thatch can be cut away in pretty sharp lines, be bound and then loose itself in the main roof, under a crop of moss in a very short time, leaving a shape but no edges.

There is enough of the thatch to lend itself to imitation without this. Hip roofs are common. Snubbed gables are still more common. Odd combinations are most common of all. The thatched roof is without guile; the cunning thatcher hides all his craft. So when pointing for a thatched effect build the lines with studied inattention, but bind them if possible into a continuous form.

For example take the near end of the roof in Fig. 5.

This could have been built with the chimney rising closer to the wall and through the ridge of a common gable end. However, there is no call to bring straw thatch around the chimney face in weak fashion, and the snubbed gable can be brought up on a cricket inside, making a much snugger job of roofing. And in Fig 5 the roof of the entrance vestibule is in part with the main roof. This is better by far than attempting a separate roof of such small proportions. The smaller roof adds to the main roof and to itself as well. Porch roofs of real thatch are frequently made quite flat and low as shown in Fig. 8. The camber to it is easy enough in straw but requires considerable work in imitation. And then the results cannot be anticipated.

There is good reason for "thatched" roofs in this country. They are more than imitation, but if they were merely that and good roofs they would help to relieve us from the thin roof structure of the thoughtless. Straw thatch would not do here at all. The weather is too severe and winds too high. Where the weather is usually moist and the moss grows thick fire hazards are not as high. Nor are the walls of our homes so often built of stone or brick or other fireproof material. But there is a homely quality about a thatched roof. In my opinion it is in its close knit appearance and its capacity to cover irregular outline with unbroken roof lines. Its apparent thickness declares warmth, the heavy edges ample protection from the rains, and its curved surfaces seem to mark stability. These, of course, are mere impressions or first appearances. Nevertheless they stick and linger in the mind.

To get this contiguity notice how the builder builds his hips and valleys. He is using formed cedar shingles, dipped and crated for the job. At the ridge he brings his rafters out far enough to chamfer the upper corners, forming a ridge of ample radius for continuous shingling. The dormer ridge is brought out thus and divided into double hips. These double hips are spaced with solid bridging, each piece having the radius of the ridge. The valleys are interserted with the same construction except that they are concave instead of convex. The rafter tails are separate pieces and the carpenter is obviously careful in setting them. But each has a curved edge which will be retained by the look-outs. The straight gable ends, as in the vestibule roof, Fig. 5, will be curved a bit more.

When the shingles are laid the first courses are set in carefully irregular, and with an eye to shadows. The cut of the shingles makes this fairly simple and the line of shadow does not have a choppy appearance when the curves at the weather end are matched up. The idea of getting a steep shadow on the wall and easing it into the roof surface with wavy shadow lines is quite a stunt, and it does the business well. A slight return at the ends of the eaves also helps.

(Continued to page 177)

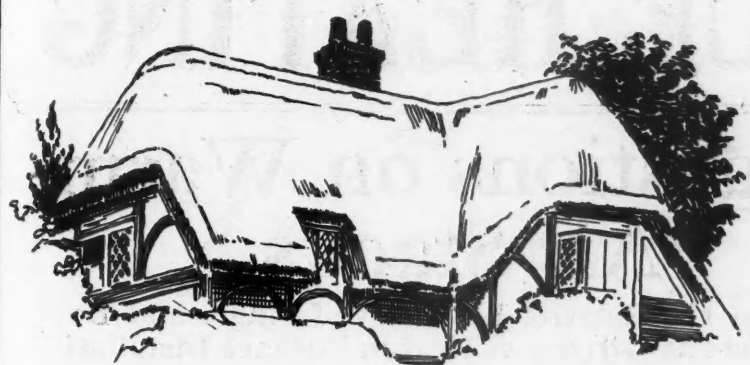


FIG. 1. UNIFIED THATCHING SLOPES FOUND ON A SUSSEX COTTAGE.

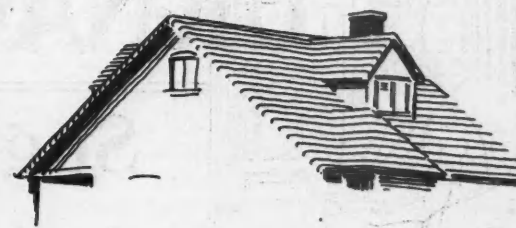


FIG. 2. A FAIR EXAMPLE OF FINE THATCHED ROOFING MATERIAL ON A WRONG ROOF. THIS SHOWS AN ACUTE CASE OF CORNERS, UNBROKEN AREAS THAT OUT-SCALE THE CORNICES, AND A PREDOMINANCE OF CORNICE OVER THE EAVES. RIGID IN THE EXTREME.

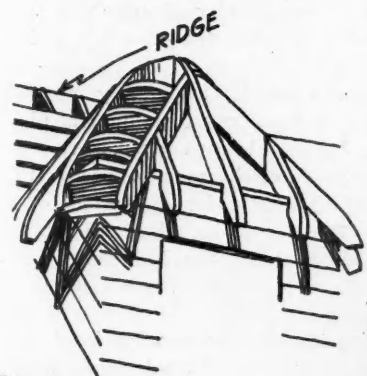


FIG. 3. FRAMING THE DORMER ROOF AND HIP ROLL.

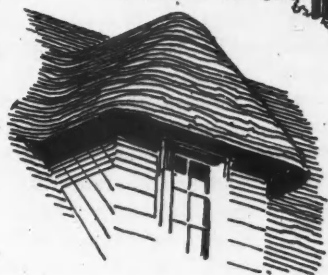


FIG. 4.

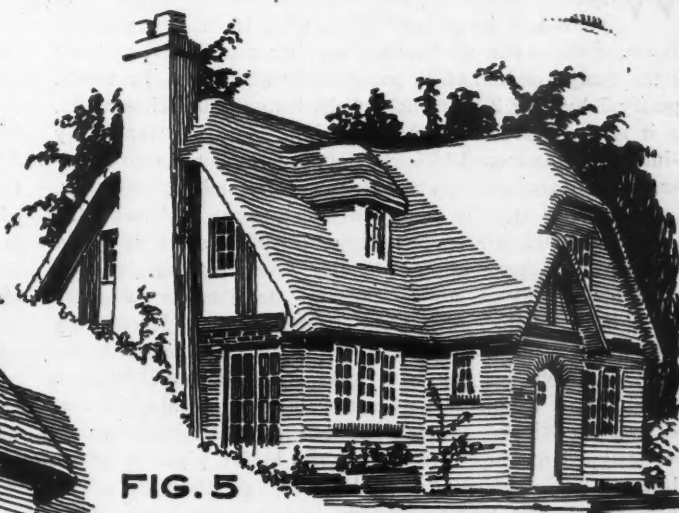


FIG. 5. THIS HOME, IN THE SAME TOWN AS THE HOME SHOWN IN FIG. 2, IS OF BRICK AND HALF-TIMBER. THE ROOF IN THIS CASE CLOSELY FOLLOWS THE CURVES OF ITS MOSS-GROWN ANCESTOR.



FIG. 6. FRAMING THE ROOF OF THE HOUSE SHOWN IN FIG. 5. BASKET CEDAR SHINGLES AND FORMED CEDAR SHINGLES

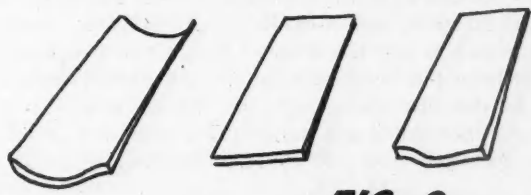


FIG. 8. A NEW HOME IN THE "WEST COUNTRY". A TRUE BLANKET STRAW THATCH.



FIG. 7. THE ROLL.

V. L. Sherman 10-2-20



# FURNACE HEATING

## Suggestions on Warm-Air Stacks

Comment on the Relative Efficiency of Single and Double-Walled Risers as Carriers of Heat in Furnace Installations

*This Department by R. C. Nason, Heating Expert, appears every month in American Builder*

**W**HETHER warm or cold air is being conducted, the salient factor in reducing internal frictions is in providing large pipe sizes, free from obstructions. Hence, if the warm-air heating installer could have his way in the design of buildings, particularly residences, he would specify 2 by 5 or 2 by 6-inch studs, located 20 inches apart, as it is the universal complaint of furnace men that 2 by 4-inch studs, centered 16 inches apart, cramp the space necessary for warm-air riser stacks to second and higher floors.

As there is usually plenty of head-room in basements, horizontal warm-air leaders may be run in sizes up to 16 inches in diameter without difficulty. Ample pitch gives the warm-air supply a good start on its journey upwards through the walls and to the rooms above. Everything goes along well until the riser, or stack, is reached and here is sometimes the first snag in getting a first-class system, due to insufficient space between studs for correctly proportioned ducts. If it were possible, stacks would be designed of the same size as the leader pipes to which they are connected. Present building construction, nevertheless, prevents this and makes it necessary to cut down on the stack areas to conform to the available space.

The smallest leader duct recommended under any heating condition in residences is 8 inches in diameter and in most cases a 9-inch pipe, having an area of 63 square inches, is preferable. According to the Standard Code of the National Warm Air Heating and Ventilating Association, stacks should have an area not less than 70 per cent of that of the leader, which, in this case, calls for a stack of 44.10 square inches. As the maximum depth of the warm-air stack, when 2 by 4-inch studs are used, is 3½ inches, it is customary to specify a stack 3½ by 12 inches, having an area

of 42 square inches as a minimum for a 9-inch leader. Similarly, a 10-inch leader usually is connected to a stack 3½ by 14 inches. A 12-inch leader should have a stack 5½ by 14 inches and a 14-inch leader takes a 7½ by 14-inch stack.

As the two larger size stacks are rarely possible of installation at present, due to construction, in place of 12-inch leaders with 5½ by 14-inch stacks, two 9-inch leaders with 3½ by 12-inch stacks may be used. Instead of a 14-inch leader two 10-inch leaders and 3½ by 14-inch stacks may be used. When a 16-inch leader is called for there would best be substituted three 10-inch leaders and the same number of 3½ by 14-inch stacks connected to them.

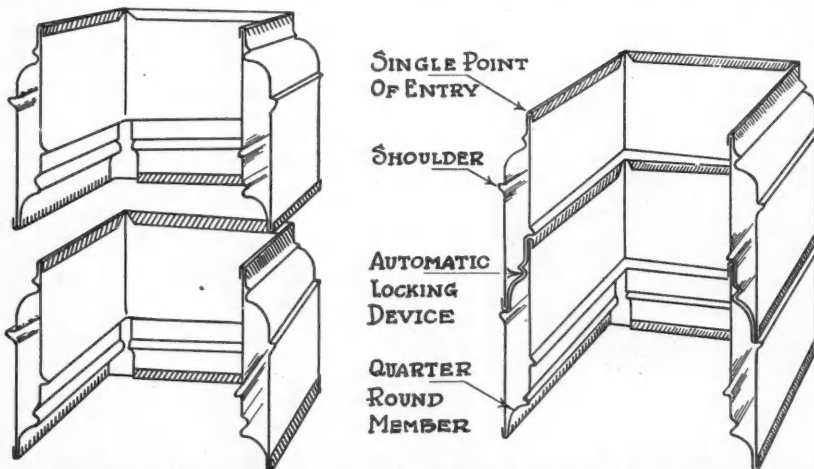
The size relation of stacks to leaders is variously recommended by installers. Some experienced men affirm that the riser should be not less than 80 per cent of the area of the leader to which it is joined. Others maintain that the stack area need be only 60 per cent of that of its leader and state that they have installed them with this ratio for many years with good success. The recommendation of 70 per cent, suggested by the furnace association, strikes a happy medium and is endorsed by the leading heating installers.

### Single or Double-Walled Ducts?

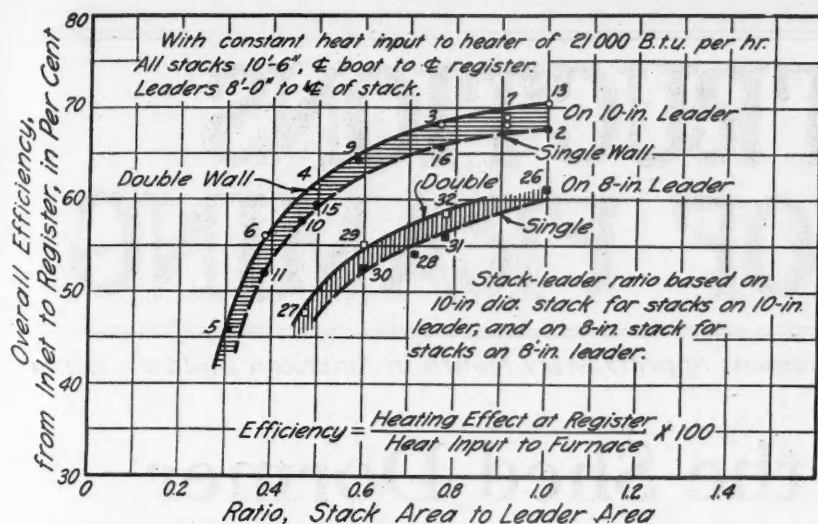
It is generally known that metal is a good conductor, as well as a good conveyor of heat, hence unless stacks of single wall construction are insulated with not less than one thickness of 12-pound asbestos paper considerable heat will be lost through the metal sides of the stack. Whether ducts are made of galvanized iron or bright tin, an air space not less than ⅜ inch would best be left on the sides nearest the studs. It is recommended, further, that all metal joints be locked and held in place by lugs or straps, as solder alone is generally insufficient support.

In late years much popularity has been accorded what are known as double-walled ducts which are, in effect, galvanized-iron or I C tin rectangular ducts which have two walls about ¼ inch apart and the enclosed air space sealed at top or bottom. This has the effect of pocketing a layer of dead air which acts excellently as an insulator and thus removes the necessity of further insulation. A cross-section of double-walled stack of special design is shown in an accompanying illustration.

Still air is known to be the most efficient insulator and double-walled stacks have re-



Double Walled Duct Showing How the Two Sections, at the Left, Are Fitted Together, Forming a Continuous Air Space at the Right.



Over-All Thermal Efficiency of Heating Plant for Various Stacks with Two Sizes of Leaders, as Shown in Bulletin 141 of the University of Illinois Engineering Experiment Station.

ceived favorable attention through the trade generally for the reason that the captured air acting as an insulator means saving in labor and insulating material. As a matter of fact there is little preference between single-walled stacks when insulated and double-walled stacks, and when the internal area of the single-walled stack is the equal to the outside area of the double-walled stack single stacks are better carriers of heat.

Some tests on the two types made a year or so ago at the University of Illinois are of interest because they demonstrated, among other things, that the temperature loss in both types of stack is greater when connected to leaders as small as 8 inches than when connected to 10-inch leaders. It was also shown that the temperature loss within a single-walled stack when uninsulated is greater than in a double-walled stack. For this reason the double-walled stacks tested showed an increased effectiveness of three to four per cent when of the same internal area as single stacks.

A larger single-wall stack, however, can be installed in the average studding space and then the single wall stack will deliver about 91 per cent of the maximum heat possible, hence is preferable. In comparing the relative effectiveness of single and double-walled stacks the outside dimensions are fully as important as inside dimensions as it is usually desirable to install the largest stack possible.

In comparing a 3 by 10-inch inside diameter, double-walled stack with a single-walled stack of equivalent outside area dimensions—that is, 3½ by 10½ inches—it was demonstrated under test that the single-wall stack has a relative heating effect of 88 per cent, as compared to 81 per cent for the double-walled stack. The increased area and larger ratio of stack to leader in the case of the 3½ by 10½-inch single-walled stack undoubtedly accounts for the improved condition.

Whereas a 3 by 10-inch double-wall stack, connected to a 10-inch leader, has a ratio of 0.382 per cent, a 3½ by 10½-inch single-walled stack, its equivalent, has a stack to leader ratio of 0.491. In the case of a 3 by 13-inch double-walled stack and a 3½ by 13½-inch, the former has a stack to leader ratio of 0.497 and the latter has a ratio of 0.630. The relative heating effect is higher for the single stack in both instances, being eight per cent greater in the case of the 3½ by 10½-inch duct and five per cent greater in the case of the 3½ by 13½-inch.

In the accompanying chart there is shown the effect of the reduction in size of the ducts from the full 10-inch of the leader pipe to lesser diameters such as are found in ordinary stack sizes. It is here shown that stacks with

areas greater than 0.6 of the leader pipe area can be credited with increasing the overall efficiency from inlet to outlet about five per cent.

On the other hand, the efficiency curve also confirms the assertion that sizes less than 0.6 of the leader area are responsible for the low heating effect and low efficiencies. It will be noted that efficiency falls sharply when stacks are less than 60 per cent of the area of the leaders to which they are connected and attain efficiency of 100 per cent only when of the same area as their leaders. The top curves cover stacks tested with 10-inch leaders and bottom curves are those connected to 8-inch leaders.

Additional experiments reveal that the air spaces of the double-walled stacks should not be punctured but kept sealed at all points. The increased efficiency when air spaces are closed varies from eight per cent at low register-air temperatures to two per cent at high temperatures. The average increase in efficiency of the plant as a whole is something over three per cent in favor of the sealed air spaces.

All pipe and fittings, either single or double, must be secured firmly in place by lugs or straps attached to the outer walls of stacks and fittings and no nails driven through stacks or fittings at any point. It is now customary to provide locking joints for stacks and fittings. In some instances these are patented but lock joints of simple design are not difficult to make. Whereas double-walled stacks would be best purchased from sheet metal contractors or manufacturers, single-walled ducts may be made easily. Slip joints with an overlap of at least 6 inches, plentifully soldered, are also recommended for single-walled ducts.

From the standpoint of friction loss it is well established that a round pipe gives a minimum of friction and it is for this reason that this shape is nearly always used for warm-air leaders. The next best shape is elliptical. Neither round or elliptical shaped ducts, however, can be run within building walls because of lack of space.

Square ducts can rarely be used, for the same reason, hence rectangular ducts are virtually the only kind that can be installed. Although it is usually necessary to proportion rectangular ducts with the shorter dimension about one-third or one-fourth of the long dimensions, an effort would best be made wherever possible to design them with the short dimension equal to one-half that of the long dimension.

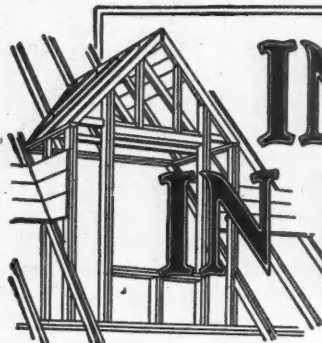


## The Thatched Roof

(Continued from page 174)

Here we have the whole mass of roof without parting lines and with its edges blending into the deep shadows that it throws. If it is well built and well laid it partakes of the virtues of the old straw thatch while making a more substantial roof. If it is not well built and well laid that is another story and a discourtesy to the shingle maker.

To further emphasize my point let me use Fig. 8. This roof covers a rather large house. In fact it is the largest thatched roof in the district. But the whole mass is curves. It is so well arranged that its size and pitch, which is considerably less steep than is general, only seem to help the blanket effect. Such a roof would be odd enough to imitate but contrary to appearances it shows up in striking fashion and attracts the eye from a great distance. Whoever built it knew he had to exceed himself to match the view from his dooryard.



# INSTRUCTIONS IN ROOF FRAMING

*This Department Appears Every Month in American Builder—Editor*

## Framing the Shed Dormer

By JOHN T. NEUFELD

**T**HERE are several interesting problems connected with framing a dormer of this kind. Each will be discussed separately in detail.

### Meeting Point of Two Common Rafters

We have in this problem two rafters both known as common rafters in a certain sense of the word which have different pitches and meet at a certain point.

In the problem given on the opposite sheet, the dormer rafter is 33 inches higher at the edge of the roof. The dormer rafter rises  $3\frac{1}{2}$  inches for each foot of run. The common rafter rises 8 inches for each foot of run. The common rafter therefore rises  $8 - 3\frac{1}{2} = 4\frac{1}{2}$  inches more in each foot. The meeting point or the point where the rafters come together will be  $33 \div 4.5 = 7.33$  feet from the edge of the roof.

### Length of Common Rafters

The length of this common rafter may be obtained in various ways. It may be found by the square root method as illustrated on the opposite page. It may also be found by measuring across the square, letting one inch represent one foot. The  $7\frac{1}{3}$  feet of run are represented by  $7\frac{1}{3}$  inches on the blade of the square. The 2 feet  $1\frac{5}{8}$  inches rise on the rafter are represented by  $2\frac{3}{24}$  inches on the tongue of the square. The distance measured between these two points is approximately  $7\frac{15}{24}$  inches. This represented in feet will be  $7\frac{15}{24}$  feet or 7 feet  $\frac{1}{2}$  inch.

When measuring the length of rafters on the square, the side of the square that is graduated into twelfths of an inch should be used. In this case  $1/12$  of an inch on the square represents one inch on the rafter.

### Studs for Side of Dormer

The studs for side of the dormer would in nearly all cases be measured or marked off by holding them between the two rafters. However, they may be figured accurately beforehand. For each foot of run the distance between the rafters is reduced  $4\frac{1}{2}$  inches; therefore, each studding can be figured by allowing  $4\frac{1}{2}$  inches for each foot of run or for each foot of distance that the stud sets back from the front edge of the wall or from the face of the dormer. The width of the upper rafter must also be taken into consideration.

Both ends of the studs may be cut by using the numbers representing the rise per foot run of the rafters. For the upper end of the stud, the rise per foot run of the dormer rafter is used. For the lower end of the stud the rise per foot run of the main rafter must be used.

### Problems

1. Find the meeting point of the two rafters for a dormer roof similar to the one illustrated, but with the following pitches. Pitch of main roof is 10 inches rise per foot run. Pitch of dormer roof is 6 inches rise per foot run. Height of upper edge of dormer rafter above upper edge of main rafter at the front of the dormer equals 4 feet.
2. What would be the length of the dormer rafter for the above problem?
3. What is the difference in the length of the studding for the side of the dormer if the studding are placed 2 feet on centers.
4. What numbers on the square will give the cuts for the upper end of the studding for the side of the dormer?
5. What numbers on the square will give the cut for the lower end of the studding?

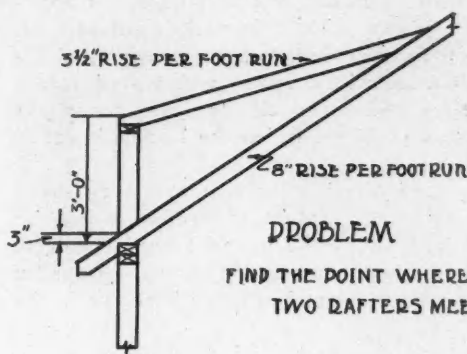
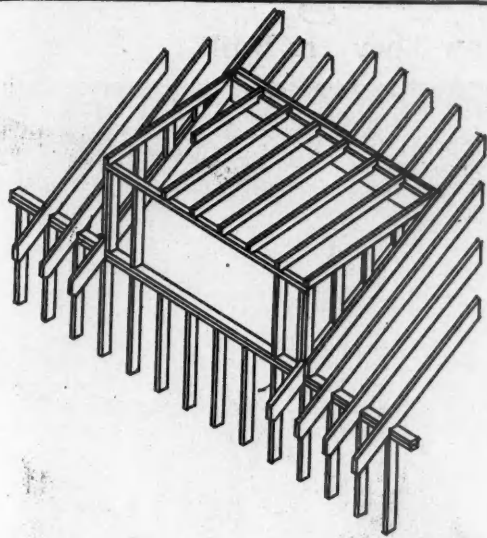
### Answers

1. The main rafter rises 10 inches per foot run. The dormer rafter rises six inches per foot run, therefore, for each foot of run the distance between the upper edges of the rafters is reduced 10 inches—6 inches=4 inches. The total distance apart at the front is 4 feet. The rafters will therefore meet at a point  $48 \div 4 = 12$  feet from the front edge of the dormer.
2. The dormer rafter has a rise of 6 inches per foot run. The length per foot run for a 6-inch rise taken from tables is 13.42 inches. The run is 12 feet. The length therefore is  $12 \times 13.42 = 161.04$  inches equals 13 feet  $5\frac{1}{16}$  inches.
3. As the distance between the rafters is reduced 4 inches for every foot, therefore the difference in the length of the studding will be  $2 \times 4 = 8$  inches if spaced 2 feet on centers.
4. The numbers 6 and 12 taken on the square will give the cut for the upper end of the studding.
5. The numbers 10 and 12 taken on the square give the cut for the lower end of the studding.



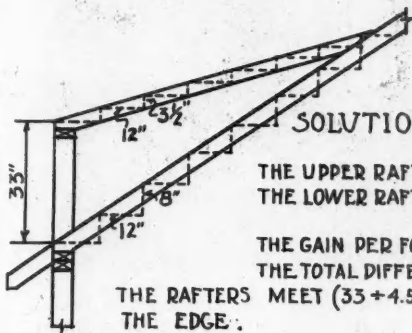
### Road Show and Convention

**A**NNOUNCEMENT is made by the American Road Builders' Association that the 1927 Convention and Road Show will be held in Chicago during Good Roads Week, January 10 to 14, inclusive. The Road Show will be held in the Coliseum as usual but the convention headquarters this year will be at the New Palmer House and official headquarters will be opened December 10, 1926.



### PROBLEM

FIND THE POINT WHERE THE TWO RAFTERS MEET.

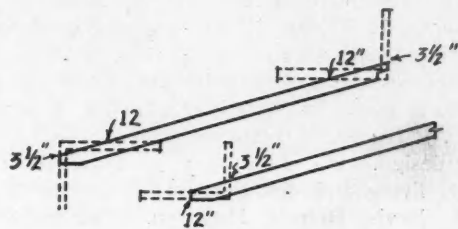


### SOLUTION OF PROBLEM

THE UPPER RAFTER RISES 3 1/2" PER FOOT  
THE LOWER RAFTER RISES 8" PER FOOT

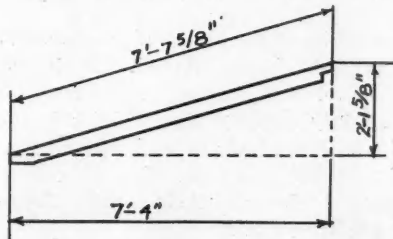
THE GAIN PER FOOT IS 8" LESS 3 1/2" = 4 1/2"  
THE TOTAL DIFFERENCE IS 2'-9" = 33"

THE RAFTERS MEET (33 ÷ 4.5 = 7.33) 7 1/3 FEET FROM THE EDGE.



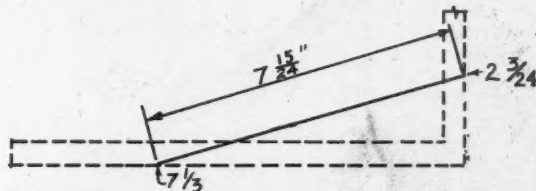
### CUTS FOR THE DORMER RAFTER

THE NUMBERS REPRESENTING THE RISE PER FOOT RUN, GIVE THE PLUMB AND SEAT CUTS.



### LENGTH BY SQUARE ROOT

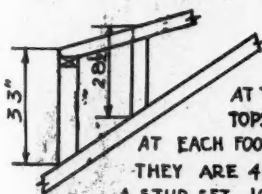
THE TOTAL RISE IS  $73.3 \times 3.5 = 25.655' = 2.138 \text{ FT.}$   
THE LENGTH OF THE RAFTER =  $\sqrt{7.33^2 + 2.138^2} = 7.635 \text{ FT.}$   
 $= 7'-7 \frac{5}{8}''$



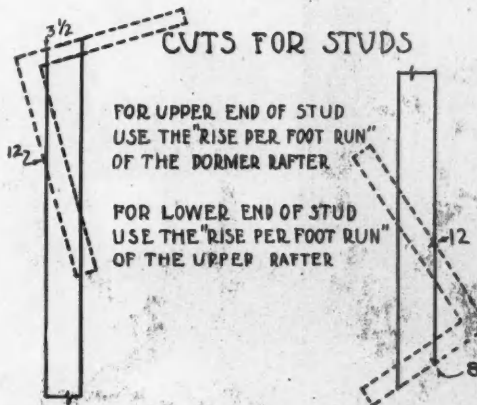
### MEASURING LENGTH ON SQUARE

THE LENGTH MAY ALSO BE OBTAINED BY MEASURING ON THE SQUARE. THE DISTANCE BETWEEN 7 1/8" ON THE BLADE AND 2 3/4" ON THE TONGUE IS 7 1/4". THE LENGTH OF THE RAFTER THEREFORE IS 7 1/4 FEET = 7'-7 1/2" .

### LENGTH OF DORMER STUDS



AT THE EDGE OF THE WALL THE TOPS OF THE RAFTERS ARE 33" APART.  
AT EACH FOOT DISTANCE FROM THE WALL THEY ARE 4 1/2" CLOSER TOGETHER THEREFORE A STUD SET 16" (1 1/3 FT.) FROM THE EDGE IS 1 1/2 X 4 1/2 = 6" SHORTER.



### CUTS FOR STUDS

FOR UPPER END OF STUD USE THE "RISE PER FOOT RUN" OF THE DORMER RAFTER

FOR LOWER END OF STUD USE THE "RISE PER FOOT RUN" OF THE UPPER RAFTER

# Better Plastering

## Arched Doorways and Niches and How They Are Built

**N**OW that Spanish, Italian and Mediterranean architecture is in vogue, with their marked influence on modern architectural design, both exterior and interior, we find that arched doorways and arched recess panels for bookcases and other closets quite frequently bring up construction problems which the builder is called on to solve.

There is hardly need of repeating that at a very slight expense much individuality can be given that would be otherwise a plain interior, by the use of arched openings. Indications of their adaptability and the many ways in which they can be used to beautify a home is shown in the illustrations.

Fig. 1 shows the use of an arched window opening which appears in the apartment of Alfred C. Bossom, New York City architect. It is one of the outstanding decorative features of the dining room.

Quite unique are the arches used under and as part of the the main stairs in the modern home, Fig. 2, designed by Architect F. J. Foster, of Great Neck, L. I. This house is of English design. Fig. 3 shows a large arched opening between the living and dining room in the residence of Mr. H. H. Servis, Detroit, Michigan. The architect is Richard Marr.



Fig. 2. In the Home of English Design, F. J. Foster, Great Neck, L. I., Architect, Is Seen the Application of the Curved Arch to Various Openings.

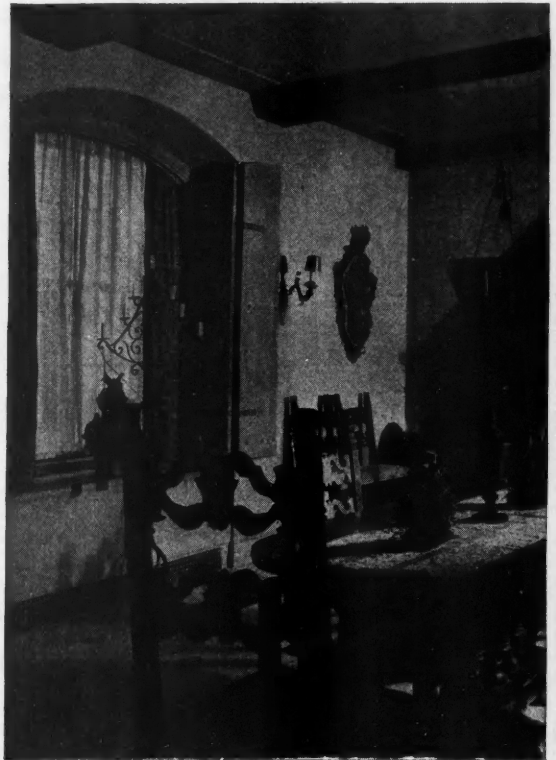


Fig. 1. This View of the Dining Room in the Apartment of Alfred C. Bossom, New York City, Shows the Use of the Arch Over the Window Opening.

Arched recesses in walls such as niches for vases and for bookcases are also being favored. The bookcase in the center of Fig. 4 is one example. Attention is also called to the slightly recessed plaster finish in the form of an arched opening which is built around the stairway shown near the left-hand side of the picture. These are mentioned because their construction will be described in greater detail.

Regardless of the plastering base which may be used in other parts of the building it has become universal practice to use only metal lath for arched openings such as we have described. This follows because it is readily formed to the proper curvature, is quickly attached to the framing and at the same time provides a very satisfactory reinforcement for the plaster finish.



Fig. 3. Wide Arched Openings in the Residence of H. H. Service, Detroit; Richard Marr, Architect.





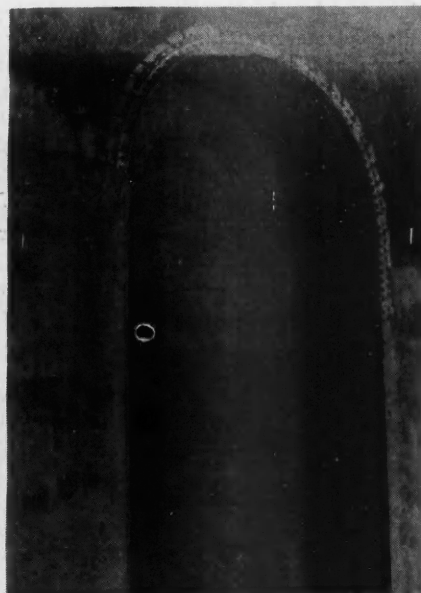
**Fig. 4. A North Italian Interior Showing the Use of Arches for the Recessed Bookcase and, to the Left, to Harmonize the Flat Topped Doorway Entrance.**



**Fig. 5. Construction Detail for an Arched Opening.**



**Fig. 6. Application of Metal Lath to an Arched Opening.**



**Fig. 7. Application of Corner Bead to an Arched Recessed Bookcase.**



**Fig. 8. Arch Construction Over the Flat Topped Doorway Shown in Fig. 4.**



**Fig. 9. Application of Metal Lath to Arch as It Appears Completed,**

The first step in making such arches is shown in Fig. 5, where are shown the curved pieces in place. These are cut on a band saw in accordance with the architects's template. The center point of the curved pieces are usually stiffened in order to provide substantial nailing surfaces and they are then lathed with metal lath as shown in Fig. 6.

Note how these sheets of metal lath are cut at the side and bent around the corner so as to provide an unbroken plaster reinforcement for the edge of the curved opening. There is also shown the lath around the opening as illustrated in Fig. 9. Note also the doubling of the studs adjacent to the door opening, in order to take the load off the arch and preserve uncracked plaster soffits. This opening is now ready for the plasterer.

Fig. 7 shows cornerbead reinforcing the edges of the opening in the construction of the circular top bookcase shown in Fig. 4. Closeup detail showing the method of cutting the cornerbead so as to follow the curvature of the arch is shown in the inset. Fig. 8 shows a detail of the application of metal lath to the circular plaster reveal around the flat top door opening shown at the left in Fig. 4. Note how the short pieces of wood have been cut to conform to the approximate curvature in order to form a backing for the metal lath nailed over it. Inasmuch as the plaster reveal was given a curve in plan, it was not feasible to use cornerbead which is usually recommended for the purpose.

Fig. 11 shows the plasterer in the process of putting on the brown coat plaster for an arched opening. This requires skill and care but with the background of metal lath properly applied the work is not as difficult as it might seem at first glance. Arched niches are quite readily built



Fig. 10. Construction of a Curved Top Wall Niche for a Vase.



Fig. 11. Plastering an Arched Opening.

into the wall as indicated in Fig. 10 and add a distinctiveness to the design out of proportion to their cost.

One advantage that should not be lost sight of in the construction of arched openings is the opportunity they give to indicate massiveness of construction which is particularly called for in Spanish and Italian design. From the details which have been illustrated herewith it will be seen that this construction is entirely practicable and that there are no special difficulties to be overcome.

However, it is important to observe that an arched opening built into a wood stud wall should not be expected to carry any load from above. This should be taken care of by properly trussing the opening so as to relieve the plaster arch entirely.

It is customary in the case of arched doorways, etc., to omit all wood trim ordinarily used around door openings, so that the protection afforded by cornerbeads should be resorted to. They also insure straight, sharp corners.



### World's Largest Dome

**A**MERICAN architects and builders of the twentieth century have gone their ancient brother craftsmen, who designed the noble proportions of St. Peter's Cathedral at Rome, one step better in the art of dome construction. St. Peter's, founded in 1480, is still the world's largest cathedral. Neither of the huge edifices now building, the Cathedral of St. John the Divine of New York, nor the National Episcopal Cathedral at Washington, D. C., will surpass it in size.

However, at West Baden, Ind., a resort hotel has been built whose immense dome is 200 feet across—12 feet greater than that of the old cathedral, thus making it the largest in the world. This hotel represents an architectural and engineering triumph of which America may well be proud.

A difficult problem facing the engineers was to design supports of adequate strength to carry the enormous weight of the dome. As completed it rests on sixteen solid brick piers laid up in lime mortar.



Fig. 12. A Curved Top Wall Niche, as in Figure 10, as It Appears When Finished.

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on one of two sides, making it impossible to place plaster directly upon the chimney construction. When this is the case, the lumber studding and the joists should be insulated and separated from the chimney, as shown by Fig. 2.

### Chimneys in Outside Walls

The foundation for an exterior chimney should start below the frost line. Concrete or masonry foundations of strength sufficient to carry the weight imposed without danger of settlement or cracking are required. A good weather-proof connection between the exterior stud wall and the chimney must be secured. The chimney wall in such cases should be not less than 8 inches thick. A slight offset should be provided in order that the sheathing may lap over and produce a right angled joint to prevent the passage of the elements. The lumber should be protected from the chimney by the insertion of asbestos board, or its equivalent.

This construction is illustrated in Fig. 3.

### Chimney in Center of Buildings

An independent chimney is sometimes erected in the center of a building. The careless builder sometimes uses it to support the floor joists, sometimes adding a few inches of brick to the thickness of the chimney walls to support the additional load. Such construction will develop a very serious hazard. The shrinkage of the lumber members probably will not be the same as the settling of the masonry chimney. So in addition to plaster cracks it is almost certain that the chimney joints will open up and furnish opportunity for the passage of flame and sparks into the concealed hollow places between the joists. No lumber should rest directly upon any chimney construction. The joists should be supported around by headers and trimmers, as shown in Fig. 4.

### Chimney in Masonry Party Walls

In many sections masonry party walls between buildings are common. Where flues or chimneys are a portion of such party walls the flues should not extend beyond the center of the walls. Their location should be permanently indicated on the exposed side of the wall, so that, in case of alterations, the chimney for the adjoining building may

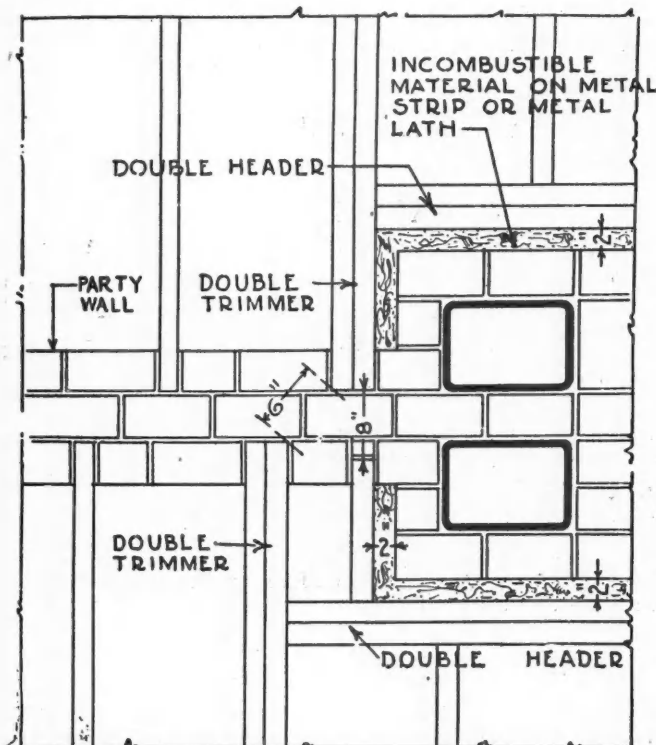


Fig. 5. Chimney in Masonry Party Wall.

remain undisturbed and those who are making the alterations may maintain the proper separation of lumber members therefrom. An example of this and also of the minimum separation for the ends of lumber joists entering party walls is shown in Fig. 5. Where there is no right angled joist as shown in the detail, the separation between the ends of joists should be not less than 8 inches.



### Practical Pickups

**S**TARTING a job right in the beginning, even though it may take a little more time, always proves to be the most economical when you commence to do the finishing. In the beginning keep the long-run in mind, and you will not be sorry in the end.

Take time to take pains when you frame your rough openings for doors and windows, and you will not see so many chips fly later, when you set your window frames, or when you put the grounds on the door openings. Putting on grounds is a very important piece of work, although carelessly done many times.

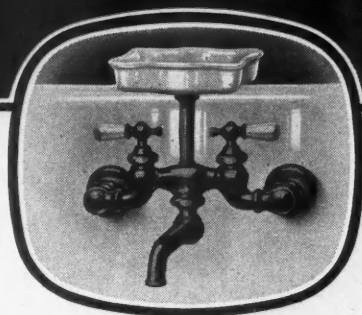
If the jambs are made of  $\frac{3}{8}$ -inch material, the rough opening should be from  $2\frac{1}{4}$  to  $2\frac{1}{2}$  inches wider than the width of the door—wider or narrower than this will add extra expense to the job later. If  $1\frac{1}{8}$ -inch material is used for jambs, 3 inches should be added to the width of the door. The thickness of the jamb should always be taken into consideration when a rough opening is laid out—unfortunately many mechanics lay out all their rough openings by the same rule. For both the cases referred to the rough opening, from the rough floor to the header, should be 3 inches more than the height of the door.

When framing rough openings, cut the timbers perfectly square—make the headers come on a level, and the sides plumb. Thus you are not only giving your work a mechanical appearance, but you are preparing the way for putting on the grounds.

There are several methods of putting on grounds employed by carpenters, but the best way that we know is the double-straight-edge gauge. Take two straight-edges 6 feet 8 inches long (if the doors are 6-88 doors) and tie them together with two cleats, say, put a cleat about 18 inches from each end. Make the distance between two straight-edges equal to the width of the jambs, which usually is  $5\frac{1}{4}$  inches for 2 by 4-inch partitions. A little block about  $\frac{7}{8}$  inch by  $1\frac{1}{4}$  inches, fastened halfway between the two straight-edges onto the cleats will hold the gauge away from the rough work enough to permit the grounds to be slipped in. The setting of the gauge is an easy matter—start a nail at the center of each cleat, in such a manner that it will go through the little block. This done, set the gauge up to the rough jamb and drive the upper nail into it, being careful that the gauge will allow an equal amount of space for plastering on each side of the partition. Then plumb the gauge and drive the bottom nail. The nails should be driven so they can be pulled with a claw hammer. When the gauge has been set, take common lath with one edge straight, or nearly so, and nail them to the rough work, keeping the straight edge against the gauge. Having the grounds on one side of the opening, set the gauge on the other side, and put the grounds on there in the same way. For the grounds overhead, take two perfectly straight lath, cut them in length to the width of the opening, and nail them so they will intersect with the side grounds. This method gives better results and requires much less labor than the old system of using a single straight-edge and a gained-out gauge.

With the grounds on right you will not only get a better job of plastering, but the jambs will be easier to set and the casings will go on better; thus the finished work will have a good and workmanlike appearance.

H. H. SIEGLE.



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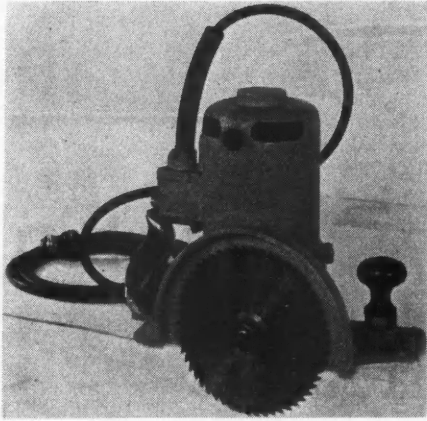
# WHAT'S NEW ?

**EDITOR'S NOTE:** *The AMERICAN BUILDER does not accept payment in any form for what appears in our reading pages. In order to avoid any appearance of doing so, we omit the name of the maker or seller of any article we describe. This information is, however, kept on file and will be mailed to anyone interested; address AMERICAN BUILDER Information Exchange, 1827 Prairie Ave., Chicago.*

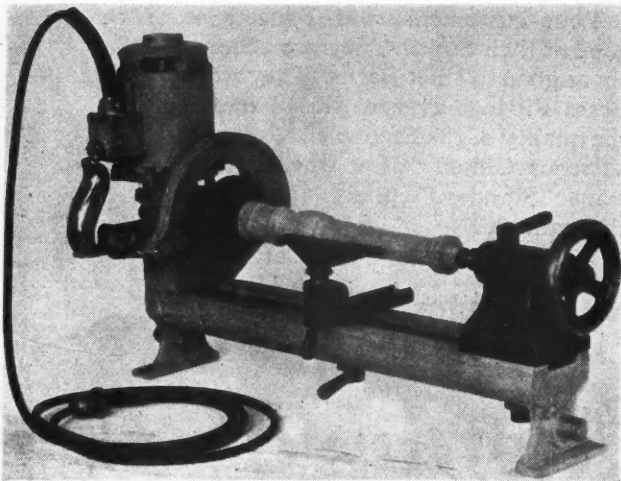
## All Around Portable Woodworker

**T**HE illustration shows a new, universal, electric woodworker which combines the power of an electrical driven machine with the ease and facility of manipulation of a hand tool. It includes a wide variety of easily interchangeable attachments all of which are driven by a specially built, powerful motor.

The manufacturer states that this machine may be used for all of the following uses: cross cutting, ripping, mitering, joining, boring, dadoing, planing, routing, moulding, drilling, screw driving, mortising, tenoning, grinding, matching, stair routing, polishing, sanding, shaping, turning and jig sawing. With such a wide variety of uses there is practic-



Here Is the New Woodworking Machine Rigged for Sawing, Only One of the Many Operations that It Will Perform.



Another Use to Which This Machine Can Be Put Is Turning, the Lathe Being Operated by the Same Powerful Motor Which Is Used for All the Other Operations.

ally no phase of the woodworking field in which it will not be found useful.

The various tools being combined in one unit permits the use of a more powerful motor, giving each individual tool a surplus of power. Because of the single source of power the cost of each tool is less than that of a number of indi-

vidual power tools doing the same work would be. The combination of tools decreases the weight and adds to the ease of transportation from job to job.



## Large Rotary Floor Machine

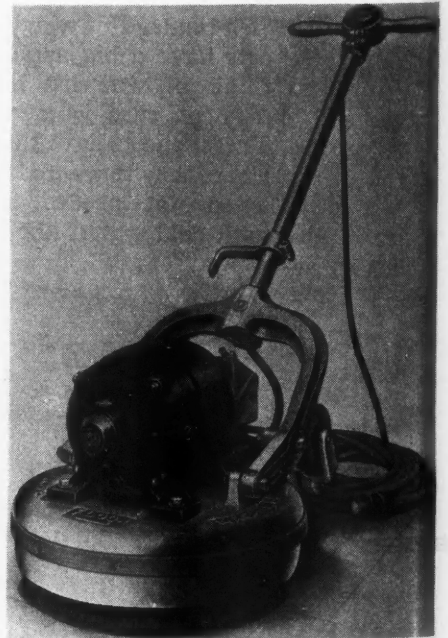
**A** PROMINENT company has recently brought out a new model floor machine which it states is the largest electric rotary floor machine manufactured today. This machine, which is illustrated here, weighs 125 pounds in operation and is equipped with a  $\frac{1}{2}$  horsepower motor. The diameter of the base is  $15\frac{1}{2}$  inches and the attachments used with the machine are 14 inches in diameter. These attachments are as follows:

A bassine fibre scrubbing brush which is used for scrubbing wood, linoleum, tile, cork tile, rubber, fine tile and composition floors; a steel wire brush which is used for scrubbing concrete, marble, terrazzo and very dirty floors; a bassine fibre waxing brush which is used for rubbing wax into wood, linoleum, tile, terrazzo and other floors; a tampico polishing brush which is used for polishing floors and linoleum that have been waxed; a polishing pad and holder which is used for giving a polished, waxed floor a high luster; a steel wire brush which is used with steel shavings for removing old coats of paint, shellac and varnish from floors and a sandpaper disc which is used for sanding floors, benches and tables.

This machine is very sturdily built and is operated from an ordinary electric light socket. It is equipped with 35 feet of cable and a plug for connection. It is started and stopped by means of a toggle switch at the end of the handle. When properly operated it is easily guided back and forth over the floor. The detaching and attaching of brushes and discs is simple.



**D**ON'T use too much water in your concrete mixtures. Excess water impairs strength. But be sure to mix thoroughly.



This New Floor Machine Is Said to Be the Largest Electric Rotary Floor Machine Manufactured.

# A new way to WINTER PROFITS

**D**URING the winter months your business is not as active as at other times of the year. Building slacks off... your earnings shrink.

But an unusual winter profit opportunity has developed in recent years for every builder and carpenter. It has

pointed out a way to offset this depression.

For in Celotex Insulating Lumber you have a product that can be sold for every old house in your town as well as every new one. That opens up hundreds of sales opportunities for you... *right now.*

You don't have to wait for people to build to sell them Celotex. The use of Celotex as attic, basement, porch and garage lining and insulation is rapidly spreading over the country. People are wanting to make their present homes more comfortable... to get their share of the big savings Celotex makes in fuel bills.

This idea is being featured in Celotex national and newspaper advertising during the fall and winter months. It offers you a big opportunity to develop an extra volume of business at a time when it will be most welcome.

You can make a good profit on each job because Celotex is so easily and quickly applied. The broad, light boards are sawed and nailed just like wood lumber. And every piece is usable—free from cracks, knot holes or stain. That saves material.

This profitable extra business isn't hard to get. When you explain the many advantages and the low cost of lining an attic, basement, porch or garage with Celotex you are offering your prospects a real service—one they'll be quick to appreciate.

Send the coupon below for more information about the winter uses of Celotex and about how you can sell them. It may well be the means of increasing your profits several hundred dollars this season. And all it will cost you is a postage stamp to mail the coupon.

THE CELOTEX COMPANY, CHICAGO, ILL.

Mills: New Orleans, Louisiana

Branch Sales Offices in many principal cities  
(See telephone books for addresses)

Canadian Representatives: Alexander Murray & Co., Limited  
Montreal, Toronto, Halifax, Winnipeg, Vancouver

# CELOTEX

INSULATING LUMBER

THE CELOTEX COMPANY, Dept. T-151  
645 N. Michigan Ave., Chicago, Ill.

Send more information about Celotex as attic, basement and garage lining.

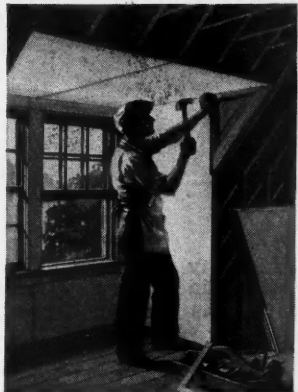
Name .....

Street .....

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

American Builder, 11-26

Photo © Chicago Aerial Survey Co.

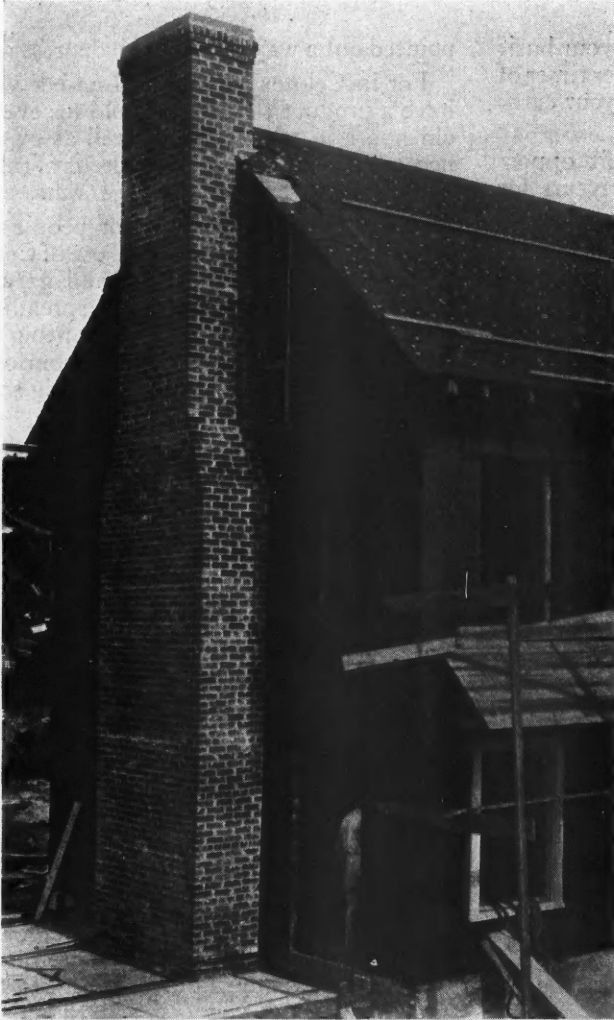


**97% of America's  
Roofs need this  
protection**

Nearly every house in your town represents an opportunity for an attic lining job right now when jobs are scarce.

### Wood Fiber Insulation Board

**A** NEW insulating material, composed entirely of wood fiber, utilizes the waste from saw mills in its manufacture. The wood fiber is formed into boards or sheets which are grainless and entirely free from rosin, sap and defects. This material is desirable for use as sheathing, as a plaster base taking the place of lath, as interior finish and for insulation against heat, cold and sound in walls, floors, ceilings and roofs.



Structural Insulation Is Provided in Sheathing with This New Material Which Is Composed Entirely of Wood Fiber and Made from Saw Mill Waste.

This insulation is supplied in sheets 4 feet wide and 12 feet long. Its edges are clean cut, straight and true and the corners are perfect right angles so that a snug fit is possible without waste in installing. It is easily handled and can be readily cut with an ordinary hand saw and nailed like ordinary lumber. When used as sheathing no building paper is required. One side is quite smooth while the other is slightly rougher and its strength and rigidity prevent cracking and checking. Its surface affords a perfectly bonding plaster base. It is also used without plaster as a base for any type of decoration.

As stated, this material is made entirely from saw mill waste, slabs and edgings—no sawdust is used. These are chipped and screened to remove all sawdust and larger particles which are used for fuel. The chips are then inserted in guns and steam at an enormous pressure is turned into the chamber for 15 to 20 seconds till the

chips are thoroughly saturated. They are then suddenly expelled through small ports in a valve.

The difference in pressure tears the cellulose fibers apart, producing a soft, long fibered pulp. The lignin of cementing structure is not destroyed and serves to bind the finished produce without the use of any binder. Neither is the strength of the fibres impaired by the process.

The pulp is passed into beaters where it is subjected to a hydration process and all loose fibers that have not been torn apart are removed. A little size is also added to make the board waterproof. From the beaters the pulp is collected on a screen and formed in sheets by the same process used in paper making. The sheets are then taken to steam heated, hydraulic presses, where the board is pressed into shape and all moisture removed. The edges are then cut perfectly true.

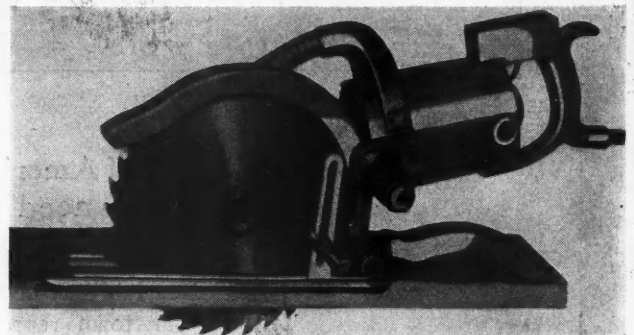
This insulation board is 7/16 of an inch thick. A second type, of less thickness, is also produced by the same process but, because of greater compression, has greater density. Still a third type is made by this process with still greater density. This material is about 3/16 of an inch thick, has a smooth surface and is extremely hard. It is heavier than wood and is intended to be used in place of wood for a number of purposes such as boxboards, flooring and finish.



### A Light Power Saw

**S**IMPLY attach the extension cord to any light socket, press the trigger and do your cutting by power, that is the way the portable electric hand saw, shown in the illustration, works. This saw is the product of a well-known manufacturer of portable drills and grinders and the result of many years of tool making. It can use 8, 9, 10 or 11-inch blades and unless otherwise specified is furnished with 8-inch rip and 11-inch combination blades. It is provided with a 10-foot extension cord, spanner and "S" wrenches and is shipped ready for use.

This tool weighs only 24 pounds when using the 11-inch blade. Its perfect balance and the side handle permit it to be used in any position. The safety guard is on a loose hinge and need never be touched, simply drop the saw and the guard drops with it. A patent air blower brings air from the fan down the line to follow in ripping, blowing



Light Weight and Simplicity Are Two Outstanding Features of This Power Saw Which Can Be Operated from a Light Socket to Speed Up the Work of Sawing.

away the saw dust. There is a depth gage for light cuts. Another feature is the swivel head for sawing at any angle.

A trigger switch with momentary contact eliminates useless running. Power is furnished through a powerful motor. The body is all aluminum, polished. The cutting capacity is a full 4 inches and the sliding gage permits any depth of cut. The worm gears are of aluminum-bronze and shafts are mounted on ball bearings.



# JOHNS-MANVILLE Asbestos Shingles



*Insurance  
underwriters  
lower rates for **FIRESAFE** roofs*

**T**HE insurance underwriter no longer calmly watches the public build as they please. He actively advocates fire-safe roofs and offers inducements in lower rates for safe roofing construction.

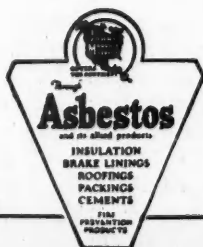
His warnings added to those of other fire prevention authorities are having their effect. The public is demanding more asbestos roofings than ever.

Good thing to sell what the public wants, isn't it?

JOHNS-MANVILLE Inc., 292 Madison Ave., at 41st St., N. Y. C.

*Branches in all large cities*

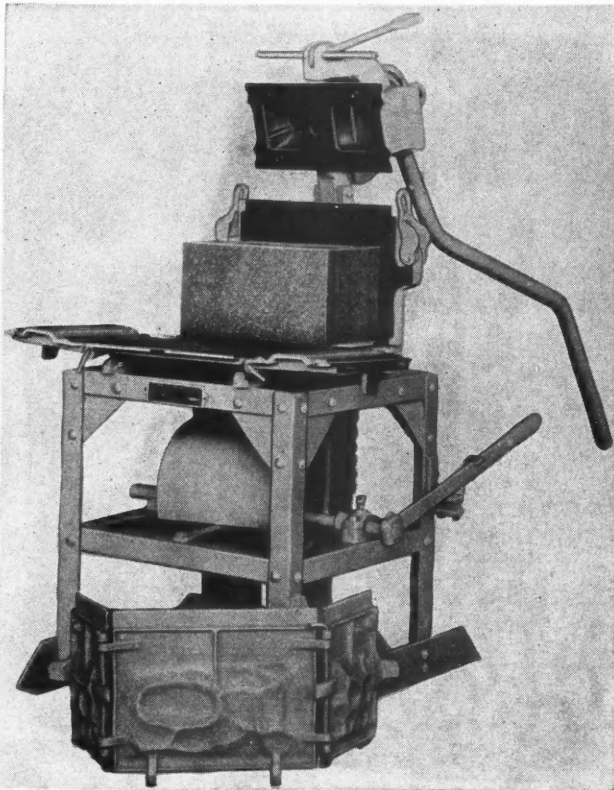
For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto



### Rapid Cement Block Machine

THE machine shown in the illustration is a hand operated, cement block machine which does not require an expert for its operation. Because leverage, not muscle, does the work with it it is possible to turn out 75 plain faced blocks per hour and finish the day without fatigue, say the manufacturers of this machine. A roller eccentric enables even a boy to exert a pressure of 193 pounds to the square inch or 12½ tons pressure to the block. No tamping is required, there can be no spilling of aggregate on moving parts and there is no complicated mechanism to wear, break or loosen up and interfere with production.

This machine makes 8 by 8 by 16-inch, rock faced blocks, panel faced blocks, straight faced blocks and half blocks, corner blocks, slab blocks for veneer work, panel, rock or straight faced blocks 4 by 8 by 16 inches, blocks with recesses for joists, blocks for nailing cleats for doors, cas-



Rapid Production of Cement Blocks, Without Undue Fatigue, Is Possible with This New Type of Hand Operated Machine.

ings, windows and mop boards, and block with air vents allowing air to pass through the core hole in the blocks insuring dry inside walls.

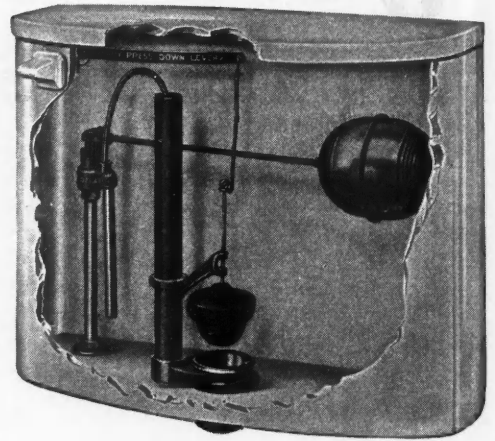
An attractive time and labor saving feature of the machine is the simplicity of changing from straight to either panel or rock faced block which can be accomplished in less than five minutes by simply removing three pins in each set of molds and placing either set of molds on the machine. No bolts or nuts are used.



### Efficient Low Price Flush Tank

THE flush tank illustrated here is a high quality, low priced tank for which the manufacturers point out a number of features that recommend it. They state that this tank is light of weight and easily lifted, weighing only 39 pounds. It has a buffed on celluloid finish which will not color or craze. It is not affected by temperatures from 0 to 205 degrees. It is fitted with a valve, ball cock and lever equipment which eliminate operating troubles.

The valve has a hard rubber float with a removable flat washer of specially treated chrome leather to insure a tight seat. A universal joint attachment for the lift wire prevents the float sticking open. The lower part of the float is so shaped that it is guided to its seat with a positive action. The lower lift wire is of monel metal and the upper wire of soft copper. The overflow tube is 1⅛ inch seamless lake copper. Efficient flushing is assured by an unre-



A Low-Priced Flush Tank but One Which Is Equipped with High Quality Fixtures.

stricted water-way and permanent buoyancy of the float.

The lever has an all china lever handle with no exposed metal parts. The movement is a single press down action and the absence of friction or binding parts prevents sticking. The square shank of the lever is equipped with a tapered lead washer, which fits into any size lever hole and the freedom from off center strains prevents the lever from getting loose or out of alignment. Simplicity of assembly, by one screw pin, permits quick attachment to any tank.

The ball cock is smooth and quiet in operation. It operates more quietly as it approaches the close instead of becoming more noisy as is commonly the case. It will close without squeal or whistle up to 200 pounds pressure.



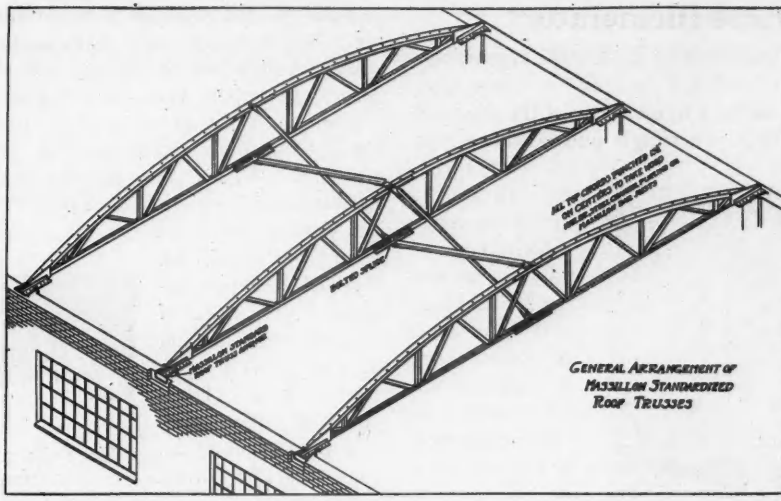
### Permanent Roofs

THE initial cost of the best materials is always more than that of inferior ones but it is well to remember, when selecting materials for the home, the annoyance, the unsettled state of the household and the additional expense which always accompanies repairs and replacement. In the long run you will actually save money by selecting materials which are permanent and will not require either repair or replacement. This is particularly true of those parts of the house which are exposed to the elements.

Under this head come the roof, leaders, gutters, valleys and flashings. These should be of material which will withstand constant exposure and will not be destroyed by rust. Such materials will play their part in reducing the present \$625,000,000 yearly loss from rust and will at the same time give permanent satisfaction and freedom from worry.

A prominent manufacturer of zinc products points out that at the foot of the price scale among the rust resisting materials is galvanized iron and at the top is copper, while half way between is zinc. There is on the market a pure zinc which is ductile and works as easily as any other metal roofing material. The life of galvanized iron is limited while both zinc and copper are permanent and, since zinc is far less expensive it is a permanent material that is practical for the great majority of home builders.

This company offers a high grade zinc roofing which will give a permanent roof, unaffected by weather and in perfect harmony with the character of the house or other buildings on which it may be installed. At the same time gutters, leaders, valleys and flashings can be made of the same material and the same permanency attained.



# Standardization that Benefits the Building Industry

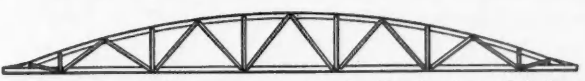
*Steel Roof Trusses standardized and shipped from stock for all spans*

**RUGGEDNESS** is an essential part of every Massillon Truss. It may have to stand a long rail haul, a rough boat voyage, a bumpy truck trip over mountain roads or a combination of all three. Every step from standardized design to standardized final shop inspection insures this ruggedness.

Starting with the design—the top chord, the bottom chord, and the bracing members are made with a greater thickness of metal than is usual. It is accomplished by using single angle sections in place of the customary lighter double angle sections. The same weight of steel secures the same strength for each member and results in a more rugged truss.

Solid steel arc welded connections are used at all joints. This not only eliminates rivet holes which tend to weaken the sections but actually builds up the connections so that they are stronger than members themselves. Every weld is thoroughly tested.

Just as Massillon Bar Joists have set new standards for permanent fireproof floor construction so has the Massillon Roof Truss set new standards for the construction of rugged roofs for garages and other buildings requiring clear open floor space.



**Massillon Roof Trusses** are standardized, shop fabricated trusses especially adapted to garage and factory roof construction or any place where clear spans are desired. Carried in stock for immediate shipment. May also be adapted to concentrated loads.

**Massillon Vault Reinforcing**—Standardized reinforcing frames economically secure the maximum protection in vault construction for Banks—Offices—Oil Stations—Hotels—Stores—Homes. Shipped, properly tagged with layout drawings for quick, easy erection.



**Massillon Bar Joists** are scientifically designed steel members made up of round bars welded into a single unit and are used for fireproof floor and roof construction in all classes of buildings. They are carried in stock ready for immediate shipment.

**Massillon Metal Lath**—Furnished in both Rib and Diamond mesh. Also complete line of corner beads, base screeds and furring channels.

**Massillon Area Grating**—Electric arc welded steel grating made in standard frame sizes and in special sizes to order.

**For the Contractor**—Electric welded steel mixing boxes and mortar boards. Will outlast dozens of wooden ones. Fire can be built right under the boxes for winter mixing.

**Other Building Products**—Standardized steel lintels, steel columns, coal chutes, basement windows, steel sash, window guards; etc.

**Send us a sketch or plans of your proposed building for quotation on your building requirements. Descriptive literature of products sent architects or contractors on request.**

*Some good territory still open for active dealer connections*

**THE MASSILLON STEEL JOIST CO., 909 Belden Ave., N. E., Canton, Ohio**  
**Canadian Manufacturing and Sales Agents: Sarnia Bridge Co., Ltd., Sarnia, Ontario**

# MASSILLON STEEL BUILDING PRODUCTS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

### Built-In Chute Incinerator

TO a well-known line of portable and wall type incinerators there has been added a built-in or chute type incinerator for which provision is to be made in the plans of architects and builders. This is a simple and effective type



A Built-In, Chute Type of Incinerator Which Can Be Installed Satisfactorily in Buildings of Any Height.

of equipment. All garbage, animal or vegetable, old newspapers, waste paper, tin cans, bottles and refuse of every description, are emptied into the flue through a hopper door which opens into the kitchen and which, when not in use, closes flush into the wall.

This incinerator can be installed in apartments and buildings no matter how tall or how many apartments they contain. The plant in the basement receives all refuse from every floor. When it is nearly full, the waste paper is lighted and all the discarded matter is burned with the exception of incombustibles, such as bottles and cans, which are removed from the ashes.

No gas or fuel of any kind in addition to the refuse material is needed. Complete combustion is assured by the auxiliary draft. The air supply comes in through the openings provided by the open brick work and passes through and over the refuse. With this equipment unsanitary garbage pails are eliminated and with them fly and germ breeding places. There are no foul odors and it is not necessary to go out doors to dispose of refuse.

The hopper doors, in two sizes are neat in appearance, sturdy in construction and no smoke or odor can escape whether the door is open or closed. The manufacturers furnish all iron and steel for this incinerator while the owner furnishes and constructs the furnace, foundations and stock according to blue prints furnished for the job. Plans to fit any requirement are supplied and full instructions for installation.



### Electric Air Heater

A MANUFACTURER of electric steam radiators is now offering an electric air heater which is easily portable and attractively finished. It is intended for use in providing quick heat on cool mornings, chilly days and evenings when the furnace

or boiler is not running or those damp, dreary days in winter when there are cold spots in the house, when the bathroom, living room or nursery does not heat sufficiently, any place where you want heat quickly.

This heater weighs but a few pounds and can be moved easily from one room to another. It is finished in a beautiful shade of dark gray lacquer baked to 300 degrees. The handles and legs are nickel plated. The two smaller sizes can be operated from a baseboard receptacle while the larger size requires a line of greater capacity. Six feet of heater cord and plug are supplied with each heater. It is furnished for either 110 or 220 volts alternating or direct current.

Heated air is circulated from both sides and top of the heater. The cold air is taken in through numerous openings covering the entire bottom of the case. By means of baffle plates this air must pass upward directly through the heating element, leaving the heater through the top and sides at a higher temperature.

The heater is strongly built of the best materials with a furniture steel case. It can be furnished with a suitable thermostat to maintain any desired temperature. Each heater is 12 inches high and 6½ inches wide. The lengths are 24 inches and 28 inches.

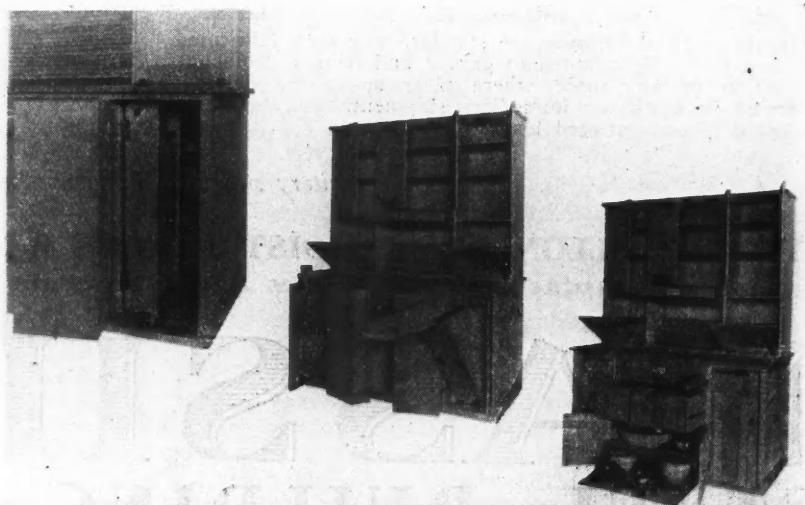
Here Is a Light, Portable Electric Air Heater Designed to Warm Up the Cold Spots in the House.



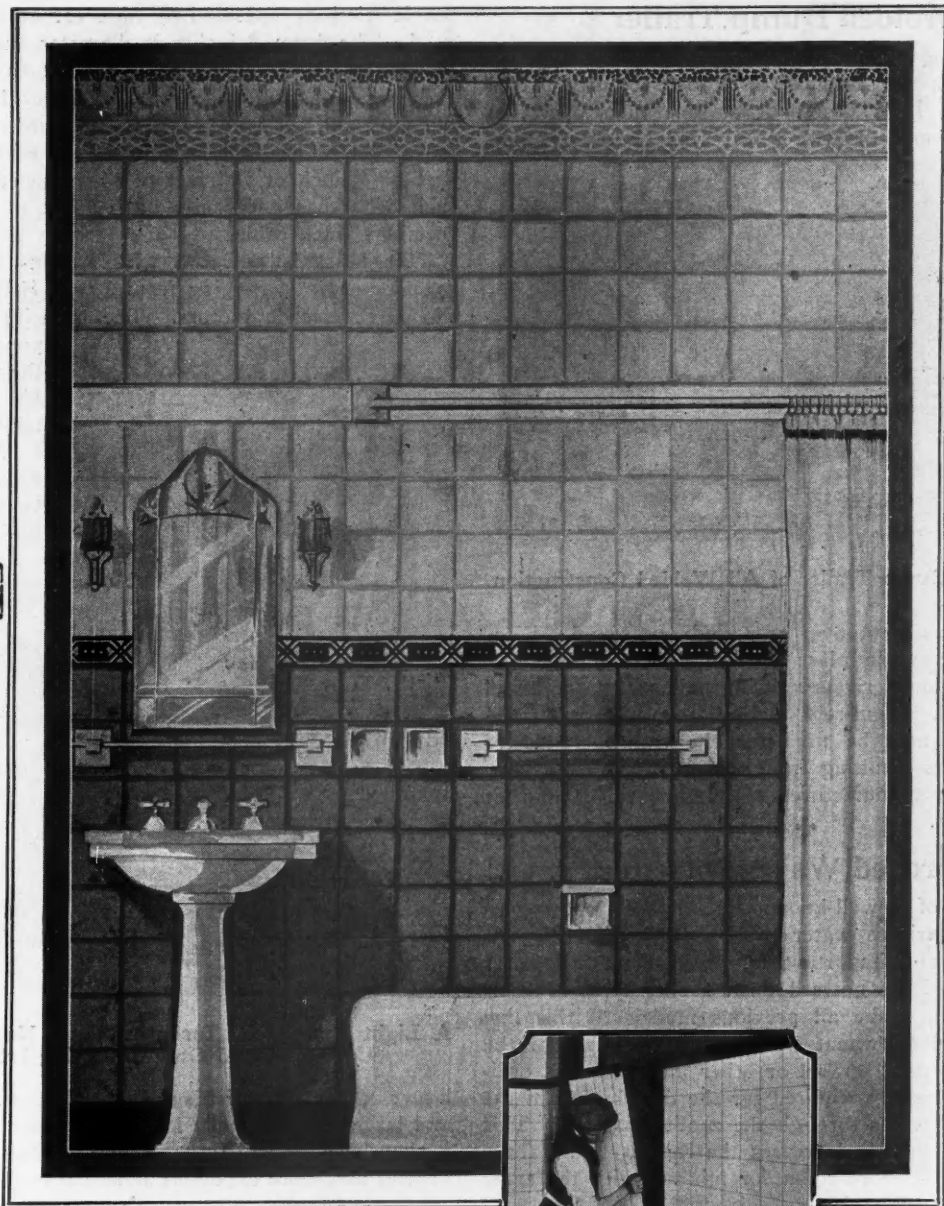
### Cabinet and Ironing Board

ONE of the features of a new type of kitchen cabinet is a combination ironing board and table installed in the door of a storage compartment. The board is of a type which has been previously manufactured by this company being a folding board which, when not in use, is folded into a space only half the height of the usual ironing board space. Its position on this kitchen cabinet makes it also available as a convenient kitchen table or even as a breakfast table.

As shown in the illustration, it is so hung that it may be swung back giving access to the space behind which is fitted with shelves for the storage of various kitchen supplies. A metal and asbestos covered shelf for the iron is also provided, the whole unit being a highly compact and space saving piece of kitchen furniture.—R. G. THACKWELL.



This Kitchen Cabinet Contains an Ironing Board Set Into a Lower Door, with Storage Shelves Behind It.



*This delightful bath-room illustrates only one of the many practical uses for SANI ONYX. Ideal for every room in every home.*



To the architect and builder seeking new opportunity to *permanently* beautify and strengthen walls, ceilings, wainscotings and floors, SANI ONYX affords a wealth of possibilities not found in any *natural* product of Nature's Laboratory. Available in six standard colors—White, Blue, Ivory, Green, Gray and Black—this vitreous substance, fused under tremendous heat in great furnaces, is harder and more enduring than marble, plaster or tile and may be had in any special size, design or color to order. Six standard textures—Flame Glaze, Semi-Matte, Matte, Tapestry, Polychrome and Embossed—are carried in stock for immediate delivery.

Canadian Factory—  
Sani Products Co., Ltd.  
155 Richmond St., West,  
Toronto.

Distributors in principal cities  
throughout United States and  
Canada.

**SANI ONYX**  
**A VITREOUS MARBLE**  
A PRODUCT OF THE MARIETTA MANUFACTURING COMPANY

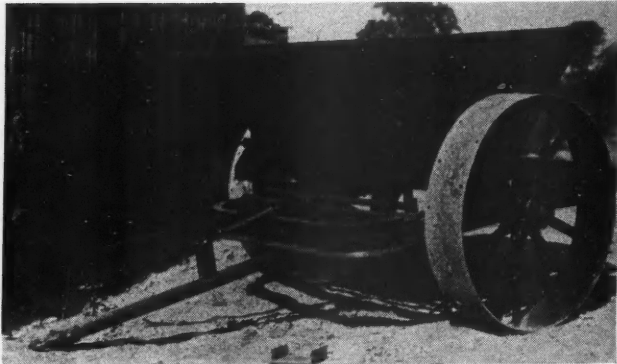
Send for a copy of our beautiful new book illustrating actual SANI ONYX installations in full color. Address, SALES PROMOTION DEPT.

**MARIETTA MANUFACTURING COMPANY**

Office and Works: 80 Brookside, Indianapolis, Indiana

**All Welded Dump Trailer**

THE accompanying illustration shows a new type of all purpose, heavy duty, dump trailer recently placed on the market. It is designed for one man operation behind a tractor and the two-wheel type of construction



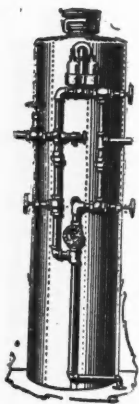
**A Heavy Duty, Dump Trailer of All Welded Construction.**

permits rapid movement over any kind of ground. Electric welding is used in place of riveting throughout the frame to avoid loose rivets causing failure in operation. The dump itself is entirely welded to make it watertight so that it may be used for the transportation of grout. Economies resulting from the use of welding have also enabled the manufacturer to market this dump at a moderate price.



**Improved Water Softener**

THE makers of a well-known line of soft water generators and private water systems have recently announced a new and important improved model of water softener. It is of the upward flow, zeolite type, of compact construction. Like all previous models of this line it has a patented filter mat which takes the place of the usual gravel or other inert material ordinarily required for the distribution of the water through the zeolite material. This greatly increases the capacity since there is more room for mineral with the same size tank.



**An Improved Model, Zeolite, Water Softener Which Double Washes the Mineral in Regenerating.**

The outstanding advantage of the new model, however, is pointed out by the makers as being the double wash of the mineral in regenerating. In other softeners the salting and washing process takes place in one direction only, but in this model the mineral is first washed downward and then by reversal of the valves, it receives a second thorough washing upward.

As a result of this process the mineral cannot pack and there is no tendency to channelling. The entire capacity of the mineral is available, therefore, for the softening process. This feature increases the efficiency to a very considerable extent.



**General Duty Hoist**

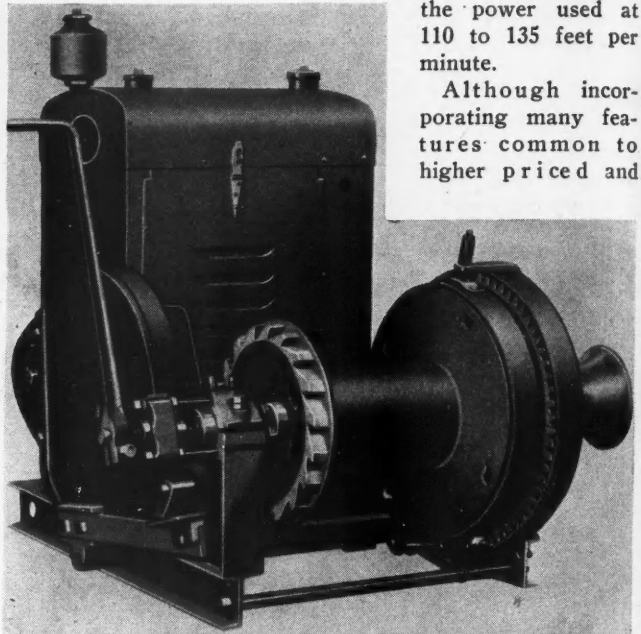
THE hoist pictured here is the most recent development in light duty, gasoline and electric driven hoists manufactured by a leading maker of engines. Several features are incorporated in this new piece of equipment heretofore found only in heavy duty hoists. In addition this hoist uses a non-warping, welded, tubular frame, the first hoist in which such a design is utilized.

This hoist is a single free drum type. Double cone, hard

maple frictions, operated by high carbon thrust screw, are used. The drum, 8 inches in diameter and 14 inches long, is bronze bushed and has the ratchet cast on the end at the operator's side of the hoist. A larger drum, 12 inches in diameter and 14 inches long, is furnished, when ordered, at extra cost. The cable capacity of the 8-inch drum is 1,250 feet of 3/8-inch or 700 feet of 1/2-inch cable, while the 12-inch drum has a capacity of 700 feet of 3/8-inch and 400 feet of 1/2-inch cable.

This hoist is powered with various single and two-cylinder engines, ranging from 3 to 9 H.P. or with 3, 5 or 7 1/2 H.P. electric motors. The capacity is 600 to 1,600 pounds, depending on the power used at 110 to 135 feet per minute.

Although incorporating many features common to higher priced and



**A Light Duty Hoist Incorporating a Number of Features Usually Found Only on Heavy Duty Hoists.**

larger outfits, this hoist is moderate in cost. Its light weight and large capacity make it very desirable for general hoisting work and it will serve on many jobs formerly requiring heavier and more expensive hoists, it is said.



**Better Paints**

EVER since the introduction of lithopone as a paint pigment, its use in general painting has offered interesting possibilities because of its good color, high hiding power, moderate cost and easy working qualities. In the early development of the use of this pigment its inability to hold its color in the presence of moisture and light was a serious drawback but a large manufacturing company has experimented until it has produced a superlithopone unaffected by sunlight and moisture, which is now being used successfully in the manufacture of exterior paint.

Extensive tests over a period of several years have demonstrated that this paint gives remarkable satisfaction for exterior painting.

It is desirable that a paint fail by chalking but this chalking should be very gradual. This new paint is so blended that it prevents premature chalking and produces an easy working, bright, durable paint with good hiding power and high spreading rate. None of the ingredients form dark colored compounds with sulphur gases, a source of much ruined paint in the many places where such gases occur. In spite of its superior qualities this type of paint is inexpensive. It is supplied ready to spread, as a ready mixed paint, and also in paste paint form for the master painter, the paste being thinned with linseed oil, turpentine and drier.

Y  
J. H. Kiern  
Louis Lars  
A. T. Lest  
John Lind  
Emil Lind  
K. B. Lund  
Oscar Lund  
Elmer Nel  
Peter Nel  
Olberg Bro  
Leslie Ogle  
W. T. Ogle  
C. J. Olson  
Walter L. I  
Wm. Peter  
John Pham  
John Pisan  
Carl Rehn  
Fred Renn  
Frank A. R  
Ruffenach  
M. L. Soko  
Arthur C. S  
Swanson &  
Arvid E. S  
H. V. Swan  
L. O. Swed  
Swanson &  
Herman Sw  
John P. Ste  
Albin Strom  
Emil Strom  
Whissel Bro  
Guy Wilson  
Park Rapids  
W. P. Smit  
St. Paul  
A. L. Ander  
John J. An  
J. Bleching  
Oscar Blom  
Wm. Brad  
R. F. Bran  
Carlson & S  
Geza & Do  
John G. Ge  
John J. Gol  
M. & M. E  
Carl Hillgr  
Louis Jenso  
J. Aug. Joh  
John Johns  
John Joseph  
Herman Ka  
Oscar Nel  
Albert H. K  
Nick Knaff  
Joseph Kno  
R. Krepp  
Chas. Larso  
Larson & S  
P. Leo  
R. F. McCl  
McRae & B  
G. A. Menz  
A. H. Mey  
Andrew W.  
Nolles & S  
Bert Robid  
C. F. Robin  
Otto C. Sky

# You Ought To Know

they are all pushing a type of plastering which alone has proved satisfactory to owners, builders and plasterers: **Better Plastering on metal lath.**

The next time you have a plastering job to let, call in one or more of these contractors and let them submit a bid. You will be surprised how very little extra a *first class* plastering job costs. It means better construction and satisfied owners.



These contractors will also supply Better Plastering signs on all Better Plastering jobs. If you build to sell, you will find this sign a silent salesman which clinches prospects.

- J. H. Kienzie
- Louis Larsen
- A. T. Lestor
- John Lindgren
- Emil Lindquist
- K. B. Lundquist
- Oscar Lundstrom
- Elmer Nelson
- Peter Nelson & Son
- Olberg Brothers
- Leslie Ogle
- W. T. Ogle
- C. J. Olson
- Walter L. Peterson
- Wm. Peterson
- John Phaneuf
- John Pisansky
- Carl Rehn
- Fred Renn
- Frank A. Roberts
- Ruffenach Co.
- M. L. Sokolowski
- Arthur C. Solem
- Swanson & Horton
- Arvid E. Swanson
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- L. O. Swedberg
- Swanson & Svendahl
- Herman Swenson
- John P. Steffens
- Albin Strom
- Emil Strom
- Whisler Brothers
- Guy Wilson
- Park Rapids
- W. P. Smith Co.
- St. Paul
- A. L. Anderson
- John J. Anderson & Son
- I. Blechinger
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- R. F. Brandt & Son
- Carlson & Sacrison
- Cesa & Domonkos
- John C. Genelle
- John J. Goblet
- M. & M. E. Gormanson
- Carl Hillgren
- Louis Jensen
- J. Aug. Johnson
- John Johnson
- John Joseph
- Herman Kastner
- Oscar Nelson
- Albert H. Kirchoff
- Nick Knapp
- Joseph Knopke
- R. Krepp
- Chas. Larson
- Larson & Strelsky
- P. Leo
- R. F. McCloskey
- McRae & Batterson
- G. A. Menz & Son
- A. H. Meyer
- Andrew W. Mitchell
- Nolles & Sapletal
- Bert Robideaux
- C. F. Robinson
- Otto C. Skytte

- Eugene Slater
- Thill Bros.
- Geo. Waldhauser & Sons
- Harry B. Wicken
- Chas. Zwinger
- MISSOURI
- Afton
- S. D. Charpentier
- Clayton
- Fred K. Fox
- Independence
- Harry W. Angell
- Kansas City
- Albert Abbiatti
- Walter L. Ankrome
- H. G. Beard Plastering Co.
- M. C. Cox
- Comer Metal Lath Const. Co.
- Leslie G. Cone
- W. A. Darr
- H. W. Graham
- H. Stanley Hill
- Charles F. Hunter
- W. M. Jennings Mfrs. Co.
- Kansas City Arch'l. Dec. Co.
- W. E. Lightfoot
- H. L. Moore
- Fred L. Moore
- Geo. A. Moore
- K. C. Ornam'l Plas. & Stone Co.
- The Palmer Plastering Co.
- Guy L. Reed
- Rolla L. Reed
- Stroud & Berry
- Shambe & Zera
- G. C. Turner
- H. W. Volk
- Walter Plastering Co.
- H. E. Walk
- W. H. Weaver
- Kirkwood
- F. L. Jameson
- Geo. J. Kuhn
- Richmond Heights
- J. Harvey Lynch
- St. Louis
- Adolph Bohrman
- John A. Fox
- Goeddel Plastering Co.
- Peter C. C. Johannes
- Chas. L. May
- Geo. R. McNeill
- O'Connor & Roth
- J. E. Resinger
- St. Louis Plastering Co.
- James H. Squires
- A. E. Terry
- Matt Thomason
- Henry J. Tiefenbrunn
- Shrewsburg Park
- Max O. Pitzer
- Webster Grove
- H. C. Anderson
- Cramer Bros.
- Peter Hansen
- Wellston
- Chas. Vienup
- MONTANA
- Billings
- Frank Evangelisti

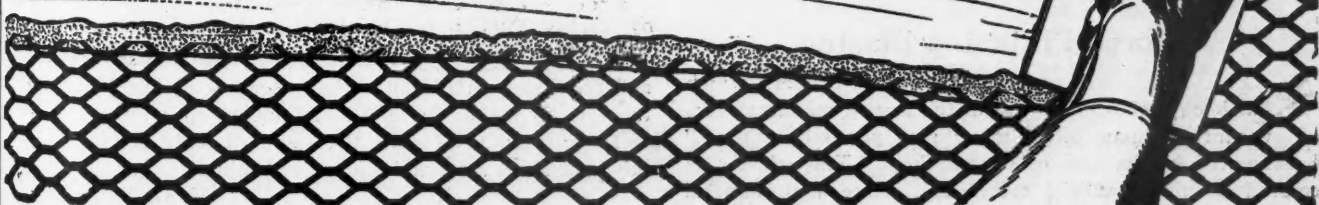
- NEW JERSEY
- Atlantic City
- Jerry J. Hurley
- Camden
- Camden Plastering & Supply Co.
- Pleasantville
- Wm. H. Irwin
- Palmryra
- Peterson & Read Co.
- NEW YORK
- New York City
- Couihan Bros., Inc.
- R. T. Donaldson, Inc.
- NORTH DAKOTA
- Fargo
- G. F. Grimes
- OHIO
- Canton
- Chas. Bennett
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- Cincinnati
- J. M. Duffey
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- Andrew Hyland
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- Cleveland
- Wm. R. Hunter
- East Cleveland
- Farrar, Hodgins Plastering Co.
- Mount Healthy
- Henry Schweitzer
- OKLAHOMA
- Oklahoma City
- A. E. Mardt Plastering Co.
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- L. E. Gulker
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- Ardmore
- John McKeenan & Son
- C. Bongiovanni
- Thos. Rizzo
- Berwyn
- A. Yocum
- Bryna Mawr
- John T. Doyle
- Bywood
- Frank S. Hall & Sons
- Chester
- Joseph Mills
- Clifton Heights
- R. E. Mousley & Son
- Darby
- R. J. Kirk
- J. W. & E. McKeenan
- Drexel Hill
- James McKeenan
- E. A. Pigeon
- Elkins Park
- Frank C. Mitch
- Hatboro
- C. V. N. West
- Johnstown
- E. C. Shultz
- Sprengel Bros., Inc.
- Moore
- Suburban Plastering Co.

- Narberth
- James Frantantoni & Sons
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- Philadelphia
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- Edw. J. Brennan
- J. H. Babcock
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- F. C. Bridgeport
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- J. J. Gaffney & Sons
- W. Graham
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- James Hamilton
- Wm. M. Hazlett
- Julius Holtzman
- J. C. Humphreys & Sons
- Hymowitz & Sons
- C. F. Hoffman
- Adolph G. Jacobs
- John Jefferson
- George Katz
- Wm. H. Kensill & Son
- Wm. Kerr
- S. Levine
- L. Leibig
- Alex. McBain
- R. McGonnigle
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- H. Mulvaney
- Wm. Meehan
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- A. J. Miller, Jr.
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- Thos. J. O'Neil
- Parlett Bros.
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- Jos. Raynor
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- Sorkin & Guitanoff
- J. D. Sumption
- Smith & Dawson
- R. Stonehill
- Harry Spadling
- Wm. J. Trimble
- Thomas Brothers

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- Wm. Walker & Son
- Wall Bros. & Co.
- M. Williams
- Chas. Wilkinson
- E. J. Wood & Co.
- Weitz & Perez
- Upper Darby
- W. S. Thomas
- Pittsburgh
- J. C. Laffin
- J. C. Baxendell
- East Liberty Plastering & Stucco Co.
- Washington
- Geo. B. Fulton
- York
- Geo. R. Olthen
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- Stour Falls
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- TEXAS
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- Couchman & Son
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- F. G. Mannan & Sons
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- Williamson-Greer Co.
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- J. Lozyone
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- S. Lozupone
- A. M. Lee
- O. O. Laurant
- Murray Bros.
- Fred A. Nelson
- S. Pollinger
- I. Sherman
- P. Vasco
- Charles E. Walter
- Louis B. Zolly
- WISCONSIN
- Ashland
- Sam Jensen

THE NATIONAL COUNCIL FOR BETTER PLASTERING  
1305 Madison Square Building, Chicago, Ill.

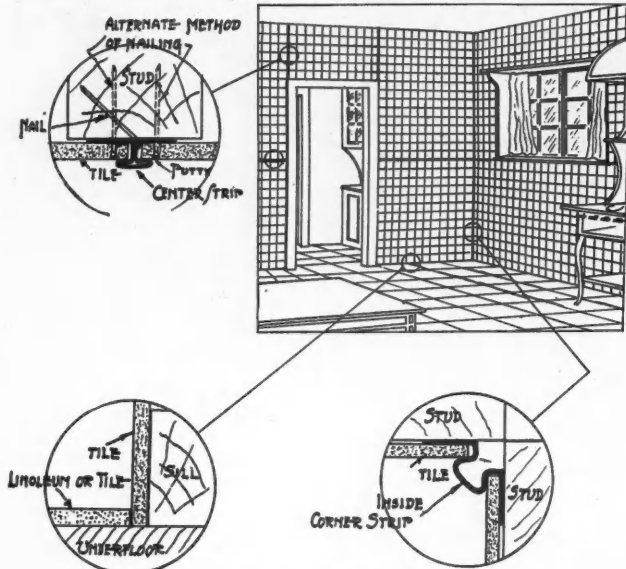
# ON METAL LATH



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

### Glazed Asbestos Tile

SOMETHING quite new is a tile made of asbestos, pressed into a rigid sheet of convenient size and given a permanent, highly glazed surface in various colors and finishes. It can be applied to any wall surface by any carpenter or handy man and gives an excellent replica of either ceramic tiling or finely polished wood paneling.



This Sketch Shows the Method of Applying the Asbestos Tile with Metal Fastening Strips and Also by Nailing.

This tile is thoroughly fireproof, being made of asbestos, and is highly sanitary because its surface can not absorb any foreign matter and can be washed easily with soap and water. It will not lose its finish from any ordinary cause. As compared with ceramic tiling or wood paneling it offers important economies, according to the manufacturers. Its first cost is said to be one-quarter the price of tiling and it can be applied in much less time by less experienced labor.

It is also stated that this tile costs practically nothing for maintenance and never requires refinishing. The finish is obtained by a process of glazing during its manufacture, making the finish a part of the sheet itself. The finish is not a paint or varnish but a glazing. It can be obtained in white, cream, Tiffany gold, marble, mahogany and walnut finish. The regular finish is a high glaze but a satin finish is furnished if desired. The sheets come in the following sizes: 32 by 48 inches, 48 by 48 inches, and 48 by 96 inches. Special sizes are made to order.

This tile is attached directly to the studs in a wood building or against furring strips in concrete or hollow tile buildings. Metal center strips, inside corner and outside corner metal strips, are furnished, of the same color as the sheets, and these are first nailed to the studs or strips and the sheets are securely placed in them. While this tile can be nailed or screwed, the metal strips make a better job and by their use hide all joints, making a good job and permitting the work to be done very rapidly. Top moulding and base moulding are also furnished at a small extra charge. The tile may also be applied over plaster or insulating material if desired.



### Colored Finishing Plaster

A READY-MIXED, colored, finishing plaster, which has been developed by one of the largest manufacturers of gypsum products, offers many new possibilities in the finishing of homes and other buildings. This plaster is colored in nine standard colors and white with mineral

pigments which are absolutely permanent and, being scientifically, mill mixed, there is absolute uniformity of color. When received on the job it is only necessary to add water to this plaster and apply.

Not only is the mineral pigment used unfading but, as it is an actual part of the material, should some place on the wall ever be chipped by accident, it will not show white beneath the surface. This plaster is, however, extremely durable and will stand wear and tear exceptionally well without chipping or cracking. It is also very sanitary as it may be washed, whenever it becomes soiled, with pure soap and water.

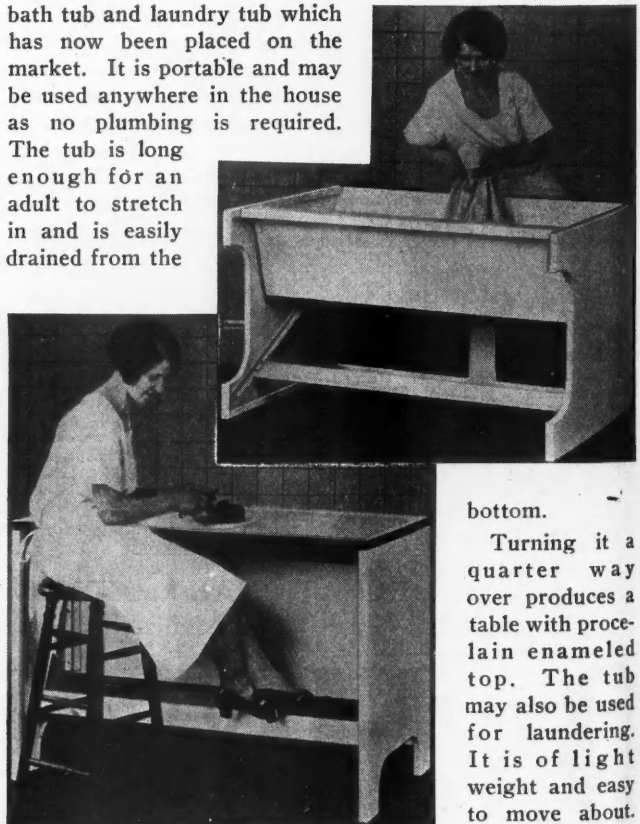
When this plaster is used, no other wall finish or decoration is required but, should a change of color ever be desired, paint may be applied over the plaster just as with any other wall surface. Very attractive rough finishes, of the sort which are now so popular, may be obtained by simple cork, carpet or felt floating. Tile effects can be secured by scoring the wall, with a straight edge as a guide, before the plaster has hardened.

The handling of this material is so simple that it effects a saving in time, producing excellent results with a minimum of labor. In addition it effects an appreciable saving of time in the completion of apartments and other large buildings. It is furnished in moisture proof bags and will keep fresh in storage.



### Combination Tub and Table

OF particular value in new subdivisions and other places where water supply is not available, is a recently invented combination table and bath tub which has now been placed on the market. It is portable and may be used anywhere in the house as no plumbing is required. The tub is long enough for an adult to stretch in and is easily drained from the



bottom.

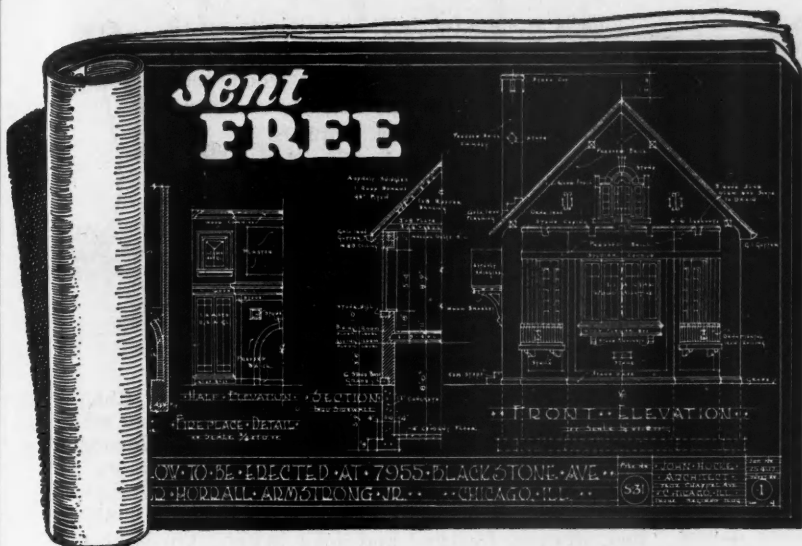
Either a Table or a Tub Is Available by Simply Tipping to One Side or the Other.

and requires no tablecloth when used for dining. The tub table is 48 inches in length, 27 inches in width, and 32 inches in height. This is the standard table height. The tub is of sheet steel and has welded joints.

R. G. THACKWELL.

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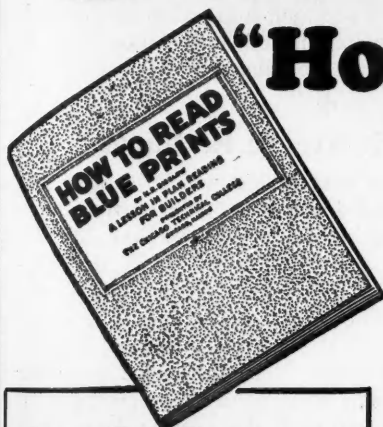




# Mail the coupon for Blue Print Plans and 24-page Book:

## “How to Read Blue Prints”

Blue Prints are interesting to every man in the building trades. And more! They are the key to every builder's success. For until you can read and understand blue prints you will probably have to be satisfied with only a scale wage. The man who can read blue prints can become foreman, superintendent, or have a business of his own. To help every man who really wants to make money and get ahead in building, Chicago Technical School for Builders offers absolutely free these Blue Print Plans and a 24-page book “How to Read Blue Prints.”



### You Can Become a Building Expert

**Plan Reading.** Every man who has got very far ahead in any building trade can read blue prints. No man can expect to be a first rate foreman or superintendent until he knows what every line on a plan means and how to lay out and direct work from the architect's plans. By the Chicago Tech. Method you quickly learn to read any plan as easily as you read these words.

**Estimating.** Of course a man who wants to be a contractor or to hold a big job in a contracting organization must know how to figure costs of labor, material, and everything else that goes into any kind of building. The Chicago Tech. Course covers every detail of this important branch—shows you just how it is done from actual blue print plans.

**Superintending.** How to hire and direct men, how to keep track of every detail of construction as it goes on, how to get the work done in the least time at the lowest cost is also fully covered in the Chicago Tech. Builders' Course.

Also special courses in Architectural Drafting for builders, taught by practical men. These explained in Special Catalog “D” sent on request.

### What this book is

This book is written by an expert ... a practical builder who knows the game from top to bottom. It tells how different materials are shown on blue prints, how “sections” and “elevations” are shown on plans, how to lay out a building from a plan, how to take off quantities ... and all the other interesting and important facts regarding blue prints. The book is as easy to read as your newspaper ... written in plain, everyday English that everyone can understand. “How to Read Blue Prints” will be mighty helpful to you. Aside from the real help it gives you it will show you how clear and plain and easy the Chicago Technical Builders Course is ... how quickly you can learn in your spare time .. at home ... to become a building expert.

### If You Live in or Near Chicago

Visit our School for Builders, open day or evening. 500 carpenters and builders attend each year. You can get the same training *at home*, by mail. Same plans; same lessons; same instructors. The Coupon brings all facts *Free*.

### Learn at Home to make more money

For 23 years the Chicago Tech. School for Builders has been training men to advance and make more money in building. Hundreds of successful men, superintendents and contractors, owe their success to their Chicago Tech. training. We train you by mail ... in your spare time ... at home.

### Send the Coupon ... Now

With the free Blue Print Plans and our book “How to Read Blue Prints” we will send you another book ... also sent absolutely free. It tells all about the Chicago Tech. Builders course ... directed by practical building experts ... tells what others say this course has done for them ... shows pictures and gives all the facts about our method of training men ... quickly ... for the jobs that pay most money. This may be your golden opportunity. It costs you nothing to find out all about it. So send the coupon in *now* ... for the free plans and books.

### Mail the Coupon—NOW

#### CHICAGO TECHNICAL SCHOOL FOR BUILDERS

Dept. 1136, Chicago Tech. Bldg., 118 East 26th St., Chicago, Ill.

Please send me without obligation your Free Books and Blue Prints for men in the Building Trades. Send postpaid to my address below. It is understood that no salesman will call on me.

[Write or print name plainly]

Name .....

Address .....

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

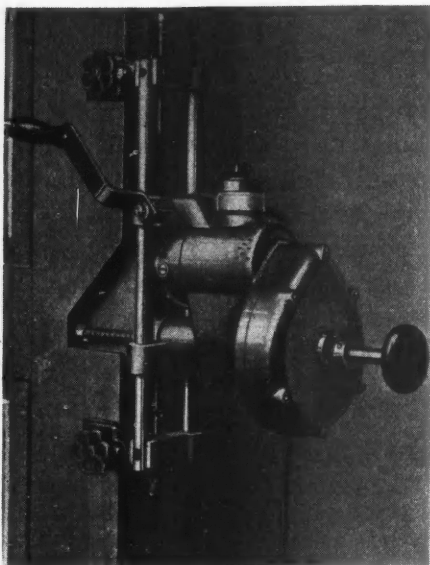
## CHICAGO TECHNICAL SCHOOL FOR BUILDERS

Dept. 1136, Chicago Tech. Building, 118 E. 26th St., Chicago, Ill.

### Fast Working Door Mortiser

**A**N electric door mortiser is being manufactured which, it is claimed, is thirty times faster than the brace and chisel method. The outstanding feature of this tool is the fact that it mortises the door for the lock-face plate as well as for the cylinder. This operation is considered the most particular and most costly part of the lock-fitting because the mortise must be accurate as to width and depth so the lock plate fits perfectly.

This mortiser is equipped with a universal motor, 3/10 horsepower, and will operate from any light socket, either alternating or direct current. Positive and adjustable stops are provided for regulating the length and depth of the mortise. Twelve sizes of cutters, ranging from 3/8 inch to 15/16 inch diameter, are provided to suit the size of the lock. The cutter screws into the end of a long spindle. This spindle is fed into the door by light pressure of the right hand and, while revolving at high speed, is worked up and down by means of a crank handle in the left hand.



This Electric Mortiser Mortises for the Lock Face Plate as Well as the Cylinder.

Self-centering clamps and rigid construction insure perfect accuracy. It is a sturdy tool and fitted to withstand long hard service.



### Coloring Concrete Floors

**A** SURFACE treatment for hardening concrete floors, which at the same time produces, by chemical reaction, beautiful, cloud-like color effects, is the latest addition to a well-known line of products. The treatment is applied to any clean cement floor, wall or other surface which is free from stain, oil, grease or other foreign matter. The application is simple and the results are positive.

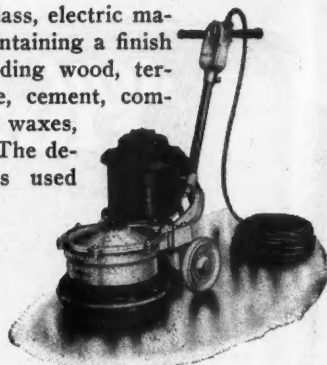
The convenience of a liquid surface hardener is well known. This product combines all the advantages of this type of treatment with the added advantage of permanent colors which are not only beautiful but also sun and water proof. These colors include Flemish oak, palmetto green, Nile green, cordovan, weathered bronze, jade and duotone in which these colors are combined.



### Improved Electric Floor Machines

**A** NEW electric floor machine has been brought out the outstanding feature of which is the instantaneous changes which can be made of the various attachments which it uses. This is of particular advantage as a time saver in large apartment buildings and public buildings.

This is a powerful, high class, electric machine for producing and maintaining a finish on all kinds of floors including wood, terrazzo, marble, linoleum, tile, cement, composition or metal. It cleans, waxes, polishes, scrubs and sands. The detachable brushes and discs used have a diameter of 13 inches and operate at 250 revolutions a minute with a pressure of 85 pounds. The 1/2 horsepower motor is operated by current through a cable and plug attachment to a light socket.



Instantaneous Change of Brushes and Discs with This Floor Machine Means Time Saved.

According to the manufacturers, under ordinary conditions this machine will do the work of eight to 12 men working by hand and do it better. On large areas it will wax 3,000 square feet per hour and polish at the same rate. It is of high grade materials and construction throughout and is furnished with a complete set of attachments and 50 feet of cable.



### New Electric Steam Radiator

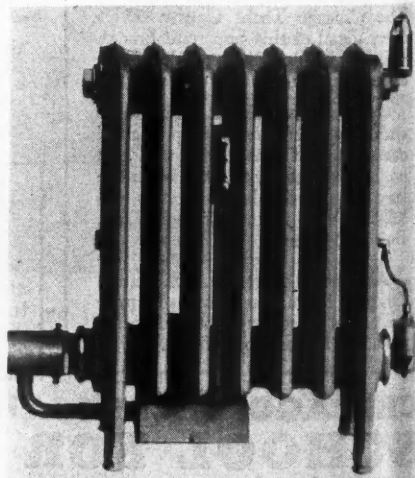
**A** STEAM radiator of new design which is heated by electricity is a recent invention. One of the special features of the new heating system is the low monthly cost of operation. The automatic control is the main feature and is responsible for its remarkable performance and economy of operation. The instant that the heater reaches the degree of heat desired, the automatic control cuts off the supply of electric current. Thereafter the automatic control permits enough current to be used to maintain the heat, thus saving the electricity, the current being consumed only about half the time.

The steam generating unit consists of a nicrome wire embedded in a finely ground chemical powder which is converted into a solid mass of high density through a special process. When so treated, this powder becomes one of the best known conductors of heat. Thus all the heat from the element is transmitted through the powder and used to generate steam. And at the same time air is absolutely prevented from coming in contact with the element, and thus the element is permanently maintained at its maximum efficiency.

In order to provide just the amount of heat desired there is a three-way heat control for high, medium and low heat. The new heating system requires very little attention. Once every two or three months it becomes necessary to place about a cup of water into the filler cap, the height of the water being shown by means of a water gage. A safety valve is provided to prevent the steam pressure from becoming too great.

The radiator is designed on new and exceedingly graceful lines. Its beauty will make it harmonize with the most tasteful interior.

C. W. GEIGER.



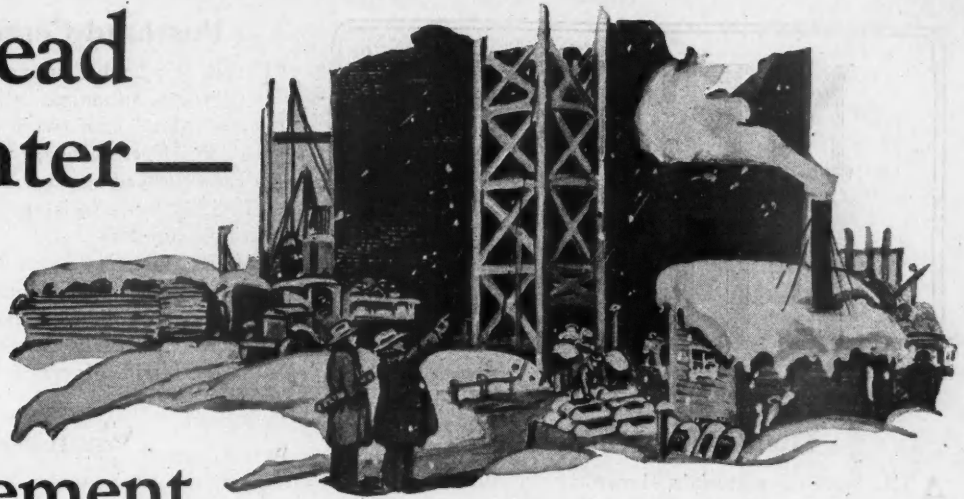
An Automatic Control Which Makes for Economical Operation Is the Feature of This Electric Steam Radiator.

"We for all br mortar of with very Masor ing was d spite the was very Your ly under quickly ar small spa hard bon As su our satis ment of C say that v much oth continue jobs."

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In the dead  
of winter—



**Carney Cement  
did this job in record time!**

READ what Henry Janisch has to say about his experience with Carney Cement on the Eastgate Hotel job at Chicago last winter. He not only did the job in record time, but Carney Cement produced a perfect wall.

Freezing in the wall does not affect the quality of the Carney Cement Bond. This feature not only insures a perfect cold weather mortar, but the simple mix of Carney Cement Mortar actually cuts down labor costs. One man with a mixer can supply a crew of 30

masons with Carney Cement Mortar, because there is no soaking to be done and no lime needed.

The masons, too, will show a substantial increase in the number of brick they can lay in a day with Carney Cement Mortar. Its slower set, before going into the wall, makes tamping and tempering on the boards unnecessary.

Give Carney Cement a shot at one job—winter or summer. Then you'll see why H. Janisch & Company goes to bat so strong for it.

"We used Carney Cement for all brick, tile and terra cotta mortar on the Eastgate Hotel job with very fine results.

Masonry work on this building was done in record time, despite the fact that the weather was very cold.

Your mortar works excellently under the trowel, can be quickly and handily prepared in small space, and makes a good hard bond in the wall.

As substantial evidence of our satisfaction and endorsement of Carney Cement, we can say that we are now using it on much other work, and expect to continue to do so on future jobs."

HENRY JANISCH,  
H. JANISCH & Co.,  
Chicago, Illinois.

**THE CARNEY COMPANY**

District Sales Offices: Cleveland, Chicago,  
Detroit, St. Louis and Minneapolis.

Specifications:

1 part Carney Cement  
to 4 parts sand.

*Cement Makers*  *Since 1883*

**CARNEY CEMENT**  
*for Brick and Tile Mortar*

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

# NEWS of the FIELD

## Own Your Home Plans

ALL building materials shown at the 1927 annual New York and Chicago "Own Your Home Expositions" must submit to a severe test before they are accepted by the management under a new policy laid down in each city. At the New York Ninth Annual Exposition to be held in Madison Square February 19 to 26, 1927, and the Seventh Annual Exposition to be held in Chicago at the Coliseum April 2nd to 9th, this plan will be known as an "inspection before acceptance for exhibition."

Commenting on this action, Robert H. Sexton, managing director, who inaugurated these shows nine years ago, said: "As a result of this decision there will be accepted for exhibit only building materials that are included in the official classification covering the character of building materials eligible for exhibit, and then only after each individual concern has been approved and recommended by the exhibit committee under whose classification it belongs. Following this is a test of material quality by the Architectural Committee on Management, whose final approval is necessary before the product is accepted for exhibit."

## Automobile Shipping Service

FOR those who are planning a trip to California this winter and wish to take their automobiles with them, a new service which has been provided by the Automobile Club of Southern California will be of much interest. The club will communicate with its representatives in the various cities having them take charge of the cars and deliver them to Los Angeles. This service will not cost the owner anything except the regular freight and loading charges. The cars will be handled by skilled employes and the saving on each car shipped will amount to from \$35 to \$75 and upwards. This service is extended to all motorists whether belonging to any automobile club or not. Full information can be secured by addressing the Forwarding Department, Automobile Club of Southern California, 2601 South Figueroa Street, Los Angeles, Calif.

## Birmingham Office Expanded

THE American Steel & Wire Company has maintained a sales office in the Brown-Marx Building, in Birmingham, Ala., for the sale of several of the leading products manufactured in the Fairfield mills ever since those mills were built. This office has served the district including Alabama, Mississippi and Louisiana. It has now been decided to greatly enlarge the scope of the Birmingham office for serving the trade in the most prompt and efficient manner to cover all products manufactured by this company. J. J. Gilmore, heretofore in charge, has been promoted to be sales manager with a competent force in his office and sufficient traveling representatives to keep in close touch with the trade of the district.

## Portland Cement Appointments

THE Portland Cement Association, 33 W. Grand Ave., Chicago, announces the following appointments in its general office staff which became effective October 1st:

C. R. Ege, Manager, Advertising and Publications Bureau, succeeding H. C. Campbell, who has resigned.

G. S. Eaton, Assistant Manager, Advertising and Publications Bureau.

W. E. Hart, Manager, Highways and Municipal Bureau. (Formerly Highways Bureau.)

F. R. McMillan, Manager, Structural and Technical Bureau. (Formerly Structural Bureau.)

T. J. Harris, Manager, General Educational Bureau.

## Changes in Personnel

THE Great Southern Lumber Company, Bogalusa, La., has announced that A. C. Long, Jr., formerly assistant sales manager of the Great Southern Lumber Company, the Bogalusa Paper Company, Inc., and the Bogalusa Turpentine Company, has been made sales manager of the Bogalusa Paper Company, giving his entire time to the marketing of its products. George A. Poteet, formerly in charge of the Indianapolis office of the Great Southern Lumber Company, has been moved to Bogalusa as assistant sales manager for the company, his attention being given entirely to the marketing of Bogalusa lumber products.

## Paint Associations Merged

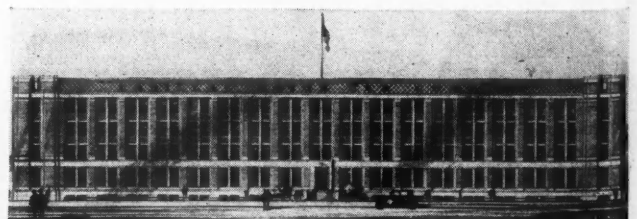
A CONSOLIDATION of the Paint Manufacturers' Association of the United States and the National Varnish Manufacturers' Association, was completed at the conventions of the two organizations held in Washington, D. C., during the week of October 12 to 16. The new organization, which will be known as The American Paint and Varnish Manufacturers' Association, chose Frank P. Cheesman as its first president. The retiring presidents of the two old organizations, J. Sibley Felton and A. D. Graves will serve as vice-presidents.

## Cadillac Program Completed

WITH the completion, September 15, of a new \$600,000.00 administration building, the Cadillac Motor Car Company has brought to a close a building and equipment program which was begun in 1919, and which has involved a total investment of over \$25,000,000.

The new structure, with a frontage of 321 feet and a depth of 56 feet, occupies a central position among the other plant buildings. It is thoroughly fireproof, four stories high above the basement, and the structural supports of reinforced concrete provide for a fifth floor when needed. It conforms generally in architecture with the remainder of the plant, and, in addition, has an exterior of ornamental brick and Bedford limestone.

The general contractors were the Albert A. Albrecht Company, Detroit, and the architects and engineers, Albert Kahn, Incorporated, Detroit.



The New Administration Building of the Cadillac Motor Car Company Which Completes a \$25,000,000 Building and Equipment Program.



## Low Cost of Replacement Parts and Unusual Accessibility

### Keep GMC Maintenance Costs Low

Many a GMC Truck, 5 years old and more, has had *less than \$10 a year spent on it for replacements*. This is not due to chance but is the direct result of General Motors efforts to simplify and make quickly accessible all the parts that are subject to wear.

Every wearing part of a GMC Truck is so designed as to assure *a minimum cost of replacement*. Most parts subject to wear can be immediately replaced from stock. Many of them, such as engine bearings, steering gear parts, etc., are interchangeable:

While such GMC features as detachable cylinder heads, removable cylinder walls and removable valve lifter assembly make the replacing of worn parts a quick and easy job and *reduce labor costs and time-out-for-repairs to a minimum*.



Sold and Serviced Everywhere by Branches, Distributors and Dealers of

**GENERAL MOTORS TRUCK COMPANY**  
5800-6600 W. Dickens Ave.  
CHICAGO, ILLINOIS

A DIVISION OF YELLOW TRUCK AND COACH MANUFACTURING COMPANY

GMC 1, 1½ and 2½ ton trucks

GMC Big Brute 3½ and 5 ton trucks GMC Big Brute 4 to 15 ton Tractor Trucks

Yellow Cabs Yellow Coaches Yellow-Knight Delivery Trucks Hertz Drivurself Cars

### Standard Company Expands

**A**NNOUNCEMENT has been made by J. W. Robson, president of the Standard Varnish Works, 443 Fourth Avenue, New York City, that arrangements have been completed whereby the Standard Varnish Works will acquire the entire capital stock of E. R. Bohan & Co., of Los Angeles, Calif., manufacturers of paints and varnishes and for several years jobbers of Standard Varnish Works' products for southern California. The company plans to greatly expand its western business through this connection and will erect a modern plant as soon as it can be arranged.



### Wayne Company Changes Name

**O**FFICIAL announcement has been made of the change of name of the Wayne Tank and Pump Company of Fort Wayne, Indiana, to the Wayne Company. Permission for the change was granted for the reason that the old name is no longer representative of all the products made by the company which, in addition to gasoline pump and tank line, also manufactures Wayne oil burners, water softeners and electric refrigerators for homes and Wayne industrial water softeners. The change in no way affects the business status or policies of the company.



### Unusual Demonstration Made

**A**N unusual exhibition was made before the Master Carpenters' Association of Milwaukee by the DeWalt Products Co., of Chicago, on October 11. At this exhibition the DeWalt "Wonder Worker" was thoroughly demonstrated in its particular adaptation to building from the inception of the building project to its completion.

This demonstration was far more effective and satisfactory than the ordinary procedure of merely sawing up a few small boards.



### Beam Department Expanded

**T**HE rapid expansion of the market for the Junior Beam manufactured by the Jones & Laughlin Steel Corporation, of Pittsburgh, has made the expansion of the Junior Beam Department necessary. Vernon C. Ward, of Chicago, has been made manager of the new department which handles the marketing of this light weight, rolled steel, structural section applicable to floors and roofs in building and dwelling construction.



### New Sargent Headquarters

**S**ARGENT & COMPANY, manufacturers of locks, hardware and tools, has removed its Chicago office, display room and warehouse, formerly located at 223 W. Randolph Street, to the Sargent Building, Wacker Drive at Randolph Street, where it will have better facilities for handling its business. Its telephone numbers remain the same.



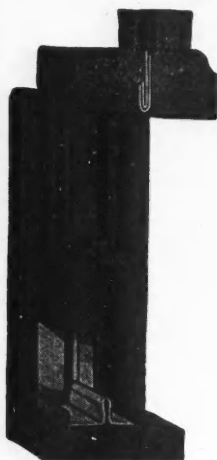
### Governors' Day at Road Show

**M**ORE than 70 active and former governors will be asked to participate in a Governors' Day program to be held in Chicago on Tuesday, January 11, in connection with the twenty-fourth annual convention and road show of the American Road Builders' Association. All former governors as well as those now in office will be asked to attend, and special problems of interest to state executives will be discussed by speakers of international importance.

# ALLMETAL WEATHERSTRIP

## Contractors

## Make Your Own Weatherstrip Installations



**Y**OU can save about 50% of the cost of nearly every weatherstrip job by having the work done by your own men.

On cold rainy days when outside building work is stopped, you can turn the idle hours of your permanent staff into profit-making hours by doing your own metal weatherstrip work.

ALLMETAL Weatherstrip is sold cut to size required for each opening. It is easily installed and our "Directions for Installing" book enables any good mechanic to install the material perfectly.

*We Loan Necessary Tools*

----- RETURN COUPON TODAY FOR SAMPLES -----

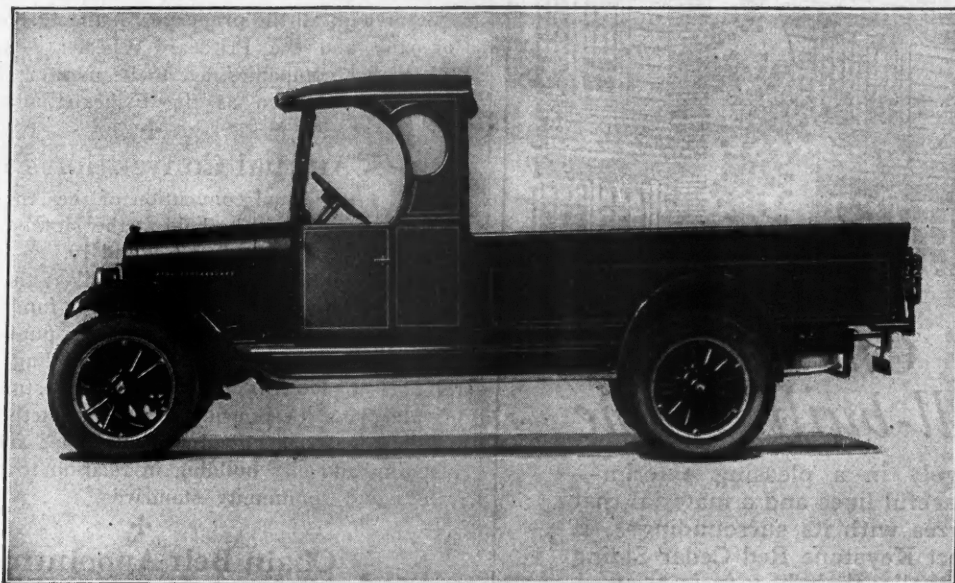
**ALLMETAL WEATHERSTRIP COMPANY**

231 West Illinois Street, Chicago, Ill.

Gentlemen: Without obligation, please send me samples and literature.

NAME.....  
 ADDRESS.....  
 CITY..... STATE.....

*for Economical Transportation*



# *Just look at a Chevrolet Truck!*

If you want to learn what an amazing measure of truck value you are offered at Chevrolet's sensationally low prices, just look at a Chevrolet Truck! Look at the husky rear axle, the sturdily-braced six-inch channel steel frame, the heavy-leaved, semi-elliptic springs and oversize brakes! Notice the big motor, the semi-re-

versible steering gear and the 3-speed, sliding gear transmission! Check these Chevrolet-built Trucks from front to rear! Compare them in any way you want with any comparable priced truck you want—and you will quickly realize why thousands of truck buyers all over America are enthusiastically turning to Chevrolet!

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN  
*Division of General Motors Corporation*

*Now reduced to:*

**1/2-Ton Truck \$375**    **1-Ton Truck \$495**  
*Chassis Only*                      *Chassis Only*

*All Prices f. o. b. Flint, Michigan*

## **World's Lowest Priced Gear-shift Trucks**



## The Charm of a Well-built Home

lies largely in a pleasing exterior—trim, graceful lines and a material that harmonizes with its surroundings. If you select Keystone Red Cedar Siding for side-walls, their beauty is assured.

Builders are finding that it is easier to build with this smooth, easily worked, light lumber, and that houses sided with it are easier to sell. Home buyers are attracted by its charm and appreciate its durability and high insulating qualities which keep the home warmer in winter and cooler in summer.

Houses with walls of this smooth, tight-fitting lumber will give enduring satisfaction to those who dwell in them.

Write today for valuable information about this super-quality lumber.

HAMMOND CEDAR CO., Ltd.  
New Westminster, B. C., Canada

Western  
**Red Cedar**

"The Wood That Nature Armed Against Decay"

is recognized as the most durable lumber that can be used for outside work, in any place subject to exposure, to dampness or storm. It is practically immune from rot, because of a natural oil which it contains.

**KEYSTONE**  
**RED CEDAR SIDING**

"Smooth as a Kitten's Ear"

## Fisher Buys Hardwood Timber

THE latest move of the Fisher Body Corporation, said to be the world's largest manufacturers of automobile bodies, in the rivalry between the wooden frame and the steel frame for such structures, is the purchase of 60,000 acres of hardwood timber in Louisiana and Arkansas. This brings the Fisher northern and southern hardwood holdings, all of which have been acquired within the last three years, up to 1,500,000,000 feet.

The corporate ownership of the recent purchases, together with all the properties of the Fisher-Hurd Lumber Company and the Pritchard-Wheeler Lumber Company, both Fisher companies, are to be merged into a new company to be known as the Fisher Lumber Corporation.

## Annual Convention Plans

THE fifth annual convention of the American Construction Council will be held at the Hotel Cleveland, Cleveland, Ohio, on November 8, 9 and 10.

Under the auspices of the council at this time will be a series of conferences dealing with the fundamental relations of the construction industry to the public on such vital subjects as the permanency of building construction in relation to hazards of life and investment; public and private plans for housing financing; methods of certifying building materials; good workmanship; and town and city planning and city building in relation to city growth, city values and community standards.

## Chain Belt Appointments

PETER VERHEY, for many years identified with the construction industry, has been appointed southern district manager for the Chain Belt Company, Milwaukee. He will manage the sales and distribution of the company's line of Rex concrete mixers and pavers with headquarters at Atlanta, Ga. Mr. Verhey, prior to 1919, was connected with J. F. Casey at Pittsburgh and J. I. Green & Co. at Chicago. He later went into the contracting business for himself and during 1923 and 1924 built over one million dollars worth of concrete roads in Illinois.

The company also announces the appointment of George E. Soursey and E. E. Elsey as its special representatives in southern Ohio, southeastern Indiana and eastern Kentucky. The firm of George E. Coursey is located at 701 Union Central Building, Cincinnati, Ohio.

## Establish New Department

THE Massillon Steel Joist Company, 909 Belden Avenue, N. E., Canton, Ohio, has rounded out its line of standardized steel building products with a miscellaneous iron and steel department. This department will handle a line of standardized stock items for the general building purposes. It includes area gratings, sidewalk doors, window guards, basement windows, coal hole rings, coal chutes, etc. Of particular interest to the mason, cement, and plastering contractors is the new line of steel mixing boxes and mortar boards. Jack Edwards, former Cleveland district manager, has been brought in to handle the increasing activities of the new department.

## Appointed Sales Manager

J. D. WALLACE & COMPANY, 136 South California Avenue, Chicago, manufacturers of portable wood-working machinery, announces the appointment of J. B. Murphy as sales manager of its New York office. Mr. Murphy was formerly assistant general sales manager at Chicago. M. A. Cole succeeds Mr. Murphy at Chicago.





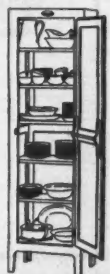
*Here is a thoughtful  
booklet*

We want to send to every architect and home-builder in America a carefully prepared booklet which we now have ready for mailing, in which is interestingly set forth the need of taking the kitchen cabinet problem into consideration at the time the home-plans are made. Some architects are not thinking far ahead in this important matter of kitchen equipment. G. I. Sellers & Sons Company, Elwood, Indiana, will gladly mail to you a copy of this booklet upon your request, without cost and without obligation.

*The cheapest kitchen  
equipment*

As compared with built-in cupboarding, the modern kitchen cabinet, especially with the associated utility closet, is certainly more beautiful, more sanitary, and much more highly developed in labor-saving conveniences. It is also equally flexible because it can be combined with utility closets to fit any need. It costs less than built-in shelves, being made and finished by standardized methods as against slow hand work. No cupboarding, however elaborate, can possibly take the place of the modern kitchen cabinet.

**SELLERS**  
KITCHEN CABINETS



SELLERS  
UTILITY  
CLOSET

## Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

The Kerner Incinerator Co., 753 E. Water St., Milwaukee, Wis., has published a very handsome, illustrated booklet on its chimney-fed incinerators for installation in all type of construction.

The Buffalo Forge Co., Box 985, Buffalo, N. Y., has just published a new catalog No. 466, of its products, including the Breeze-Fin heater and the new Hi-Pressure units.

The Weatherbest Stained Shingle Co., Inc., 119 Main St., North Tonawanda, N. Y., has just published another group of color photogravures illustrating houses on which Weatherbest shingles have been used.

"Cornell Rolling Doors" is the new catalog prepared by the Cornell Iron Works, Inc., Long Island City, N. Y., completely illustrating and describing its products.

The Chicago Pump Co., 2300 Wolfram St., Chicago, offers loose leaf catalog covering its line of condensation, vacuum, sump, sewage, house, circulating and fire pumps.

Van Guilder System Concrete Building, Inc., 15 E. 40th St., New York City, now has a new edition of its "Van Guilder Wallbuilder" catalog and will be glad to fill any requests for it.

The T. L. Smith Company, 1026 32nd St., Milwaukee, Wis., announces a Western Road Show Paver and Mixer Booklet which has been published in connection with this company's exhibit at the Road Show.

"Save the Surface News" No. 4 of Vol. 7, published by the Save the Surface Campaign, New York City, is devoted to the Save the Surface Home at the Sesqui-Centennial Exposition.

The Kenney-Cutting Products Corp., 507 Fifth Ave., New York City, offers a new catalog C on the Kenney-Cutting needle shower which is fully illustrated with photographs and drawings.

"Early English and Colonial Hardware" is illustrated and cataloged in a booklet under that title published by P. and F. Corbin, successor to The American Hardware Corporation, New Britain, Conn.

The Wall Paper Guild, 461 Eighth Ave., New York City, has issued a booklet under the title "Wall Paper House," describing and illustrating the exhibition house at the Sesqui-Centennial Exposition.

The American Society for Testing Materials, 1315 Spruce St., Philadelphia, Pa., has now published a book containing the A. S. T. M.'s standards adopted in 1926. Price \$1.50.

The Central States General Electrical Supply Co., 316-26 S. Wells St., Chicago, has issued a new catalog of Maxolite industrial reflector for shops, warehouses, factories and similar buildings.

"Cottages, Manors and Other Minor Buildings of Normandy and Brittany," by William D. Foster, published by The Architectural Book Publishing Company, 31 E. 12th St., New York City, is a handsome volume containing illustrations from photographs taken through the less traveled roads of France. Price \$12.50.

"American Apartment Houses of Today," by R. W. Sexton, published by the Architectural Book Publishing Company, 31 E. 12th St., New York City, is a complete treatise illustrated with plans, details, exteriors and interiors. Price \$16.00.

The Marietta Manufacturing Co., 91 Brookside, Indianapolis, Ind., has published a very handsome booklet in colors on new methods of treatment and new ideas for decorative effects with Sani Onyx.

# Build and Sell Homes in the Suburbs Now —Don't Wait for Sewers

"Out to the suburbs," is now the nation-wide cry. The city dwellers want plenty of lawn, green grass, garden, orchard, sunshine and blue sky. Folks are tired of living where they daily toil for their bread and butter.

People realize that it is not necessary to live in the city nowadays just for the sake of city comforts and conveniences. Modern homes with sanitary plumbing are now easily procured anywhere.

The problem of sewage disposal is perfectly solved with the safe, modern, economical

## *San-Equip* Septic Tanks

for all unsewered districts. Don't let lack of sewers worry you.

San-Equip Septic Tanks follow U. S. Public Health Service design. Thousands are in use. No failures. Fully guaranteed. Easily installed.

### Write for Our Free Plan Sheets

Sell San-Equip Septics with the lot or use our free plan sheets to help you sell. Our advertising is telling more than half your prospective home buyers about the San-Equip idea of sewage disposal.

San-Equip Septic Tanks are rust-proofed copperoid iron tanks—correct design—water tight—unbreakable—ready to connect.

Look one over at our risk. Prompt shipment from warehouse near you.

## CHEMICAL TOILET CORPORATION

901 FREE STREET, SYRACUSE, N. Y.



# SISALKRAFT

Reg. U. S. Pat. Office

The 20th Century Building Paper

Because it is **ECONOMICAL**  
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**2** Layers of Iowa Sisal Fibre **TOUGH**  
make it . . . . .

**2** Layers of High Grade **WATERPROOF**  
Asphaltum make it .

**2** Layers of No. 1 Kraft Paper **CLEAN**  
outside make it . . . . .

**UNEQUALLED** for sheathing  
under stucco,  
brick veneer, shingles, clapboards; under floors  
prevents dust and moisture passing through.

**PROTECTS** buildings, partitions,  
temporary work,  
stock piles, etc., during construction—and can  
be used again for sheathing.

Stocked in rolls 36, 40, 48, 54, 60 inches wide, and  
containing 500, 900, 1000, 1350, 1500 sq. ft. respectively.

Weight: Approximately 45 lbs. per 100 sq. yds.

*Sold in New England under Name  
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**American Reenforced Paper Company**  
ATTLEBORO, MASSACHUSETTS

### Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

The Edison Lamp Works of the General Electric Company, Harrison, N. J., offers a series of booklets on lighting subjects under such titles as "Motor Car, Garage and Display Room Lighting," "Lighting of Offices and Drafting Rooms," "Theory and Characteristics of Mazda Lamps," "Calculation of the Lighting Installation."

"Triangle News" is published monthly by the Richardson & Boynton Company, 260 Fifth Avenue, New York City. The mid-summer issue contains a number of interesting features.

The Concrete Surface Corporation, 342 Madison Ave., New York City, offers a pamphlet on "Bonding Surfaces on Concrete Produced by Bonding Con-Text," a product manufactured by this company.

The Massillon Steel Joist Co., 909 Beldon Ave., N. E., Canton, Ohio, has published a pamphlet containing a report of a fire test conducted by the Pittsburgh Testing Laboratory of a standard Massillon bar joist floor.

S. C. Johnson & Son, Dept. A.B. 10, Wis., has prepared a very informative booklet under the title "The Proper Treatment of Floors" which covers this subject for all type of floors. Price 25 cents.

F. D. Kees Manufacturing Company, Beatrice, Nebr., offers Bulletin No. H-10, including catalog section 1 and 2, of its line of builders' hardware and hardware specialties.

The A. C. Horn Company, 1410 Horn Bldg., Long Island City, N. Y., offers a very complete group of

pamphlets and booklets covering its concrete waterproofing and coloring products. Special attention is called to a handsome booklet in colors on "Keramik—a color penetrant for concrete surfaces."

"Concrete Designers' Manual," by George A. Hool and Charles S. Whitney, McGraw-Hill Book Co., Inc., New York City. This is a thoroughly revised, second edition of this well-known book of tables and diagrams for the rapid designing of reinforced concrete. Price \$4.

"Design of Concrete Structures," by L. C. Urquhart and C. E. O'Rourke, McGraw-Hill Book Co., Inc., New York City. This is a revised, second edition of this widely used text which has been amplified and rewritten in many parts. Price \$4.

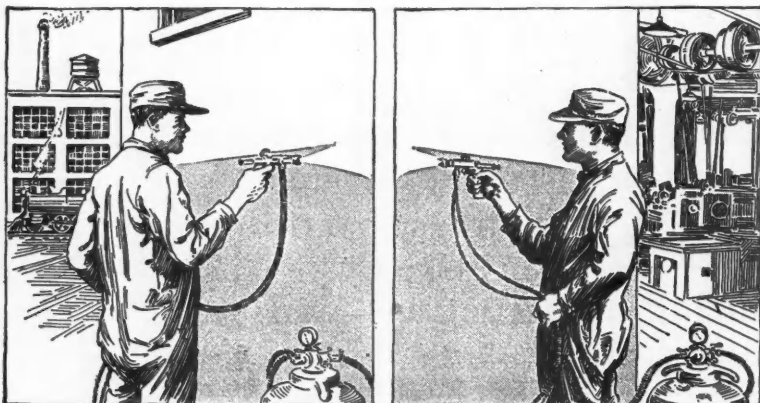
Allith-Prouty Company, Danville, Illinois, offers a complete new catalog, No. 95, of its line of hardware products including door hanging specialties.

"Radford Doors" is the new door catalog of the Radford & Wright Co., Oshkosh, Wis., illustrating in colors the doors manufactured by this company.

The James Swan Co., 28 Warren St., Seymour, Conn., has just issued a new catalog of its Premium mechanics' tools including a complete line of bits and the new 4½-inch chisel.

The Portland Cement Association, 33 W. Grand Ave., Chicago, has issued a booklet on "Winter Construction with Concrete Masonry," explaining the best methods to be used

The Pole & Tube Works, Inc., Avenue D and Murray Street, Newark, N. J., has issued a pamphlet of size and design to fit the A. I. A. file system and containing complete technical information, and illustrations of its tubular steel flag poles.



## Outside or In —

*You'll make more money painting the DeVilbiss way*

No matter what nor when you paint, painting with the DeVilbiss Spray-painting System speeds up your work 3 to 5 times. Hours of time are saved and more dollars of profit made.

Besides, improved work is done on every sprayed job and you have a more satisfied crew of painters.

Investigate this well established, greater profit DeVilbiss way of painting. Interesting facts will be gladly mailed. Address—

THE DEVILBISS CO. 238 Phillips Ave. TOLEDO, OHIO

New York  
Chicago  
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San Francisco  
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**DeVilbiss**  
*Spray-painting System*

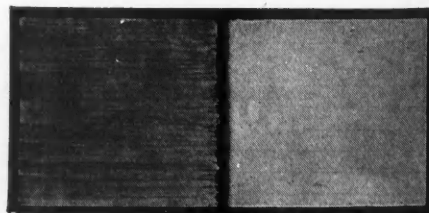
Indianapolis  
St. Louis  
Milwaukee  
Minneapolis  
Windsor, Ontario

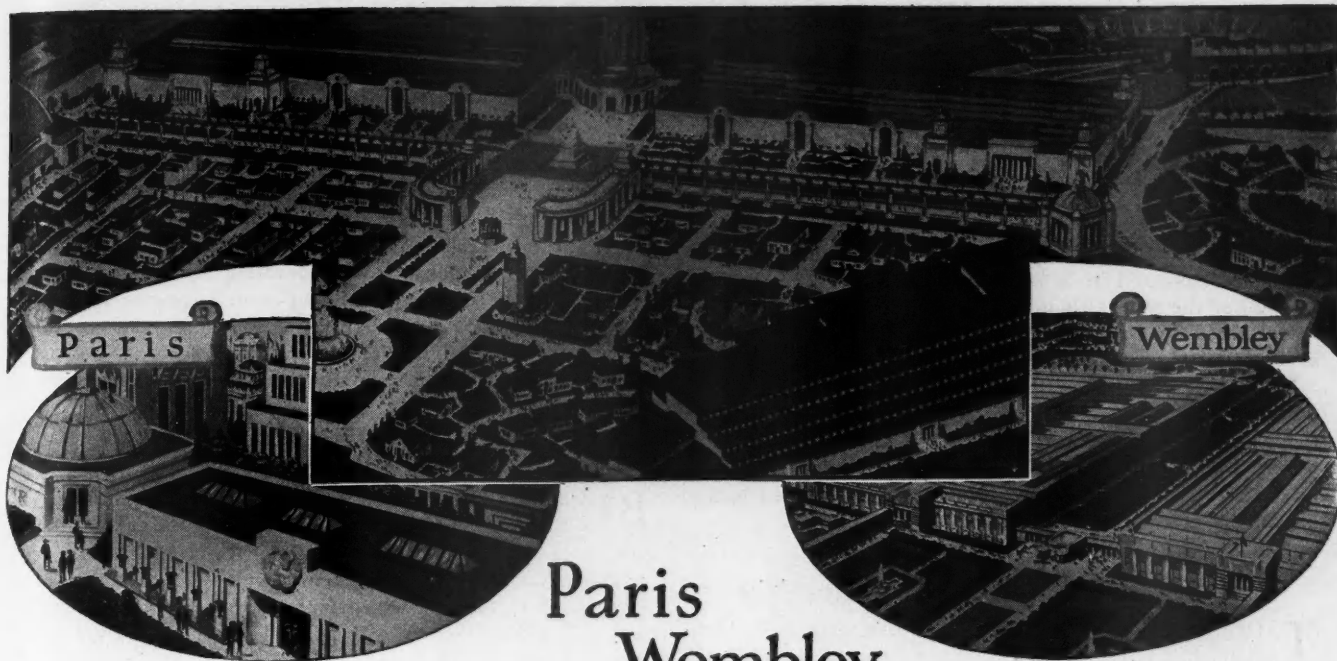
### Illustrating the Comparative Hiding Power of Brushed and Sprayed Coats of Paint

The hand brush puts on an uneven coating and the thin paint in the grooves wears away quickly. . . . The DeVilbiss Spray Gun applies a strong, even paint film that covers perfectly, that is durable and that wears down uniformly.

(Illustration shows same paint applied on identical surfaces —Photograph is unretouched and greatly reduced in size.)

One brushed coat :-: One sprayed coat





Paris  
Wembley  
... and now

# The Sesqui-Centennial Ruberoid Roofs Cover Major Buildings

FOR over a generation the merits of Ruberoid Shingles and Roofings have received world-wide recognition.

Conclusive evidence of this recognition has been given by each of the last three great international expositions—Wembley, Paris, and now our own Sesqui-centennial at which the major buildings, housing treasures of almost countless worth, have been roofed with Ruberoid.

The general use of Ruberoid Products in all parts of the world is due not only to their superior qualities, but also to the fact that there is always a

Ruberoid Product to meet a specified roofing need.

The Ruberoid Line includes seven different styles of asphalt shingles, in numerous two, three, and four-tone color effects. There are also five different grades of smooth surfaced and mineralized roll-roofings.

Near you is a lumber or building supply dealer who sells *genuine* Ruberoid Shingles and Roofings. Ask him about them or write us. The coupon below is for your convenience.

**The RUBEROID Co.**

Chicago

New York

Boston

# RUBEROID

## SHINGLES AND ROOFINGS

A.B.-11

The RUBEROID Co.  
95 Madison Ave., N. Y. C.

Gentlemen: Kindly send me the name of the nearest Ruberoid Dealer and information regarding the products checked below.

*Ruberoid Strip-shingles*  
 Octagonal    Square    Hex-agonal

*Ruberoid Individual-shingles*  
 Giants    Standard    Lock-down

*Ruberoid Roll-roofing*  
 Slate-surfaced    Smooth-surfaced

Name.....

Address.....

**More Architects Needed**

THE United States Civil Service Commission reports that the execution of the \$165,000,000 public buildings program recently authorized by Congress is well under way in the Office of the Supervising Architect, but that additional associate and assistant architects are needed for the work.

Preliminary plans have been outlined for many of the larger buildings, including some of the monumental structures to be erected in Washington, and by December 1 at least 20 of the several hundred smaller Federal buildings to be scattered over the country will be under contract. Bids have already been asked on many of the projects.

The Civil Service Commission is now receiving applications for positions of associate and assistant architects for the Supervising Architect's Office. Competitors are not required to report for examination at any place, but will be rated on their education, training, and experience, and specimens of their drawings.



**Republic Branch in Philadelphia**

THE Republic Motor Truck Company, Inc., of Alma, Mich., has opened a direct factory branch at Philadelphia, Pa., according to an announcement by J. C. Haggart, Jr., vice-president of the Republic institution. The new branch is located at 26th and Moore streets. C. L. Bowler, well known in automotive circles in Philadelphia, has been appointed branch manager. It is mainly for the purpose of supplying the highest possible grade of service to Republic trucks in the Philadelphia territory that a factory branch was established at that point. Up-to-date shop equipment and a complete stock of genuine Republic

parts is now carried at the Philadelphia branch, with factory trained service men in charge.



**Complete Movable Plant**

AN interesting mixing plant was recently furnished to J. W. Zempter & Co., of Galveston, Texas, by the Alamo Iron Works, representing the T. L. Smith Company, of Milwaukee. This was a Smith 27-E paver equipped with a special tower, elevating bucket and hopper for chuting the concrete from different locations and combines in one movable machine a complete mixing plant. Because of the extreme length of the causeway job on the Galveston sea wall this portability was practically essential.



**New Kitchenkook Plant**

BY way of a fitting celebration of the thirtieth anniversary of the founding of the American Gas Machine Company, of Albert Lea, Minnesota, this concern has recently awarded the contract for the first unit of a group of new factory buildings and construction work is already under way. The new factory will be used almost entirely for the manufacture of Kitchenkooks, providing ample room for further development of this particular branch of the company's business. The transfer of the Kitchenkook department to the new plant will provide the much needed room to take care of the rapidly growing demand for other products.

The most modern and approved type of factory building construction will be used throughout. About four acres of additional floor space will be provided by these new buildings, more than doubling the capacity of the present plant.



*Buy the Best  
**HARDWARE**  
For Hard-wear*

For more than 50 years Bommer Spring Hinges have maintained their leadership and proven their superiority over all others.

They have kept pace with the times, because they have been kept up with the times whenever improvement was possible.

**BOMMER  
SPRING HINGES  
ARE THE BEST**

They are in universal demand—easiest to apply and the most satisfactory spring hinges made.

Your Dealer handles them.

Send for New Catalog 47. It is a big help in ordering.

**Bommer Spring Hinge Company  
MANUFACTURERS  
BROOKLYN, N. Y.**




*These HEAT WAVES show  
how the heat RISES and ESCAPES through  
the roof and walls of your house*

That's what makes the snow melt so fast on your roof. Do you like to buy coal to melt snow? This is sheer waste, and you can stop it by insulating the roof and walls of your house with

**CABOT'S Heat ~ "QUILT"**  
*Insulating*

You can lay Quilt under your shingles, siding, tiles or boarding, or between your studs or rafters or under your attic floor. It will save enough coal to pay for itself in two or three Winters, and keep on saving heat and doctor's bills and making you comfortable as long as the house stands.

*Send for Free Sample of Quilt and full information*

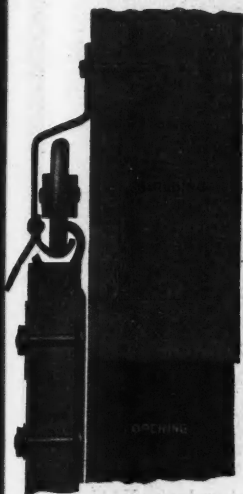
**SAMUEL CABOT, Inc.**  
141 Milk Street Boston, Mass.  
342 Madison Avenue, New York  
5000 Bloomingdale Ave., Chicago  
Los Angeles Portland

*Cabot's Creosote Stains, Waterproof Collophanes, Old Virginia White, Double-White, etc.*

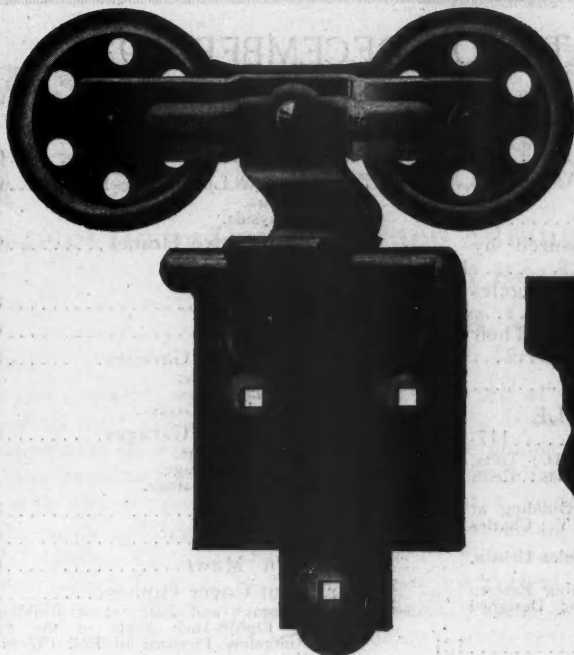


# FRANTZ "GLIDE" HANGERS

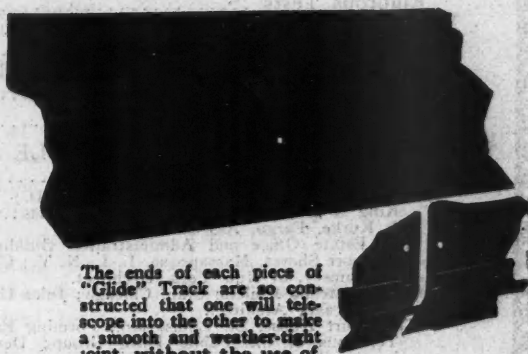
~ will carry doors of any thickness because of their inside drop strap



The above cross section illustrates how the inside drop strap of the "Glide" Hanger allows doors of any thickness to be hung without strain or rubbing. Note perfect weather protection and non-derailing feature.



A rolling door cannot operate smoothly and easily long unless the hanger supports the door without strain and is protected against the elements.



The ends of each piece of "Glide" Track are so constructed that one will telescope into the other to make a smooth and weather-tight joint, without the use of a joint bracket.



Above is an end view of a piece of "Glide" Track with all dimensions given. Notice the wide running space for the Hangers.

**R**EGARDLESS of the thickness of the door, because the "Glide" hanger drop strap is on the inside, out of the weather, the doors always are carried close to the building without rubbing or sagging.

### No Brackets or Blocking Out

The inside drop strap feature eliminates the fault of many ordinary hangers which use tracks that require blocking away from the building, making it impossible to get a perfectly weathertight installation. "Glide" Track does not require unhandy, weak brackets. It is made in one piece and fastens flat against the side of the building.

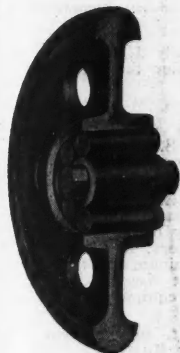
### The Original "Watershed" Track

"Glide" is the original watershed or covered track. It was designed in 1912, at a time when all hangers used track of the light, inefficient, flat rail type. Supplying a long felt need, "Glide" made thousands of friends. These same friends today are showing others how well "Glide" has stood the test of the elements. Both the hangers and the track of the original installations still are giving good service.

"Glide" Track No. 111 is made by using a special rust-resisting formula of steel that takes tons of pressure to bend each piece into shape. "Glide" is a track and cover in one piece. It is an easy task to equip any door. These are some of the reasons why the first installations are still giving good service.

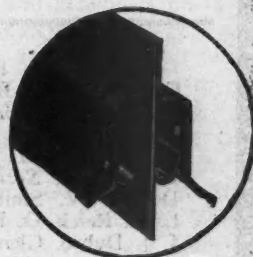
The tread on which the hanger runs is shaped so as to eliminate friction and the possibility of derailing the hanger. The cover extends well out over the edge of the door to provide a weathertight installation.

"Glide" Track is made in 6, 8 and 10-foot lengths.



The cross section photograph above shows the roller bearing construction of all "Glide" Door Hanger wheels that is responsible for the ease with which the Hangers operate when carrying heavy doors.

Inside drop straps of Hangers allow doors to pass freely when hung in parallel positions. A parting strip, for making the job weathertight, is furnished if desired.



**FRANTZ MANUFACTURING Co.**

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FRANTZ QUALITY  
Without the Red Label"*