

# AMERICAN BUILDER

## THE WORLD'S GREATEST BUILDING PAPER

Vol. 40.

CONTENTS FOR DECEMBER, 1925

No. 3.

COPYRIGHT, 1925, BY AMERICAN CARPENTER &amp; BUILDER CO.

Around the Family Table.....	87	Two Economical Homes.....	Colorplate IX
Editorial Page.....	89	The Otis, a Double Bungalow of Brick and Stucco with Five Rooms on Each Side.	
The Building of Peacock Lane.....	91	The Oxford, a Six-Room Dutch Colonial Home.	
Modern Apartment Buildings Are Completely Equipped.....	94	The Ogden.....	Colorplate X
ART SUPPLEMENT OF NOTABLE ARCHITECTURE.....	95-98	A Popular Stucco Home of Seven Rooms—Color Sketch of Living Room.	
The Armour Plaza, Kansas City, Mo.; Victor J. DeFoe, of Kansas City, Architect.		The Oak Hill.....	Colorplate XI
The Canal-Commercial Trust & Savings Bank, New Orleans, La.; Emile Weil, Architect.		A French Cottage of Five Rooms—Color Sketch of Well Furnished Dining Room.	
The Military Park Building, Newark, N. J.; Polhemus & Coffin, of New York, Architects.		The Overton.....	Colorplate XII
The Grand Rapids Trust Co. Building, Grand Rapids, Mich.; Smith, Hinchman & Grylls, of Detroit, Architects.		A Shingled Cottage in the English Style—Color Sketch of Well Appointed Kitchen.	
From Our Daily Foreign Mail.....	99	Three Popular Garages.....	Colorplate XIII
The House of International Friendship.....	100	The Oak Garage, One Car, with Hinged Doors.	
American Business Men Send to Paris, France, an American Home Equipped with All Modern Conveniences as a Model to Follow.		The Olean Garage, One Car, Stucco Garage with Sliding Doors.	
Tampa's Thirty Million Dollar Island Made by Daniel P. Davis, Builder.....	106	The Usage Garage, a Double Garage of Brick Construction.	
A Shop Building that Attracts.....	109	The Orangeville.....	Colorplate XIV
Landscape Architecture and the Home.....	110	A Low Cost English Cottage of Six Rooms—Color Sketch of Dining Room.	
A Christmas Bouquet.		The Orient.....	Colorplate XV
Details of Home Building.....	112	A Delightful Five-Room Home of Stucco Construction.	
Homes in Colors.....	114	The Oswego.....	Colorplate XVI
BLUE RIBBON HOMES IN COLORS..	115-130	An English Cottage of Six Rooms—Color Sketch of Well Furnished Sleeping Porch.	
Christmas and the Home.....	Colorplate I	Our Front Cover Home.....	131-135
The Oberlin.....	Colorplate II	Photograph and Full Set of Building Plans Drawn to Eighth Inch Scale of the Beautiful Home Pictured in Full Colors on Our Front Cover.	
A Straight Gable Colonial in Brick—Color Sketch of Well Appointed Bathroom.		Save the Surface Department.....	136-138
The Oriole.....	Colorplate III	Interior Finishes to Match Exterior Designs.	
A Dutch Colonial Design—Color Sketch of Well Furnished Bedroom.		Stencils in Interior Decoration.	
Spanish Interiors.....	Colorplate IV	An Old Home Made Modern.....	139
Photographs of a Living Room and a Reception Hall.		Good Furnace Heating Demands Sufficient Air Supply.....	140
Two Spanish Refectories.....	Colorplate V	An Attractive Small Shop Group.....	142
Two Interesting Photographs.		Heavy Timber Mill Construction.....	144
The Odessa.....	Colorplate VI	Full Page of Details of Approved Heavy Timber Work.	
A Narrow Lot Stucco House—Color Sketch of Living Room.		The Charm of Leaded Glass.....	146
The Oliver.....	Colorplate VII	HoltBid a Great Success.....	147
An English Cottage of Distinction—Color Sketch of Bedroom with Four-Poster Twin Beds.		Cellular Gypsum—Fire-Resistive, Heat and Sound Insulator.....	148
Two Attractive Small Homes.....	Colorplate VIII	What's New.....	154
The Olney, a Pretty Shingled Cottage.		Motor Truck Department.....	164
The Omega, a Double Bungalow with Five Rooms on Each Side.		Correspondence Department.....	166
		Better Plastering.....	170
		Instructions in Roof Framing.....	174
		How Dan Does It.....	178
		Advertising Index.....	259-261

Published on the first day of each month by American Builder and Carpenter 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*; Paul N. Rothe, *Circulation Manager*; Delbert W. Smith, E. B. Wolfrom, C. R. W. Edgumbe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, H. P. Sessions, J. J. Dubro, *Advertising Staff*.

#### Publication Offices:

**Radford Building, 1827 Prairie Ave., Chicago**  
Telephone: Calumet 4770

**Eastern Office: 250 Park Ave., New York City**  
Telephone: Vanderbilt 3185

Entered as second-class matter July 1, 1905, at the post office at Chicago, Ill., under the Act of Congress on March 2, 1879

**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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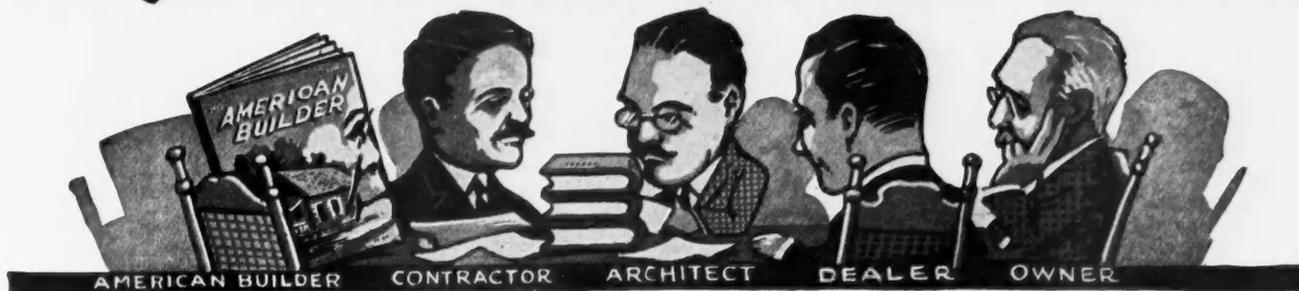
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# AROUND THE FAMILY TABLE



## Help Speed Up the Mail

Postmaster Arthur C. Lueder Makes a Timely Plea for Better Addressing

**W**E are glad to pass along to our readers, both advertisers and subscribers, this letter from the Chicago postmaster:

OFFICE OF THE POSTMASTER  
CHICAGO, ILLINOIS

To the Editor:

November 19, 1925.

Many tenants of rooms or suites in office buildings use a form of address on their letterheads or in the return cards on their envelopes that is misleading and is the cause of considerable delay or misdelivery of mail. With the exception of the name, the following is an exact copy of a letterhead used by one of the largest firms of its kind in the city:

JOHN G—— & SON CO.,  
1011-112 W. Adams St.,  
CHICAGO, ILLINOIS

A this moment I have on my desk three separate special delivery letters from three different parts of the country addressed to this firm as follows:

JOHN G—— & SON CO.,  
1011 W. Adams Street,  
CHICAGO, ILLINOIS

All three of these special delivery letters were sent to Station "C" on the west side for delivery at 1011 West Adams Street and were there marked up to 112 West Adams Street and returned to the Main Post Office for delivery. We do not know what inconvenience or loss these delays involved, but it is reasonable to assume since each envelope bore a special delivery stamp that speed was an important item. The intent of the senders in each case was defeated by the confusing form of letterhead. It is desirable that the room number appear upon all mail addressed to the office buildings; this not only aids in distribution but helps to prevent delay when a substitute must be assigned in the place of the regular carrier; but in every case the word "Room" should be used in connection with the room number so that it will not be taken for the street number of the building.

The following forms of address for a letterhead or return card on the envelope seem to offer the least chance for confusion:

JOHN G—— & SON CO.,  
112 W. Adams St., Room 1011,  
CHICAGO, ILLINOIS

or,

JOHN G—— & SON CO.,  
Room 1011, Airplane Bldg., 112 W. Adams St.  
CHICAGO, ILLINOIS

The letterhead quoted is only one of thousands that result in the daily delay of hundreds of pieces of mail. The correction of this form of confusing address is much more important to the one who uses it than to us, and we cannot do anything to avoid the delays thus caused without his co-operation.

Because you have shown such a helpful spirit in all our relations with you, I am encouraged to place this matter before you in the hope that you will bring it to the attention of your readers with beneficial results to them. This condition exists in every city which has office buildings with room numbers and the information will be of interest to your readers no matter where they may be located.

Sincerely yours,

Arthur C. Lueder,  
Postmaster.

At this season of the year the mails are extra heavy; and prompt delivery is important to all business men. Postmaster Lueder has done some

very notable work in educating the mailing public and in putting into effect numerous efficiency methods that have worked out to the benefit of all. We are sure that all of our readers will gladly co-operate as requested.

EDITOR, AMERICAN BUILDER.

### The 1926 Annual AMERICAN BUILDER

will be issued  
March 1, 1926

Right at the beginning of  
the active building season.

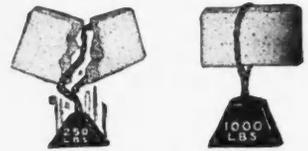
*A Book of 1,000 Pages  
No Increase In Price*



Res. of James Gilmore, Esq., Reg. Arch. Cincinnati, Ohio, Bishopric Ivory Cream Stucco over Bishopric Base on all exteriors.

### Stucco walls of greater strength

Ordinary Stucco      Bishopric Stucco



The enormous tensile strength of Bishopric Stucco is illustrated here. This is just one of the Bishopric guarantees of permanence on the wall.

# How Bishopric provides lasting beauty and protection

Rare beauty of shade and texture, with permanent protection from the elements are exclusive Bishopric qualities that are being appreciated more and more by those interested in home-building. BISHOPRIC is a super-stucco with greatly increased strength, thus providing durability and protection so vital to every building, whether it be large or small. In Bishopric only can be obtained the wide variety of beautiful shades and textures now demanded by those who appreciate the best. With Bishopric, beauty and protection go hand in hand.

Tensile strength tests show BISHOPRIC far superior to other stuccoes.

BISHOPRIC is fireproof, magnesite rock used is the same as that used to line furnaces and smelters — Tremendous heat has no effect on it.

BISHOPRIC is thoroughly waterproofed by a secret process shutting out moisture, cold, heat, wind and vermin.

BISHOPRIC Insulation Qualities are practically perfect, retarding heat and cold, eliminating objectional noises.

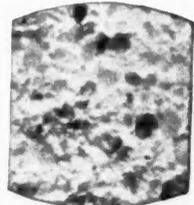
BISHOPRIC requires no painting or renewing — A wall built to stand for generations.

In mansion or bungalow, Bishopric Stucco has a place, whether laid over stately lines or designed after those quaint cottage effects, now so popular.

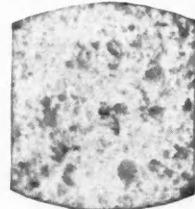
Bishopric Stucco endures in every climate, retaining its strength and its original color in temperatures of either extreme. Economical in original cost, negligible in upkeep, warm in winter and cool in summer, BISHOPRIC STUCCO over BISHOPRIC BASE not only wins friends but keeps them. And no wonder, for it yields itself to any form and endures from generation unto generation.

An interesting booklet "Bishopric For All Time and Clime," illustrated with photographs of beautiful houses built with Bishopric Stucco, plaster and sheathing units will be mailed you Free.

Ordinary Stucco



The average stucco being marketed today is extremely porous and therefore NOT WATER-PROOF. Notice the spongy porous formation in this enlargement and compare the density of Bishopric shown below.



Bishopric Stucco

The BISHOPRIC MANUFACTURING CO  
7 ESTE AVE. CINCINNATI, OHIO  
NEW YORK CITY      CINCINNATI      OTTAWA, CANADA  
The BISHOPRIC MFG. CO. OF CALIFORNIA  
LOS ANGELES

# BISHOPRIC STUCCO *over* BISHOPRIC BASE

*"A Complete Wall Unit for all Time and Clime"*



# AMERICAN BUILDER

Formerly AMERICAN CARPENTER AND BUILDER

## 1924 Building Record Exceeded in First Ten Months of 1925

**L**AST month had the largest October construction volume on record, according to F. W. Dodge Corporation. Building and engineering contracts awarded during the month in 36 states (which include about seven-eighths of the total construction volume of the country) amounted to \$519,528,200. This was 27 per cent greater than the volume of the previous October.

The month's record included the following important items: \$262,725,500, or 51 per cent of all construction, for residential buildings; \$66,006,500, or 13 per cent, for public works and utilities; \$63,316,100, or 12 per cent, for industrial buildings; \$55,912,100, or 11 per cent for commercial buildings; and \$28,192,000, or 5 percent, for educational buildings.

The entire construction volume of last year, which was the record year to date, has already been exceeded in the first ten months of this year. Construction started during the past ten months has amounted to \$4,846,266,900, compared with \$4,479,307,000 for all of last year and with \$3,772,593,500 for the first ten months of last year. The increase over the 1924 total has been 8 per cent; over the total for the first ten months of last year, 28 per cent. Four large districts have already exceeded their 1924 totals: New England, the Pittsburgh district, the Central West, and the southeastern states.

Contemplated new work reported last month amounted to \$839,049,300. This was an increase of 27 per cent over the amount reported in September, and 52 per cent over the amount reported in October of last year. This large volume of new work in the plan stage indicates that the demand for new construction continues very strong.

### Winter Building

**R**ESPONSES to a questionnaire sent out by the Department of Commerce show that the winter depression in construction is being gradually leveled out. During the last two years winter building has shown a decided increase over that of former years, which proves conclusively that the agitation in behalf of year-round construction is producing definite results. Investigation and experience have shown that, except in the most northern sections during extreme weather, work can go ahead about as rapidly and profitably as in summer.

### They Assist the Home Builder

**M**ORTGAGE loans on dwellings and apartment houses providing living accommodations for 3,478 families in the United States and Canada were made during October by the Prudential Insurance Company of America, the investments of the company for this purpose alone totalling \$12,179,800.

Archibald M. Woodruff, vice-president of the Prudential in charge of real estate and mortgage loans, in his report on the activities of the month, discloses that Prudential funds

were advanced for mortgage loans on 1,898 homes and 121 apartments, the amount of loans on the former being \$8,302,600 and on the latter \$3,877,200.

The cumulative record of such loans for the first ten months of this year exceeds by more than \$20,000,000 that of a similar period of 1924, thus reflecting the determination of the Prudential to carry out the policy voiced early this year by President Edward D. Duffield, when he advocated assistance for prospective home owners.

For the ten months, loans on 15,041 dwellings and 783 apartments, accommodating 25,275 families, have totaled \$86,383,489. This compares with total loans of \$66,040,524, made during the first ten months of 1924 on 13,382 dwellings and 702 apartments, accommodating 20,961 families.

This company has also given its attention to property other than dwellings, loans being advanced continuously on farms and city property. In this latter category alone the company advanced \$1,369,000 during October of 1925.

### Most Material Prices Below 1924 Level

**P**RICES of building materials, with the exception of lumber, are below the 1924 level, according to statistics gathered by the U. S. Department of Labor. Prices of cement averaged from the quotations of six plants in Pennsylvania, Indiana, Minnesota, Texas and California stood three per cent below a year ago. Price of lumber at wholesale now averages four per cent above the 1924 level. The price of common brick per thousand is four per cent below last year and the wholesale price of structural steel is eleven per cent below last year.

### To Study Forest Tax Problem

**A**NATION-WIDE study of the forest tax problem in relation to reforestation is being launched by the forest service, United States Department of Agriculture, which has just announced the appointment of Prof. Fred R. Fairchild, of Yale University, as director of the investigation.

A detailed study of forest tax problems will be made in the principal forest regions of the United States to determine the effect of present tax laws on reforestation and timber holding and the conditions that must be met in any effort to readjust present tax laws so as to be fair, both to the land owner and the county.

### Lien Law Simplification

**W**IDESPREAD approval is being expressed of the announcement by Secretary Hoover that he has appointed a committee to work on simplification and unification of the many and varying lien laws which now confuse the construction industry. In order to frame a model act which will be as fair as possible to all different groups, it was felt that these groups should be represented in deciding on the general principles to be embodied in the act and that the best legal advice should be obtained in connection with phrasing it.

## Autocar compact design gives a larger factor of sturdiness



4-cylinder Autocar owned by the Davidson Ayers Co., Detroit

With extra strength and ruggedness concentrated into less space, Autocars are particularly adapted to the gruelling tasks allotted them in hauling heavy loads of building supplies.

The compactness of Autocar short wheelbase design eliminates excess weight and enables the Autocar to

maneuver into difficult building operations and dump its load right on the spot where it is needed.

Autocar more even weight distribution is another example of how Autocar chassis design gives sturdy support to the pay load without the encumbrance of unnecessary dead weight.

### The Autocar Company, Ardmore, Pa.

ESTABLISHED 1897

#### Direct Factory "Autocar Sales and Service" Branches or Affiliated Representatives in

*Albany	*Buffalo	*Detroit	*Memphis	*Paterson	*San Francisco	Tampa
*Allentown	*Camden	*Erie	*Miami	*Philadelphia	*San Jose	Trenton
Altoona	*Charlotte	*Fall River	*Newark	*Pittsburgh	*Schenectady	*Washington
*Atlanta	*Chester	*Fresno	*New Bedford	*Providence	Scranton	West Palm Beach
*Atlantic City	*Chicago	*Indianapolis	*New Haven	*Reading	Shamokin	*Wheeling
*Baltimore	*Cleveland	*Jersey City	*New York	*Richmond	*Springfield	Wilkes-Barre
Binghamton	Columbus	Lancaster	*Norfolk	*Rochester	*St. Louis	Williamsport
*Boston	*Dallas	*Lawrence	*Oakland	*Sacramento	*Stockton	*Wilmington
*Bronx	Denver	*Los Angeles	Orlando	*San Diego	*Syracuse	*Worcester
*Brooklyn						York

\* Indicates Direct Factory Branch

# Autocar

gas and electric trucks

EITHER OR BOTH - AS YOUR WORK REQUIRES

# The Building of Peacock Lane



R. F. Wassell, Portland Builder,  
Succeeds with English Cottage  
Designs

By NAOMI SWETT



ANYONE in Portland, Ore., can tell you that Peacock Lane is something "different" from the ordinary run of real estate developments and in every way lives up to the picturesque expectations which the name creates. When R. F. Wassell, Portland builder, planned this fascinating street he chose a name which would not suggest the development of an entire addition to the mind of the public, for Peacock Lane is just four blocks long, and which would demand much in construction and development to justify its use.

Five acres of land, parallel with Fortieth Street, on the east side, within an easy ten-minute drive from the heart of the downtown section, were selected for the Lane. The four-block length of it runs from Stark, a main thoroughfare, to Belmont, another main thoroughfare, and is very close to one of the best trolley lines in Portland. This tract involved a consideration of \$21,500 and Wassell immediately assessed the property for street improvements costing approximately \$11,000. These included the installation of eleven beautiful street lamps, gas lighted, with arrangements for ten years' service from the Portland Gas & Coke Company, to cost each home owner but \$1 a month.

This was the first step in a completely worked out plan



The Spacious Living Room in the Wade Home Is Lighted by Wall Candle Brackets and Floor Lamps. At the far side French doors lead to the dining room.

and it gave the Lane, even before house building was started, unusually fine illumination. Next commenced the construction of a group of houses that would not in any way fall below the expectations built on the suggestion of the name.

English style architecture was chosen, with full play to



The House on the Corner, Which Is the Residence of Dr. Wade, Is One of the Higher Priced Homes in Peacock Lane, Which Sold for Not Over \$8,750. On the next two pages a floor plan and interior view of this home are shown.



A Two-Block Stretch of Homes in Peacock Lane Which Is, in All, but Four Blocks Long. Every house is different from the others, but all are of the same English style. Some of these houses sold as low as \$6,500.

the imagination allowed, resulting in tall, peaked gables, and plenty of exposure to the sunlight that would stream into each home through quaintly beautiful windows, in no two houses exactly alike.

Twenty-two houses were built in Peacock Lane, all in pleasing relation one to another, and of strictly English character. As surely as a visitor to the Lane decides, "This surely is the prettiest of them all!" he discovers something in the house next door that is more interesting still! He then tries to compare one with another. "Which

really is the loveliest?" But it's impossible.

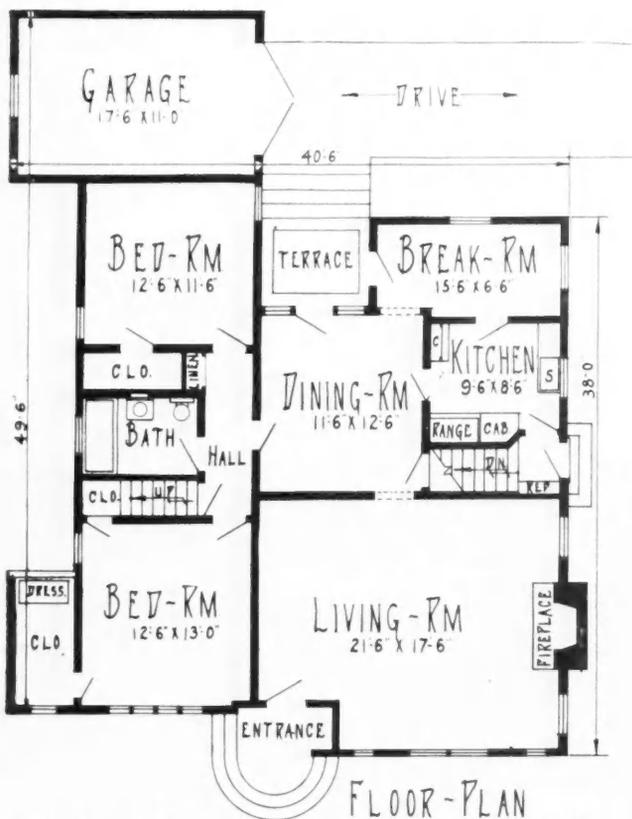
It can only be said that the beautiful houses of Peacock Lane are more beautiful because there is but one style of architecture on the entire street, no unsympathetic line or design to destroy the quaint little English village atmosphere that Wassell succeeded in attaining. Surely an English house, surrounded on all sides by English houses, is more English than if it faced a Spanish home across the street, an Italian house at its left, and a stately Colonial house at its right! And, because the climate of this part of Oregon is exactly like that of England, Wassell deemed the English type truly fitting in the building of Peacock Lane.

The houses of Peacock Lane have each either five, six or seven rooms. All are equipped with single and some with double garages. For exterior surfaces, either stucco, shingle or combinations of the two are used in a host of interesting ways. Both metal and wood lath have been used under the stucco outer surfacings.

The five acres were cut into thirty-three lots, each 50 by 85 feet. Most of the houses were built with an attractive little garage forming an interesting addition to the house proper and with picturesque gate entrance alleys giving immediate passageway from each kitchen. Sometimes the little alley is between the house proper and the garage, sometimes it is on the outside of the garage, and sometimes there's no alley at all, the garage being built separately—always, however, each garage is different from the others in design.

The houses all have triple floors throughout, two under-floorings of soft wood and the upper one of oak. Particular attention was given to the designing of windows, which sometimes have wood casement, sometimes leaded panes, sometimes large square panes, or just as often small diamond-shaped panes, never just like the panes of any other house on the Lane.

No two interiors were planned exactly alike, though in each house the general idea is carried out of a large living room, commodious dining room, super-convenient kitchen with extra large breakfast room. Living rooms usually have casement type windows, and this is adhered to throughout most of the houses. Sometimes there are beautiful transom door type windows. Fireplaces are faced with soft-toned ceramic tile. Living rooms have no



Like Every House in Peacock Lane, the Wade Residence Is Planned for the Living Comfort and Convenience of the Family Which Is to Occupy It.

built-ins, giving owners opportunity to fill their homes with plenty of fine furniture. Living rooms, dining rooms and bedrooms are all papered, ceilings having been finished in smooth, creamy-toned plaster.

Except in the dining rooms, side illumination from wall bracket candle fixtures has been provided. The bathrooms have the most modern type of built-in plumbing, usually tile floors, while kitchens have drainboards, either tile or glass work tables, hoods over ranges and convenient enclosed vestibules for the placing of refrigerators. Each house has a laundry room and fruit closet in the basement and is equipped with a thermostatically controlled furnace, assuring the owners of homes in Peacock Lane the highest peak of modern home comfort and efficiency.

Most of the houses of Peacock Lane have been built level with the ground, some with little brick stoops, some with stoops of concrete. Often wrought iron is introduced into the exterior trim, by means of little entrance hoods or porch rails. The entrance doors are as unusual as anything else about Peacock Lane. Sometimes they are of the enclosed vestibule type, sometimes of panel or leaded glass, sometimes of hardwood with or without a small window, and adorned by old-fashioned brass knockers.

The lots are usually level with the sidewalk, but in some few instances have low banks. Even nature has contrived to make Peacock Lane the little lane from the fairy book, the straight line that has no turning! When the houses of Peacock Lane were finished in soft creams, grays, browns or pure whites they were brightened by wood trim, in contrasting colors; their main portions so colored that in time they would acquire pleasing aged tones with no fear of dinginess because of the easily renewed and colorful wood trim.

By taking out building permits for twelve or fifteen houses at one time and putting a crew of skilled workers on the job on a strict time and material basis Wassell was able to save the purchasers of these homes from 10 per cent to 20 per cent of what it would have cost them to obtain their own building work, had they engaged architects' and contractors' services. "Our mechanics worked from one house to another," he explained, "and



The Kitchen in the Wade Residence with a Spacious Breakfast Room Adjoining. A hooded range and enclosed refrigerator vestibule are features of the kitchen which cannot be seen in this view.

there was no lost motion. In addition, through the larger buying power gained by making a single material purchase for the entire group of houses we secured the finest possible at the lowest possible price."

Two-thirds of the houses in Peacock Lane were sold before they were finished. And the balance sold shortly after, so that at this writing, not many months since ground was first broken in Peacock Lane, every house but one has been sold. The selling prices of these houses have been from \$6,500 to \$8,750 each. Quite a number of them were sold for all cash, the balance with down payments of from \$1,000 to \$2,000, the rest in monthly payments like rent of from \$50 to \$75.

All first mortgages were taken at 6 per cent by the Prudential Life Insurance Company, the difference between the first mortgages and the down payments being absorbed by the Wassell estate as second mortgages.

"While I always engage the finest architects available in building apartments," Wassell says, "I developed the plans of these English houses myself by working out suggestions gained through a study of various magazine pictureings of English style homes. When I had arranged my layouts I had a draughtsman work up specifications and working details."



Another Group of Houses Which Form a Part of Peacock Lane, Showing the Typical English Style, Garages Designed as a Part of the House and Attractive Arched Doorways Between Garage and House.

# Modern Apartment Buildings Are Completely Equipped

With Latest Furniture and Devices for Convenience and Comfort

By **BERNARD L. JOHNSON**  
*Editor, American Builder*

**A**RCHITECTS and builders are today making apartment buildings as complete and attractive as possible. They rent and sell to better advantage when so equipped. Even fine furniture is being installed and it is selected for its fitness. Housekeeping is certainly being made very convenient and attractive with the many labor-saving devices available, such as are being installed in the Armour-Plaza Apartments, Kansas City.

## Armour-Plaza Apartment Building Kansas City, Missouri

Victor J. Defoe, Architect  
Philip Minkin, Builder

This high class, modern apartment building is fire-safe, owing to its frame and floors of reinforced concrete and its brick walls ornamented with terra cotta trim. The architectural style is modified Georgian Colonial. The building will contain 54 kitchenette apartments equipped with gas ranges, ice boxes, china cases, one-piece sinks, storage cabinets, garbage receptacles and electric wall plugs. The breakfast room will be completely equipped with breakfast tables and chairs. China cases will be built in this room, also built-in ironing and pressing boards. Each dressing room will be equipped with dressing cases and mirrors. The bathrooms are to be all tiled and the living rooms will be furnished with furniture of the latest mode. Each of these rooms will be equipped with disappearing beds and closets to contain them.

The basement will be well above ground and have a most efficient heating boiler fired by an automatic oil burner. There will also be automatic hot water heater and storage tank, and a garbage incinerator, into which refuse can be dropped from each floor of the building. Space has been provided in the basement for a ballroom and a completely equipped billiard room, as well as locker storage room and janitor's apartments. A complete vacuum cleaning system operates throughout the building and one passenger and one freight elevator have been provided.

The architect has designed a fine lobby, 20 by 60 feet, with a fireplace nook, and there are many notable features of finish and ornamentation throughout the building, such as terrazzo floors, mahogany trim and special electric light fixtures. The lobby furnishings are of the finest type and, when set to one side, the lobby can be used for dancing. There is a standpipe with hose connections on every floor and the stairways are of concrete with decorative wrought iron railings. Garages in the rear and a roof garden and dining room on the eighth floor are contemplated. Owner, architect and builder are to be congratulated upon the excellent design and complete equipment of this building.

## Canal-Commercial Trust and Savings Bank New Orleans, Louisiana

Emile Weil, Architect

This splendid bank building will cost \$4,000,000 and be one of the finest structures in the South. It will be the largest commercial structure in New Orleans, for in addition to the bank proper it will have 360,000 square feet of rentable space. The architecture will be of the early Italian Renaissance type, with the ornamental exterior of

buff limestone. The building will extend from the rear of the present main bank at Varieties Alley to Baronne Street, and will overshadow the large structure facing Carondelet Street. The alley will be converted into an arcade entrance from Common Street, and will connect with another attractive arcade extending through the square from Carondelet to Baronne Street, which will insure ample light on all sides. The basement will be given over to the safety deposit vaults and other accessories. The banking quarters will take up three stories, and will be as luxurious and artistic as possible, with marble and bronze lavishly utilized, and with mezzanine floors to supply room and facilities for all the departments. The office floors will be thoroughly modern, with all the latest conveniences, and with twelve of the largest and finest elevators to serve the tremendous traffic and population.

## Military Park Building, Newark, N. J. Polhemus and Coffin, of New York, Architects

Newark, N. J., now a city of half a million people, is to have a skyscraper rivaling in height those of the larger metropolitan cities. It is to be twenty-one stories—the highest building in the state of New Jersey. Facing three streets and a park and surrounded by very low structures, there will be a maximum of light and air on all floors. Eight high speed elevators will provide service at half-minute intervals and unexcelled arrangements have been made with respect to sanitation, toilet space and wash basins, with hot and cold water on all floors.

Maurice I. Stransky, New York builder, with Isaac and Louis Cohen, organized the holding company and they have announced that the building will be ready for occupancy next summer. It will cost about \$2,500,000 and S. W. Straus & Co., New York investment house, has taken a mortgage and is issuing the bonds, which run for twelve years at six percent.

This building is but twenty minutes from the financial center of New York by the Hudson Tubes, the Newark terminal of which is within a block. City and suburban busses carrying 260,000 passengers daily pass the door, as also do surface cars carrying over half a million daily, with trolley terminus nearby. The Pennsylvania Railroad and the Central Railroad of New Jersey stations are within a few blocks of the site.

## Grand Rapids Trust Company Building Grand Rapids, Michigan

Smith, Hinchman & Grylls, Architects

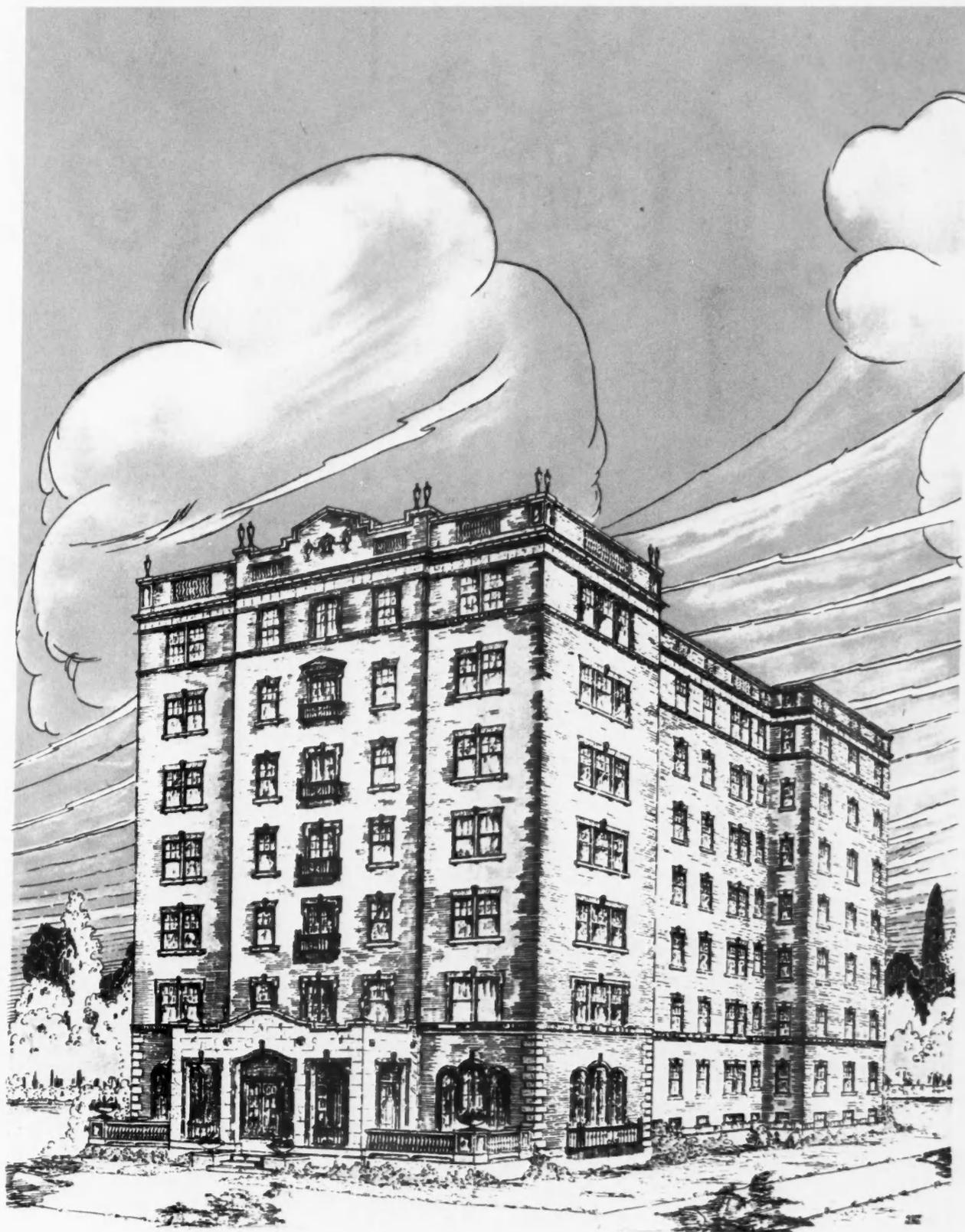
The board of directors of the Grand Rapids Trust Company, Grand Rapids, Mich., recently approved plans for the construction of a new bank building to house the company in the heart of the business district.

It is to be thirteen stories, 150 feet in height, occupying a corner site 88 by 88 feet.

Smith, Hinchman & Grylls, Detroit, are the architects. The building, of brick and terra cotta construction, is expected to represent, with the land, a total investment of \$1,500,000.

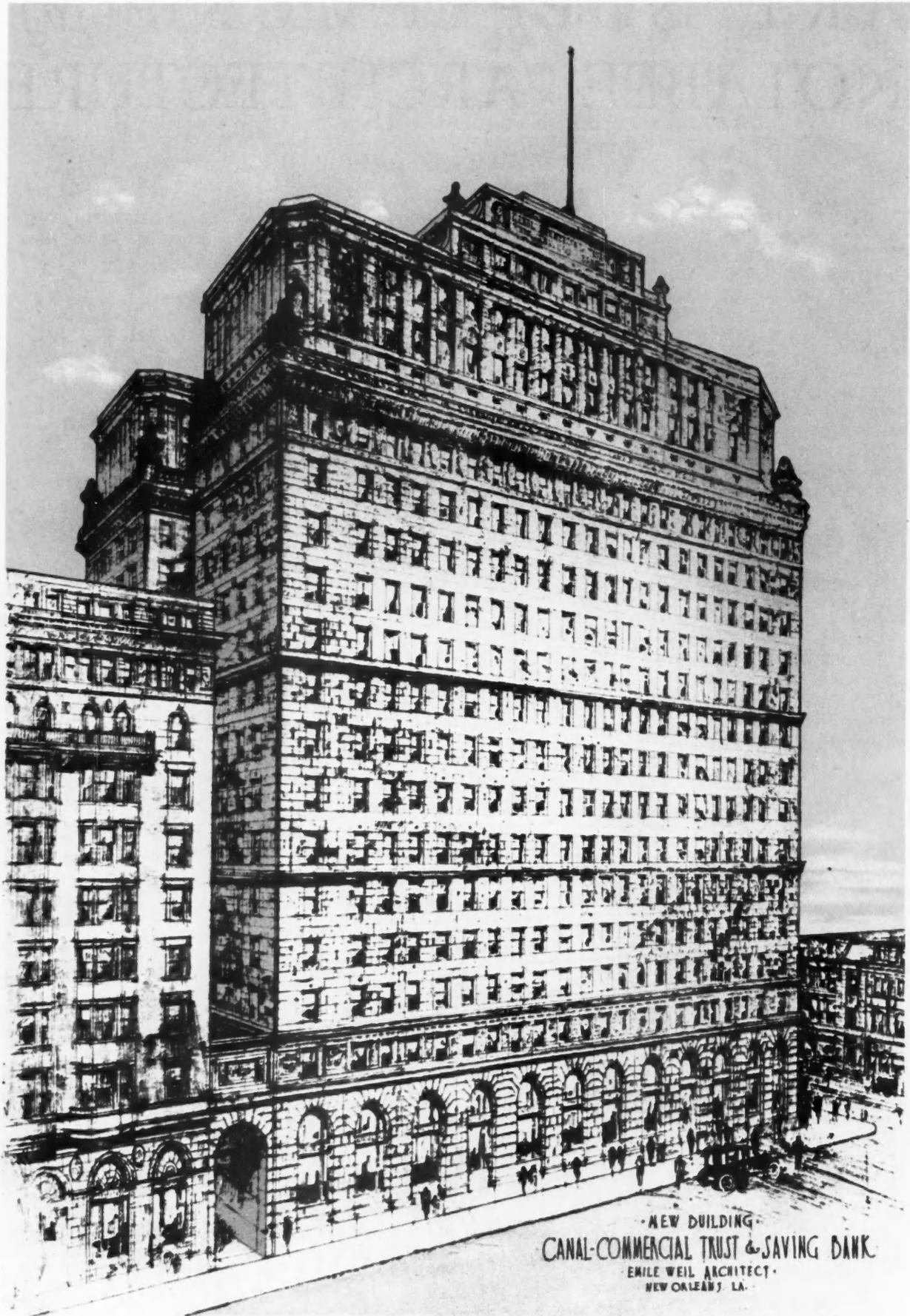
The first floor of the building is intended for shops, the second floor will be occupied by the trust company, and the floors above will be devoted to offices.

# ART SUPPLEMENT *of* NOTABLE ARCHITECTURE



*The* ARMOUR PLAZA, Kansas City, Mo.; Victor J. DeFoe, of Kansas City, Architect.  
This Georgian type building will contain 54 kitchenette apartments.

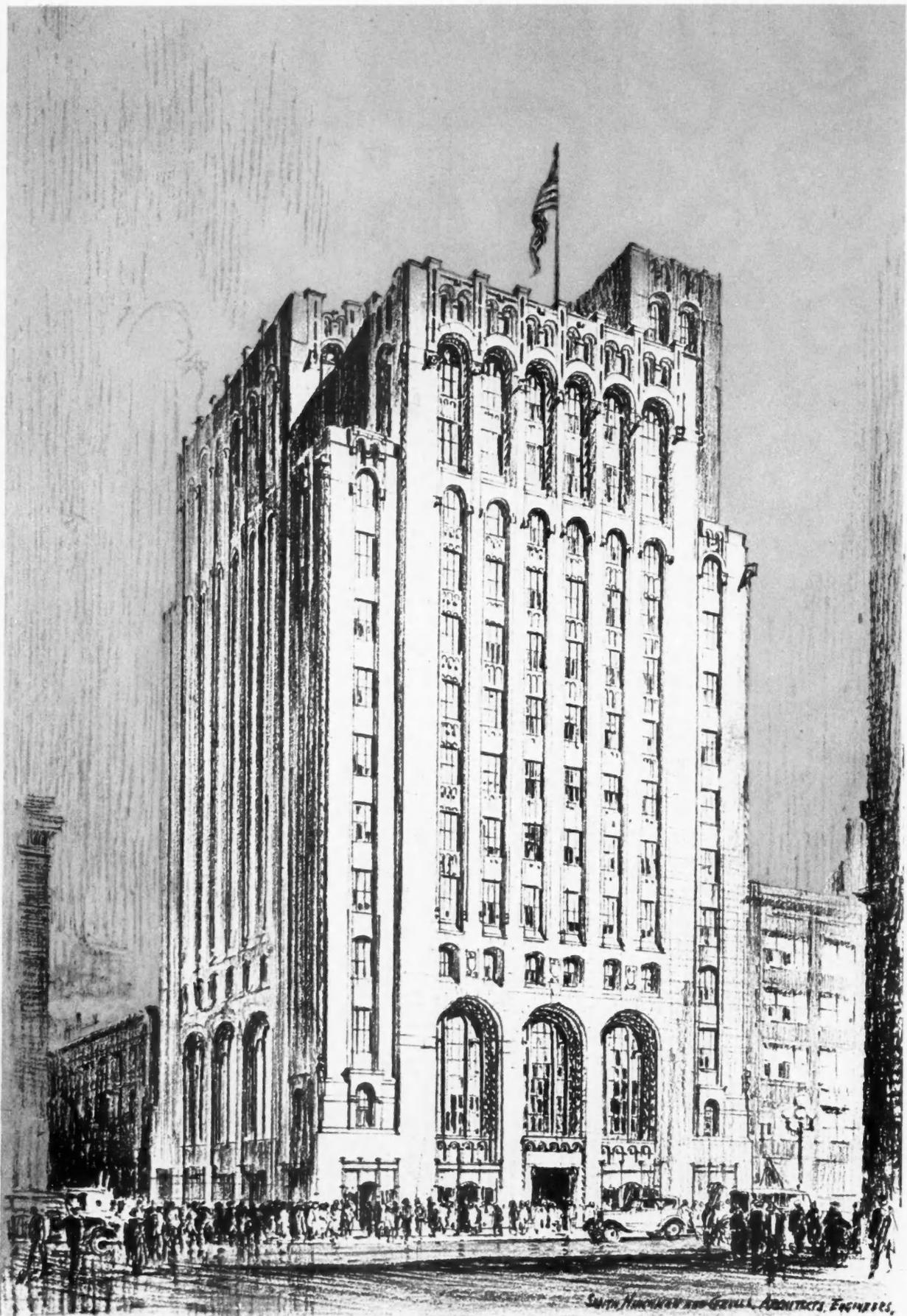
PLATE 61



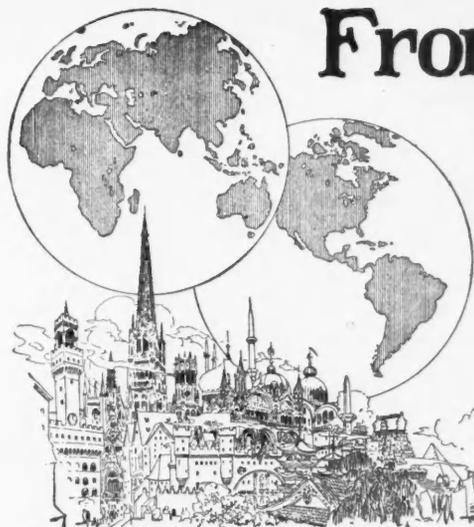
The CANAL-COMMERCIAL TRUST & SAVINGS BANK, New Orleans, La.; Emile Weil, Architect. This will be the largest office building in the South.



*The MILITARY PARK BUILDING, Newark, N. J.; Polhemus & Coffin, of New York, Architects.*



The GRAND RAPIDS TRUST CO. BUILDING, Grand Rapids, Mich.;  
Smith, Hinchman & Grylls, of Detroit, Architects.



# From Our Daily FOREIGN MAIL

Conducted by Wm A Radford, Jr.



*William A. Radford, Jr., Vice-President of the Radford Publications, in a two-year investigation, has personally visited forty-nine foreign countries in the interest of the American Builder and World Trade for our advertisers.*

**A** GOOD many of our AMERICAN BUILDER advertisers are getting into foreign trade through the foreign circulation of the AMERICAN BUILDER and the activities of this department. Inquiries are coming in and desirable sales are resulting.

Correspondence in a foreign language is difficult, and to the American concern that does not have a well developed export department is an obstacle to business. It is to help the AMERICAN BUILDER advertisers with their foreign letters that we have been publishing every month the invitation appearing at the bottom of this page regarding the translation of any foreign language letters that are referred to us.

We have expert facilities for this translation work and the importance of good, accurate translations can hardly be emphasized enough.

An incident is related of a call recently made on a manufacturer who is trying to handle some export business. He was asked if he was having any trouble.

"Trouble!" he said, "say, I never saw such a bunch of fools as the foreigners with whom we correspond! They can't understand anything, although we try to make things clear to them."

## FROM TURKEY

Constantinople, Turkey.

AMERICAN BUILDER:

Will you kindly request some of your advertising clients to mail us, as soon as possible, their catalogs, pamphlets, price lists and discounts, and if at all possible, samples.

We are interested in all building material for houses, office and industrial buildings, as well as portable contractors' equipment.

We have a contract for a very large number of up-to-date houses for which we shall need a variety of material.

At the same time we are wholesale dealers in construction material and contractors' equipment.

It is imperative that lowest possible prices and most favorable conditions be mentioned right off to enable us to place orders without delay.

(Signed) J. AGGIMAN, C.E.  
Consulting Engineer.

## FROM JAPAN

Kawasaki City, Kanagawa-ken, Japan.

AMERICAN BUILDER:

We are in the market for the following equipment and supplies:

Air painting equipment, disappearing beds, casement hardware, door hangers and track, door hardware, metal doors, cement hardeners, sash balances and sash chains, wheelbarrows and wood preservatives.

(Signed) W. W. STEVENS,  
Truscon Steel Company of Japan.

## FROM DUTCH EAST INDIES

Medan, Dutch East Indies.

AMERICAN BUILDER:

We are in receipt of a copy of the AMERICAN BUILDER which you sent us and for which we are much obliged to you. This will be very useful to us for ordering all kinds of materials, and we will not omit to mention our source of information when placing orders with manufacturers.

(Signed) B. H. KERKHOFF,  
Agents and Importers.

## FROM CHINA

Shanghai, China.

AMERICAN BUILDER:

We have sent you the 1925 edition of our directory, entitled "The China Architects' and Builders' Compendium." This will give you an idea of the modern building work being done in Shanghai and Hankow.

(Signed) THE PUBLISHERS, NORTH CHINA

DAILY NEWS AND HERALD, LTD.,  
Shanghai, China.

EDITOR'S NOTE—The above book has come to hand and like the last year's edition is well bound, well printed and full of good information. The price is Mex. \$5.00.

## FROM CHILE

Antofagasta, Chile.

AMERICAN BUILDER:

Kindly send us a sample copy of the AMERICAN BUILDER as we are very much interested in modern American building methods and ideas in house design and construction.

(Signed) HOMERO LOIS FRAGA,  
Arquitecto.

## FROM PHILIPPINE ISLANDS

Talisay, Occidental Negros,  
Philippine Islands.

AMERICAN BUILDER:

We are in the market for the following items and would like to have you put us in touch with your advertisers who can serve us to advantage:

Bathroom fixtures, disappearing beds, door hangers and track, door hardware, garment hangers, hinges and springs, kitchen cabinets, lighting fixtures, lighting systems, electric outlets, plumbing supplies, house pumps, iceless refrigerators, sewage disposal equipment, stucco, tool boxes, and cases, wallpaper, waterproofing, water supply systems and woodworking machinery.

(Signed) ALFONSO HILADO,  
Contractor.

## FROM SIAM

Bangkok, Siam.

AMERICAN BUILDER:

We are in the market for some of your country's products as per manufacturers' coupons enclosed, which we have clipped out of the AMERICAN BUILDER. Will you kindly put us in touch with them? We feel very much obliged to you for this frequent service.

(Signed) C. KIM HAH & Co.,  
Architect and Building Contractors.

## FROM AUSTRALIA

Adelaide, Australia.

I have your letter of August 29, 1925, in which you refer to the report sent by this Consulate relative to the construction of a transcontinental railway. You say that this is of interest to your publication. You say that you are sending a copy of the AMERICAN BUILDER to this Consulate. You also say that you will be pleased to furnish copies to others who might use the publication profitably in connection with these building operations.

I wish to thank you for the copy you have furnished this office. I shall see that it is used to good advantage.

I wish to suggest that the Commissioner of Railways, Adelaide, South Australia, might get valuable help from your publication. I also wish to suggest that it might be to your advantage to send a copy of this publication to Mr. T. Carlyon, Jr., of Hotel Adelaide, Adelaide, South Australia. A project is being undertaken just now for the construction of a large modern hotel in Adelaide at an estimated cost of about £184,000 sterling. The hotel is to contain about 220 bedrooms, each equipped with hot and cold water service, radiator, telephone and reading lamp, bathroom, etc.

As the plans have just been gotten under way to raise the finance for the construction of this building, it is probable that your publication might be of advantage to the management of the concern in the construction and equipment work required.

(Signed) HENRY H. BALCH,  
American Consul.

**Note: For the benefit of our advertisers we will, without charge, translate any foreign language letters referred to us.**

**AMERICAN BUILDER.**

# An American Home for France

Model Demonstration Home Now on the Atlantic En Route to Paris—To be Center of American Section of International Exposition

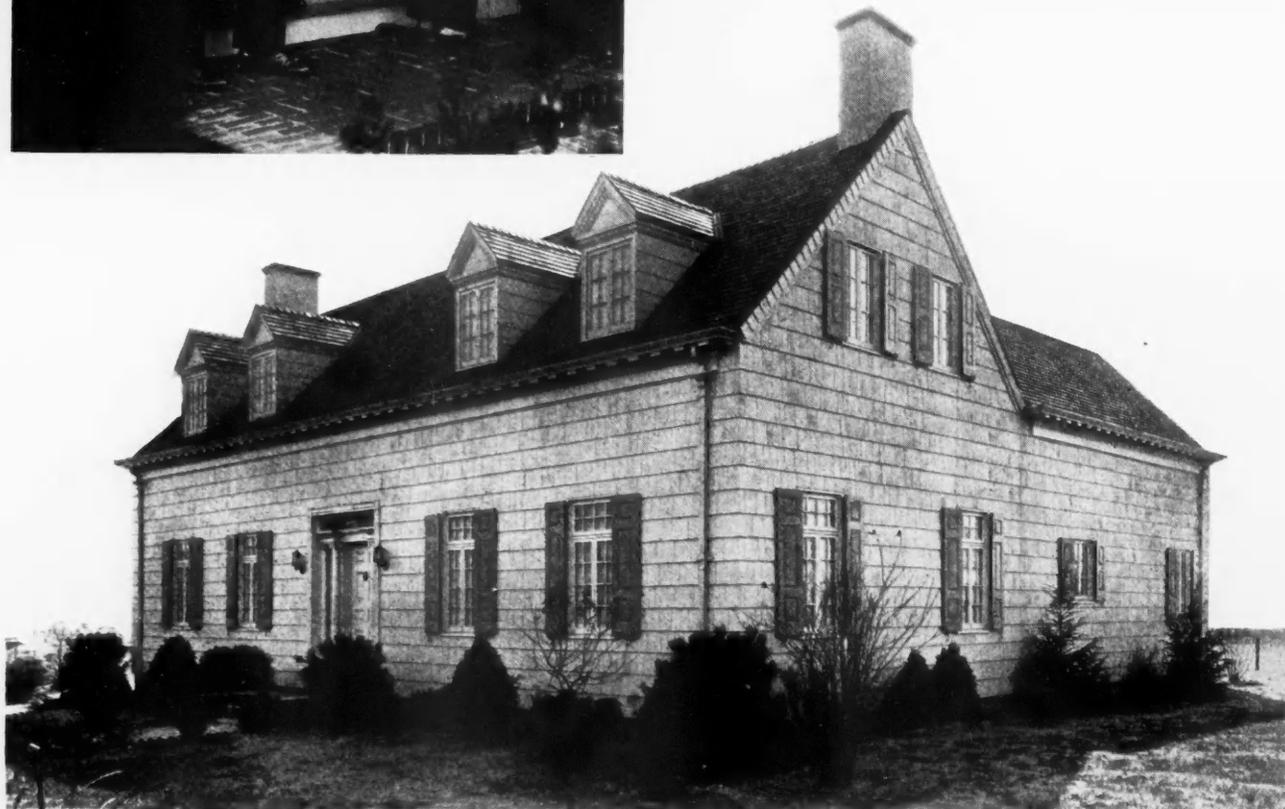
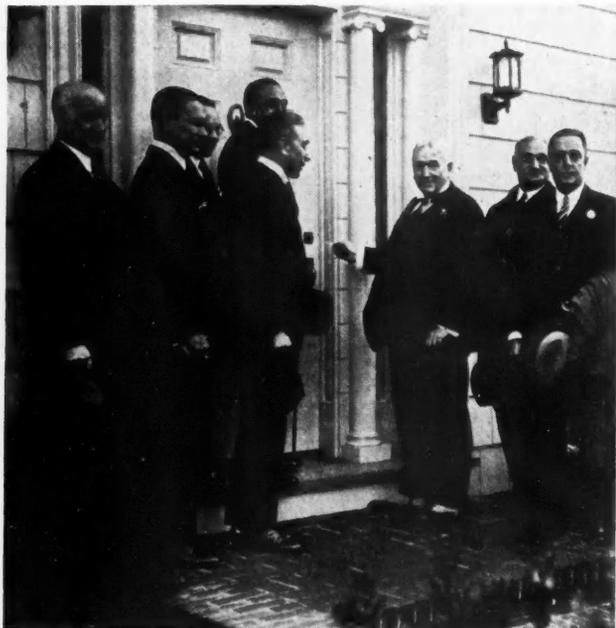
**T**HE French people know that you Americans have mastered the art of getting your household and office work done with a minimum of human drudgery, but they do not know how you manage this. The French housewife who still does her washing, ironing, cooking, sewing, scrubbing and cleaning with her own hands has much to learn from the American woman who

uses little electrical servants to do such work," declared Albert Broisat, a high official of the Department of Public Instruction of the French Republic, in accepting "The American Home" for exhibition in Paris this winter.

And so there will be this winter an American demonstration home for France! On a mission of good will, a complete ten-room house of the pure Colonial architectural type of 1775 is now on the high seas en route for Paris, where it is to be erected as an American demonstration "model" house under the auspices of the French government—a gift from a group of our representative manufacturers of building materials and equipment.

It is probably one of the most unusual, and certainly as practical and as attractive a house of New England Colonial design as ever was built. Unusual, because it was originally planned to be three times rebuilt before it will be set upon its final foundations overseas and donated to a deserving French family, to be designated by the Republic of France.

In February, 1926, "The American Home" will be the feature of the annual Exhibition of Household Appliances and Labor-Saving Devices held under the auspices of the Department of Public Instruction of France, in Paris. When erected full-size on the floor of the Grand Palais, this will be its second showing to the public as a complete house.



The Key to the House of International Friendship: Arthur Williams, Vice-President, Commercial Relations of the New York Edison Company, and President of the American Committee of the International Exhibition of Household Appliances and Labor Saving Devices to Be Held in Paris, Opens the Door of the First American Home Ever Constructed for the Purpose of Being Shipped to France Fully Equipped and Furnished, There to Be Reconstructed in the Grand Palais as the Gift of American Industry to the French people. Front row, left to right are: Edward T. O'Loughlin, park commissioner of Brooklyn; M. S. Sloan, president, Brooklyn Edison Company; Maxime Mongendre, consul general; Arthur Williams, vice-president, Commercial Relations, the New York Edison Company, and president, American Committee; Edward C. Blum, honorary president, American Committee; A. Barnaud, representing Herbert Hoover, U. S. Department of Commerce. On the step of the American Home is Albert Broisat, general commissioner for the American Section of the Exhibition in Paris to which the American home will be transplanted.

## An American Home for France

101

Its first formal opening took place in Prospect Park, Brooklyn, N. Y., on October 7, where it was open for public inspection for five weeks, before being delivered to the French government. Completely dismantled and crated, the interior furnishings included, "The American Home" was scheduled to sail for France on November 27, accompanied by General Commissioner Albert Broisat, who came to the United States several months ago for the purpose of interesting American manufacturers in the sales opportunities of the French market for building materials and household equipment, with the co-operation of the U. S. Department of Commerce.

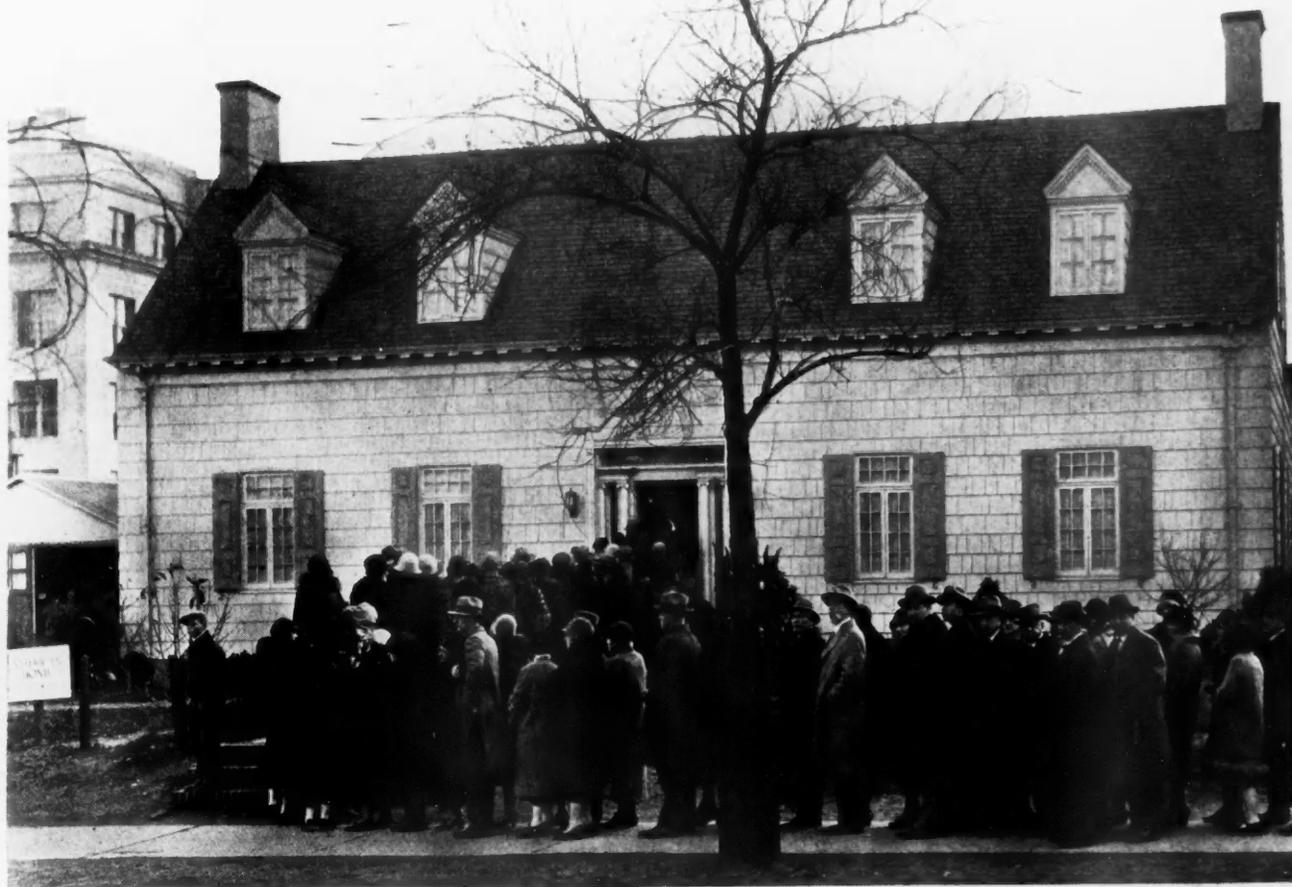
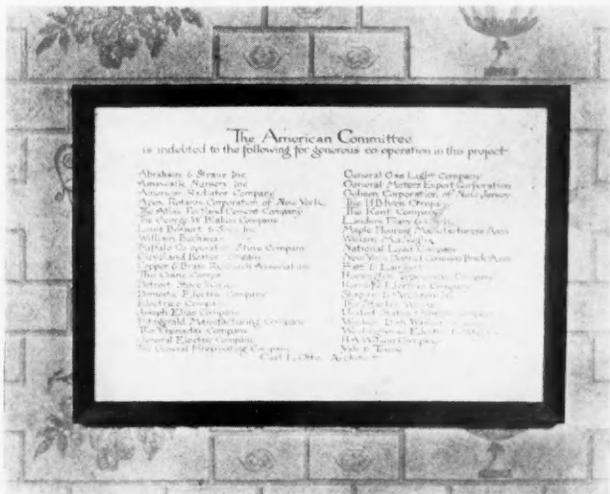
After the showing of the house at the Paris exposition,

it will be carefully taken down for a second time and rebuilt for the third on a Parisian plot deeded for the purpose by the French government, according to arrangements made by M. Broisat. "It marks an entirely new era in home building and new ideas for France," he said recently, expressing satisfaction over the success of his mission. "Such an enterprise as transporting an entire house from one side of the Atlantic to the other with all of its equipment and furniture has never before been undertaken."

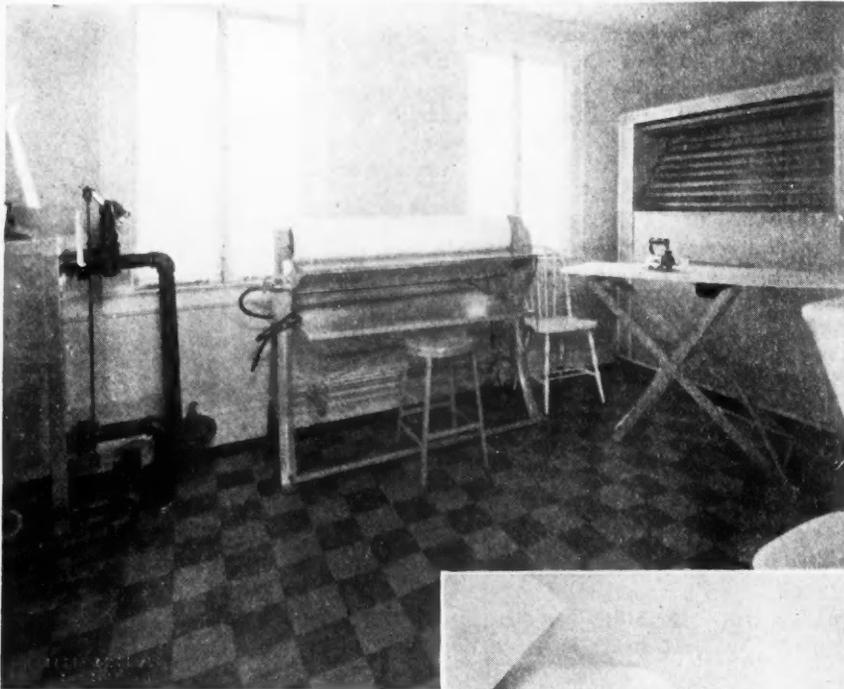
The committee appointed by M. Broisat to gain the co-operation of manufacturers and associations for the demonstration of "The American Home" in France was headed by O. C. Harn, of New York, chairman of the Producers' Research Council, affiliated



O. C. Harn, of New York, is Chairman of the Special Committee Which Gained the Co-operation of Many Leading Manufacturers of Building Materials and Equipment in the Construction of the Typical American Demonstration "Model" Home Which Is Now on Its Way to France. Mr. Harn is advertising manager and chairman of the sales committee, National Lead Company, also president, Audit Bureau of Circulations.



The American Home Was First Demonstrated in Brooklyn, Where Thousands Passed Through It. Above is framed list of the concerns participating in this exhibit.



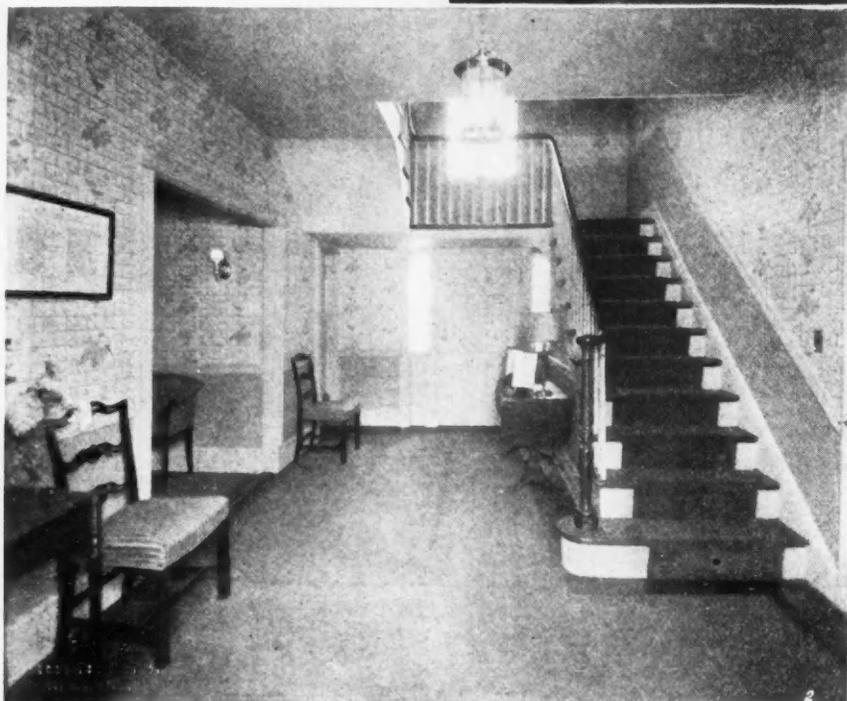
The Modern Laundry in the American Home.

with the American Institute of Architects, and advertising manager and chairman of the sales committee, National Lead Company, with L. Porter Moore, also of New York, as vice-chairman. Mr. Moore is president of the Home Owners' Service Institute and vice-president of Homebuilders' Exhibits.

Carl Otto, New York architect, designed "The American Home," and succeeded in combining the atmosphere of Colonial days with the added com-



One of the Bedrooms.



Entrance and Stair Hall in the American Home. The framed list of donors is on wall to left.

forts of this age so as to acquaint the French people with modern American building materials and the devices that go to make our homes beautiful and comfortable with as little labor as possible and at low cost. The floor plans indicate the practicability of the design. In the rear two wings shelter a charming courtyard, offering an out-of-door living room which will appeal to the French.

Four dormer windows adorn the front of the house, which is two stories high and has an exterior finish of shingles. Ends of the gables are flanked with two chimneys. The attractive doorway is pure Colonial in type and feeling. So that the building may be easily and quickly taken down in Brooklyn and put up again in Paris, it

is constructed so that it comes apart sectionally.

There is a spacious entrance hall with a large living room opening on one side and a dining room on the other, as one enters. A study opens into the dining room and a pantry leads from the dining room into the kitchen. This, in turn, has an entrance into the laundry, a wonder place with every known labor-saving device.

The mistress' bedroom is on the first floor and is connected with the nursery above by a truly intriguing staircase. There are three master bedrooms, each with complete bath. The servant's room also has a bathroom adjoining. Another feature of the sleeping rooms is the plan which includes in each suite a private dressing room.

Only Colonial and early American furnishings and decorations are used.

All the furniture selected is authentic in design, many pieces having actually been copied from Metropolitan Museum exhibits. Although the furnishings are copies from period pieces, however, the comfort and livableness of the home have not been sacrificed in any particular.

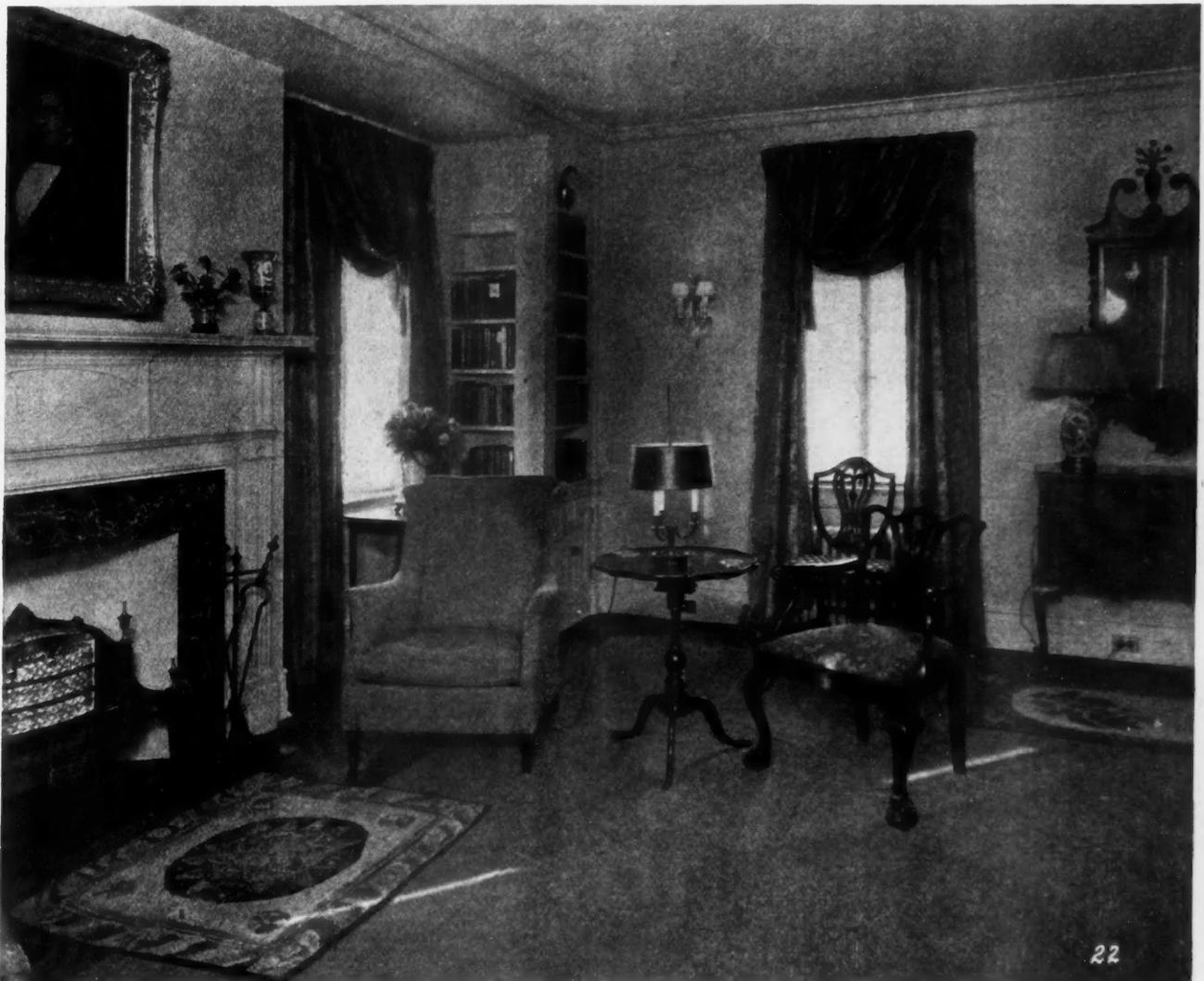
The fact that the American Home is to be twice dismantled and twice reconstructed has not deterred the builders from making the house complete in every respect, with running hot and cold water, gas and electric service, and a place for every labor-saving and comfort-providing device used in American homes throughout the country.

The kitchen and laundry will undoubtedly make the French women rub their eyes in amazement. For this model home will introduce to French women devices which are rarely seen or heard of in France, such as the vacuum cleaner, washing and ironing machines, fireless cookers, electrical refrigerator, and numerous other labor-saving devices.

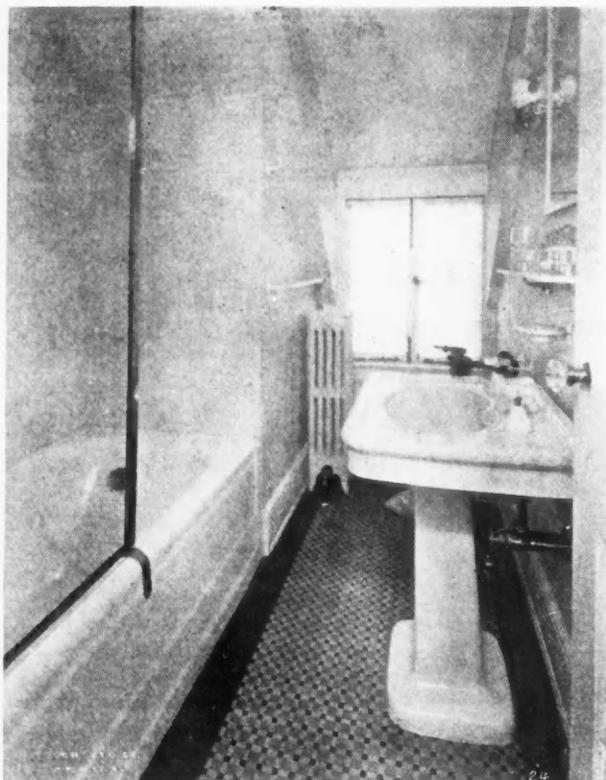
"The American Section may well



The Stately Dining Room with Its Colonial Furnishings.



The Living Room in the American Demonstration Home for France Is Furnished in the Best Colonial Style.



One of the Four Bathrooms.

cause a 'revolution in the French household,' according to Mr. Arthur Williams, of the New York Edison Company, who has been very active in this enterprise. "French women of all classes will be astounded to see the great diversity and usefulness of American mechanical devices. Electrical service is available everywhere in France, but it is used almost exclusively for lighting; for the many wonderful

electric devices so common in American home are practically unknown to the great majority of French women. The American Home should serve to strengthen the strong bond of friendship existing between the French and the American peoples."

Though the French build their houses with splendid solid stone walls and floor them with heavy oak, they have little notion of convenience in the interior. The pre-war abundance of servants is probably responsible. There are



View of Home from Rear, Showing Court Yard.

always so many women in need of work that "conveniences" were unnecessary, with a result that log-cabin comforts were frequent even in the homes of the wealthy.

As French houses were built to last, the inconveniences that were built in at the start last with them. Houses with even one bathroom are scarce. If an owner should put in four bathrooms his neighbors would think him insane.

The writer has not yet seen a French kitchen sink that did not consist of a slab of stone with a depression perhaps an inch deep scooped out of it. The sink is not expected to hold water, it is merely to hold the dishpan. There are few if any French kitchens with running hot water. Frequently, even in the handsome apartments, there is only one faucet in the house, the single cold-water faucet over the kitchen sink. Water is carried in pitchers for the other rooms. This single hydrant is high up to accommodate the tall tin pitchers that must be filled from it.



The Kitchen in the Model American Home Will Be a Wonder to the French Women.

# A New Type of Bank Tellers' Counter Has No Cage

**W**ITHOUT grilles, gratings or steel roofs is the latest type of bank counter. Customer and teller now meet face to face with only a narrow ledge between them. This 1925 model screen, installed in the Federal American National Bank's new home in Washington, D. C., was designed by the architect of that institution, Mr. Alfred C. Bossom, of New York City. It seems more like a piece of furniture than equipment. Its lines suggest those of some of the medieval Italian closets or wardrobes with their wonderfully carved panels or ornaments. The visitor indeed gets the impression on entering the bank that he is in some elaborately furnished apartment with friendliness in the very atmosphere.

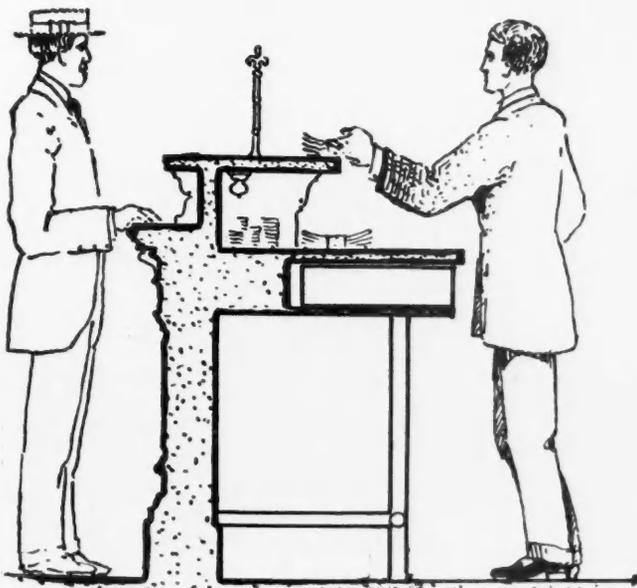
The device is of black walnut. On its paneled front, 3 feet 6 inches in height, rests a shelf 8½ inches in width and large enough for writing.

Eight inches higher rises a second ledge covered with a slab of black glass 21 inches in width. On the top of this rises a slight rail of metal 10 inches in height consisting of three twisted rods crowned by a decorative strip. Every 3 feet is a supporting stanchion of ornate design. Client and the teller can see each other readily across this apparently slight barrier and can converse more easily than they could were the conventional screen employed.

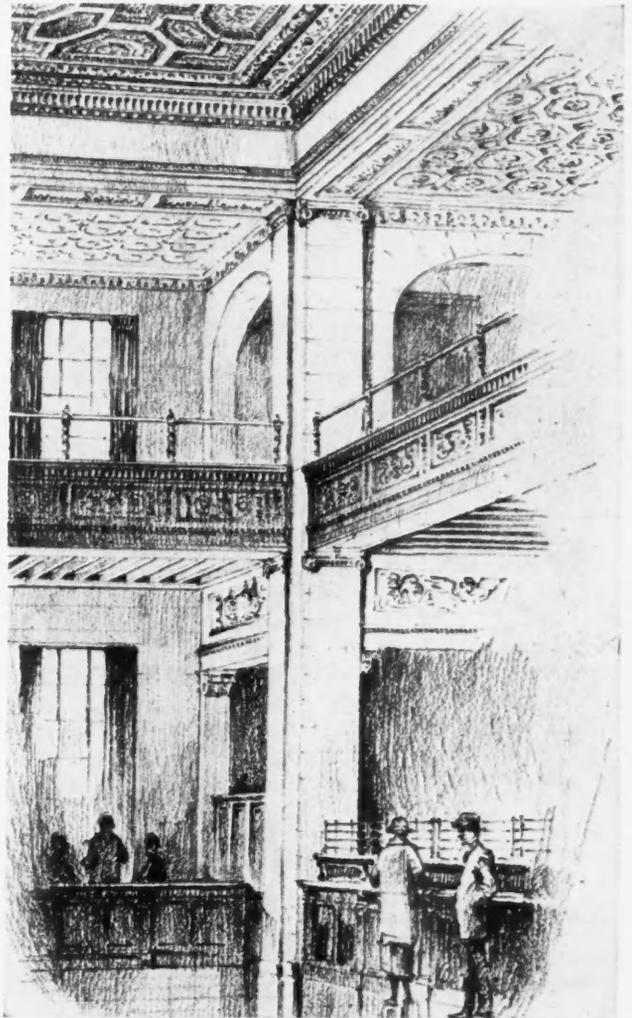
Underneath the glass top ledge is a very large recess or space, lighted by electric lights provided with reflectors, where the teller counts the money he takes from the cash drawer.

An experimental unit has been in successful operation in the Federal American National Bank for several months. Tests indicate that the fact that the client does not see the teller count the money is no objection, for every one who receives specie counts it himself before leaving.

The higher level of the screen is much wider than it appears. It would be impossible, therefore, for anyone to reach over it or to get his arm through the horizontal bars. The arrangement behind the screen is without heavy partitions, which guarantees greater freedom of movement on the part of the bank employees. Months of tests in every-



This Sketch Shows the Design of the New Counter with Concealed Desk for Counting Money and Cash Drawer Beneath.



A View of the New Federal American National Bank, Washington, D. C., Showing How the New Teller's Counter Appears to the Bank Customer.

day use have shown that the device is absolutely practicable.

As there is no overhanging screen above the heads of both customer and teller, the plate bearing the name of the bank official at any definite station is exactly on line of the eyes. In most institutions nameplates are above the wicket or grille, where they are less readily seen. The designation of the rank or office such as paying teller or receiving teller is placed on a tablet under the ledge.

One of the advantages of the new device is that both the teller and the client can concentrate better on their transactions than they can when the fortress-like screen is employed. At the same time the money is protected.



## Bricklaying by Machine

**B**RICKLAYING is one of the oldest of the building trades, but the general method of hand work has remained the same throughout its history. Now, after years of experimenting, a machine for laying brick is said to have been perfected by Sir William Arrol & Co., Ltd., of Glasgow, Scotland, and is being used on a housing scheme in the Glasgow area.

# His \$30,000,000 Island A Lesson In Building Faith

By GEORGE H. DACY

**W**HERE Jose Gasparilla, the famous pirate of the Spanish Main, once camped and where the late Theodore Roosevelt and his rough riders pitched their tents while awaiting orders to embark for Cuba in 1898, a sextet of small islands out in picturesque Tampa Bay has been developed into an unusual and beautiful residential section, a property of 875 acres, an island paradise, which sold for \$30,000,000.

Daniel P. Davis, who developed this notable project, is the son of a Tampa Bay steamship engineer, and started his career as a grocery clerk in Tampa. As a boy, he fished and played truant on the very islands which he subsequently amalgamated and developed into one of Florida's greatest and most picturesque realty projects. As a boy one of his greatest pleasures was to go fishing out on Grassy Island, Little Island or Big Island. Such an excursion always meant a chance to hunt for the pirate's buried gold which was reputed to be interred there.

Eighteen months ago, after several years' absence and a varied business experience, Mr. Davis returned to Tampa. He treasured the idea of purchasing the grass-green islands where he had played as a

boy and of transforming them into the finest residential section south of the Mason-Dixon line. He presented his proposal to the city of Tampa. He agreed to purchase the islands and to reserve 14 acres of the tract as a public park. The purchase was not as simple a matter as it appeared.

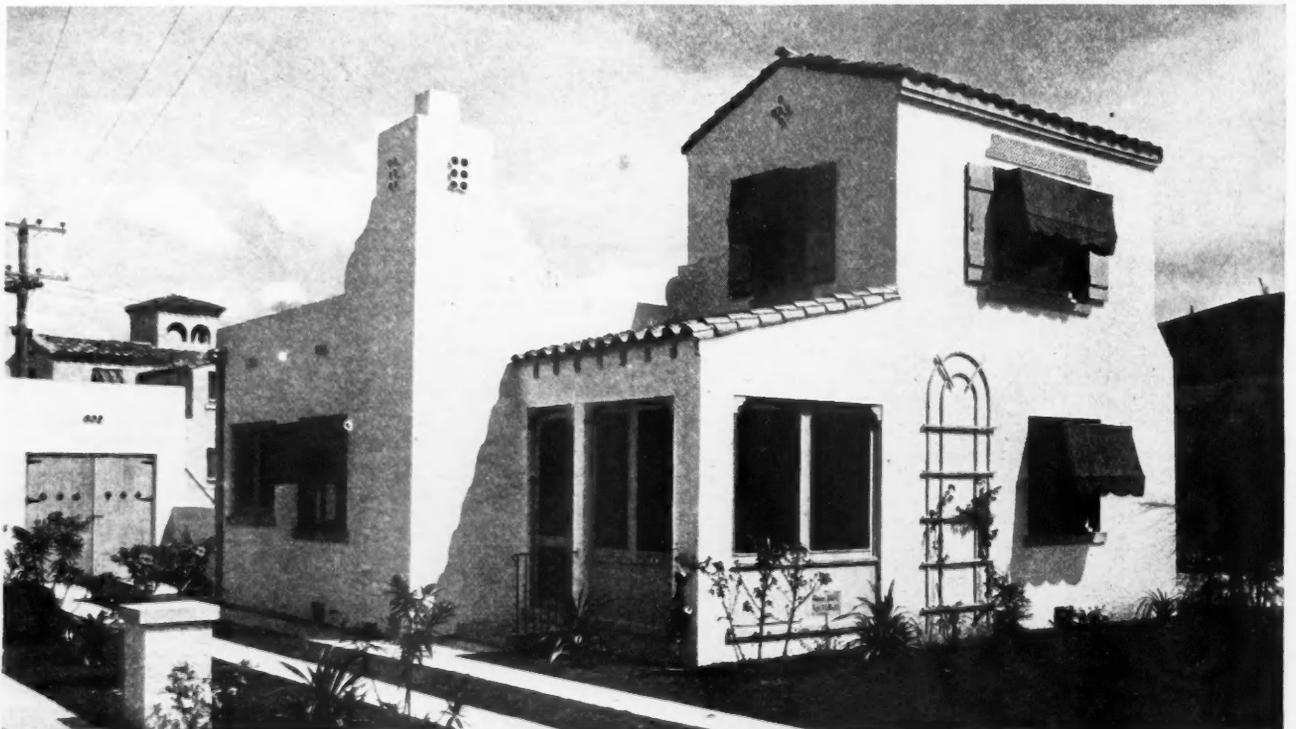
It involved a lengthy law suit and a special decision on the part of the Supreme Court of Florida before Mr. Davis finally acquired possession of the diminutive islands.

These islands were located at the delta or mouth of the Hillsboro River where that beautiful stream enters Tampa Bay. They were nothing more than the silt accumulations of scores and scores of years. The silt deposits anchored around a group of jutting rocks. Gradually the islands were formed and grew as the river water surged seaward and deposited its cargo of silt. Mr. Davis' plan was to build a great seawall and to pump from the floor of Tampa Bay sufficient sand, silt and muck to expand the original six islands until they covered one solid tract of 875 acres. And that is what his great crews of workmen did.

From a firm in Minneapolis, Mr. Davis purchased six of the largest dredges ever operated in the Gulf



D. P. Davis, of Tampa, Fla., Who Has Built a \$30,000,000 Island in Tampa Bay.



An Example of the Beautiful and Comfortable Homes Which Are Being Built on Davis' Island in Tampa Bay. Mr. Davis has already constructed \$5,500,000 worth of residences and another \$7,500,000 worth are under construction to be ready for occupancy soon.



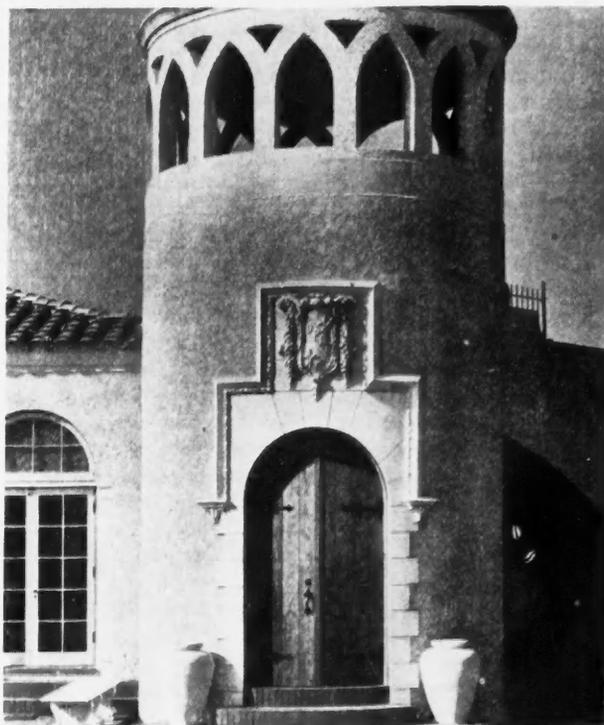
The Process of Building One Large Island from Six Small Ones Which Were Formed by Silt Deposits in Tampa Bay. The new island contains 875 acres.

How Davis' Island Will Look When Completed with Its Bayous, Lagoons, Driveways. It will be connected with the city by a steel and concrete bridge.

States. Under their own power he carried these dredges down the Mississippi River to New Orleans whence he had them towed across the Gulf of Mexico to Tampa. When the dredges finally began work, they represented a cost of more than \$500,000. These dredges were capable of handling 1,000,000 yards of fill a month.

Mr. Davis has made his island development one of the finest real estate properties in the world. Experts say that when the island is completed and residence construction developed to the maximum point that the entire project will be worth in the neighborhood of one-third of a billion dollars.

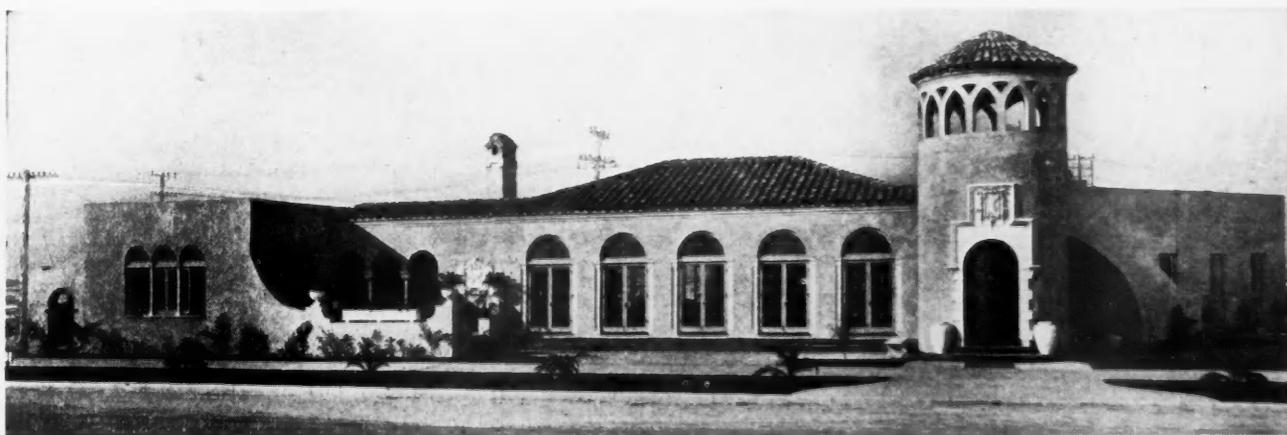
Even before construction was well under way, the Davis offices were so besieged with prospective buyers who wished to reserve special lots, that finally Mr. Davis announced a special sale of 306 lots on the northern end of the island



The Imposing Tower Which Forms One Corner of the Administration Building at Davis' Island.

for a certain day. Buyers stood in line for 40 hours in order to win a chance to purchase some of this property. The lots were sold on the policy of "first come, first served," with a stipulated hour, 10 o'clock in the morning, for opening the sale. In three hours' time the 306 lots were sold for \$1,683,580, probably establishing a record for the rapid sale of subdivision property. Nine-tenths of the lots were purchased by residents of Tampa who have known Mr. Davis all his life.

The demand for the residential property was so great that Mr. Davis held a second sale. In these two sales \$3,000,000 worth of lots were sold in exactly ten hours. The Davis Island is directly opposite fashionable Hyde Park, the finest residential section of Tampa. A large wooden bridge now links Davis Island, 370 yards off shore, with the mainland.



The Administration Building at Davis' Island Is a Beautiful Structure, Harmonizing with the General Architectural Plan at the Island, as Well as Being a Practical Structure Housing the Great Task of Managing This Enormous Project.

This bridge is only temporary, for use during construction of the water-bordered subdivision. It will be replaced by a permanent bridgeway of steel and concrete as soon as the latter can be built.

The contour of the Davis Island is being made as attractive as possible. It is indented with beautiful bayous, coves, lagoons and interlacing channels. A fine yacht club harbor is provided as well as facilities for trans-water travel from the island to the mainland.

Daniel Davis claims that one explanation of his success in subdivision sales is the fact that he has always followed the policy of building as many residences as possible on the tracts which he has handled. These constructional programs have won the confidence of the purchasers in the permanency and reliability of each project. Mr. Davis is following this rule at his magnificent island development. He is building 300 permanent homes on the island which will range from \$10,000 to \$30,000 in value.

These houses are of Spanish and Italian design with stucco and concrete construction predominating.

One outstanding feature of the Davis Island is that its most remote point is less than one-half a mile from the Hillsboro County courthouse, one of Tampa's centrally located buildings. Not only will the island-dwellers be living in an exclusive seaside settlement but they will be close to the heart of the city.

An eighteen hole golf course is being laid out on the island by one of the country's leading golf architects. A \$200,000 clubhouse, which will be one of Florida's most beautiful structures of this type, is now under construction as well as a \$50,000 tennis clubhouse and courts. Clay, grass and concrete courts have been provided and southern championship meets will be annual events. There are grounds and facilities for polo and all other outdoor sports. The 14-acre public park is being developed as a bower of tropical beauty.

Three of every four lots sold on Davis Island have been purchased by the people of Tampa. They have faith in "Dave" Davis. Mr. Davis has paid dividends on this faith. Among other things he has set aside \$10,000,000 in a special loan fund for the use of persons who wish to build permanent homes on their lots. There are no



Pergola of the Davis Island Tennis Club Built at a Cost of \$50,000. Here clay, grass and concrete courts provide a playground for the Davis Islanders.

complications associated with the making of such loans. The prospective builder gives first and second mortgages on his property to Mr. Davis and in return secures full financial assistance.

Furthermore, Mr. Davis has already constructed \$5,500,000 worth of buildings on his project while an additional \$7,500,000 worth of his residences, apartments and hotels will be ready for occupancy by Christmas Day. This last contract is in the hands of Hegeman-Harris, Incorporated, of Chicago and New York, who have moved their southern headquarters from Nashville, Tenn., to Tampa. F. M. Butler, who developed and beautified Lincoln Park, in Chicago, has charge of the 100-acre nurseries at Davis Islands where every known variety of semi-tropical flowers, plants and ornamentals is being grown. As soon as the plants attain sufficient size, they are set out over the man-made island. Streets, lawns, parkways and plazas are thus being beautified along uniform, systematic lines.

The monolithic concrete seawall 11½ miles in length, which borders the island, is being built under the supervision of a former major in the U. S. Corps of Engineers. The work is progressing at the rate of 1,000 feet a day. The concrete wall is built upon 18-foot creosoted piling.

It is being made strong enough to resist the fury of the wildest tempest. The ornamental topping of this seawall is 24 inches wide, indicative of the solidity of the massive masonry.

The 3,300 residential lots on the Davis Island have been sold for \$30,000,000. The concluding sale of this spectacular property was held on October 1, 1925. A total of \$18,000,000 worth of lots was sold in a consecutive period of 31 hours. At the end of the sale \$8,250,000 in certified cheques, bank drafts and similar securities filled the coffers of the Davis company. Eighty per cent of these lots were purchased by residents of Tampa. Despite the magnitude, unusual character of Davis' project, the people who had seen "Dave" Davis mature from a grocery clerk into a promotor of million dollar subdivisions, supported him all the way through in his undertaking.



Spanish Style Homes of Stucco, with Tile Roofs, Are the Most Popular at Davis Island and Striped Awnings Lend Their Touch of Color to the Brilliant Landscape.

# A Shop Building That Attracts

By J. HAROLD HAWKINS

**T**O be successful in its enterprise the small, exclusive shop of any kind, or the gallery of art goods, should be housed in a building that is in keeping with the atmosphere that a fastidious proprietor desires to maintain throughout every detail of his establishment.

Fourth Street in San Diego, Calif., climbs from the level of San Diego Bay to the canyoned heights of the exclusive residential district of Mission Hills. About half way up the steady grade is a most delightful, small building in which are nestled two exclusive shops; one an art gallery, and the other the studio of a consulting interior decorator. There is an impressive air of artistic refinement about both establishments, and, from the viewpoint of a passer-by, this atmosphere is created almost solely by the building itself.

Stucco, with a faint lavender tinge, over hollow tile is the medium used. The surface is slightly rough, although the first impression is of a smooth plane. A frieze of square, tile plaques band the building near the top edge. The plaques are black with a conventional design done in flat blue. Smaller plaques of similar design form arches over each of two entrances.

Novel transom lights are provided over each of the four show windows. While transoms in effect, these openings are really separate windows and entirely independent from the show windows themselves. The four openings are arched and grilled with wood spindles that are painted black.



The Arched Entrance Doors Are Distinctive With Their Grilled Windows and Ornamental Plaques and Lanterns Above.

The two pairs of differing show windows—one shop being on a decidedly lower level than the other and its pair of windows necessarily being taller—are each of one sheet of plate glass. This variation in size lends interest to the building's front. The window frames are not visible except for a single narrow jamb into which the edges of the glass fit inconspicuously. The stucco is smoothly beveled at the edges of the openings so that the appearance of the windows is, as a whole, extraordinarily neat, attractive and artistic.

The two distinctive entrance doors (one of which is screened in the photograph) are arched and fitted with arched glass, protected by a grille of turned wood spindles similar to those over the transom lights above the show windows. Directly above the arch of colorful plaques over each entrance is an ornamental iron hanging lamp. All exterior woodwork, including the doors and the lamps, are black. Only the blue of the plaques, and the gold braid which borders the respective cream and black draperies that hang inside the shops, furnish striking color contrasts to the building's general color effect of black and lavender white finish.

The "Little Gallery Building," in keeping with its name, is small as can be seen by comparison with the automobile parked at the curb. Its construction is simple and comparatively inexpensive, yet the small edifice stands out as one to be remembered by any appreciative pedestrian of Fourth Street, San Diego.



The Little Gallery Building, in San Diego, Calif., is Striking in Its Simplicity. The tone of the building is in complete harmony with the atmosphere of the shops which it houses, one an art gallery and the other the studio of an interior decorator.

	<p><b>LANDSCAPE ARCHITECTURE</b>  <b>AND</b>  <b>THE HOME</b></p> <p>A DEPARTMENT CONDUCTED BY <b>F.A.CUSHING SMITH</b>  <b>LANDSCAPE ARCHITECT</b>  <b>CHICAGO</b></p>	
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## A Christmas Garden

How to Plant for Winter Beauty Around the Home

By F. A. CUSHING SMITH, Landscape Architect

**T**O the builder or home-owner who is fortunate enough to be able to take up his tent and depart for the sunny south in the winter, there is no need to talk of the winter garden in the north. He is far more interested in getting away from the cares of a northern winter, and less interested in the scenery which he could create about his northern home, if he had the inclination. Thus this article and the suggestions which it contains are intended for the man who loves his northern home, who misses the snows and bracing winds when he leaves them, and who would not miss a snowy Christmas for all the oranges in Florida.

The sturdiness and hardiness of a large group of evergreens, both large and small, make them worthy of more attention than has in the past been accorded them. Their popularity in recent years has at times been somewhat hurt because of their death in an especially hard winter when a sleet storm with the consequent freezing and thawing of their branches may have caused the falling of the needles, and later death of the trees.

Some people have also found that an evergreen sold to them as a dwarf variety suitable for planting at their entrance door, after a few years assumes the proportions of a forest tree. Such errors in planting are regrettable, for an evergreen of any size is difficult to transplant properly, and due to their first cost the greatest care should be taken in planting to insure dwarf varieties in such a position, saving the taller varieties for specimens.

The finest use to which a Norway spruce can be put is one which one of my friends happily discovered. To the front of his house was a well enclosed, shrub bordered lawn, just outside of his living room windows. Feeling that each Christmas had meant the death of a fine spruce tree, for who would be without a decorated tree on Christmas Eve, he decided to plant a large tree in the

center of this lawn. This tree he had wired, the wire running in a small conduit underground from a switch conveniently located near the front entrance. On Christmas Eve the spruce tree was decorated in the usual fashion, and hung with small electric bulbs. The effect when this tree was lighted at night was well worth the effort which such a plan involved, and he had the tree alive after the Christmas and New Year's activities had passed by.

The reason for the greater cost of evergreen trees, in comparison with shrubs or trees like the maple or elm which are deciduous, is the time which it takes to grow an evergreen tree from seed in the nursery. Any tree, according to a nurseryman who specializes in evergreens, which has well-developed roots and tops, takes from eight to ten years to grow. At that time they are from two to three feet or three or four feet in height for the tall varieties, and much smaller for those which are dwarf.

To learn to tell the difference between the varieties of evergreen trees takes many years of careful study, but the general characteristics of the various families can easily be distinguished. Not all of them fall, as one of my friends remarked the other day, into the pine family, when in looking at a group of evergreens, he said, "pine trees certainly add greatly to the attractiveness of a home in the winter." If pine trees only were to be used, but one, the Mugho pine, a dwarf variety, could be planted toward the front of the house. All of the others are, when mature, large forest trees, of various types, habits, and heights.

Among the many families of evergreens with which some of my readers may be familiar is the group known as the fir trees or Abies. The Douglas fir, rugged, towering and permanent, is the finest large evergreen for northern climatic conditions. You can enter a forest of fir with the same sense of vastness and of reverence which you may feel on entering a



As a Specimen Tree, the Concolor Spruce Assumes Massive Proportions.

magnificent cathedral. A Scotch explorer, David Douglas, discovered this tree in 1827, and it was later named in his honor. This tree is native in Colorado from which state comes the Colorado blue spruce, and under normal conditions reaches a height of sixty or more feet. It is of the concolor fir, with its bluish needles both above and below, of which Hood writes:

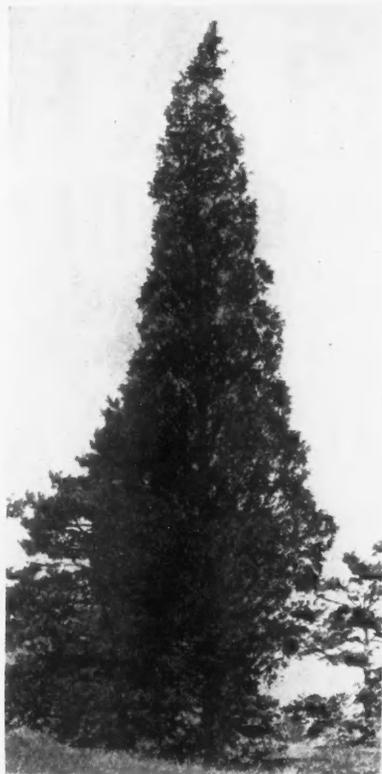
I remember, I remember,  
The fir trees tall and high;  
I used to think their slender spires  
Where close against the sky.

The fir trees with their fine flattish needles, grown in rows on opposite sides of the stem are soft to the touch, in contrast to the stiff sharp pointed needles of the spruce.

The hemlock tree with its long drooping branches and deep green needles needs a rather moist, deep loamy soil, and a cool situation, even better if partially shaded. It is well to insist upon the northern species, or canadensis strain, for the southern strain will not withstand the northern winters. Hemlock makes a beautiful hedge along an entrance drive, or about the borders of a home lot, due to its density of growth and the ease with which it can be pruned.

The red cedar or juniperus Virginiana is America's best known and most widely distributed evergreen tree. Nature planted it in almost every part of the American continent, and from the land of snow and ice, to the southland it is found in all different shapes and sizes. There are tall and narrow trees, low and bushy trees, and all varieties imaginable between. The needles of the red cedar when young are awl shaped, and sharply pointed, later adult foliage being appressed to the stem. Not one of my readers but has heard of red cedar posts, and sills of buildings which, if of cedar, resist moisture, due to their compact wood. The fragrance of cedar boughs and wood makes it valuable for chests and as a lining for cedar closets, where moths do not enjoy their life.

In season the berries of the red cedar, blue-black in color, attract large numbers of birds. This evergreen can also be sheared like the hemlock, and in the early



While the Red Cedar Can Be Readily Clipped, When Left to Its Native State It Grows to a Height of 60 Feet.

spring the branchlets take on a bright green tint, later turning to dark green. Red cedar may be used for a screen, or as a specimen tree, and when properly taken care of attains a height of from twenty to thirty feet.

Before going further with the different varieties of evergreens, which varieties will be discussed in a later article, let me caution as to their planting. They can be safely transplanted either in the early spring, or in August and September, as both of which seasons they are dormant. Do not attempt to plant them without a large ball of earth about the roots, and wet them thoroughly before removing the burlap with which these roots are packed. After planting they need much moisture, and seem to thrive best in a moist situation.

Grouping of evergreens in the Christmas garden is of great importance, and many fine effects in foliage and color combinations can be secured easily. Among the other varieties of evergreens which look well together for planting in front of the house, are the aborvitae, both the tall and the dwarf or globe-shaped varieties, and junipers with their trailing and low habit, the yew trees, in two different kinds, which, with their dark green, glossy foliage, bring a sturdy, hardy variety to our borders.



### One Family Houses Increase

OF every dollar spent in the construction of buildings during the first six months of 1925, in sixty-eight large cities of the United States, having an aggregate population of nearly 30,000,000, 65.8 cents were spent for residential buildings and of this amount 27.1 cents for one-family dwellings. Of the total number of families provided for during this period 42.8 per cent were accommodated in one-family dwellings as compared with 41 per cent in the first half of 1924.

The estimated cost of one family dwellings was \$408,306,932, or \$4,546 average per building. For the first six months of 1925 there was an increase of 6.8 per cent in the number of one-family dwellings over a similar period of 1924, with a decrease of 26.5 per cent in the number of two-family dwellings, due largely to tax exemption on new buildings in New York City ending June 30, 1924.



### Where Electricity Is Used

NEW YORK CITY, with a population of 6,000,000, uses more electricity than 12 European countries, Greece, Denmark, Latvia, Jugo-Slovakia, Poland, Hungary, Norway, Rumania, Turkey, Switzerland, Sweden and the Netherlands, with a combined population of 109,000,000, and almost as much as either Great Britain, France or Italy. This is a striking example of the high development of American home life. The ordinary electrical conveniences in the average American home would be regarded as extraordinary luxuries in the average European home.

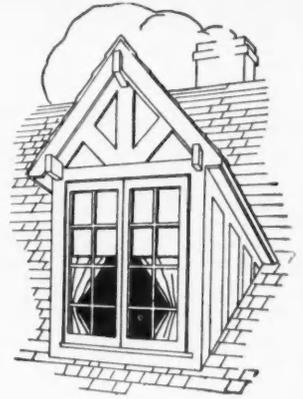


A Well Handled Evergreen Planting Against a Brick Porch Is a Most Effective Treatment for Many Homes.



# DETAILS of HOME BUILDING

by V. L. SHERMAN  
Lewis Institute of Technology



## Detail 9—The Kitchen

**M**AY "a Christmas goose" be our only censure for meddling in the kitchen just before the holidays. Authority may be questioned and our opinions smiled at by those in real authority, but the season at hand is most charitable, and the topic of kitchens in small homes is a live one.

There are two ideal kitchens. The one in which the menfolk may retreat to the fireplace and settle to enjoy the social atmosphere while the women proceed with their never done tasks, and the truly modern kitchen which is so efficiently arranged that the shortened tasks release the housewife from drudgery. Initial credit in the improvement of the kitchen goes to the disgruntled "hired girl" who, in quitting, brought home to the family the fact that the home should be improved. The old kitchen had to go.

Most of us can remember the hustlings out of the way, the admonitions, and the good-natured scoldings as well as the doughnuts. The old kitchen was a wonderful place to the hungry boy but an awful loss of time and comfort to the grown people. Now things are changed. The youngest fellow in the family sits at the corner cupboard cutting out his baby cookies, and shouts: "Take the hint and run, child, run, or I can't get no cookin' done." No hired help, no waste of time, no intense heat, no drudgery. Who is to blame? We should say that the experienced housewives have led the builders and the manufacturers to the greatest improvements of the home.

This argument is going to center on real houses, and, personal opinions and expenses being taken for granted, we will begin thus. In the new house the dining room, as such, was to be omitted. I was for enlarging the kitchen and placing a great fireplace at one end with the time honored high-backed benches on a flag-stone floor. That was vetoed as being entirely too mussy for a food-factory. The fireplace was relegated to the attic if I "must have a private one." The breakfast nook was broached next, but I objected in turn on the grounds that there was little space to dodge when the elbows of the youngsters began to play about the table. So the arrangement was made as shown in Fig. 1.

The favorable points to be recited are not original altogether, but they will show the trend toward simplifying kitchen management. This kitchen faces the street, with a Dutch-door giving an obstructed view from the sidewalk 50 feet away. A Dutch door serves as a counter against peddlers and the like besides bringing in the out of doors.

The kitchen cabinet and the range with a large ventilating hood are back against the inner wall and near the door. The sink and wall-cases line the further wall. At their counters the ingredients are prepared for work at the kitchen cabinet, sort of routing the production. The window space is left for later consideration, perhaps to furnish the artistic side of the kitchen.

A door marked A caused some argument. Viewing it from the breakfast porch the door should have been reversed, and so it should for its chance of pulling odors from the range. But it is steps that count, and who wants to walk around a door continually. The switches, however, should be on the open side of the door.

Now here is a point that demands some argument. According to all pertinent advertisements the proper place for a sink is below a window. But there seems to be objections. It is said that the light is frequently too strong, and that in cold weather there is some chill. Then there is the vent in an outside wall or exposed pipe. Still a bright sink has distinct advantages, and with practice even a man can do the dishes by touch while gazing out of the windows.

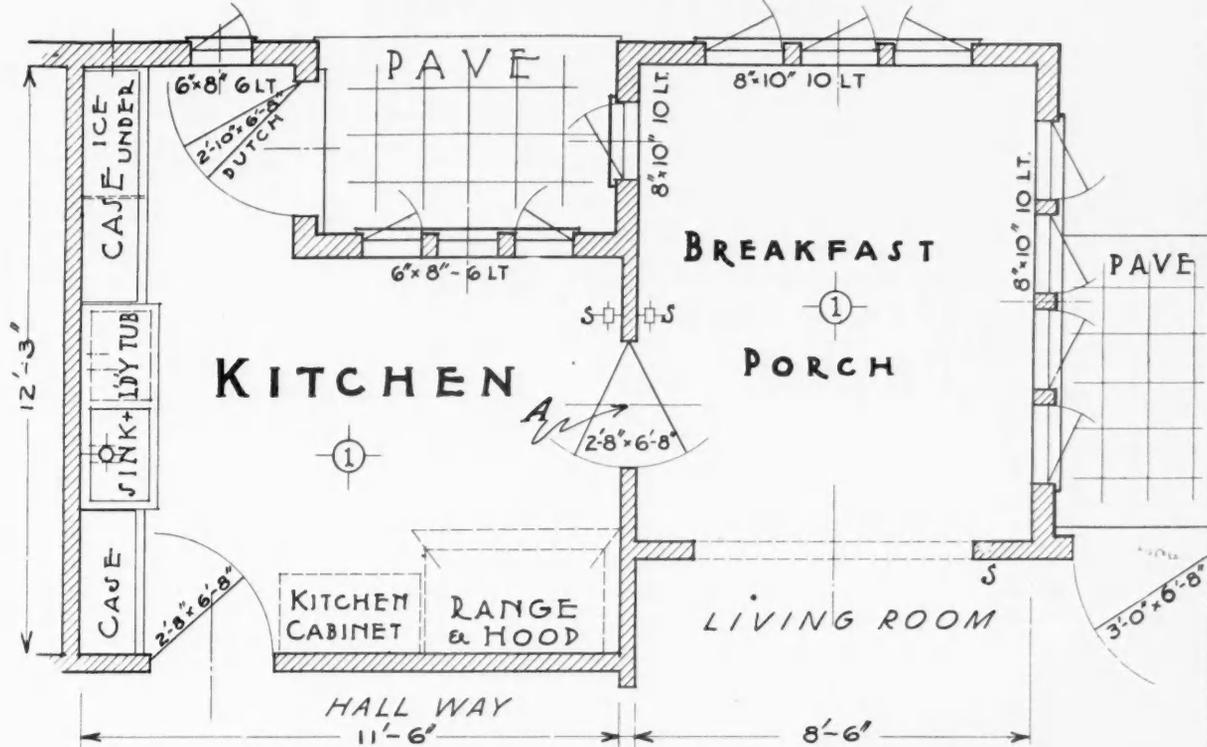
The kitchen cabinet, and the built-in cases are wonders. I know of one coffin-like arrangement running from floor to ceiling that is so helpful to the housewife that she scolds me for criticizing its shape. These kitchen cupboards of modern times are deservedly popular. Everything is at hand, and the cook sits down to her work. It means added time, a pleasanter task, better results, and the average man is better fed for it. When building there should be no effort spared on the kitchen.

The kitchen and pantry shown in Fig. 4 are the result of a small addition. A window of this kitchen was replaced by a pair of glazed doors which then opened into a "salad making" pantry. The pantry really became a part of the kitchen, but a pantry which could be closed off. The two narrow doors did the trick, saving a great deal of floor space and a great amount of light. The designer of this kitchen had a penchant for mixing salads, but she found, too, that the added floorspace made a neater and roomier kitchen, and that, with its lack of doors, the whole became an exclusive workshop.

Probably the most important points in kitchen design are light and ventilation. The favored kitchen location is toward the north, and with that condition strict attention must be paid to the window lights. Windows should then be given as much consideration as cupboards. If a ventilating hood is not placed above the range the windows or doors should be provided with transoms. Whenever possible a pantry should be situated between the kitchen and the living rooms with two doors to prevent direct openings. This, though, is very often out of the question, which again calls attention to the need of proper ventilation.

There is good reason, especially in a small house, for placing the kitchen on the street side. Many steps are saved through such an arrangement, the outlook is more likely to be pleasant (and more interesting), and back steps are avoided. Such a plan chimes in with the idea that the rear of the house should be the out of door side, and kitchens, especially in a bungalow, should be as nearly as possible the center of operations.

FIG. 1. SCALE 1/4 IN. = 1 FT.



AN EASY COMMISSARY.

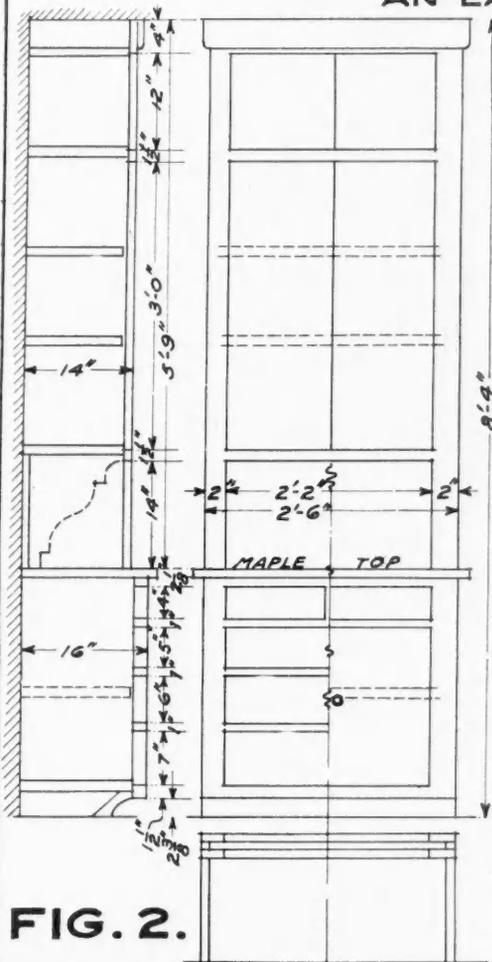


FIG. 2.

PATTERN FOR KITCHEN WALL-CASES SUCH AS ARE SHOWN IN FIGURE 1.



FIG. 3. THE KITCHEN-DOOR OF FIG. 1.

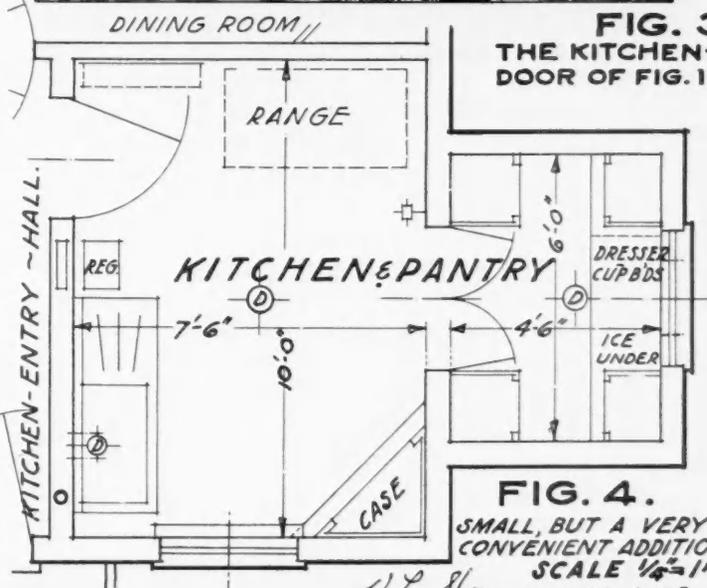


FIG. 4. SMALL, BUT A VERY CONVENIENT ADDITION. SCALE 1/4 IN. = 1 FT.

V. L. Sturman. 10-6-25.



# Homes in COLORS

*Now Is the  
Home Planning Season*

By WILLIAM A. RADFORD,  
*President and Editor-in-Chief of American Builder*

**C**HRISTMAS time suggests the home with its cheerful firelight and happy family circle. This is the time for home planning, and almost every one is doing it.

There never before was so much popular interest in home planning and home building.

AMERICAN BUILDER readers are naturally in the forefront of this work—preparing plans, figuring plans and advising with prospective new building owners regarding their building ideas and requirements.

AMERICAN BUILDER readers have the unique advantage of the sixteen pages of Homes in Colors and the many popular designs presented in black and white in every issue of the AMERICAN BUILDER. No other publication is presenting homes in full colors; so AMERICAN BUILDER readers have the advantage of these strikingly beautiful designs in their sales work and in their important function of preparing plans and advising with their clients as to what is best.

Among the regular AMERICAN BUILDER subscribers are numbered half of all of the architects practicing in the United States; and in addition to these, practically all of the builders and contractors on our subscription list are concerned with the design of many of the buildings they erect.

Our subscribers among the lumber and building material dealers, now numbering close to ten thousand, are also very much concerned with the planning of homes and they make good use of these beautiful and popular designs presented each month in the AMERICAN BUILDER.

We have no way of knowing the number of houses built each year from these AMERICAN BUILDER designs or inspired by them, or reproducing in some part or detail an idea illustrated in these pages. We hear of some, of course; like the Roanoke Rapids, N. C., house which won a first prize in this year's Better Homes in America Competition and was built from the Front Cover Home drawings published in the March, 1924, AMERICAN BUILDER.

But thousands and tens of thou-

sands are built as a result of these suggestions which we never hear of. We only know that the entire field of home building is on a higher plane and that homes are much better designed now than twenty years ago when we began this work; and we are satisfied to have contributed our ideas every month consistently for others to use and to transform as needed to meet their local building needs.

As the Christmas season with its courage and its hope for the future is the great home time and the time of home planning, we are reprinting below, at the request of many, the poem first presented just a year ago in this magazine.

## Christmas at Home

O Builder, make a picture, make me a plan to picture

A neat New England mansion or Spanish bungalow,—

Cement or brick or lumber, with rooms in goodly number,

And a green lawn like velvet, where tree shadows come and go.

I want it Christmas morning, must have it Christmas morning,

With lively pitter-patter across my bedroom floor,

The lovely lisp of children,—my happy little children,

That bring back (O, the joy of it!) my Christmas days of yore.

I want to tread the stairway—yes, tumble down the stairway!

To the hearth-full of stockings hung up the night before,

To see what Santa's brought 'em, (what Ma and I have bought 'em!)

On the Yule tree gift-laden, bright-branching from the floor.

I want what follows after, the breathless childish laughter,

O'er dollies and railways and, O Gee, a radio!

The wife and I together—good pal in ev'ry weather—

Our hearts brim o'er with pleasure that only home-hearts know.

I want to eat that dinner, Ma's home-cooked Christmas dinner,

With great big brown roast turkey and piping hot mince pie;

My eyes upon the dressing the while I ask God's blessing,

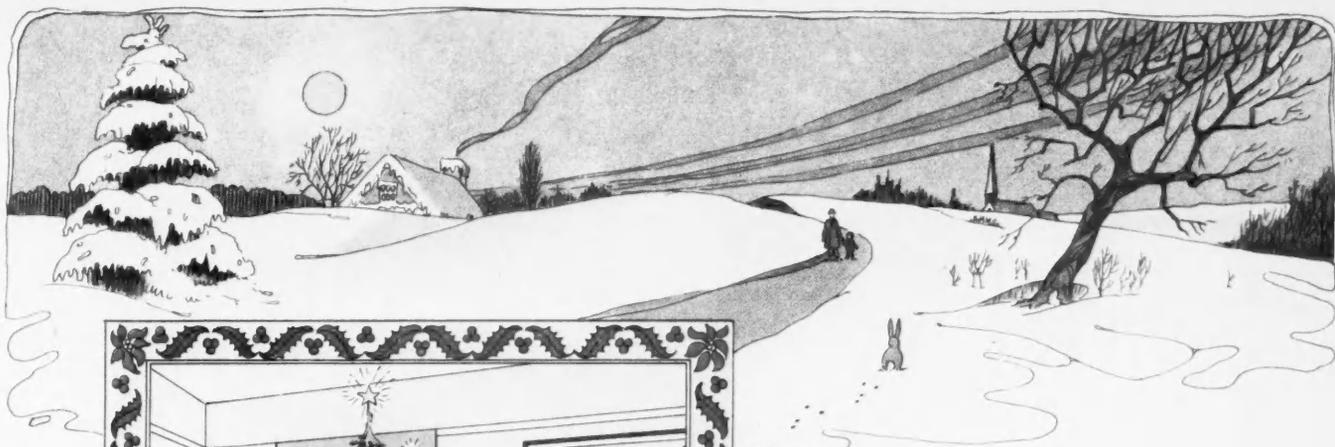
For kings within their castles are poorer far than I.

O Builder, hurry, build it,—don't wait too long to build it,

It can be great or simple, just so it is a home;

Rooms two or five or seven—no matter, 't will be heaven,

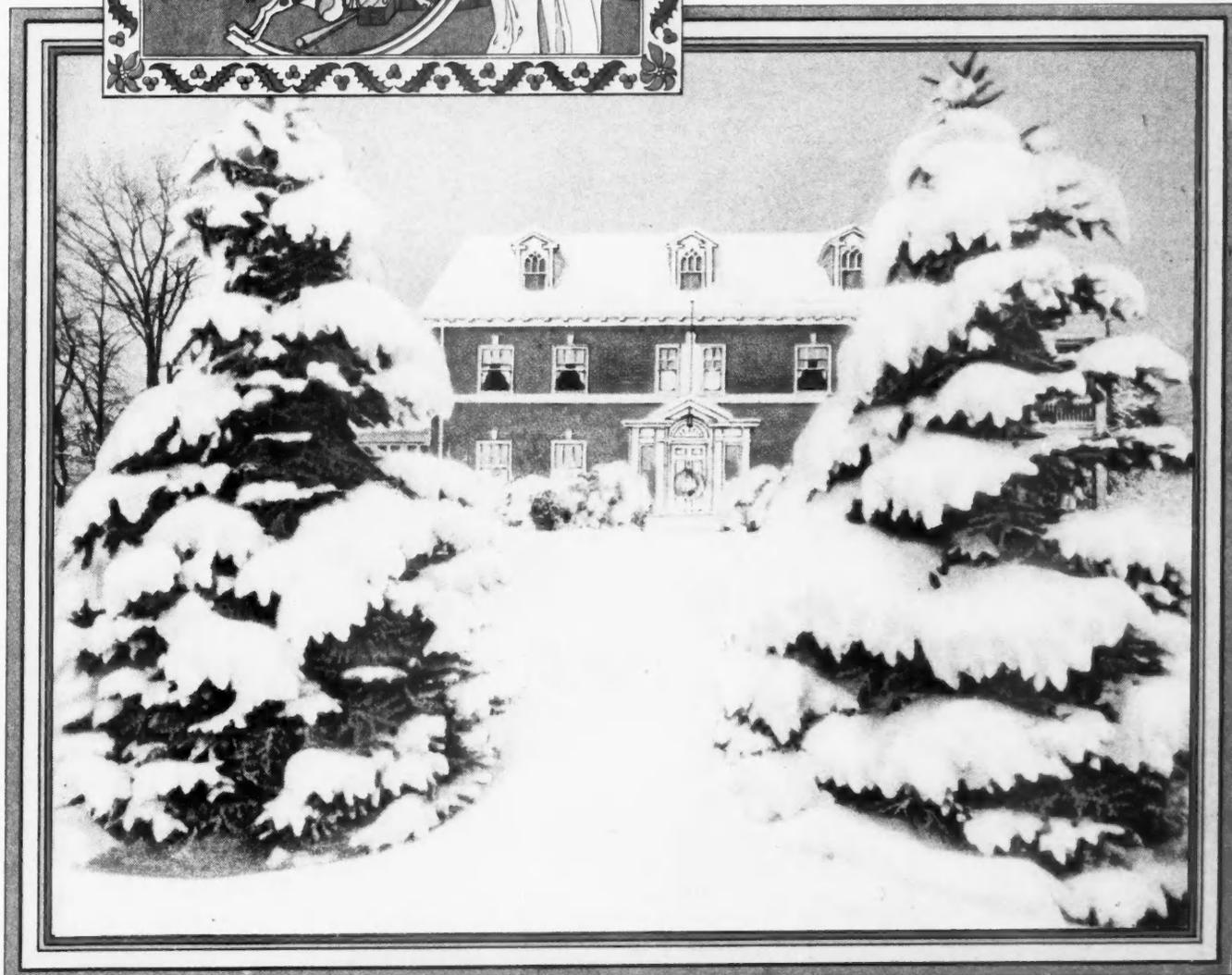
After years and years of renting, to really have **A HOME!**



Heap on more wood! The wind is chill;  
But let it whistle as it will,  
We'll keep our Christmas merry still.  
Each age has deemed the new born year  
The fittest time for festal cheer.

—SCOTT.

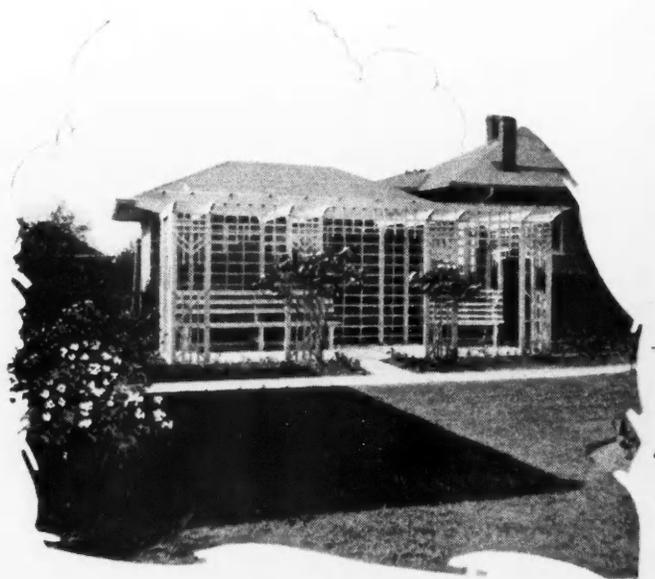
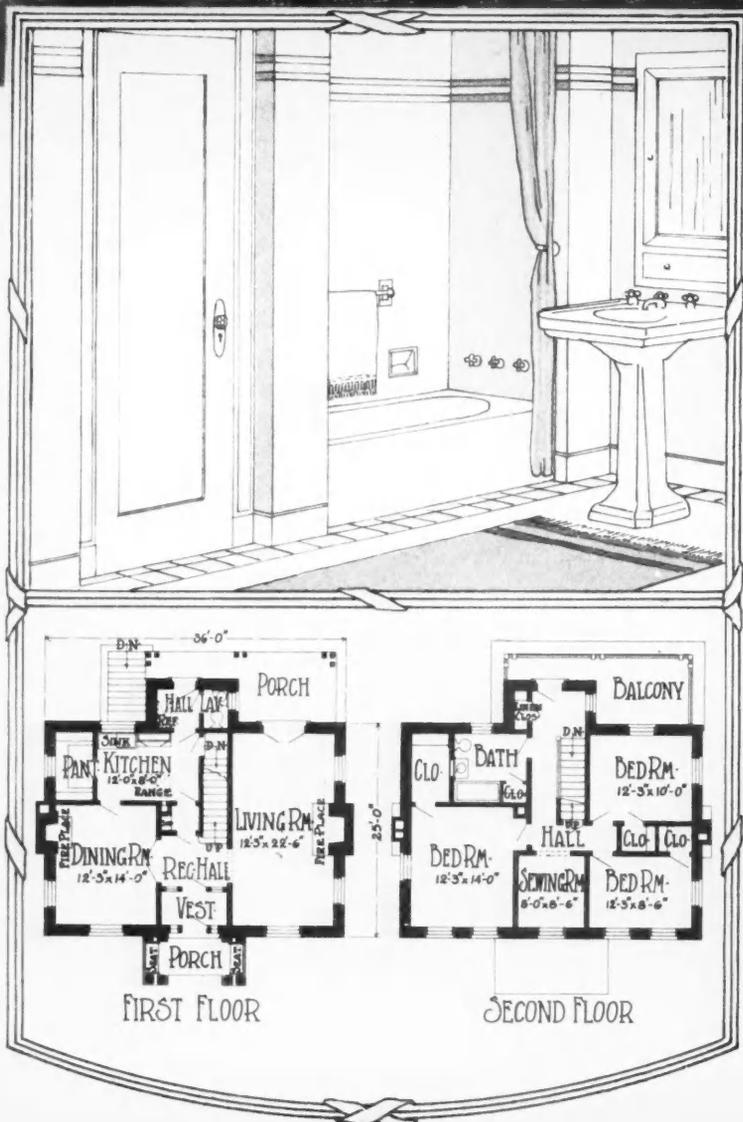
Pat. March 15, 1921 and Sept. 30, 1924. Copyright 1925,  
Wm. A. Radford, Chicago.





## The OBERLIN

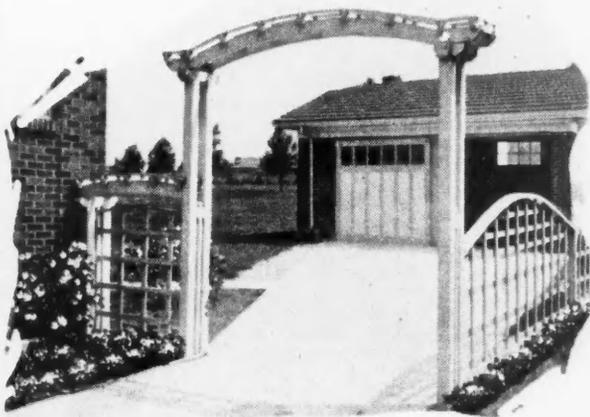
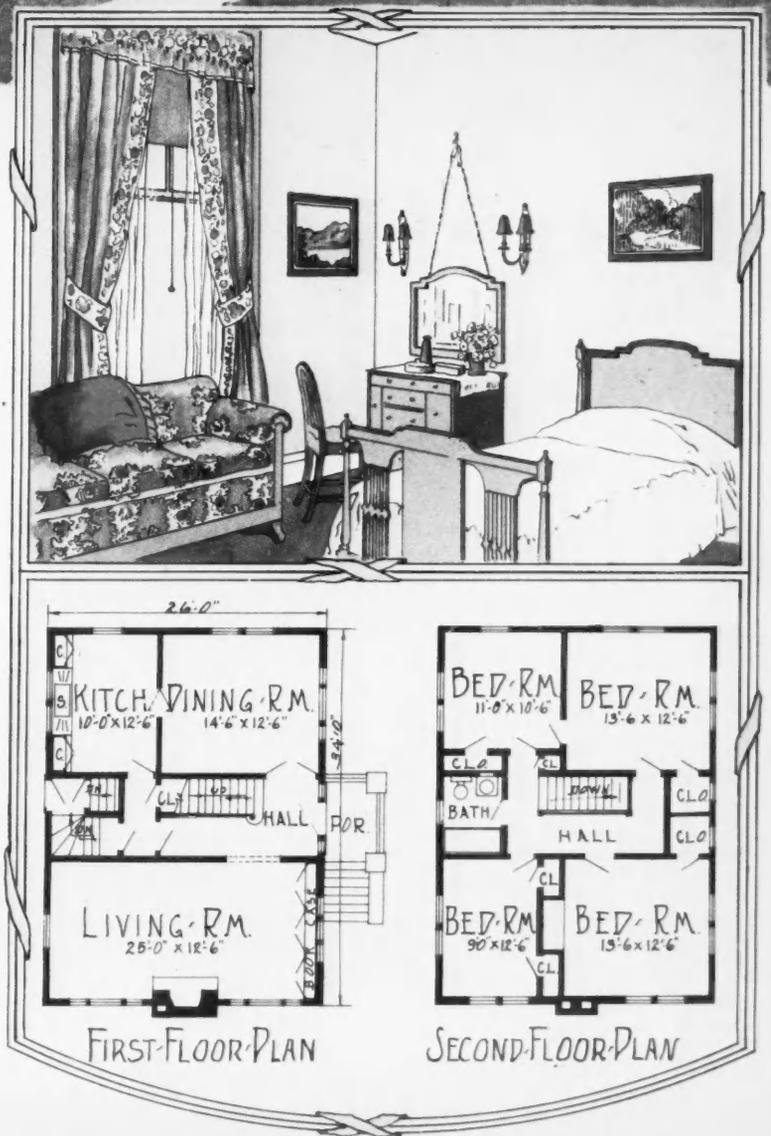
A STRAIGHT gable Colonial home in brick, containing seven rooms. This design is standard for convenience and home comfort. It is the acme of the builders' art of producing the most house for the least money. The Colonial details in this design are perfect. Color sketch to left gives a glimpse of the well appointed bathroom.

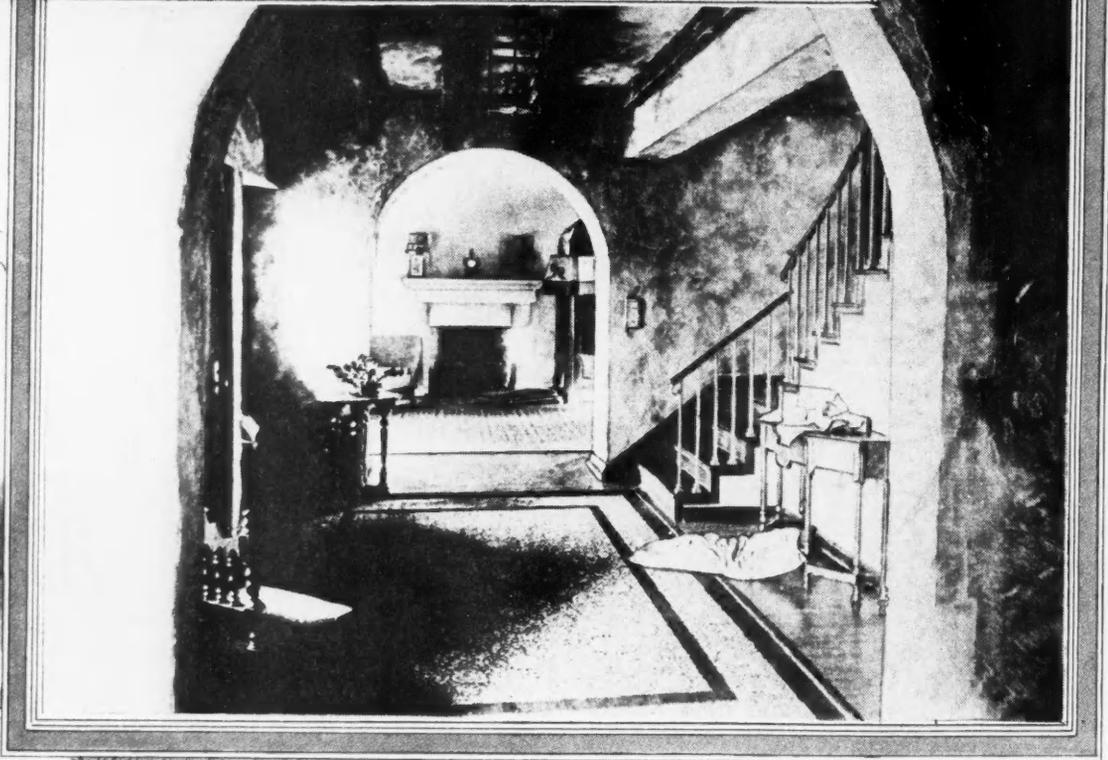




## The ORIOLE

THE Dutch Colonial home with its quaint gambrel roof has a great attraction for many. This example has been planned most happily, as a study of the floor plan will show. The color sketch just above the plan suggests attractive furnishings for one of the bedrooms.

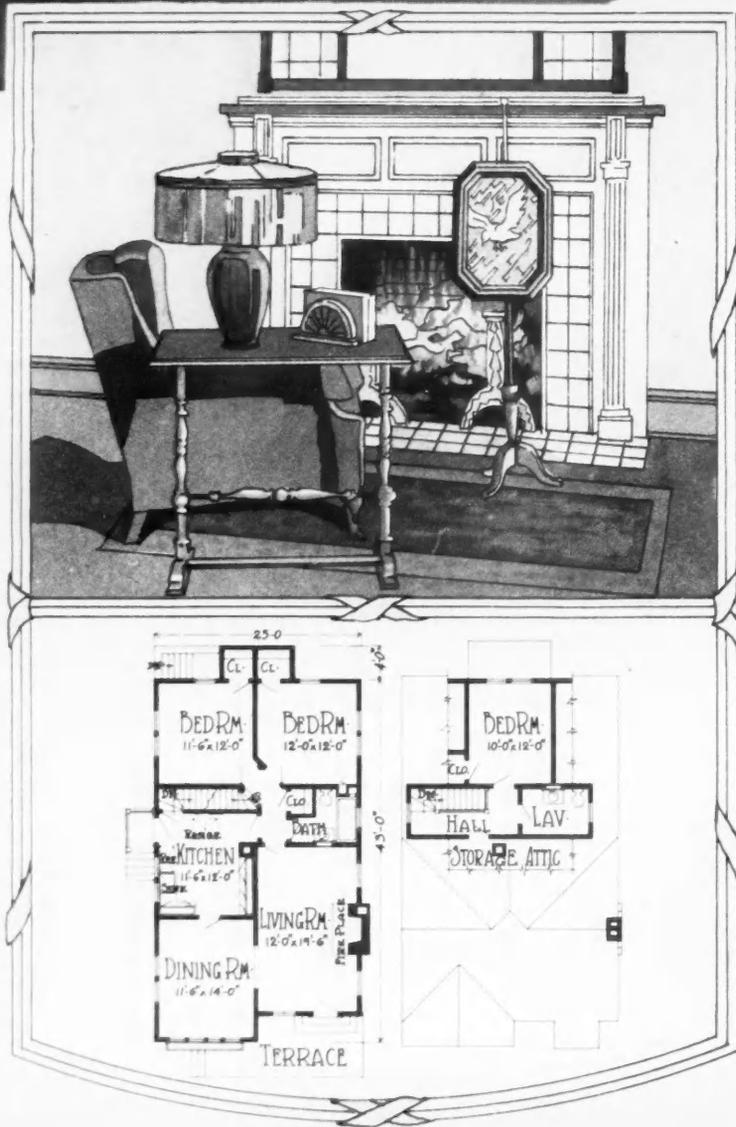
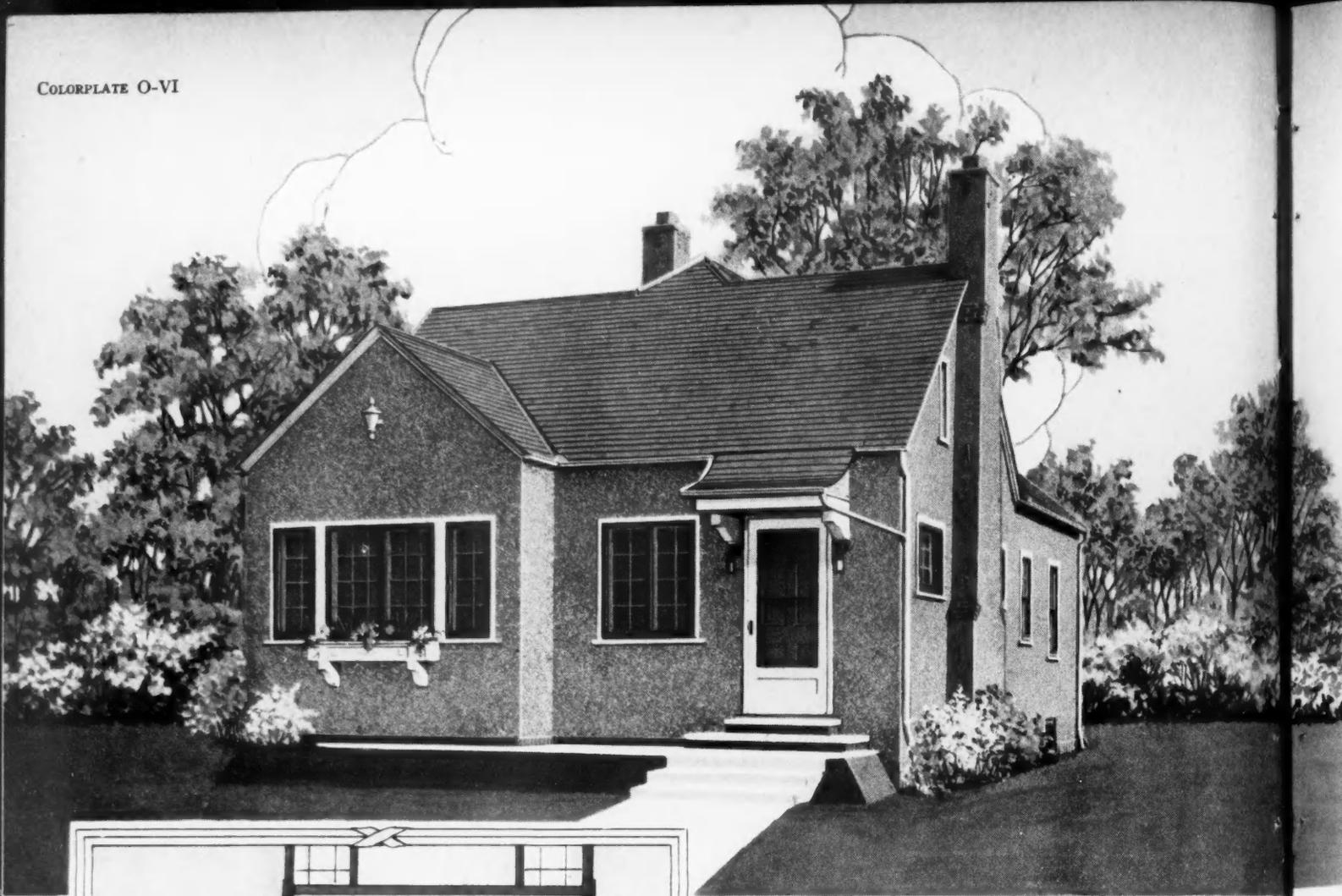




SPANISH INTERIORS—A living room and a reception hall done in the characteristic Spanish way with careful attention to the details of rough plaster finish, arch openings and primitive ceiling treatment.

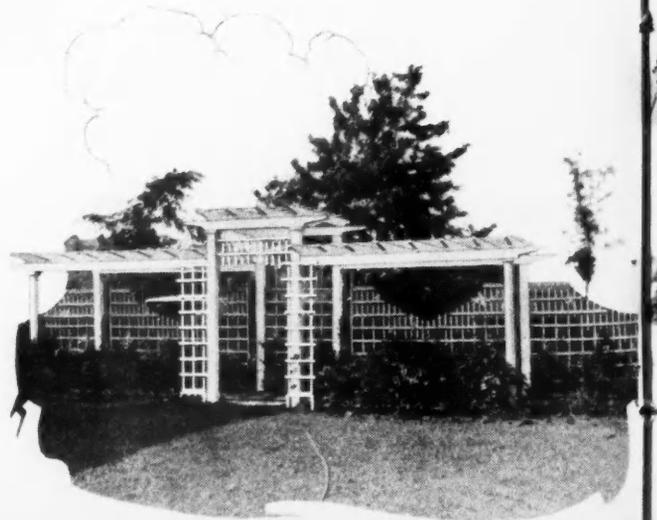


TWO SPANISH REFECTORIES, as the dining room was called in the Middle Ages. One of these pictured is lifted two steps above the living room, the other is down two steps and guarded with a pair of antique, wrought iron gates.



## The ODESSA

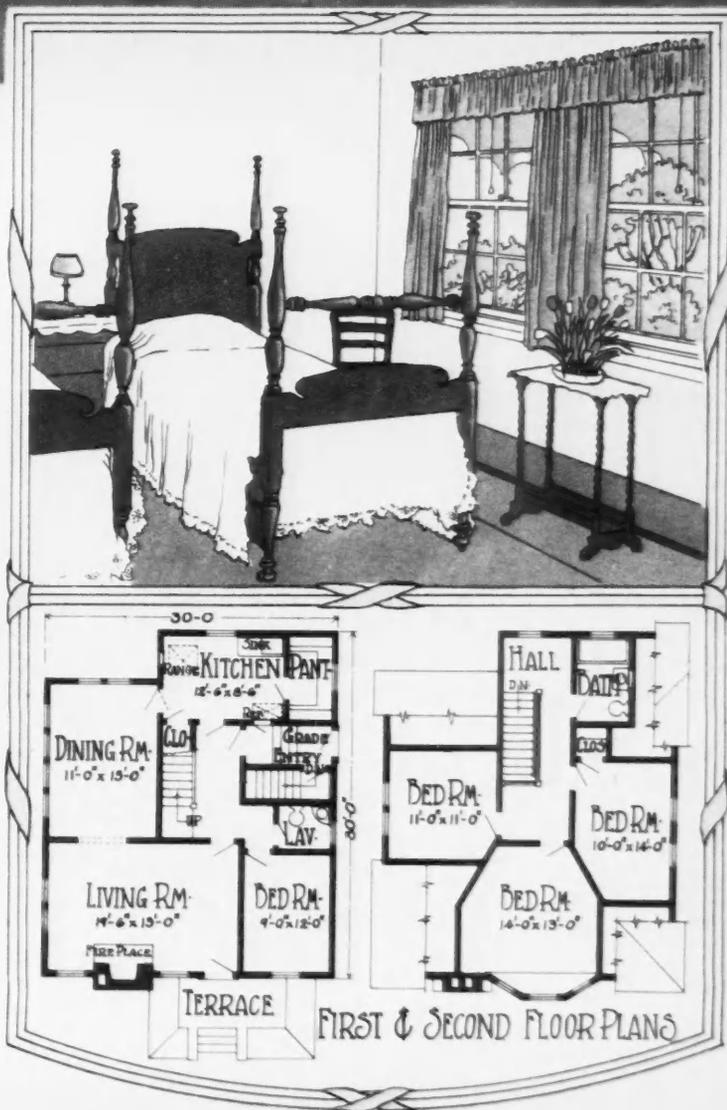
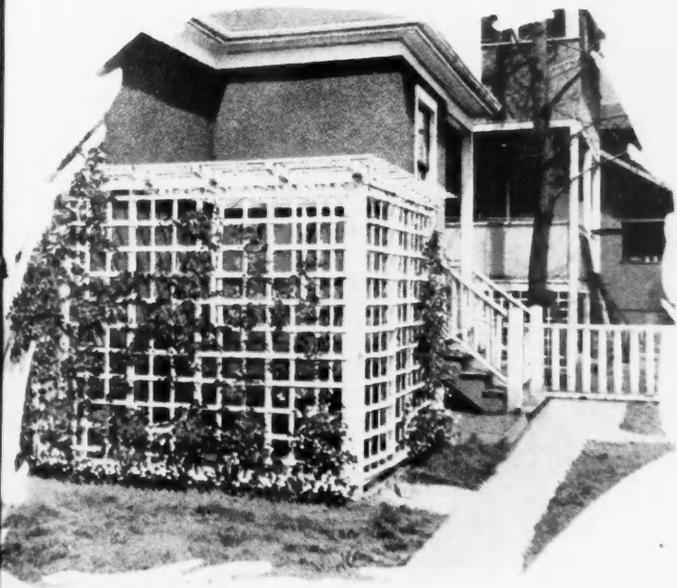
SIX rooms and two baths are contained in this attractive house of stucco construction, well planned for a narrow lot. The width is 25 feet. The rooms are arranged to make the most use of front and rear light. Notice the convenience of the kitchen arrangement and the quiet privacy of the sleeping rooms on both floors at the back of the house. Color sketch to left suggests good furnishings for the living room.

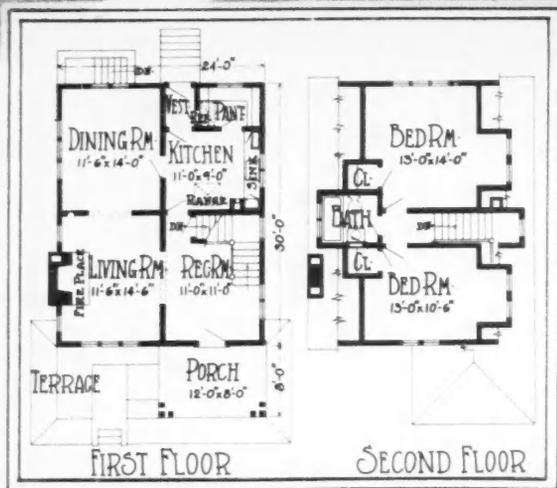
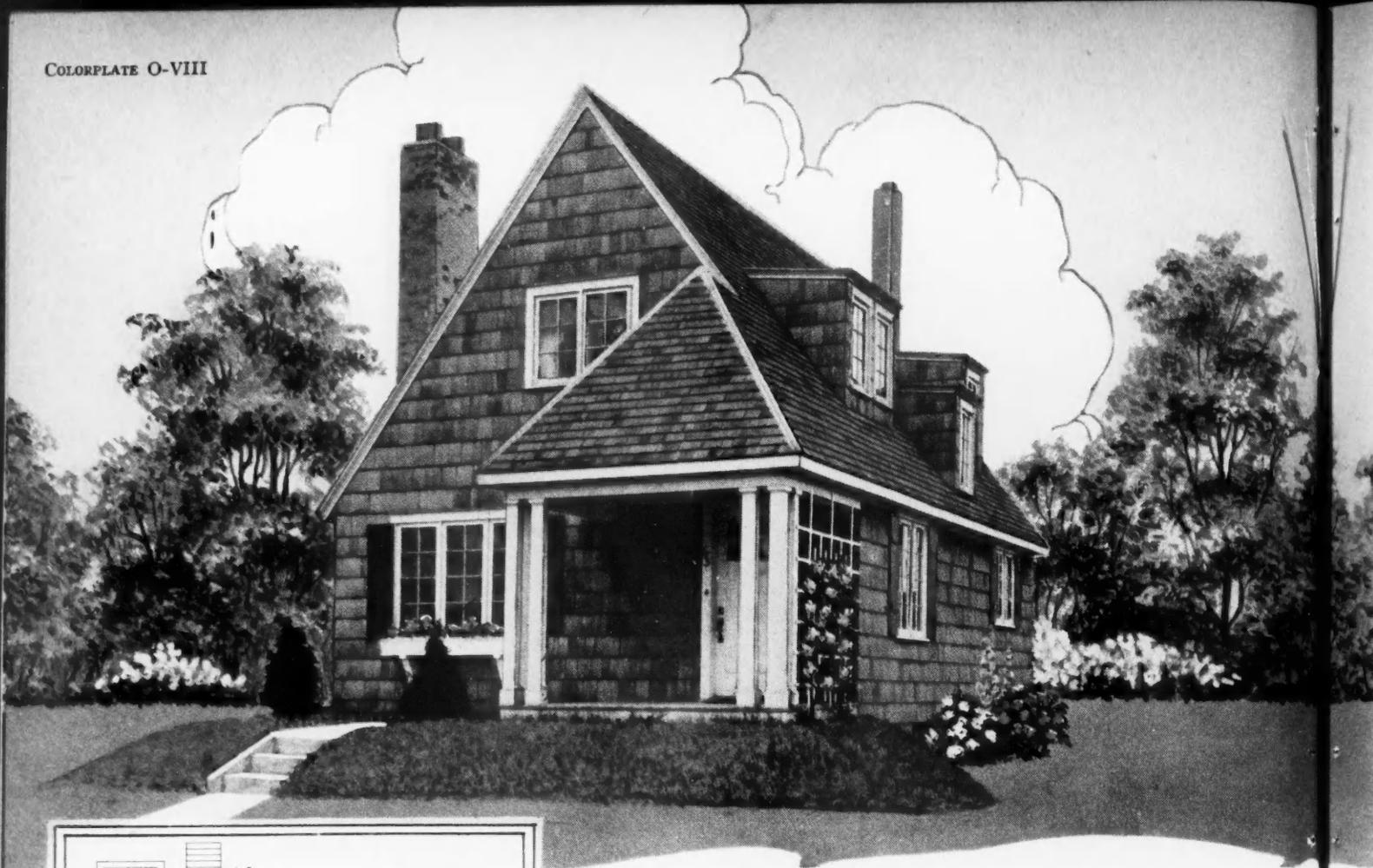




## The OLIVER

AN English cottage of distinctive lines presenting seven rooms. The downstairs bedroom with adjacent lavatory is an unusual feature of this plan. Color sketch to right shows four-poster twin beds, and pretty draperies for the double windows.



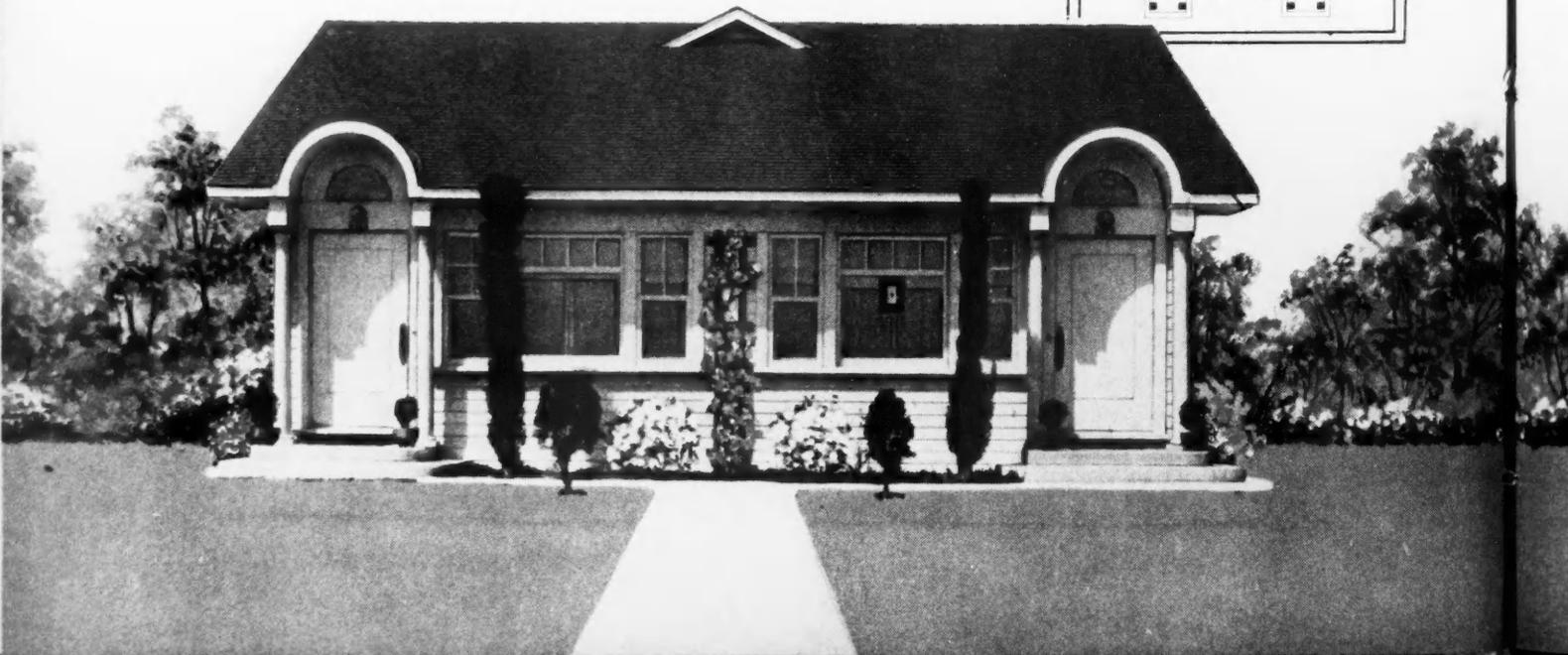
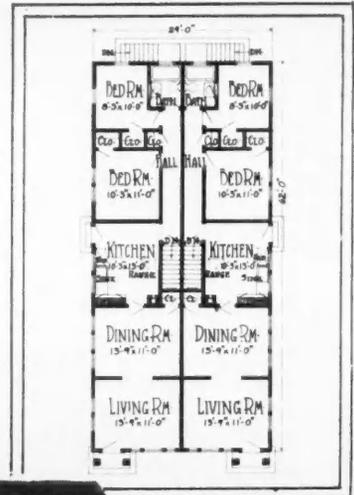


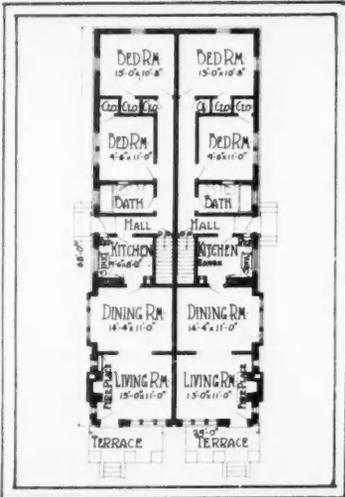
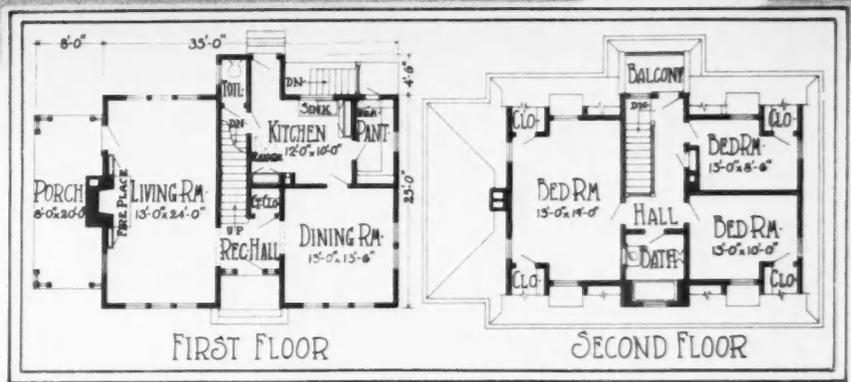
## The OLNEY

Above and to the left are presented this pretty six-room shingled cottage.

## The OMEGA

Below and to the right we offer a double bungalow, five rooms on each side.



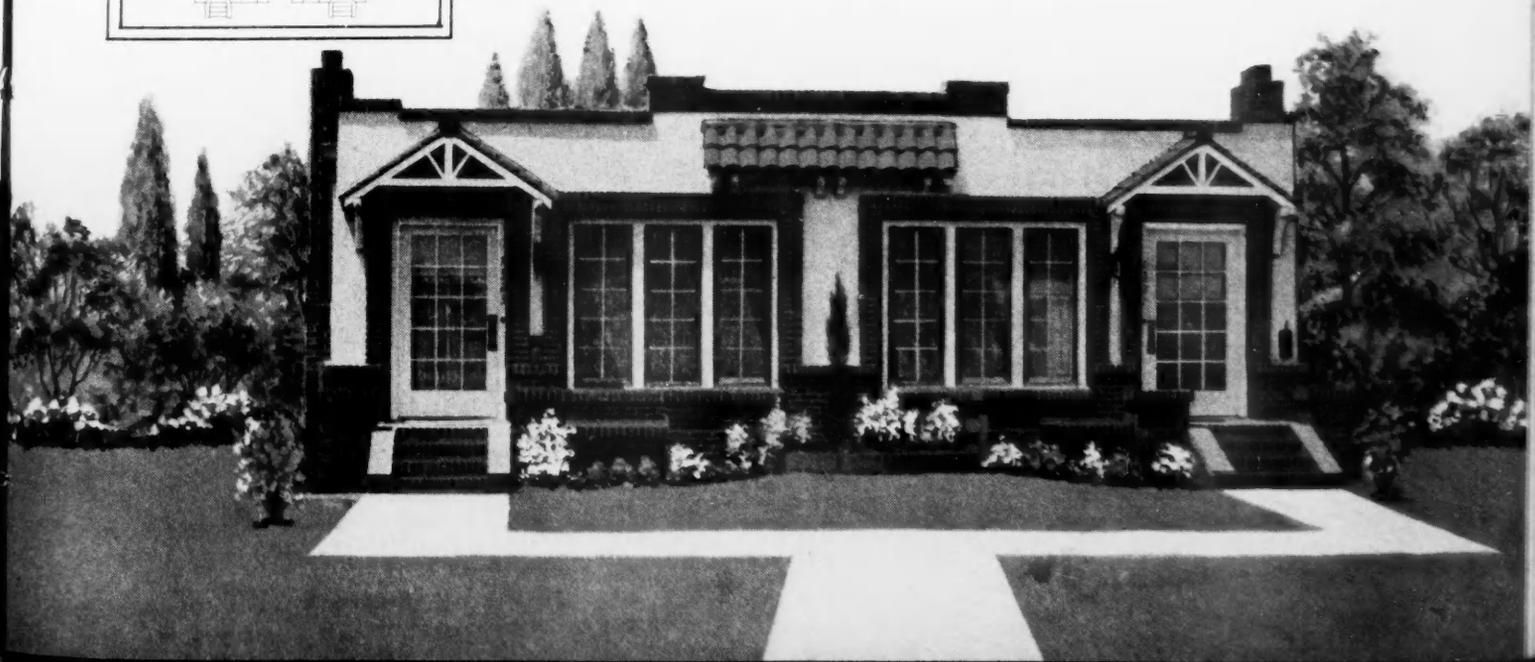


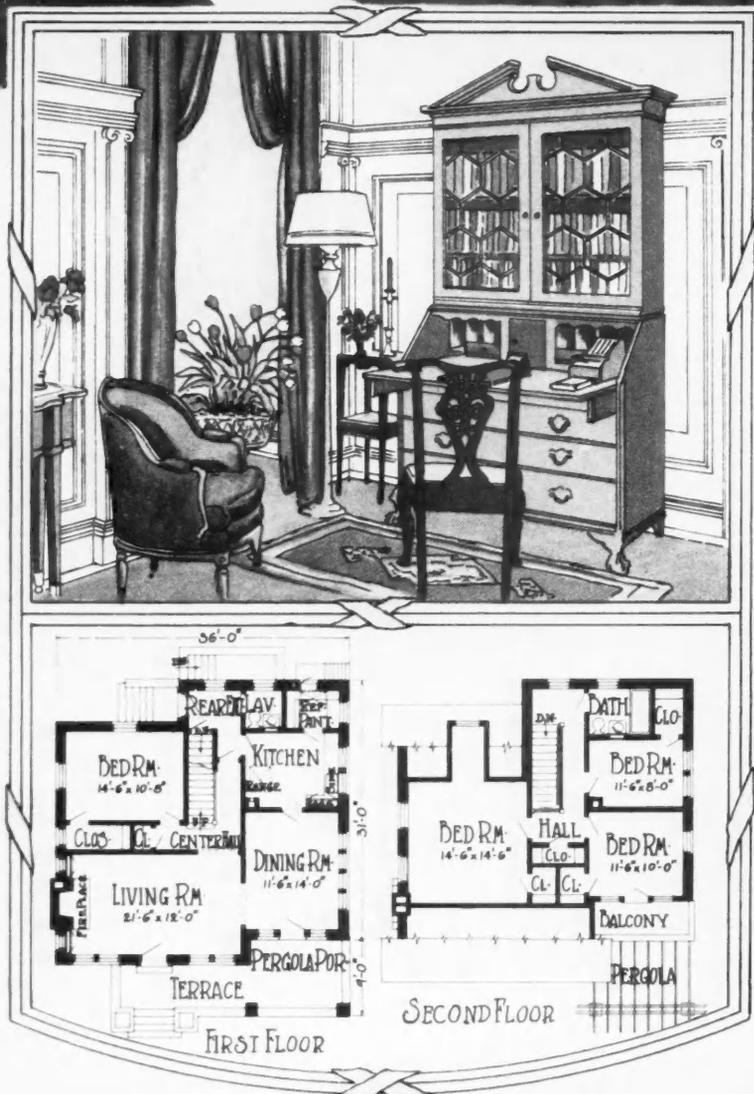
The OTIS

The OXFORD

Below and to the left is a double bungalow in brick and stucco, five rooms on each side.

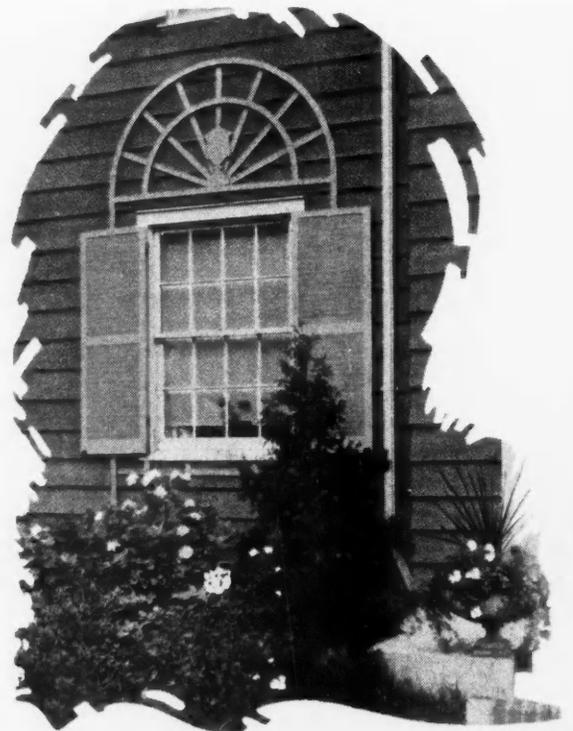
Above is presented a well planned Dutch Colonial home of six rooms.





## The OGDEN

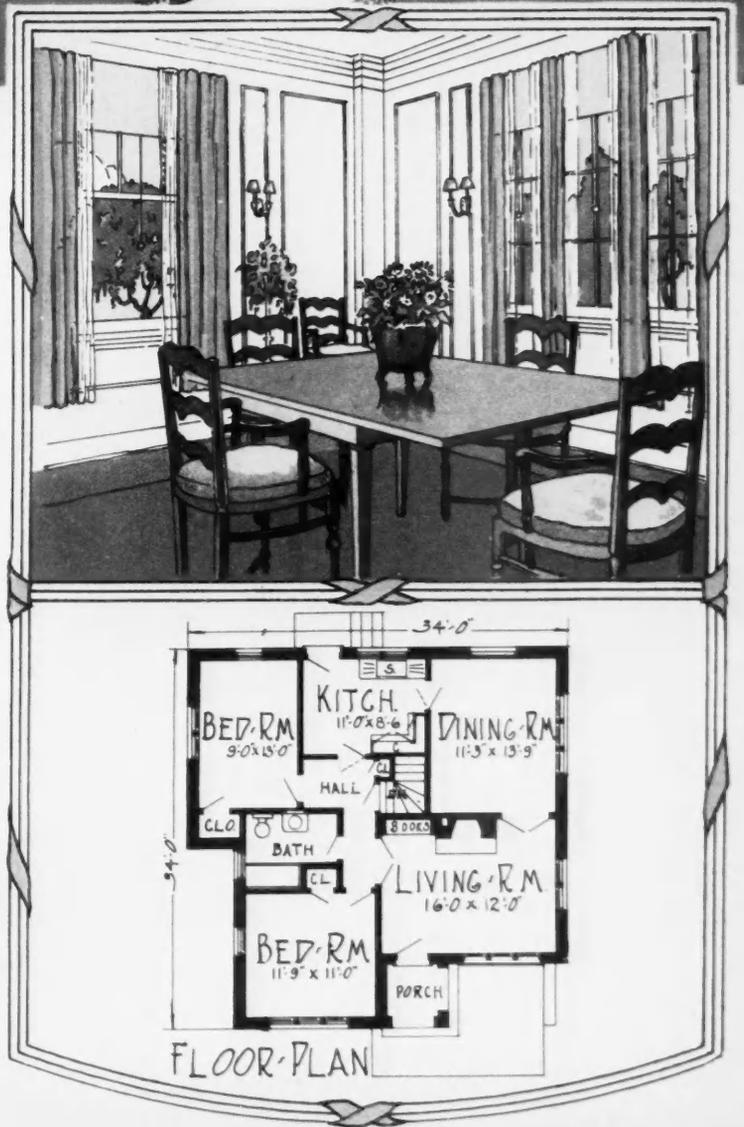
THIS popular stucco home of seven rooms has many good points. The graceful arched canopy over the front door and the pergola porch to the right make this home decidedly different. Color sketch to left shows an interesting antique desk for the living room.

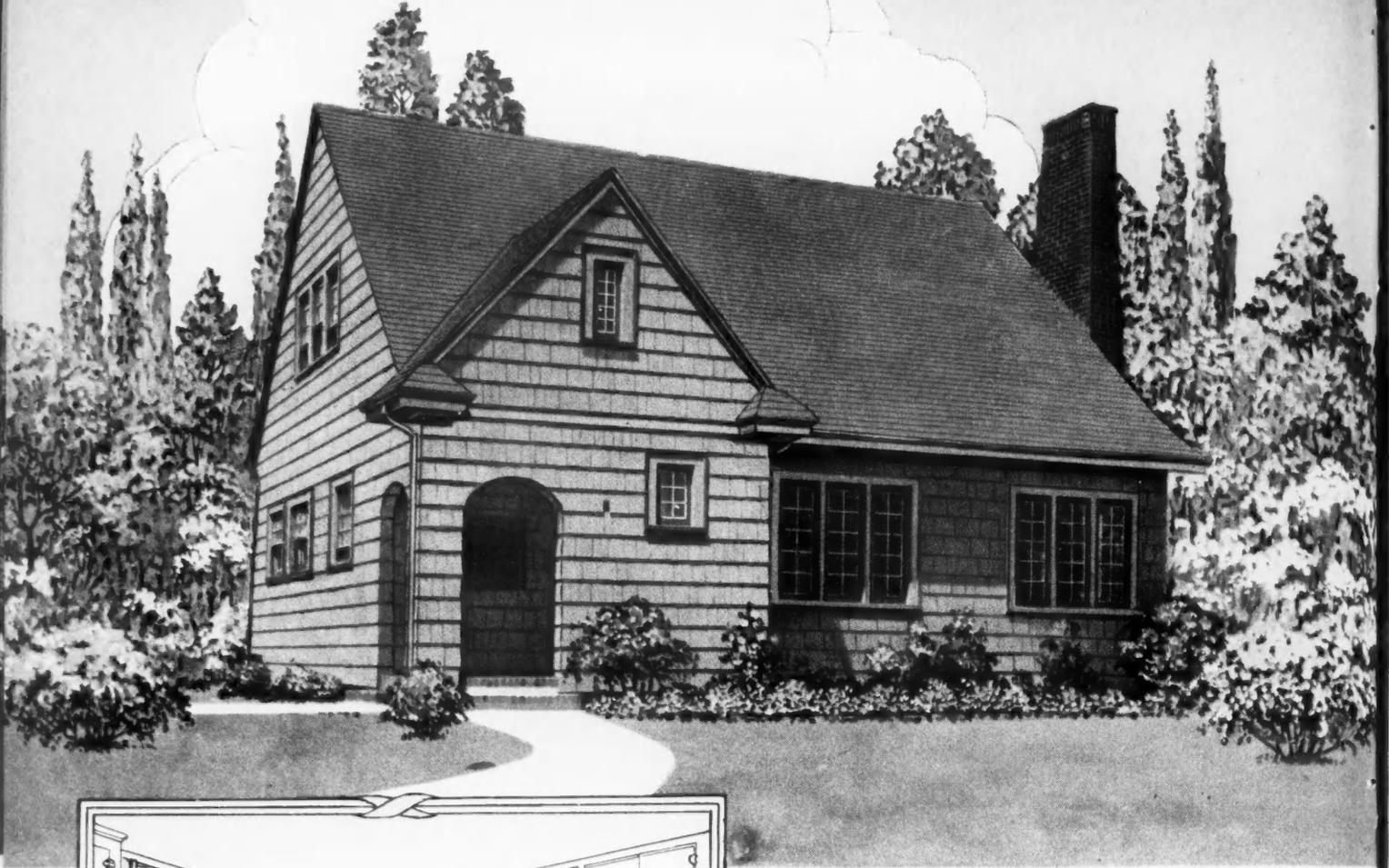




## The OAK HILL

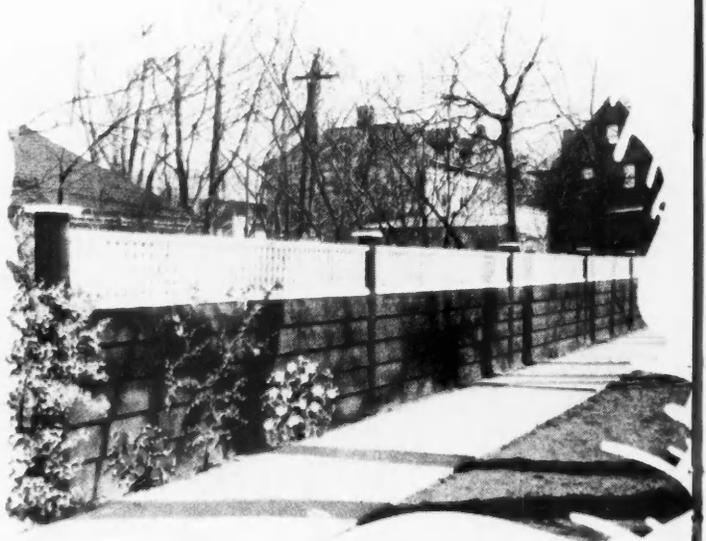
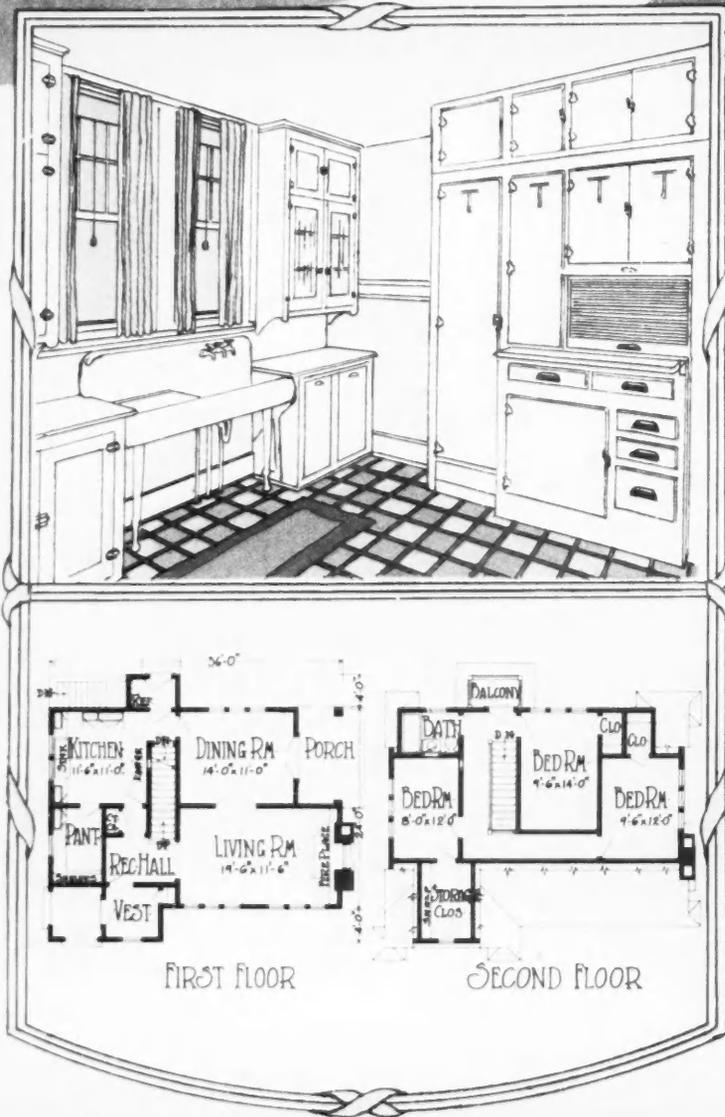
A FRENCH cottage of five rooms. The slight curve to the eaves over the French doors into the living room and the gable ends cut back combine with the arch openings and the rough plaster finish to give this design a distinctly Old World atmosphere. The room arrangement, however, is very modern and decidedly American. Color sketch to right shows the cheerful, well-furnished dining room.

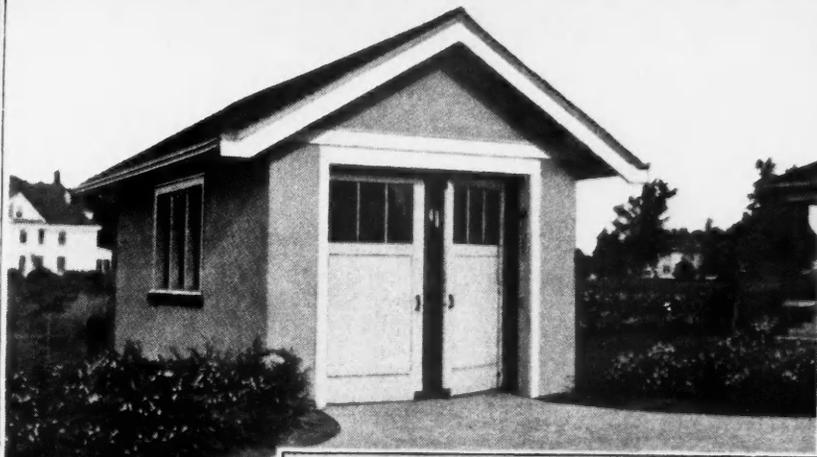
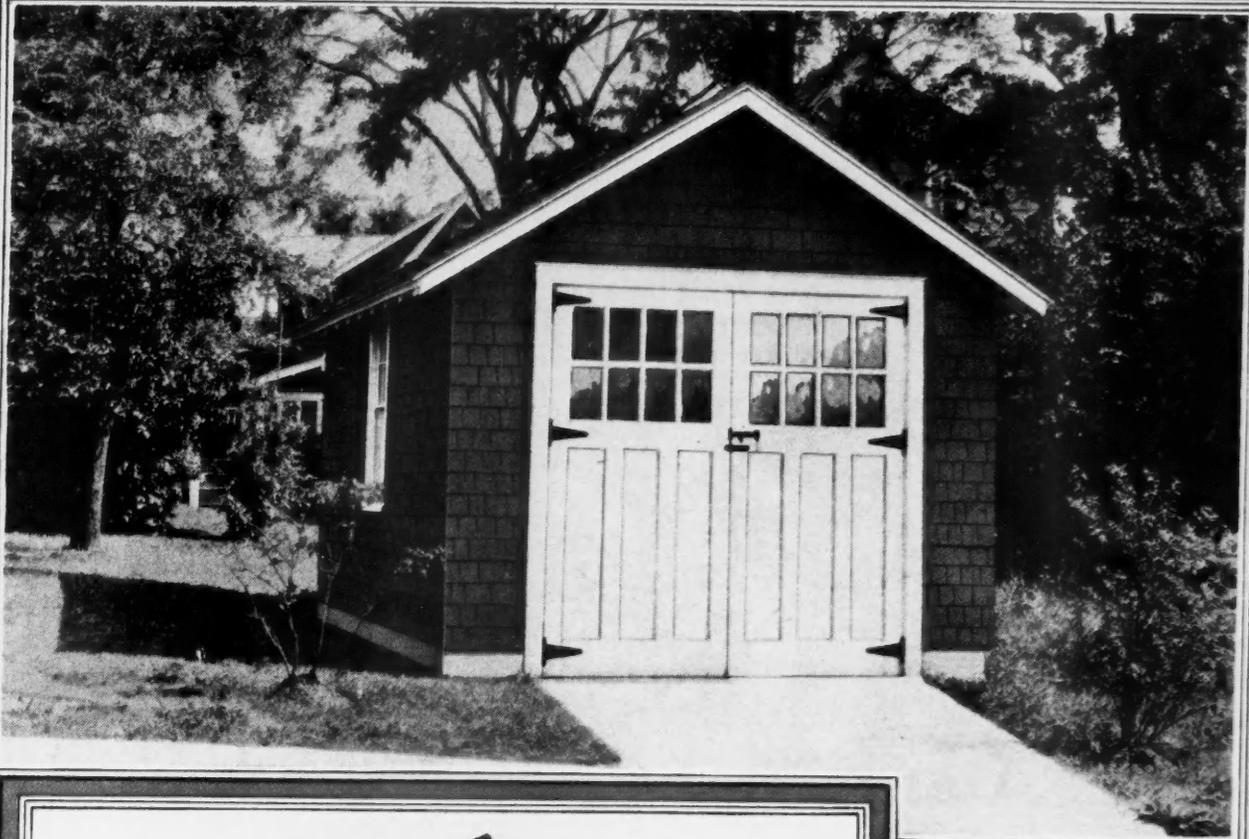




## The OVERTON

THIS shingled cottage is one of the most popular today, having just enough of the unusual without being freakish to appeal to home seekers of educated taste. Six rooms are contained and the arrangement is cheerful and convenient. The well appointed kitchen is illustrated in the color sketch to left.





**The OAK  
GARAGE**

An inexpensive one-car garage with hinged doors.

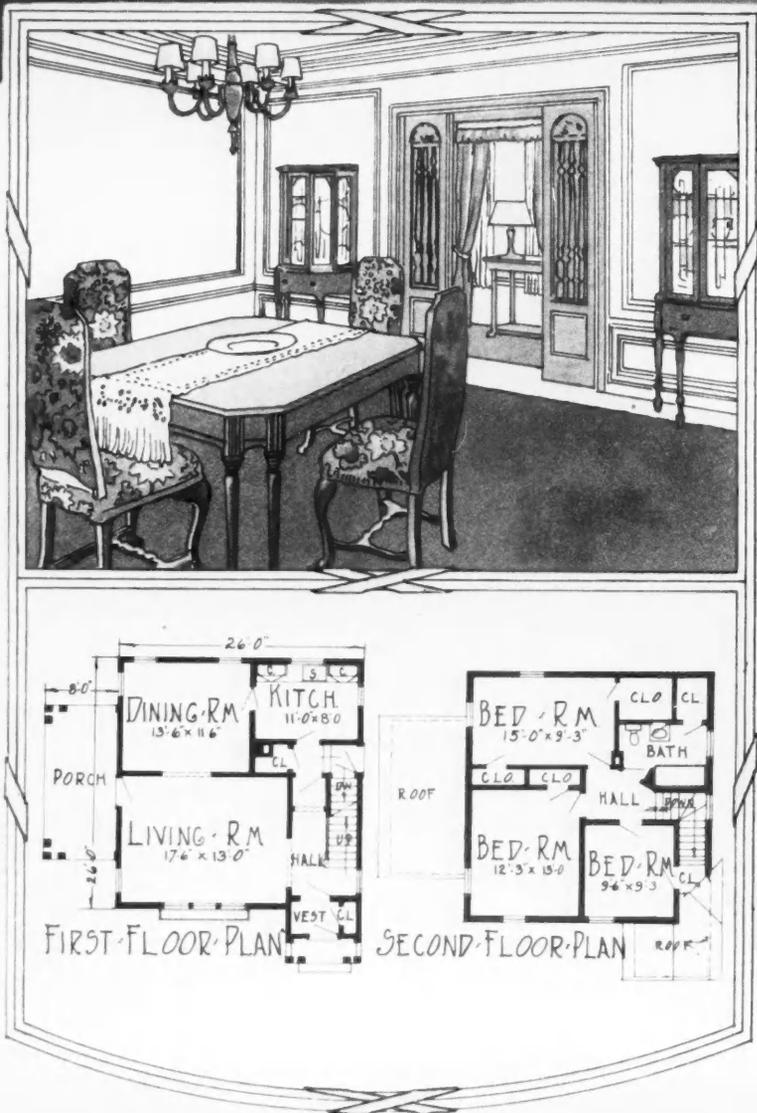
**The OLEAN  
GARAGE**

A one-car garage of stucco construction. Doors arranged to slide inside around the corners.



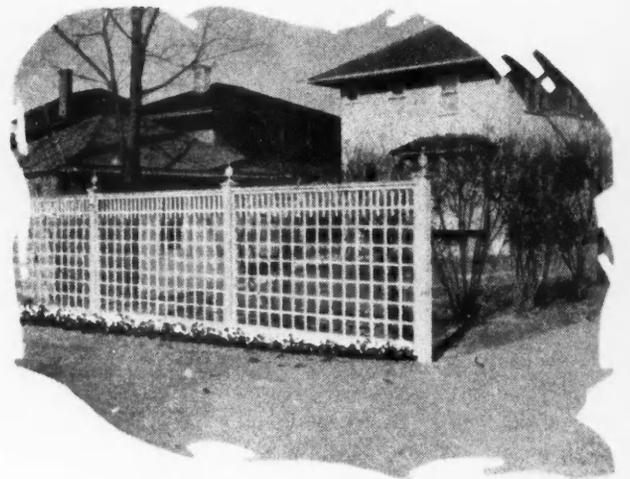
THE OSAGE GARAGE, a double garage of brick construction. Doors arranged to slide inside back around the corners.





## The ORANGEVILLE

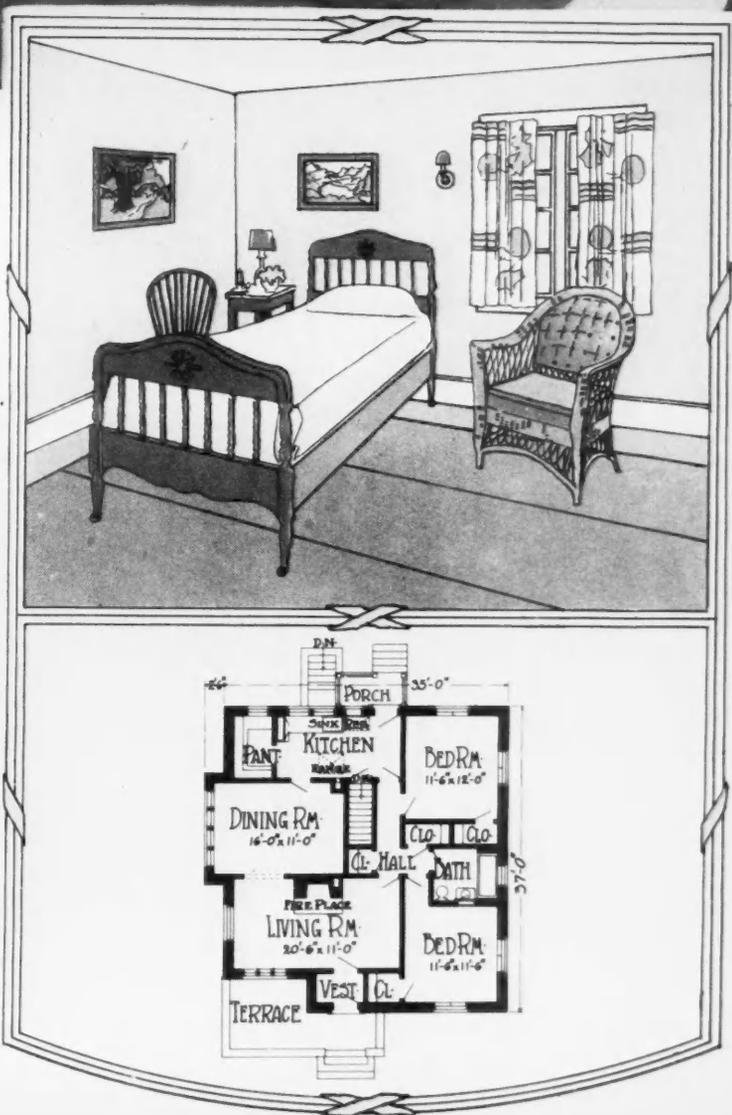
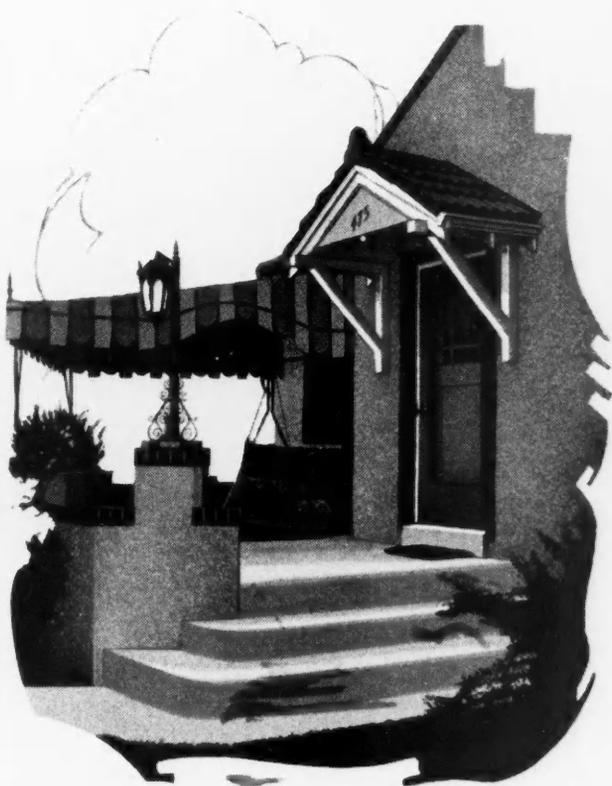
HERE is an inexpensive little home 26 feet square, containing six rooms and bath. Notice how this house is roofed. It is sometimes thought difficult to put a graceful roof on a square house but this English idea of three gables solves the problem nicely. Color sketch to left illustrates the dining room.

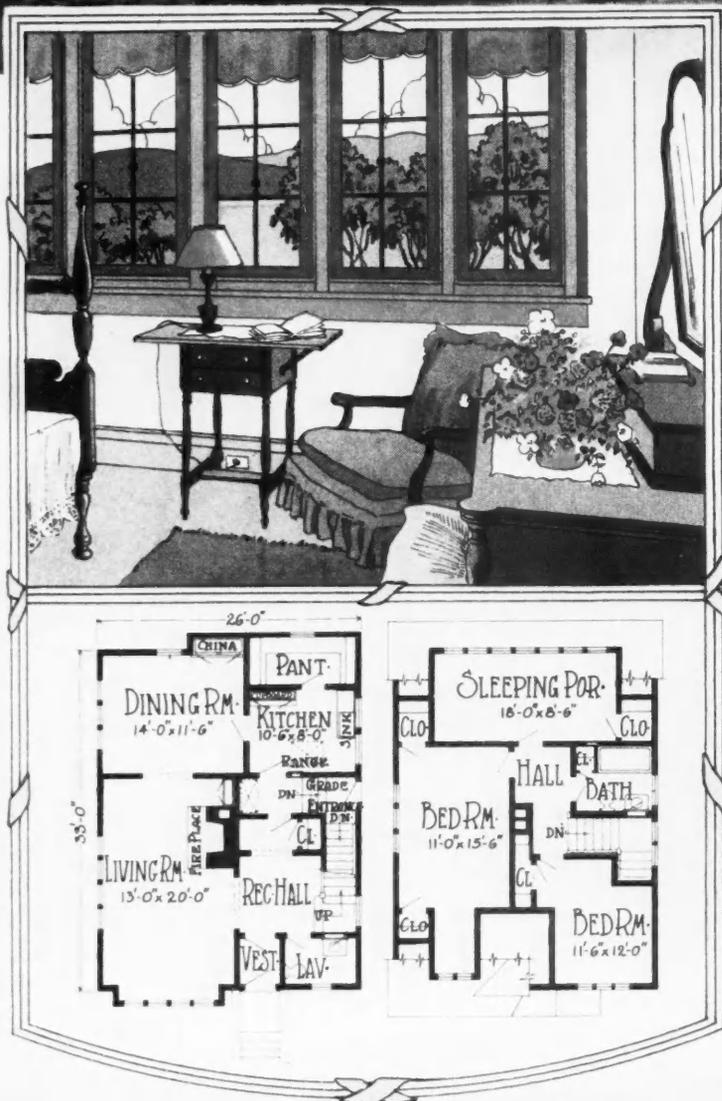




# The ORIENT

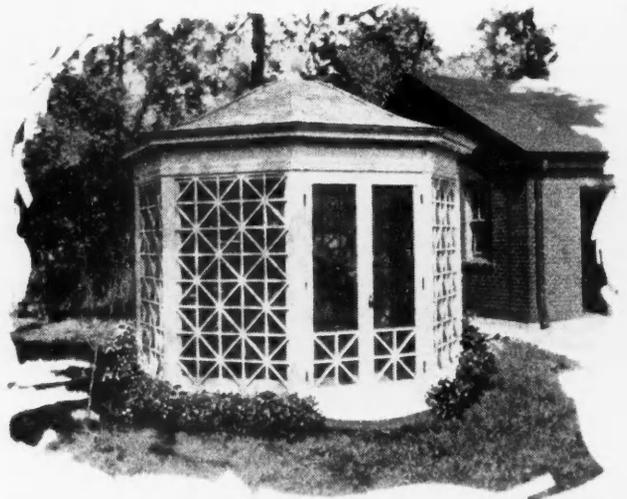
A DELIGHTFUL stuccoed home of five rooms with a very inviting open terrace in front.



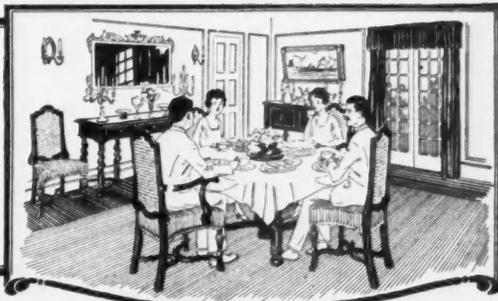


## The OSWEGO

AN English cottage of six rooms. Size 26 by 33 feet. Notice the well planned reception and stairhall with convenient downstairs lavatory. The big sleeping porch is the feature upstairs, with seven windows admitting as much of the outdoor air in any season as is wanted. Color sketch to left suggests comfortable furnishings for this well windowed sleeping room.



# OUR FRONT COVER HOME



## *A Six Room House, Distinctly English in Style Which Incorporates a Number of Unusual Features in its Design*

**D**ISTINCTLY English, in spite of the modern tone of the two-car garage which forms an integral part of the house, is Our Front Cover Home shown below. It is a stucco house with shingle roof and timbering about the entrance and in the second story front. It is designed with several features which particularly recommend it for its living qualities.

There is a long narrow passage, with a lavatory at one end and a pantry at the other, which effectively separates the garage and kitchen from the living rooms of the lower floor. The garage can be reached through a door from this passage without going outdoors, an item of considerable satisfaction in bad weather. Conveniently located, near the door to the garage, is the lavatory so that one may quickly wash up after working about the car.

The pantry affords a short direct passage from the kitchen to the dining room closed off from both by doors, while a door also shuts it off from the hall. The dining room and living room are large and the latter

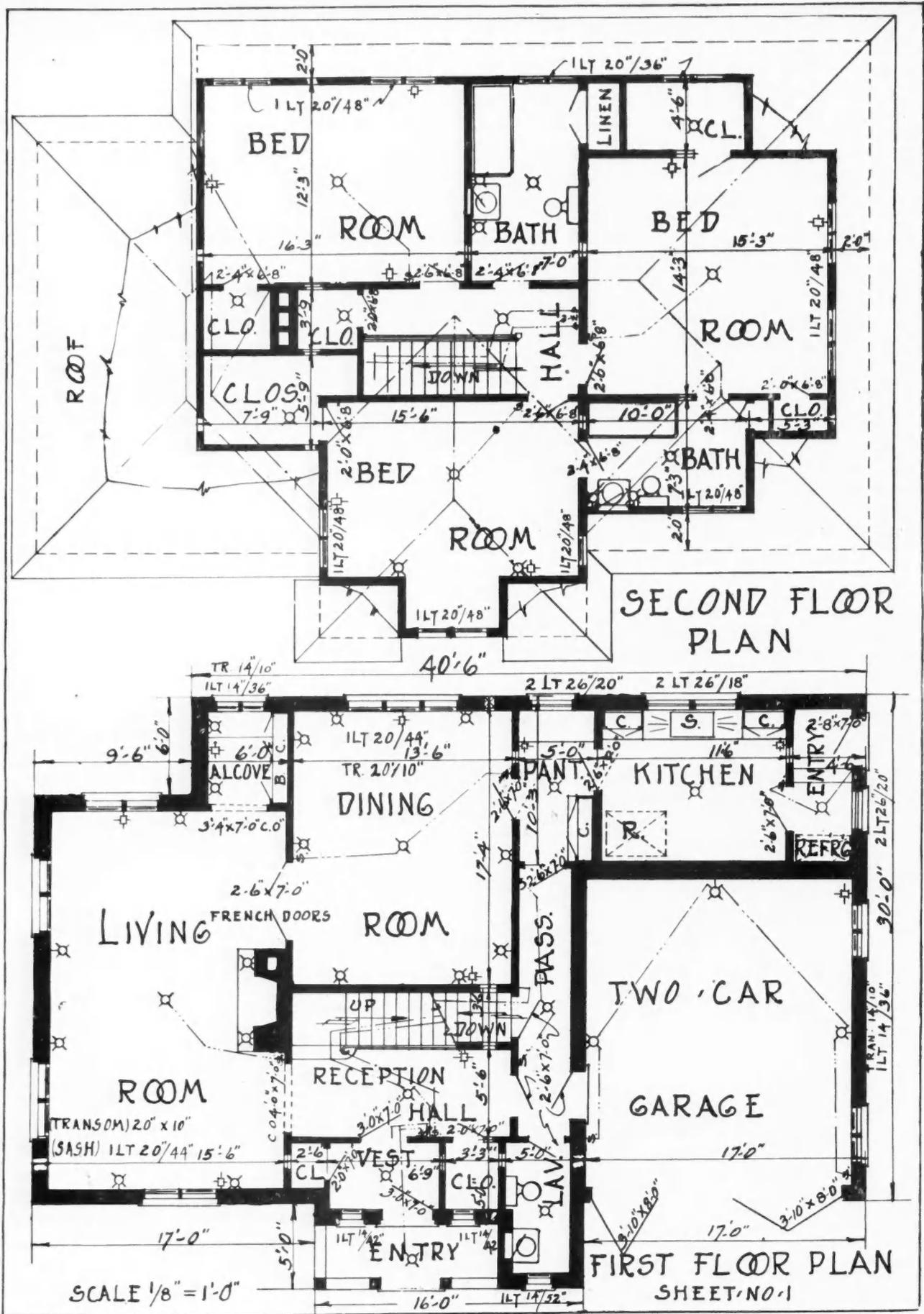
is particularly well lighted. The windows of this, and all the first floor rooms, are an interesting departure from the usual practice. The lower three-quarters of the window space is fitted casement windows while above is a small transom which provides an effective and desirable means of ventilation.

There is a large fireplace in the living room and also a cosy alcove, with a built-in bookcase, which invites one to settle down on a rainy evening and enjoy the company of a good book.

While the second floor does not present such unusual features it is well arranged and affords a remarkable amount of closet space. There are three bedrooms and two baths. One of the baths is reached from the stair hall while the other has two doors, one from the front bedroom and one from the side bedroom. A linen closet is placed in the first bathroom and there is another closet in the hall. Each bedroom has one large closet and the side bedroom has a small one as well. The windows of the second floor are all of the casement type.



The English Style House Which Makes Its Appearance as Our Front Cover Home Presents a Most Interesting Floor Plan Which, Together with the Elevations and Details, Will Be Found on the Four Pages Following.



The First and Second Floor Plans of Our Front Cover Home Show an Interesting and Highly Satisfactory Arrangement of Rooms While on the Opposite Page the Basement Plan and Rear Elevation Display Other Good Features.

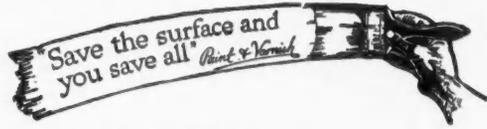




The Front and Right Side Elevations of Our Front Cover Home, Showing the Window Treatment Which Is Carried Out in the Garage as Well as in the Other First Floor Rooms.



# SAVE THE SURFACE DEPARTMENT



Written, Illustrated and Edited by the Headquarters  
Staff, SAVE THE SURFACE CAMPAIGN

## Interior Finishes to Match Exterior Designs

**T**HE modern trend in interior decoration, in modest homes as well as those of more pretentious proportions, is toward period interiors as well as exterior design. By "period" is meant typical of an era of decoration, such as early Colonial, old Italian, Spanish or English. Naturally, in the modern homes rooms designed and decorated in one of these traditions are not exact reproductions, but twentieth century adaptations. They lend an

atmosphere of Old World charm and distinction without sacrificing modern comforts.

The floor, wall and wood trim finishes for period interiors, are, after, all, of primary importance, since they form the background of the room. Then, too, rooms finished in a period style suggest certain distinctive ways of furnishing them—suggestions that many prospective home owners find very persuasive. Much depends upon the color of the



The English Style Home of Ernest Torrence, Motion Picture Star, at Hollywood, Calif. The interior treatment, as shown on the next page, follows logically the exterior design and period features.

walls, in some cases the entire effect is obtained from texture, but in nearly all cases, the best period backgrounds are achieved with paint.

Of all the period types, perhaps the Spanish is the most popular at the present time. Innumerable Spanish bungalows are being built and, on the whole, this type of architecture seems to make a wide appeal to American people. The Spanish life from which it sprang was deeply influenced by the Moors, with their Oriental passion for color. As a result, early Spanish decoration was as colorful as possible, with tile wainscoting surrounding the patio, door-frames of bright colored tile and even colored baseboards.

In modern times paint has been used in the same manner in the Spanish type house. The more color the better. Bright blue, canary yellow, red and green make bright borders around doorways and on the baseboards. The risers of the stairs are often painted brilliantly and make a charming and unusual effect. Stencils in the gayest and most exciting colors, are often used to create a design for the stair risers or for wall borders.

Another trick of decoration for the Spanish type house is to paint the floors in checkerboard style—black and earth-red, perhaps, or yellow and blue—to suggest the old-time tiled floors of the Spaniards. Such floors should be varnished to make them more durable.

The walls of Spanish houses were rough-textured. This effect can be obtained nowadays with a plastic paint which gives both texture and tone. One and two-tone effects can be achieved and both are entirely in keeping with the tradition. Dark stained beams across the ceiling are appro-



The Living Room of Mr. Torrence's Home Is Typical of Modern Interiors Done in the Traditional English Style. The beamed ceiling and rough textured walls are particularly good.

priate and large fireplaces, iron grille-work at the windows, suspended lanterns, bookcases, cabinets, and chests all help to make the interior of the Spanish type house as effective as the exterior. Built-in bookcases and cabinets are particularly in keeping, especially if they are painted in dark colors and decorated with bright patterns or borders.

There is nothing more incongruous than the period style house, a Spanish bungalow for instance, finished and furnished inside in the most modern fashion without any regard for its Moorist architecture. Builders often overlook the advantages of carrying out an architectural feature consistently. The English cottage type house, which is also extremely popular, is too frequently neglected when it comes to interior finishes. Instead of adapting the wood trim and floors to the atmosphere set by the exterior, these two features are finished and arranged as though the builder had never heard or even dreamed of the English cottage.

The floors in the old English cottages were of flagstone, but, as in the Spanish house, adaptations of these may be achieved with paint. Checkerboard designs are again appropriate in grays, blacks, low-toned reds or greens. The squares may be of any size, according to the area of the room. Another method is to paint or stain the floor to resemble wide-grained planks of oak.

Many English houses had walls of wood. While these are a detail of the more expensive type of house, most modern houses of English cottage design are considerably enhanced by a library, den or dining-room with high wainscoting. It should be stained a dark oak-color and may be either moulded and paneled or plain.

Rough textured walls are again a feature of English interiors since English plastering at the time when the cottage-style was developing, was not smooth. Nowadays plastic paints are used to obtain this effect and the surface is marked with a scraper knife or a piece of tin, to resemble crude trowel work. Ochre, buff, tan and gray are all suitable colors for English homes.

Ceilings in English type homes should be beamed or raftered. The beams should be stained and varnished to harmonize with the rest of the woodwork. Other features of the English cottage are ingle-nooks with built-in settees, stained a dark color, benches and chests. These can be painted a somewhat brighter color, but as the English



The Spanish Interior Is Soft, Shadowy and Colorful. Here yellow walls and a brilliant colored book niche provide the proper atmosphere.

are not as lively a race as the Spanish, the brilliant tones suitable for a Spanish bungalow would be entirely out of place in an English cottage. One other feature of the English house is shelves, sets of shelves for dishes, books, bric-a-brac, kitchen utensils and flowers. These may be painted somewhat brighter colors, since it was the custom to exhibit one's best dishes on similar shelves, in the old cottage days and to paint the shelves the dominant tone of the prized dishes.

Period interiors are neither difficult nor out of the reach of the average person. A little thought, plus paint and varnish will make the interior of a house appropriate and distinctive. After all, a house that is incomplete from the decorative and architectural standpoint is ludicrous and impermanent. A period house, carried out conscientiously, regardless of its size or the amount of money expended upon it, is in a permanent style that will not flutter at every change of architectural fads and fancies.

## Stencils In Interior Decoration

**M**ANY architects and builders fail to appreciate the great possibilities of stencil designs in interior decoration. In the purchase of a home, it is a well-recognized principle among builders that particular appeal must be made to the prospective woman buyer. The home is her domain and she usually casts the deciding vote in the purchase. There is nothing which makes a stronger appeal to the innate desire for beauty and individuality in the average woman than to find these qualities in the interior decoration of the home. In most cases the cost of such desirable results is prohibitive. For this reason the stencil should be particularly welcome to architects and builders.

Many quite pleasing patterns are on the market. They are comparatively inexpensive and their use requires no special technical skill on the part of the painter, as do some of the more intricate decorative procedures, such as paneling or frescoing. As a rule architects and builders welcome anything which will add to the appearance of a house without adding too much to the cost of construction. These requirements are met in the stencil. Its use breaks the monotony of walls painted in solid colors, at very little additional expense. The small additional cost is more than offset by the particular appeal it is apt to make to the prospective woman purchaser.

In the stenciled walls she finds the beauty of design that has so strongly appealed to her in attractive wall paper, with the added features of durability and sanitation. Instinctively the thing appeals to her. Perhaps also the novelty strikes her. In examining the various rooms, she notices that there has been a careful selection of suitable design and color.

The halls are perhaps decorated in the beautiful damask effects secured by using all-over lace stencil patterns; the walls of the daughter's room with a stencil border of tiny wild roses on the pale rose walls, while artistic flowers of lavender, rose and blue are stenciled on the soft gray walls of milady's chamber; and so on throughout the house. There is an individuality about each room. She is more than favorably impressed; she is delighted.

Already the house may be more than half sold, for it is

these touches of beauty and uniqueness that appear most strongly to the average woman. It is an appeal which the greatest care in architecture and construction, however essential, could never make. It is decidedly to the mutual benefit of the architect, the builder and the future home owner that the stencil be given a fair trial on the painted

walls of the modern home.

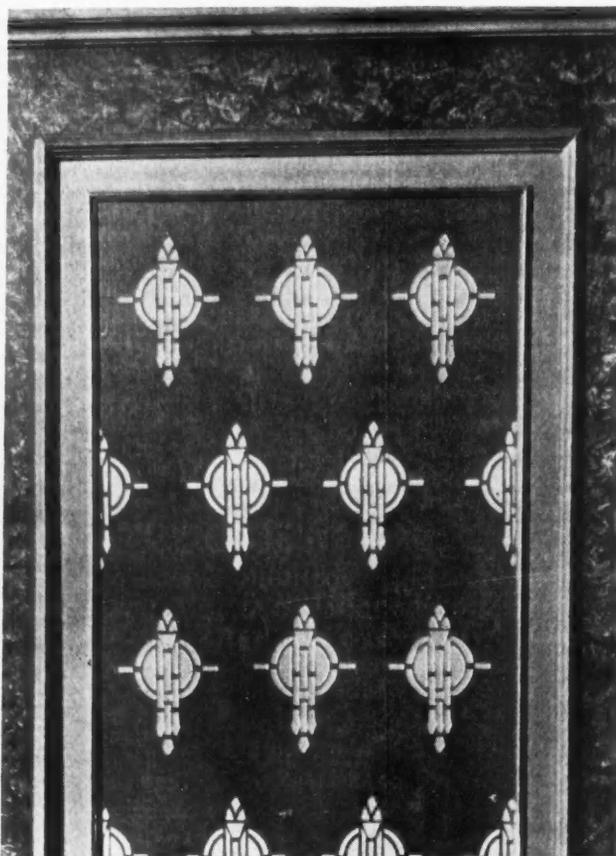
Its use in many cases is quite as effective as the more elaborate decorative methods and it is far less costly.

Stencils will be found very useful aids in securing those desirable optical effects of increased area. In many cases certain designs increase the apparent size of a room.

While it is not the purpose of this article to present in detail the special technique required in the application on the stencil, a brief outline of the essential principles may be appropriate.

Great care should be exercised in keeping the back of the stencil and the fingers free from paint, as otherwise it may prove rather difficult to prevent smearing. The pattern should be wiped clean after each application, using benzine where necessary.

Ordinary stencils are applied to the wall after the ground color and the glazing coat have dried, except in the case of the "wiped out" stencil, which is applied before the wall has dried. In this case the design is formed by wiping out with a clean piece of cloth, the glaze color of all areas



The Area Within the Panel Affords an Excellent Opportunity for Stencil Decoration. The formality of the panel is in accord with the conventional patterns produced with stencils.

between the lines of the design.

Stencils of single spot design are readily held in place by hand, but thumb tacks or gelatin paste is required for large or intricate stencils.

It is important to have the paint of a proper cream-like consistency as otherwise the edges of the design will not be clean-cut. Best results are secured by using the brush with very little paint. A separate stencil brush should be used for each color. The brush should be held at right angles and tapped—not swept over the surface, as otherwise the bristles are apt to get under the edge of the pattern, resulting in smeared edges in the design.

With a little practice even the novice will be surprised at the variety of pleasing effects that may be produced by the use of the stencil.

# An Old Home Made Modern

SOMETIMES, though we may long for a fine, new modern house, we find it hard to part with the old home which has been the center of our lives for many years. And then, too, we may realize that the old house is really sound and structurally good for many more years of service. The only fault that we can find with it is that it looks bare and unattractive when compared with the newer homes of our neighbors. Besides, it may lack some of the more modern comforts which are now almost necessities.

It was probably a situation like this that confronted the owner of the house which is illustrated on this page. A substantial building but bare and uninviting to look upon, the question was how to save the real value of the house and still make it conform to the standards of comfort and attractiveness.

The question was ably answered by the use of stained shingles and a moderate amount of remodeling, as can be seen by the larger view which was taken after the work had been completed. And here is just how it was done.

First of all a sun parlor was added. This broke the bare appearance of the front and at the same time afforded a little extra room and the comfort which goes with this more

modern type of room. Next the center of the front was raised which also served to relieve the bareness of the front and, with two large windows cut into the wall, provided additional room and light for the two front bedrooms, on the second floor.

When these changes in design had been taken care of the entire house was covered with stained shingles, right over the old siding and without the necessity for elaborate repairs or the removal of the old paint. Of course, wherever the clapboards were loose they were nailed tight, but this was only a small piece of work and after the shingles were applied the house was better protected than ever against wind and weather, better insulated against the heat of summer and the cold of winter.

For the side walls, 24-inch gray shingles were used and laid with the popular wide exposure. All that will ever be required to keep these walls perfectly protected in the future will be a brush coat of stain every five or six years and this can be done at a much smaller cost than the repainting of the old clapboards would have involved. With such treatment the house will always appear at its best, fresh and attractive in its new modern dress.



A Remarkable Change Was Made in This Old Home by the Addition of a Sun Room, Raising of the Front for Second Story Windows and a Complete New Covering of Stained Shingles.



The cost of the whole job was small and will be more than compensated for by the increased value of the house, and the saving in paint and fuel expense over the course of a few years.

# Good Furnace Heating Demands Sufficient Air Supply

The Experience of a Furnace Installer Reveals the Necessity of Providing Plenty of Clean Air to the Furnace to Insure Good Heating

By ROBERT C. NASON

**M**UCH of the success of warm-air heating depends on supplying an adequate amount of fresh air to the bottom of the furnace casing. It is necessary, for example, when the entire supply is to be taken from outside, that the volume of the supply be at least two-thirds that to be circulated to the rooms to be heated.

The reason for this may be explained in the fact that air increases to 1.325 of its volume when its temperature is raised from zero to 140 degrees Fahrenheit. Hence, if the area of the cold-air box is made two-thirds that of the combined area of the distributing ducts good circulation will be maintained so far as volume of air is concerned.

Many furnace men favor designing the cold-air box so that it has three-fourths the combined area of the circulating ducts. One manufacturer even recommends a ratio of 80 per cent. If the fresh-air box is built to be 80 per cent

of the distributing duct area and provided with a slide damper, the volume of air admitted may be regulated by hand to meet the demand for heat.

When the supply of air is insufficient, difficulty in heating certain exposed rooms may be experienced. In fact, I recall one instance in particular when this condition occurred. Our company installed a furnace in a residence, in a small town in a western state. When the work was completed it proved all that could be expected and the house was well heated with the exception of the dining room, a large room on the north side. Under no conditions could sufficient heat be delivered to the room to warm it properly. A thorough inspection was, of course, begun at once.

Measurements and calculations were carefully checked. The size of the supply duct and register appeared satisfac-

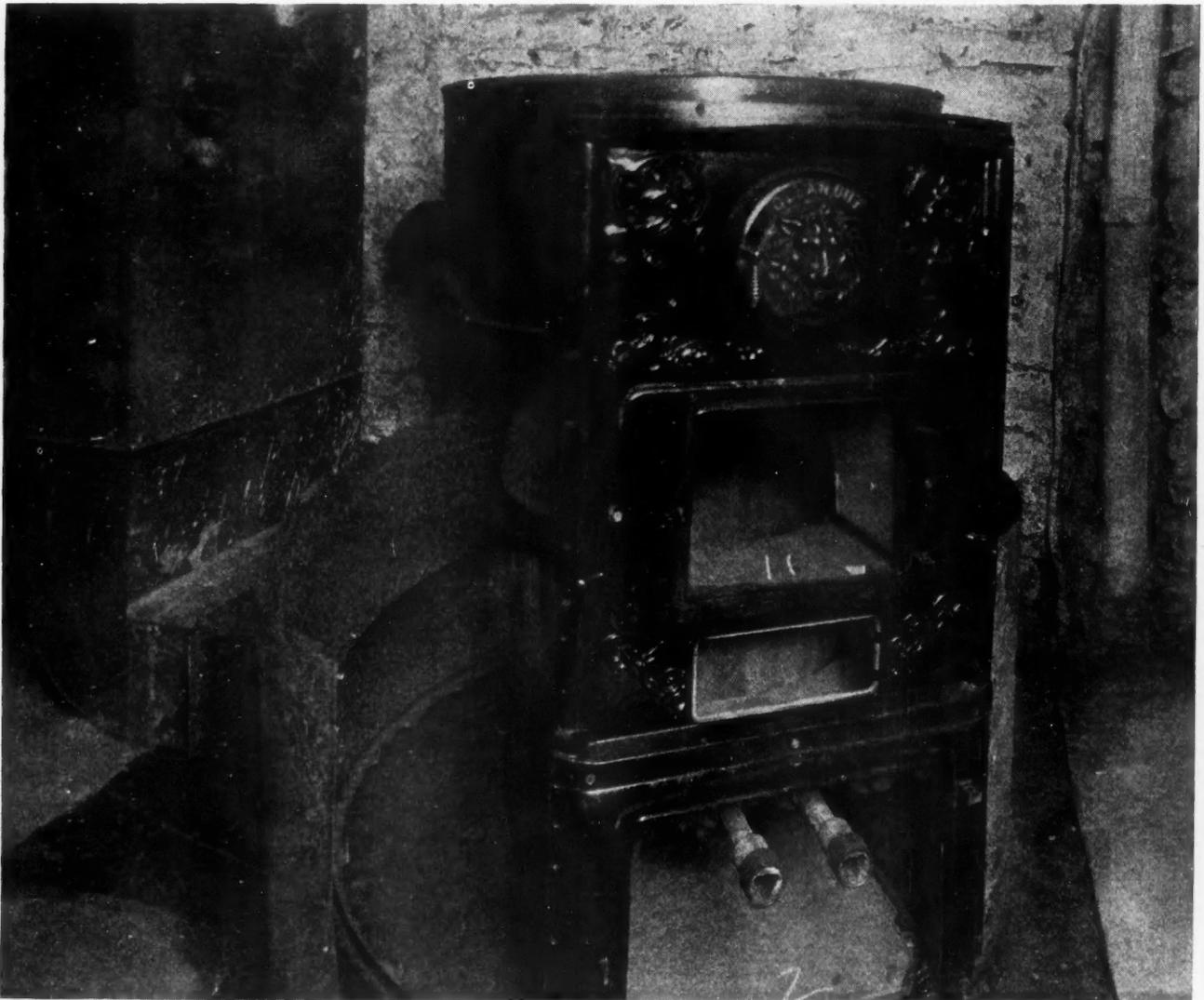


Fig. 1. Connecting the Cold Air Boot to the Bottom of the Furnace Casing. Located at the rear, a portion of air passes to the near side of the casing and the remainder to the rear and far side, assuring equal heating of the entire supply.

tory and the furnace large enough for the duty demanded of it. It was only when someone placed his hand over the dining room register that a solution was found, for, instead of warm air arising from all parts of the register, it was found that cool air was, as we thought, being delivered along with the warm air. How cool and warm air could come out of the register at the same time was hard to figure out.

Placing a handkerchief over the part of the register where we thought the cool air was being delivered we discovered that the cool air, instead of coming out of the register, was being sucked down into the register from the floor line. The furnace, not getting sufficient fresh air from the cold-air box, was drawing part of its supply from the room in question. About two-thirds of the dining room register delivered warm air while through the remainder makeup supply was drawn to the furnace casing.

An examination of the cold-air box, constructed of unmatched, hard pine, showed large cleats protruding into the interior of the box which reduced the area and thus cut down the supply. This error was soon remedied by rebuilding the box with matched lumber.

In late years we have used 26-gauge galvanized iron whenever it was felt that an abnormal amount of abuse would be present. Though metal boxes add to the cost of the installation they stand up longer and do not permit joints to pull apart as many wooden boxes do when the cellar is exceptionally dry.

**Air Supply Must Be Clean**

Another experience we had with cold air supply proved that not only is it necessary to provide sufficient fresh air but that it must be clean as well. Shortly after we had completed a furnace installation for a financier of nationwide reputation we received a complaint that though the system did everything we had guaranteed so far as heating was concerned the air delivered to the rooms was so dirty that furnishings were becoming badly soiled.

An inspection revealed that the heating engineer who designed the system had overlooked the fact that the side of the house from which the air supply was taken fronted on an alley. As is true of many alleys, ashes from neighboring buildings and street dust of all varieties was stirred up by passing vehicles and drawn into the house through the supply duct.

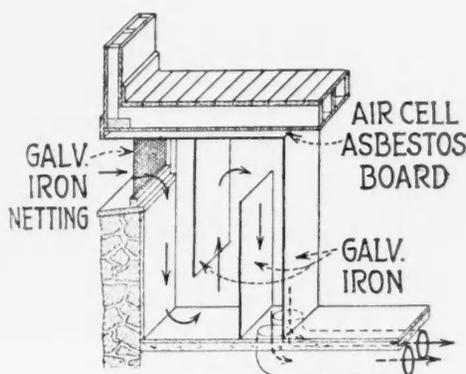


Fig. 3. A Common Method of Constructing a Fresh Air Room. Fine mesh or cheesecloth screens are loosely placed on the path of air flow so that they may be removed for cleaning.

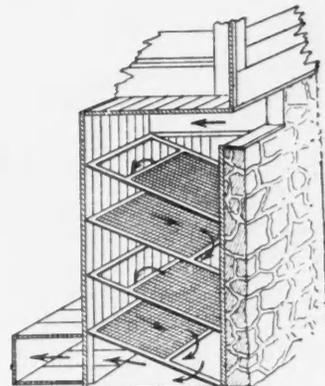


Fig. 4. Fresh Air Room with Baffle Plate of Galvanized Iron. The incoming air encounters the plates and deposits its air. A clean-out door should be located near the bottom of this type of room.



Fig. 2. Workman Fastening Bolt to Concrete Floor on Furnace Installation. The cold air duct, at the left, is ready to receive the boot connection to join at the bottom of heater casing.

The situation was remedied by entirely reconstructing the supply duct, which was converted into what is familiarly known as a fresh-air-room. This was made 5 feet square and the intake grille, which had a 1/2-inch mesh screen, was replaced with a 3/8-inch mesh grille and raised 4 feet above the street level. Four cheesecloth screens, tacked to plain, strong frames were set in the main air passage and slanted slightly in the direction of air flow, much as may be noted from the accompanying illustration, Fig. 3. The renovated cold-air box worked excellently and stopped complaint about dust.

Such boxes may be made either 4 or 5 feet square and are often constructed as in Fig. 4. Besides catching dust, they equalize the air flow on severely cold days when sudden gusts of wind would otherwise decrease the effectiveness of the heater by providing too much cold supply which would likely pass through the furnace casing so rapidly that it would be delivered to the distributing ducts at too low a temperature for adequate heating.

When such an air room can be provided it should be tightly sealed with insulation and sheathing as shown in Fig. 4 to prevent cooling the floors above.

If, for cost considerations or for other reasons, a fresh air room cannot be provided, that part of the fresh air duct which descends to the floor of the cellar should be enlarged to not less than double the required capacity, thereby providing a reservoir for fresh air which steadies the supply and prevents high and variable winds interfering with the regularity of the inflow. A clean-out door placed near the bottom of the settling chamber or enlargement, enables frequent cleaning. From the cellar floor to the heater the fresh air duct should be reduced to the required capacity.

Air supply ducts should be joined to the furnace at the rear of the casing. An admirable location is just off the center of the rear, as shown in Fig. 1. In this view the supply duct boot has just been connected to the bottom section of the casing. The sheet metal section has been purposely unfastened at the front to show how the fresh air opening appears with reference to good circulation. Located, as it is, just off center, one-half of the supply passes to the front and the remainder to the back and far side. Note the elimination of sharp corners at top and bottom of the vertical section of the cold-air duct.

(Continued to page 143.)

# An Attractive Small Shop Group

By A. W. ROE



Here Is the Answer to the Problem of What to Do About Necessary Business Construction in Suburban Sections. A shop group such as this, with its attractive, English style of architecture, in no way detracts from the desirability of a residence neighborhood.

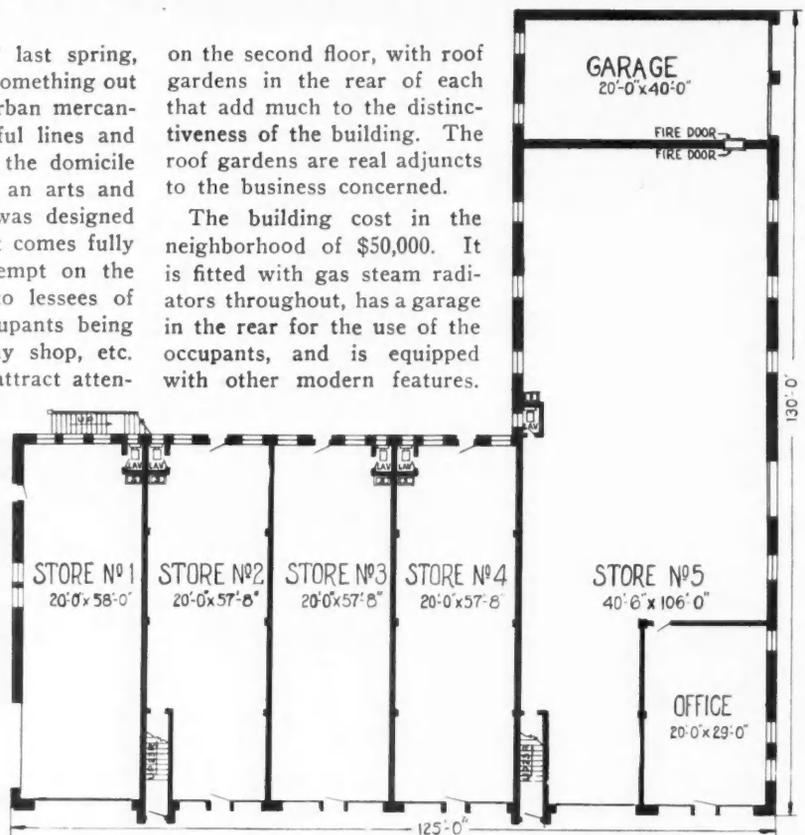
WITH the completion of "The Alvin" last spring, the city of Shreveport, La., was given something out of the ordinary in the way of a suburban mercantile building. "The Alvin" is of such beautiful lines and attractive design that it might well serve as the domicile of exclusive shops and become the home of an arts and crafts center in larger cities. The building was designed to attract exclusive shops and shoppers and it comes fully up to expectations. There has been no attempt on the part of the owner, however, to restrict it to lessees of purely the arts and craft group, present occupants being a drug store, a beauty parlor, a photography shop, etc.

The exterior of the building is such as to attract attention to it and to the shops that it houses. The walls are of brick and stucco with roof of slate. The building was particularly well designed to conform to the Middle English style common in the England of Shakespeare's day. The many gables with their quaint dormer windows, the roof of patchwork, colored slate, the chimneys projecting through the roof, are just a few of the exterior features that are highly pleasing. Although the building has been equipped with awnings and other modern outside features, it looks all in all as though it might have stepped over-night out of a Shakespearean primer.

Located on the ground floor are four shops, measuring 20 by 58 feet, with one large store, 40 by 118 feet in area. There are two large apartments for exclusive shops

on the second floor, with roof gardens in the rear of each that add much to the distinctiveness of the building. The roof gardens are real adjuncts to the business concerned.

The building cost in the neighborhood of \$50,000. It is fitted with gas steam radiators throughout, has a garage in the rear for the use of the occupants, and is equipped with other modern features.



On the First Floor There Are Four Small Stores and One Large One, the Latter Being Provided with a Garage at the Rear.

Abe Meyer is the owner, L. H. Lacey & Co., of Dallas, Texas, were the contractors, and the building was designed by Flint & Broad, architects, of Dallas, with Henry Schwarz, of Shreveport, associate.

"The Alvin" illustrates a trend in the direction of the grouping of small neighborhood shops together under the same roof. Its style of architecture and general appearance is such as to add to, rather than take away from, the attractiveness of the street it graces. It is located on the corner of Fairfield Avenue and Gary Street in the center of one of the best residential sections of Shreveport. Fairfield Avenue is the main thoroughfare from town to the residential section and is a very popular Shreveport drive.

Residents of the better streets in many cities are demanding that the zoning restrictions be applied more and more strictly. They resent the location of the average mercantile business in their midst, basing their reasons oftentimes on the contentions that the usual mercantile is not one to add to the beauty of a residential section. Usually housed in an ugly, or, to put it more mildly, utilitarian building, such a business has little to commend it to the discriminating residents.

Mercantile establishments, housing a group so that the businesses are restricted to the group and not scattered indiscriminately over several residential blocks, provided they are of attractive design as is "The Alvin," will usually be welcomed within the limits of residential districts. Not only do they provide unusually fine quarters for shops that are patronized by people of the exclusive sections, but they add a charm and grace of their own to city planning, thus becoming civic links in the modern scheme of things.



## Good Furnace Heating

*(Continued from page 141.)*

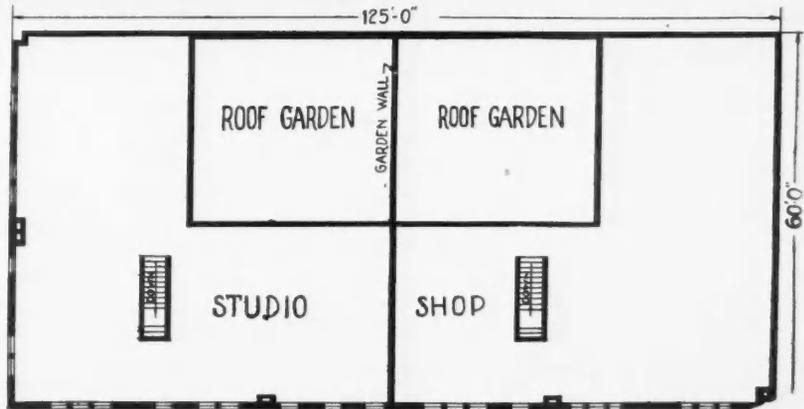
It is not uncommon to locate cold-air ducts near the ceiling of the cellar, then dropping them to the base of the furnace. If this is done care should be exercised that the vertical duct from the overhead horizontal is not located too close to the heater. Unless the vertical duct is kept at least two feet from the top of the casing it will be found that radiant heat will sometimes warm the supply before it reaches the furnace casing and retard its flow. Inadequate supply results and the plant will be unable to function properly.

## Why the Intake Should Be on the North Side

Although it is now pretty generally known that the cold air supply should be taken from the windward side of the building, usually the north or west, the temptation to put it on the lee side is at times strong. In designing a furnace system for a church in northern Ohio several years ago, it was thought by the church authorities that, if an extra large size heater were installed, the supply might be taken from the lee side where the air was cleaner.

This was done and with satisfactory results until one Sunday in January when bitterly cold outside temperature was accompanied by high wind and fine, driving snow. Although the engineer stoked the furnaces frequently the auditorium could not be heated. A rapid examination revealed nothing out of the way until the engineer put his hand over the cold-air intake grille. He found to his astonishment that instead of cold air being supplied to the furnace warm air came out.

Tests at the warm-air registers disclosed that the cold air was being drawn from the rooms and, acting as a cold-air supply was driven out the cold-air grilles by the high wind. A complete reversal of flow had resulted.



There Are Two Large Studio Shop Spaces on the Second Floor of the Alvin and Each of These Has a Roof Garden at the Rear. These are a real adjunct to the businesses which they house.

## Recirculation

In certain states where winter temperatures remain below zero for long periods we find it desirable to recirculate considerable air from within the house instead of taking the entire supply from outside. When a well designed recirculating system is employed a great saving in fuel, sometimes estimated at one-half the season's supply, is possible. In cold localities it is at times practically necessary to recirculate a portion of the air, say, up to 75 per cent, to provide proper heating at reasonable register-air temperatures.

This practice is daily coming into vogue and will likely become even more popular in the future as the amount of fresh air ordinarily admitted to a residence affords ventilation for about 35 people, whereas rarely more than six occupy the building at the same time.

When part of the supply is fresh and part recirculated a simple method of arrangement is to install registers in the floors of halls, on the windy side of large rooms or floors of closets. The area of the cold-air box under such conditions should equal the combined area of the distributing ducts. A mixing damper, so arranged that the desired amount of fresh air or recirculated air may be regulated by hand, will afford good results.



## Measuring Strains in Concrete

SOME time ago the Bureau of Standards, Department of Commerce, brought out what is known as an "electric telemeter" for measuring changes in the length of structural members produced by variations in the load upon the structure. The operation of the telemeter depends upon the variations in resistance to the passage of an electric current of a stack of carbon disks. This is the same principle as that employed in the microphone in the transmitter (the part we talk into) of the telephone. There is, therefore, nothing new in the principle employed, but the Bureau was the first to apply this principle to a precision measuring instrument.

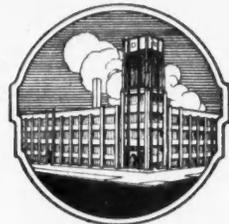
Recently a new use has been found for this device in the measurement of the strains in mass concrete. For this purpose a special cartridge has been designed which houses the stack of carbon disks, and which is embedded in the concrete at the point where the measurement is to be made. Wire leads extend to the surface and are carried to some convenient point where the indicating instruments are placed. These instruments are calibrated to show any deformation in the concrete due to loading.

The instrument will shortly be used in an investigation which is to be carried out by a special committee sponsored by the Engineering Foundation on a dam to be erected at Fresno, California.



# HEAVY TIMBER MILL CONSTRUCTION

*Details prepared and copyrighted by  
The National Lumber Manufacturers Ass'n*



## Plate No. 4 of a Series of Six

With Explanation and Discussion by Dudley F. Holtman, Construction Engineer  
of the National Lumber Manufacturers' Association

**T**HE term "mill construction" as commonly used is the name given to that type of building construction in which the interior framing and floors are of timber, arranged in heavy solid masses and smooth flat surfaces, so as to expose the least number of corners and to avoid concealed spaces which may not be reached readily in case of fire.

A broader interpretation of the term includes the meaning given above and adds the specification that the building shall be so constructed that fire shall pass as slowly as possible from one part of the structure to another. This means that each floor should be separated from all others by incombustible walls or partitions, and by doors or hatchways which will close automatically when fire is near them. Stairways, belt passages, and elevator shafts are encased, or preferably located in fireproof towers. Openings in floors for passage of belts, etc., are either avoided or fully protected against passage of fire or water. The proper installation of an approved automatic sprinkler system is of great importance. Ceilings in rooms where highly inflammable stocks are kept or where hazardous processes are followed, should be protected by the use of fire-retardant material. The ceiling should follow the lines of the timbers without an air space between the two surfaces.

### Three Types of Mill Construction

Practice as developed in different parts of the country has led to three general classes of interior framing in the heavy timber type of commercial building, each commonly referred to by builders as "mill construction." These classes have in common the basic points named above, but differ mainly in their details of floor construction. They may be divided into types as follows:

1. Floors of heavy plank laid flat upon large girders which are spaced from 8 to 11 feet on centers. These girders are supported by wood posts or columns spaced from 16 to 25 feet apart. This type is often referred to as "standard mill construction."

2. Floors of heavy plank laid on edge and supported by girders which are spaced from 12 to 18 feet on centers. These girders are supported by wood posts or columns spaced 16 feet apart or over, depending upon the design of the structure. This type is called "mill construction with laminated floors."

3. Floors of heavy plank laid flat upon large beams which are spaced from 4 to 10 feet on centers and supported by girders spaced as far apart as the loading will allow. These girders are carried by wood posts or columns located as far apart as consistent with the general design of the building. A spacing of from 20 to 25 feet is not uncommon for columns in this class of framing where the loading is not excessive. This type is more generally known as "semi-mill construction."

Each of these types is provided with a lighter top-floor to take the wear and give a finished surface.

### What Mill Construction Is Not

In order that these types may be clearly recognized, the following abstracts from Report No. V, issued by the Insurance Engineering Experiment Station under direction of the Boston Manufacturers' Mutual Fire Insurance Co., may aid in eliminating erroneous ideas.

"Mill construction does not consist in disposing a given quantity of materials so that the whole interior of a building becomes a series of wooden cells, being pervaded with concealed spaces, either directly connected each with the other or by cracks through which fire may freely pass where it cannot be reached by water.

"It does not consist in an open-timber construction of floors and roof resembling mill construction, but of light and insufficient size in timber, and thin planks, without fire-stops or fireguards from floor to floor.

"It does not consist in connecting floor with floor by combustible wooden stairways encased in wood less than 2 inches thick.

"It does not consist in putting in very numerous divisions or partitions of light wood.

"It does not consist in permitting the use of varnish upon woodwork over which a fire will pass rapidly.

"It does not consist in leaving windows exposed to adjacent buildings unguarded by fire-shutters or wired glass.

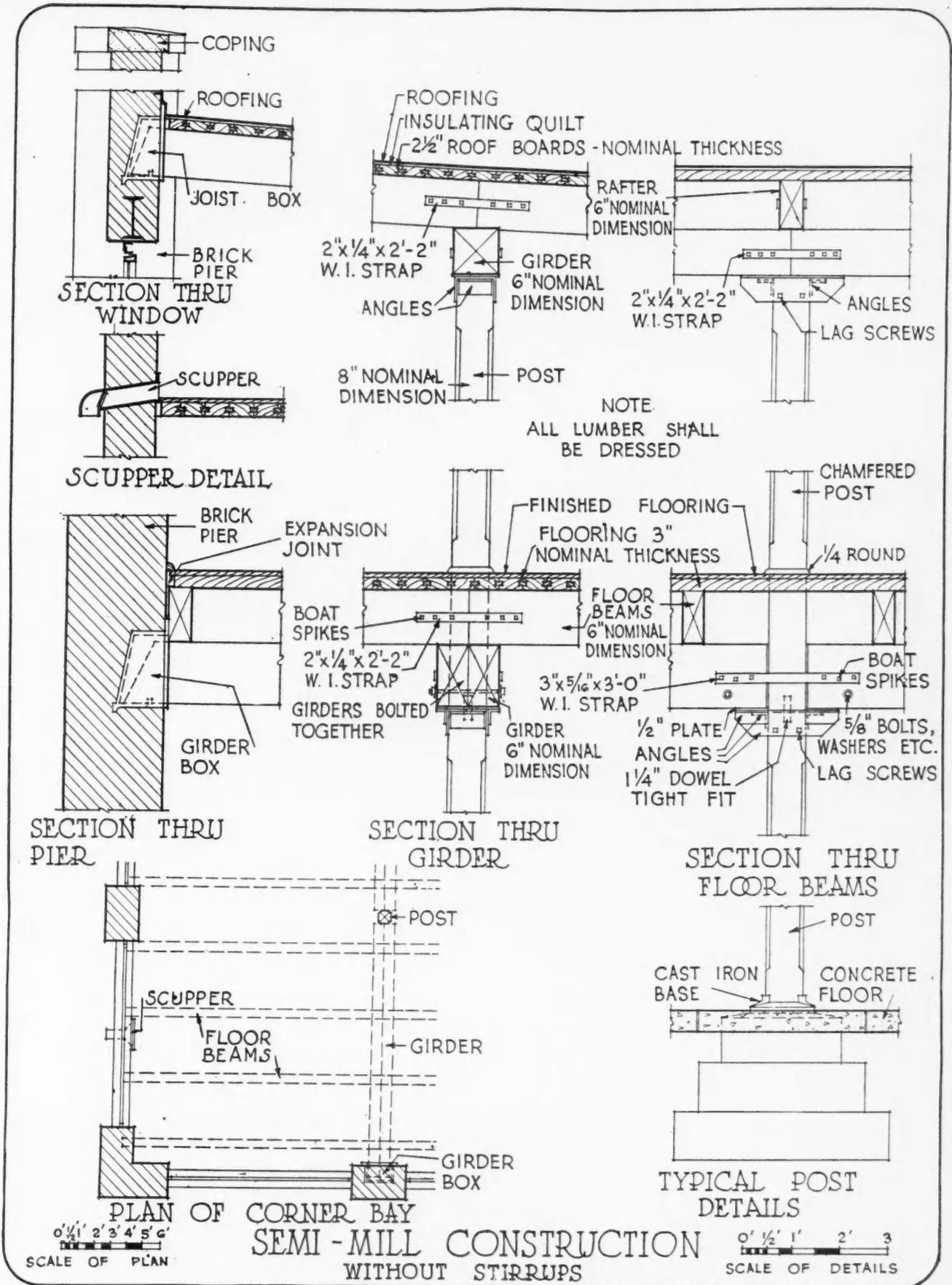
"It is dangerous to paint, varnish, fill or encase heavy timbers and thick plank as they are customarily delivered, lest what is called dry-rot should be caused for lack of ventilation or opportunity to season.

"It does not consist in leaving even the best-constructed building in which dangerous occupations are followed without automatic sprinklers, and without a complete and adequate equipment of pumps, pipes, and hydrants.

"It follows that if plastering is to be put upon a ceiling following the line of the underside of the floor and the timber, it should be plain lime-mortar plastering, which is sufficiently porous to permit seasoning. The addition of the skim-coat of lime-putty is hazardous, especially, if the top-floor is laid upon resin-sized or asphalt paper. This rule applies to almost all timber as now delivered.

"All the faults above recited have been committed in buildings purporting to be of mill construction, and all form a part of the common practice in 'combustible architecture.'"

The terms "mill construction" and "slow-burning construction" are used in most instances without a true clearness of meaning. It is true that mill construction is one of the best types of slow burning construction, but there are other types of structures which are referred to under this same classification. The popular distinction is best shown in the building ordinances of various cities. In mill construction, only timbers of large size are used, but in slow-burning construction small timbers protected by metal lath and plaster or other fire resisting materials are frequently installed. Instead of the thick floors required in mill construction, lighter material is used with a fire retardant layer between under floor and wearing surface.



MILL CONSTRUCTION DETAILS—PLATE No. 4.

Approved Details of Heavy Timber Construction.

# The Charm of Leaded Glass

Modern Products in Hand Wrought Effect Compare Favorably with the Best of the Medieval and Early Elizabethan Periods

By FREDERIC J. KURTZ

A FEW hundred years ago life was very different from the rushing crowded existence of today and even up to the earlier years of our own country's history there had been but little change. Because of the change which has taken place in more recent times there has come a conspicuous difference in the building of homes. It is generally conceded that our forefathers gave far more personal attention to the building and furnishing of their homes and the old houses that have been preserved through the years afford many examples of the beautiful hand work which this attention produced.

But still more recently there has appeared another change



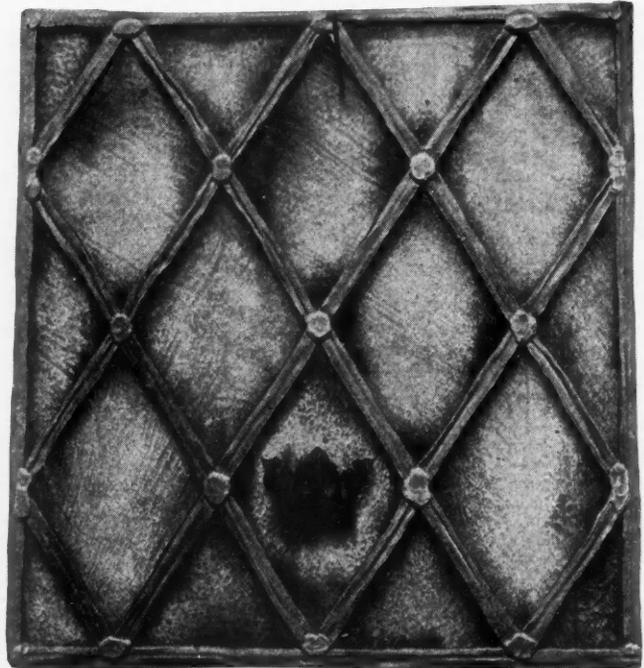
Sometimes the Medallion Designs Are More Elaborate and Special Ones Can Be Developed for Those Who Wish to Invest a Little More for the Sake of Greater Individuality in the Ornamentation of Their Homes.

in the earlier periods was the use of leaded window panes with patterns of diamond shapes, rectangles and varied forms which added an interest and individuality never possessed by mere sheets of glass. Such progress has been made in the revival of this art that today reproductions of the patterns used during the best periods of leaded glazing, the mediaeval and early Elizabethan, are now obtainable at a comparatively small cost. These reproductions compare very favorably with the best of the old time glass and possess all the charm of the hand wrought effect which characterized the early productions.

Any home can be made more interesting by the use of these leaded panes and a note of color may be added in the form of medallions or other devices introduced here and there. Particularly appropriate for the English style of architecture which is now so much in vogue are some of the patterns which are readily available to everyone and the use of even a small

in the point of view of the home builder and this has brought about a revival of many of the half forgotten crafts and arts which were used to embellish the earlier homes. There has been much searching for patterns and study of methods until today reproductions are appearing on every hand, many of which are almost, if not fully, the equal of the work of the early craftsmen.

CONSPICUOUS among the means used to embellish homes



A Typical Example of Early Leaded Glass in a Simple Diamond Design with the Added Embellishment of the Crown Medallion. No picture can more than suggest the charm and interest which is added to a window pane by the application of this craft.

amount of this glass will add greatly to the charm and interest of the English home which you may be building. There is almost no limit to the effects which are possible. There are, of course, many stock patterns which are available to all alike, at a small cost, and these are numerous enough that one need not fear too frequent duplication in the neighboring homes. In special designs there is the opportunity for full play of individuality and the skilled craftsmen, who have been trained by the artists who have developed this work, can develop your own personal ideas in the permanent metal so that they become a part of your home.

Among the infinite variety of patterns on leaded glass which are now being produced, a few have been selected to illustrate on this page as being typical of the best in this work. One must see such glazing to appreciate its beauty, as is readily apparent to anyone who attempts to describe it.



Any Number of Designs are Possible in Leaded Panes and Still Further Variety and Interest May Be Attained by the Use of Medallions Along the Lines Suggested by These Designs Which Are Characteristic of the Early Leaded Glass Work.

# SUCCESS

Great Wave of Enthusiasm Greet HoltBid, the Quick Accurate Method That Takes the Drudgery Out of Estimating—Mails Filled with Orders for the HoltBid Service

By JOSEPH D. EDDY

**A** WAVE of enthusiasm greeted the announcement that William A. Radford has become head of the HoltBid Service Company and that this marvelous method of estimating is now available to members of the building industry. Orders for HoltBid received at the company's new headquarters, 1827 to 1901 Prairie Avenue, Chicago, exceeded all expectations.

"HoltBid is a big success," said Mr. Radford. "The effort and expense of giving every member of the building industry an opportunity to become a Holdbidder at a reasonable cost and on convenient terms is being appreciated. Everyone in the building industry hates the drudgery of estimating. They all want to have their figures accurate. They don't like the idea of having their prospects peddle bills of materials. Their time is valuable and the great saving and other advantages of HoltBid more than repay the small cost of the HoltBid Method."

No sooner had the announcement reached the building industry a month ago than orders for Holtbid began coming in. In their effort to get rid of the hard work of estimating, the building industry made a lot of work for the postmen. Orders were so numerous that they taxed the capacity of the HoltBid Service organization. It was clearly demonstrated that this new method of estimating the cost of most buildings in from 30 to 50

minutes was just what the building industry wants. While watching estimators drawing off their figures in the old, hard way, it seemed a pity that there could

not be a simpler method of doing this work. Estimators working over a maze of figures would be interrupted, and would have to do much of the work a second time. They would forget to make extensions, and, as a consequence, their totals would be wrong. After all this work was done, in many cases, the job would be lost. Bills were peddled and oftentimes the job would go to a man who had made a mistake and sold the bill to his sorrow.

Before Mr. Radford became head of the Holtbid Service Company he made an exhaustive investigation of the HoltBid Method. Every member of the building industry he interviewed

who is using HoltBid was enthusiastic over it. All said that the HoltBid Method is easy to learn, some saying that after seven or eight hours they were able to draw off accurate estimates.

"Comparing HoltBid with the old, hard method of estimating is like comparing a modern, eight-cylinder automobile with an oxcart," said Mr. Radford. "Holt-Bidders have the jump on their competitors because they can figure cost estimates almost instantly while the old method kept customers waiting and sometimes made them impatient."



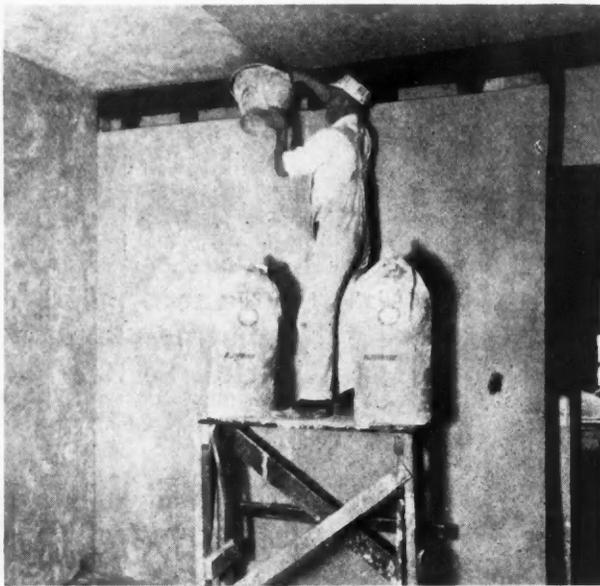
Estimators Are Making the Postman Work in Their Desire to Become HoltBidders.

# Cellular Gypsum—Fire Resistive Heat and Sound Insulator

**C**ELLULAR gypsum—a form of the mineral which, when it sets, is a mass of porous rock filled with myriads of confined air-cells—was put on the market early this year as a fire-resistive heat and sound-insulator for roofs, floors, partitions and outside walls of all types of buildings. During the building-season it has been applied for all these purposes, so that now it is possible to judge how it acts on the job.

This youngest member of the family of incombustible gypsum building materials is a form of the mineral with which a chemical is mixed. When water is added this chemical causes a gas to be released, and this makes the material swell or puff up, like bread rising. In this puffed state it is poured and then, when it sets, it becomes a mass of hard rock honey-combed with air-cells.

These confined air-cells, which are too small to permit the circulation of convection-currents, are what prevent the transmission of heat or of sound. But gypsum itself is a low conductor of heat and sound. So each confined



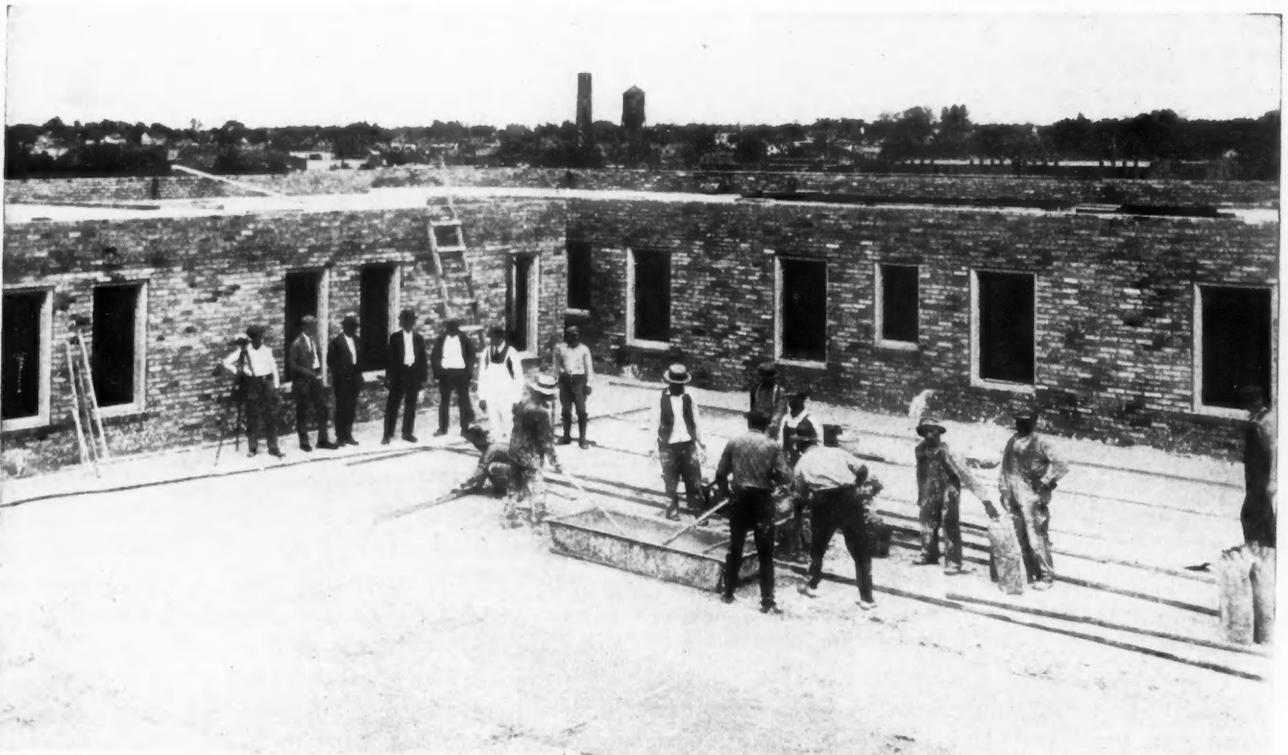
Insulating the Partitions of the Buffalo Arts Club Building. These partitions are built of fireproof gypsum wallboard and the cellular gypsum is poured, in its plastic state, between the studs and the two surfaces of the partitions, in order to sound-proof the walls. Musicians working in adjoining rooms cannot disturb each other.

air-space is completely surrounded by walls of insulating mineral.

Combined with this double insulation-value, cellular gypsum has several other qualities. Like all other gypsum materials of standard manufacture, it is incombustible; it therefore acts as a firestop. It is light in weight; the structural supports of a building do not have to be increased in size or cost to permit its installation. It is cheap to apply because it can be handled by common labor. It is plastic, and so it flows into all cracks and crevices, preventing the escape of heat through seams or joints and safeguarding the building from rodents and vermin. These several qualities are the basis for the use of porous gypsum in construction of various types.

In a \$40,000 five-flat-and-English-basement apartment-

house built by Fred A. Boswell at 4440 N. La Verne Ave., Chicago, six tons of this material were used as a floor-filler. The structure was designed by C. F. Wheeler, architect, and called for floors of wooden construction.



Concrete Roof Deck of the La Salle Hotel Annex, South Bend, Ind., Being Insulated with Two Inches of Cellular Gypsum. The material is mixed in the metal mortar-box, then dumped into a section formed by a two by two-inch strip on one side and a section of the poured and set gypsum on the other side. When it sets and dries out it is ready to be covered with composition roofing.

# Floors!

You can't hide them in a new house. They are literally under your prospect's feet every minute. They DEMAND attention.

Will they be dull, lifeless things? Or, worse yet, glaring, brittle, and glassy surfaces that scare him off for fear they will scratch?

Why not show him (and her) the mellow, durable lustre of beautiful *Waxed Floors*? Everyone wants them. Distinctive, Serviceable, Saleable.

## JOHNSON'S WAX *Electric floor Polisher*

Makes the **FINEST** finish in the world, the **EASIEST** to obtain. This wonderful new machine is a tool every builder needs. For all Wood, Linoleum and Composition floors. Small, handy, a child can operate it. Imparts a burnished, durable lustre impossible by hand and does it ten times as fast. Saves Time, Labor, Money—and makes floors that sell your houses.

### SPECIAL OFFER to Contractors and Builders

For established contractors and builders we have a special money-saving offer. Clip this coupon to your letter-head or card, check what you want, and mail it NOW.

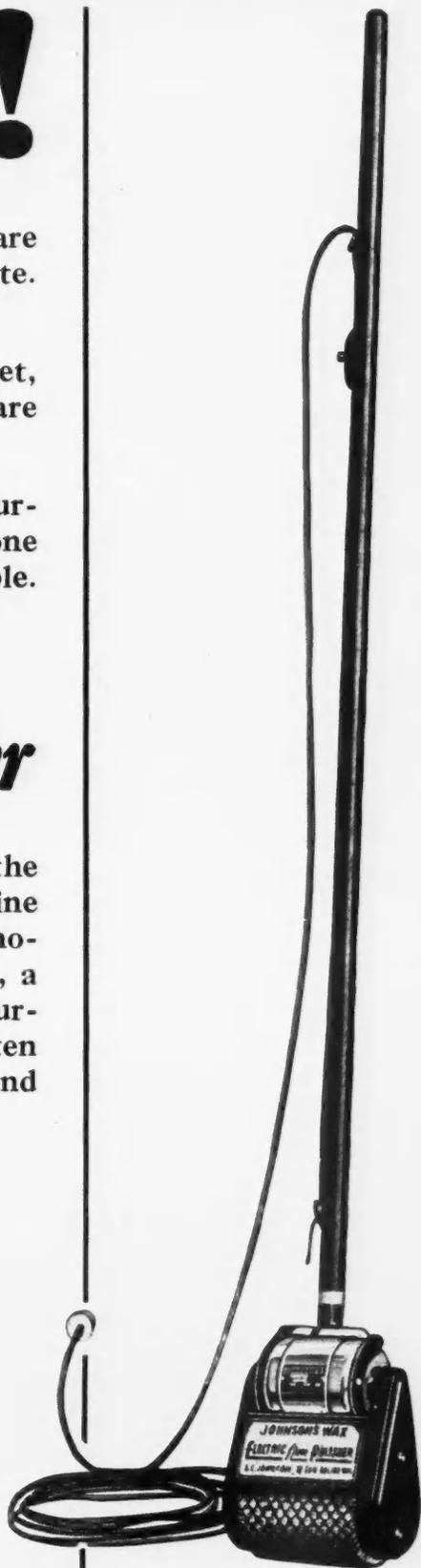
S. C. JOHNSON, & SON, Dept. A. B. 12, Racine, Wis.  
"The Floor Finishing Authorities"

- Please tell me about your Special Offer to Contractors and Builders on the new Johnson's Wax Electric Floor Polisher
- We also do our own painting and are interested in best net prices on Varnishes, Enamels, Stains, Wax, Wall Finishes, etc.

Name .....

Address .....

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



Oversize Universal Motor. Brush speed, 2100 r.p.m. Weight, 9 lbs.

## FREE

With every machine — one Johnson's Wax Applying Mop and one pint of the famous Johnson's Liquid Wax.



Insulating the Attic of the Buffalo Arts Club Building. The cellular gypsum has been poured over the lath and plaster forming the top-story ceiling and is being leveled to the proper thickness.

The filler was specified by the owner to deaden sounds which might be transmitted from one apartment to another and to provide warm floors on which children could play without discomfort and danger to their health.

Ordinary wooden sleepers were nailed to the rough flooring. The cellular gypsum was hand-mixed in a metal mortar box, and then was dumped between the sleepers. Then it was screeded to  $\frac{1}{8}$  inch below the level of the sleepers and allowed to set. The construction was completed by applying the finish flooring to the sleepers.

One of the peculiarities of this form of gypsum is that its weight and density can be varied according to the process of manufacture. The densest form of it is tan-colored and 30 pounds of this variety will fill one cubic foot. "Tan" cellular gypsum is for use on roofs. "Terra cotta" material, of which 24 pounds will fill one cubic foot, is intended for floors. "Slate-colored" cellular gypsum, of which 18 pounds will fill a cubic foot, and "white," of which 12 pounds will fill the same space, are intended for walls.

It was the "terra cotta" material which was used in the floors of Mr. Boswell's apartments. The "tan" was used to insulate and fire-proof the roof of a three-car garage attached to the building. But a more representative roof-job is at South Bend, Ind., where the entire roof of the La Salle Hotel Annex was insulated with "tan" cellular gypsum.

The structure was designed by W. M. Ellwood, architect, with a concrete roof-slab. It was desirable, of course, to insulate this slab so as to keep the upper-story rooms at even temperature in all seasons. To accomplish this, 50 tons of the cellular gypsum was applied by the Hay-Weaver Company, of South Bend, the general contractors.

Wooden two-by-twos were laid temporarily to divide the roof into sections, so that one section could be poured and leveled up at a time. The material was mixed in a metal mortar-box. Here, the only two necessary precautions for handling the material may be given. First, the gypsum always should be added to the water instead of the water being added to the gypsum. Second, the



Insulating Floors in the Boswell Apartment Building with Cellular Gypsum. The material is mixed in a mortar-box and poured between the sleepers. A workman is shown leveling it to within an eighth of an inch of the upper surface of the sleepers.



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For details of specification see: The Sherwin-Williams Book of Painting and Varnishing Specifications (sent upon request) or Sweet's Architectural Catalogue.

We invite correspondence—write to the Department of Architectural Service

The Sherwin-Williams Co.  
407 Canal Road,  
Cleveland

# ARCHITECTS' PAINTING GUIDE

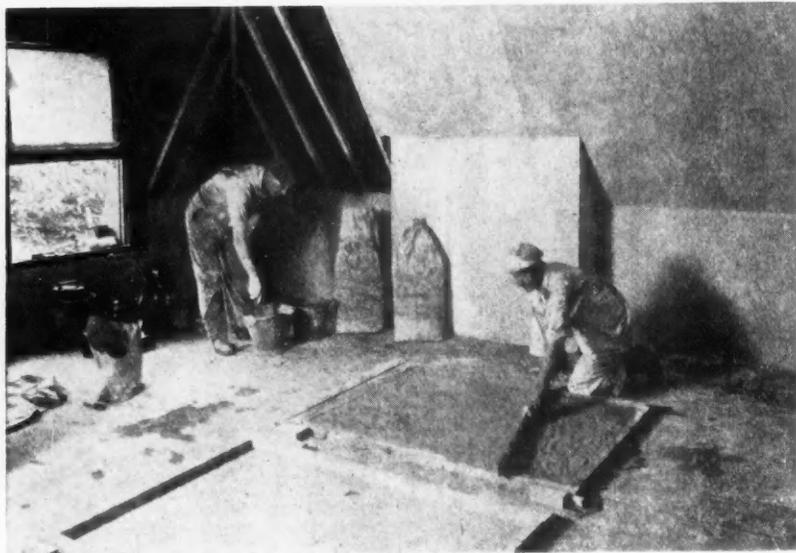
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SURFACE	TO PAINT <i>Use product named below</i>	TO ENAMEL <i>Use product named below</i>	TO STAIN <i>Use product named below</i>	TO VARNISH <i>Use product named below</i>
BRICK WALLS (ext).....	S-W Concrete Wall Finish	Old Dutch Enamel, Gloss		
CONCRETE WALLS.....	S-W Concrete Wall Finish	Old Dutch Enamel, Gloss		
CEMENT FLOORS.....	S-W Concrete Floor Paint	S-W Concrete Floor Paint		
EXTERIOR WOOD SURFACES.....	SWP (Sherwin-Williams Prepared Paint)	Old Dutch Enamel, Gloss	S-W Preservative Shingle Stain S-W Acid or Oil Stain	Respar Varnish
EXTERIOR METAL SURFACES.....	Kromik Structural Steel Primer Metalastic (for finishing coats)	Old Dutch Enamel, Gloss		
FACTORY WALLS (Interior).....	S-W Eg-Shel Mill White S-W Fume Resisting White	Old Dutch Enamel or Enameloid		
FLOORS (Interior Wood).....	S-W Inside Floor Paint (the enamel-like finish)	S-W Inside Floor Paint (the enamel-like finish)	Oil Stain or Floorlac Varnish Stain	Mar-Not Floor Varnish
GALVANIZED IRON SURFACES.....	S-W Galvanized Iron Primer (Finish with any Paint)	S-W Galvanized Iron Primer and Old Dutch Enamel		
INTERIOR WALLS AND CEILING.....	Flat-Tone Wall Finish S-W Eg-Shel Mill White	Old Dutch Enamel or Enameloid		
INTERIOR WOOD TRIM.....	SWP (Sherwin-Williams Prepared Paint)	Old Dutch Enamel or Enameloid	S-W Acid Stain S-W Handcraft Stain S-W Oil Stain	Scar-Not Varnish Velvet Finish Varnish (for imitation rubbed effect)
PORCH FLOORS AND DECK.....	S-W Porch and Deck Paint			
RADIATORS AND PIPES.....	Flat-Tone Finish or S-W Gold Paint S-W Aluminum Paint	For White—S-W Snow White Enamel For colors—Enameloid		
ROOFS—Metal.....	SWP or Metalastic (if Galvanized, prime with S-W Galvanized Iron Primer)			
ROOFS—Wood Shingle.....	SWP		S-W Preservative Shingle Stain	
STACKS AND HOT SURFACES.....	Salamander Smoke-Stack Black			
STRUCTURAL STEEL.....	Kromik Structural Steel Primer Metalastic (for finishing coats)			
TO DAMP-PROOF FOUNDATIONS.....	S-W Antydamp			
TO DAMP-PROOF INTERIOR WALLS ABOVE GRADE.....	S-W Plaster Bond			
WOOD PRESERVATIVE			S-W Carbolic-ol	

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Casting Block of Cellular Gypsum to Be Cut to Proper Shape and Applied Between the Rafters in Odd-Sized Corners of the Buffalo Arts Club Building.

mortar-box or other receptacle should be kept reasonably clean so that the set particles of material left in the box after pouring will not speed up the set of the next batch.

These precautions were observed on the South Bend job. The water was run into the mortar-box; the gypsum was poured in from bags and then was agitated with hoes until no lumps remained. Then it was poured into the sections formed by the two-by-two strips. As each section was filled it was leveled off with a wood strip. In this way the entire roof was covered with two inches of porous material. The superficial moisture was allowed to dry out. Then a brush-coat of water-proofing compound was applied and the whole was surfaced with composition roofing.

At Buffalo, N. Y., an old three-story residence was remodeled into a studio-building for the Buffalo Arts Club. It was necessary to sound-proof the walls so that different musicians could work at the same time in adjoining rooms. It also was necessary to insulate the ceiling of the top floor so as to eliminate the excessive temperatures of summer.

"Terra cotta" cellular gypsum was used in the floors; "white" was poured directly onto the lath and plaster of the third-story ceiling, and "slate" was used to insulate the walls. The problem in this case was simplified by the use of a fire-proof gypsum wallboard in rebuilding the walls and partitions. The wallboard was nailed to the studs and the insulating material was poured behind it.

In dormer-corners and other places where it was impossible to pour, the cellular gypsum was applied in blocks. That is, temporary wooden forms were built and the material was moulded in them, then cut to the desired sizes and shapes and set into the walls and ceilings. Where this was done the cracks between the slabs of porous rock and the joists were filled with the wet material applied with a trowel. This job was handled by Clyde H. Lancot, general contractor, under direction of the architect, Arthur Kowalski.

Many homes, especially those in the English cottage, Dutch Colonial and similar styles, are built with steep-pitched roofs so that the ceilings of the second-story rooms are formed by the slanting roof. This means that the heat of the sun comes into almost direct contact with the second-story rooms, making them uncomfortably hot. Such was the case in the residence at 4629 Casco Ave., Minneapolis, Minn., built for H. F. Cotton, by W. O. Hughes,

general contractor. The problem was met here by pouring the cellular gypsum over the lath and plaster of the ceiling. Where this is done the material should be poured after the scratch and brown coats of plaster are applied, but before the finish coat and the decoration are put onto the underside of the ceiling.

This same treatment is one of the most economical ways of insulating an old house, especially a story-and-a-half bungalow, so as to prevent heat-loss through the attic and roof. Another common use of cellular gypsum in residences is as a wall-fill around the plumbing.

The material also is used to build fire-stops between the wooden studs of ordinary frame construction. Applied in this way, it prevents the circulation of warm air from the basement to the attic so that it escapes from the roof and through the cracks around the door and window-frames. The need of fire cut-offs between the furnace-room and the first story of the average dwelling-house is well known, and this purpose as well as insulation can be met by the use of the material as a floor-fill between the rough and finish-flooring.



### Philadelphia Craftman Awards

THE first fall meeting of the Philadelphia Building Congress was a memorable one. At a dinner in the City Club, attended by all the elements in the building industry, the Committee on Awards, after reviewing nominations received through the co-operation of architects and others qualified to pass upon the work performed during 1924, awarded certificates of craftsmanship to individuals and firms.

These awards were made in three groups. The first to Guildsmen or those engaged in the Crafts, who have shown especial skill in developing the artistry or handicraft possibilities in their particular field of work, such as designing, laying off, modeling, carving, wrought work, and have given visible evidence of individuality, a Certificate as a Guildsman was awarded.

To craftsmen, or those now designated by various names, such as mechanics, artisans, skilled workers, etc., who in any building craft have shown skill, ability, efficiency and willingness and the desire to improve their own knowledge and technique as well as that of fellow workers, helpers or apprentices, a Certificate as a Craftsman was awarded.

To builders and contractors, those who have satisfactorily either erected buildings or other structures or parts thereof, or installed equipment therein, and have encouraged pride of craft on the part of co-workers and have given individual recognition of it when deserved, a Certificate as a Co-Operative Master Craftsman was awarded.



### "Coals to New Castle"

A STRIKING outcome of railway congestion and embargo on building materials in Florida is found in the fact that some lumber dealers find it easier to get Washington and Oregon lumber to Florida by boat than to obtain nearby southern and even Florida lumber. Two steamers are now discharging five million feet of Pacific Coast lumber at Tampa, other vessels are discharging at Jacksonville, Hollywood, Fort Lauderdale and Miami about ten million feet of Pacific Coast lumber, as well as an equal amount of North Carolina and southern pine from Norfolk, Virginia, Savannah, Georgia, and intermediate ports.

# Send 75c for These Six Books

Brick homes are easiest to sell. People prefer the permanent beauty of brick—its lack of painting and repairing. They know that a brick home has highest resale value.

Feature 100% brick homes—brick foundation walls, side walls, fireplace and chimney. Send 75c for these six books—ask for the new folder "Hollow Walls of Brick." It's free.

## All for Only 75 Cents

Two plan books showing 120 brick homes in picture and plan—"Your Next Home" and "The Home You Can Afford." All practical designs by prominent architects, actually built and lived in. Working drawings for each home shown as low as \$10 a set.

"Brick, How to Build and Estimate" is an illustrated hand book on brick construction, giving

ing details of wall construction, tables of materials and other useful information. (25c.)

"Brick Silos and How to Build Them" is a bargain at 10c, as is "Farm Homes of Brick" at 5c. "Skintled Brickwork" shows those rough texture walls you've heard so much about. Dimension details for seven effects in this 15c book.

## Free Folder on Hollow Walls

Lower cost brick hollow walls, using fewer brick and encouraging faster work, are described and pictured in a new 24-page folder free on request. Keep in step with progress in brick. Just ask for your copy.

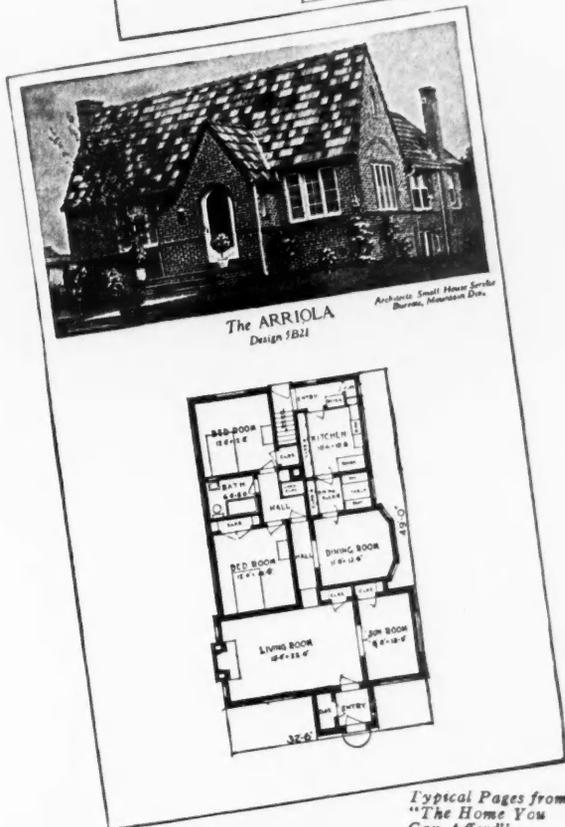
We have hundreds of requests for names of good masonry contractors. If you'd like us to refer prospective builders to you send us your name and address and a brief outline of experience for our reference file.

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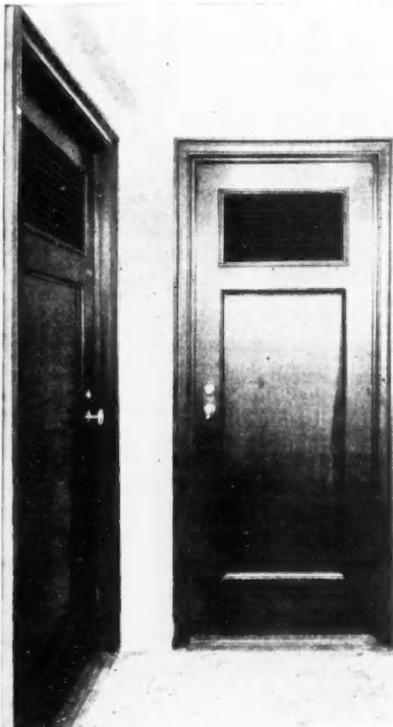


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### Steel-Louvre Panels

**T**HE usual floor layout provides for windows in only one wall of a room except at corners. Such window or windows will not provide ample ventilation and, as mechanical ventilation is rarely provided, it becomes necessary to provide an opening for the passage of air through the room, preferably in the wall opposite the window. This opening is usually a transom over the door or a ventilator in the door.

A patented panel of steel louvres, which eliminates light and vision at all times, bars thieves, prevents serious drafts and muffles sound, may be installed in any type of door, transom space or wall. It will provide maximum ventilation with absolute privacy and, so the manufacturers say, is cheaper than ventilation by means of glazed or solid wood panel transoms. It is made with either adjustable or stationary louvres to meet different requirements.

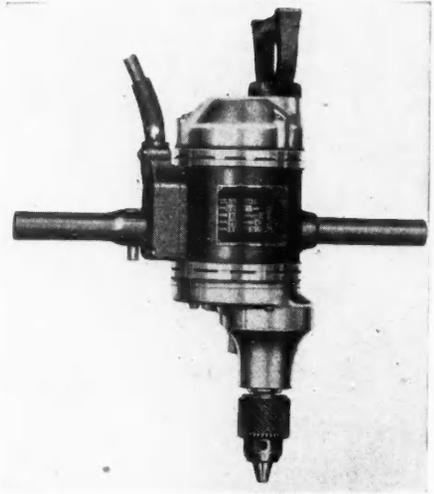


Steel Ventilating Panels, Like These, Installed in Any Door, Provide Maximum Ventilation with Complete Privacy.

The louvres are set into a frame of 15 gauge, cold rolled steel which is fastened into the opening by four or six screws for the door and transom types, respectively. After the opening is prepared the installation can be made by any unskilled workman in ten or fifteen minutes' time. The screws can be removed only from the inside of the room. In the adjustable type the louvres are operated by a positive adjustment which permits any degree of opening.

### Heavy Duty Motor Drill

**A** LEADING manufacturer of portable electric machine tools has announced a new moderate priced universal motor drill which is made in two sizes, ½-inch and ⅝-inch capacity, and is intended not merely for light or special duty, but is built to withstand the hardest use. A bench drilling stand can also be obtained for use with this drill if desired.



This New, Heavy Duty, Electric Drill Is Built to Withstand the Hardest, Constant Use.

Each drill is equipped with a 10-foot all rubber cable and suitable plug for attaching to any electrical outlet and is furnished for either 115-volt or 230-volt current. The smaller size weighs 18 pounds and the larger 21 pounds, and they operate at 525 and 500 r.p.m., respectively. The construction throughout is of the best material and especially strong and rugged. Special taper sockets are furnished to special order at the regular price. The standard equipment is a Jacob drill chuck.



### Wide Plank Flooring

**P**RESENT styles of architecture demand wide plank flooring for use with the early English, early French and Colonial house. Due to lumber having a tendency alternately to take on excessive moisture and dry out, one manufacturer of flooring is producing these wide planks, after lumber has been thoroughly kiln dried, of a veneered or laminated construction to prevent shrinking, cupping, warping, etc. This construction is guaranteed to remain flat.

This company furnishes boards from 5 to 12 inches in width, of random grain, the stock being partly plain and partly figured, in order to carry out the true interpretation of the earlier floors after which they are patterned, which floors were originally hewn, or subsequently cut, without regard to the figure that might develop.

This flooring is furnished in a number of different woods and is back-painted with asphalt, damp-resisting paint and the manufacture and installation is done by skilled cabinet makers.



SANTE FE  
OFFICE  
BUILDING

E. A. HARRISON,  
*Architect, Santa Fe Sys-  
tem; W. H. WAGNER,  
Chief Engineer, Tope-  
ka, Kans.; SWENSON  
CONSTRUCTION COM-  
PANY, Builders, Kan-  
sas City, Mo.*



## Carney Relieves the Worry of Winter Construction

IF THERE is any one time that brick mortar can make or break its reputation with architects and contractors, it's in winter—when the mercury registers zero or below.

On thousands of buildings it has been demonstrated that Carney gives the same excellent results in freezing weather as in the warmer months. The assurance of walls of solid masonry and savings in both labor and materials, are Carney features that appeal to builders at any season of the year.

### THINGS YOU'LL WANT TO KNOW ABOUT CARNEY

Mixing errors never occur with Carney. If too much sand is added, the plasticity is affected making troweling difficult. Carney, thereby insures the quality of the finished wall.

Carney saves material—it works perfectly with four parts sand.

Carney is easy to mix—add water and sand only. Reduces labor costs.

*Carney is the perfected cement for brick and tile mortar.*

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*Cement Makers Since 1883*  
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DISTRICT SALES OFFICES: Leader News Building, Cleveland; Chamber of Commerce Building, Chicago; Omaha National Bank Building, Omaha; Syndicate Trust Building, St. Louis; Book Building, Detroit; Builders' Exchange, Minneapolis.

Specifications: 1 part Carney to 4 parts sand.

# CARNEY

for Brick and Tile Mortar

### A Universal Electric Outlet

NOW comes an electrical receptacle which is universal in its application, for it can be installed in practically any wall bracket, supplying a convenience outlet at a remarkably low cost, because no separate wiring is required. Except for feeding lamps in living rooms, an outlet at the height of the ordinary wall-bracket is really more convenient than one placed at the baseboard in the usual manner, and saves a great deal of stooping to make connection for a few minutes' use of vacuum cleaner, electric curler, toaster, percolator and other appliances.

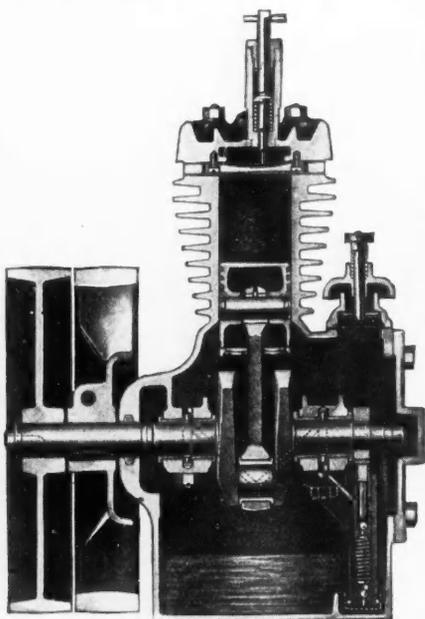
Here is an electric outlet which can be installed in practically any wall bracket at a remarkably low cost.

To install this outlet it is only necessary to cut a hole on the bracket plate and screw the two halves together. No separate support is required for the outlet, as it is rigidly attached to the bracket plate.



### Compressors for Paint Spraying

A LEADING line of air compressors is designed to meet the demand for a small high-grade machine for use in paint spraying and other applications requiring a good small compressor. Two types are made: air-cooled in 2½ by 3-inch, 3¾ by 3-inch and 3½ by 4-inch sizes and water-cooled in four sizes up to 6½ by 6-inch.



Details of Construction of the Vertical, Air Cooled Compressor, Which is the Same as the Water Cooled Except for the Water Jacket.

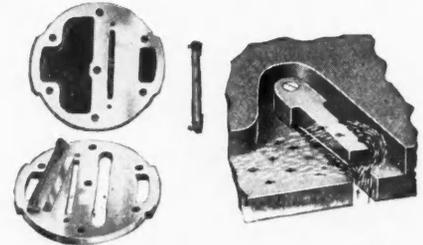
Excessive heat generated during compression enables the air to retain much moisture and oil in vapor form, thereby causing the lacquer to "blush" or to refuse to dry. Special attention is paid to the effective cooling of the compressor cylinder and to the elimination of oil in the discharge air. In the air-cooled compressor the radiating surface is unusually large, while in the

water-cooled compressor the entire cylinder with heads and valves is submerged in a large water jacket so constructed as to insure free circulation of the cooling water to all parts of the cylinder. Because of the more effective cooling made possible through the use of circulating water, the water-cooled compressor is especially recommended for fine and lacquer applications.

Excess oil in the air is avoided through the use of force-feed lubrication and special piston construction which wipes surplus lubricating oil off the walls and returns it to the crankcase.

Automobile-type construction was adopted in designing these vertical compressors so as to obtain long life, low upkeep and reliable service which characterizes the high-speed reciprocating machinery of the modern automobile. Accordingly pressure force-feed lubrication and accurate balance of reciprocating parts were incorporated in the design. These two features, together with the use of feather valves, are largely responsible for the smooth, efficient operation and long life claimed for these compressors.

The feather valves used in these compressors are similar to those used in larger and more costly compressors made by this company. This valve is simple in construction, of light weight and has proved itself to be exceptionally durable and most economical. The valve proper consists of a strip of light, ribbon steel which, when closed, covers a slightly smaller slot in the ground face seat. The strip is restrained but not rigidly secured at the ends by a curved drop forged steel guard.

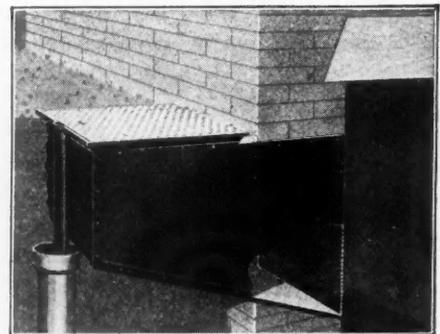


Left, Detailed Construction, Right, Flow of Air, Through the Feather Valve.



### New Coal Chute Has Excellent Drainage Feature

AS a rule, considerable difficulty is experienced with water entering the ordinary grade line coal chutes. Used in low-set and terraced residences the door is parallel with the grade, this means that water collects on the lid and creeps down between the lid and frame into the casement.



The New Coal Chute Which Incorporates an Effective Drainage Feature in Its Construction.

One company just placed on the market a new grade line coal chute with unusual drainage features to offset this difficulty. This chute provides a gutter around the frame at the edge of the door which carries the water to an outlet with a strainer at the outside of the chute, hence down a pipe to the drainage tile. The pipe connecting the strainer with the drainage tile is only furnished when ordered.

This chute comes in two sizes and is strongly constructed with checkered steel doors, malleable iron frame and hinges and with steel body reinforced by a stiff frame.



*Architects*  
Hugh Tallant and  
J. E. R. Carpenter  
New York, N. Y.

**HURT BUILDING**  
Atlanta, Ga.

*Contractors*  
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## *They can bring you more business too*

MANY a man who today owns a desirable piece of property is prevented from erecting on it a valuable, income-earning building by just one thing—financing. But many a man in just this position has been enabled to go ahead with his project by just one thing—the Miller Plan of Financing.

The Miller Plan brings to owners and builders the financial aid of men and women in all parts of the country who are satisfied investors in Miller First Mortgage Bonds. Though they are strangers personally, they are able and willing to aid because of the fine record of safety combined with liberal earnings that Miller Bonds possess.

Accept their help.

Whether you contemplate taking the contract for the erection of a hotel, apartment building or office structure, you would do well to consider the advantages of the Miller Plan of Financing.

The contractor stands no chance of suffering a loss. Periodic disbursements are made as the building is constructed. Building is

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By the simple operation of the Miller Plan, the owner is relieved of the worrisome details of the ordinary loan.

*From \$250,000 to \$1,000,000 and more*

We are ready to place at the disposal of owners any amount from \$250,000 up, which will be secured by a first mortgage on your land, building and equipment.

Find out more about how this Miller Plan of Financing operates. Read enthusiastic letters from owners and builders for whom we have negotiated first mortgage bond issues. *Write for Booklet L-1402.*

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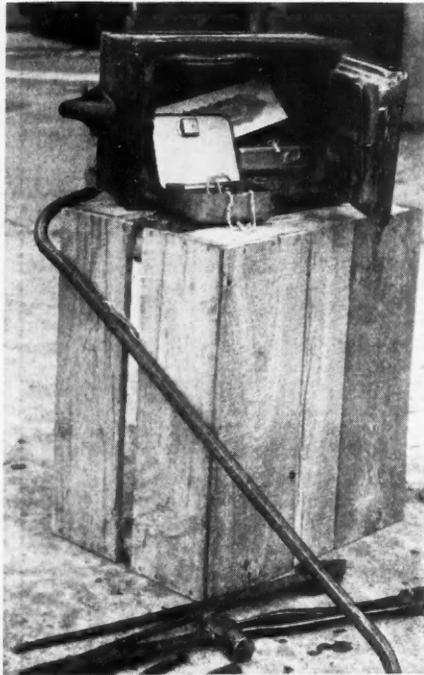
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**A Reliable Wall Safe**

**I**NSURANCE can never replace lost papers or cherished valuables, but a good reliable wall safe will prevent their loss, theft or destruction by fire. Such a safe is available at small cost and can be installed in any building, new or old, and either in the wall, on the wall or in the floor. Its operation is silent with no tell-tale clicks and defies even the sensitive fingers of a skilled burglar. Over 500,000



This Wall Safe, After Being Subjected to Extreme Heat, Was Opened and the Contents Found Undamaged, Even the Papers, as Shown.

combinations are available and no two are the same. The safe is furnished with two attractively lined, removable jewel boxes, each of a different finish and each fitted with a lock and key.

Whether installed in the wall or on the wall this safe provides the same security and can only be removed by tearing out the studs. When installed in the floor its smooth face does not reveal its presence in the floor and it can be covered with a rug or piece of furniture. Installation can be made on either brick, tile or concrete walls for which special instructions are furnished. The ordinary installation is very simple and is done by framing in an opening between the studding, 14 inches long and 10 inches high. A large number of secret installations are possible in places where it is difficult to "jimmy" the safe even if located.



**Slate Cutter and Punch**

**A** COMBINATION tool, made of the highest grade tool steel and guaranteed against flaws or breakage, is designed for greater speed and convenience in laying slate or asbestos shingles.



Here Is a Combination Tool Which Is a Great Aid in Cutting or Punching Holes in Slate or Asbestos Shingles.

This tool will cut and punch holes in either material without waste or breakage and leaves a clean free edge on both sides of the cut, so that no trimming is necessary. It is said to be particularly valuable for fitting around corners, chimneys, skylights, dormers, towers and similar points. It will cut any angle of straight lines.

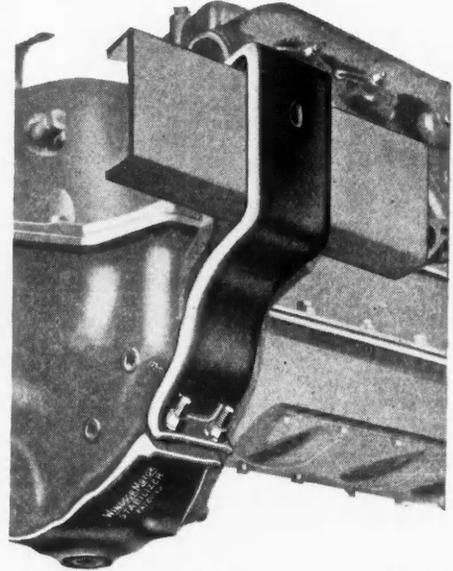
This tool does away with the need for the

stake and a ripper is the only other tool required when it is used for repair work. With it it is possible to locate and punch countersunk holes wherever they are needed and the cutting and punching is all down from the top side of the slate.



**Motor Stabilizing Device**

**M**ANY owners of Ford cars and trucks are now using, and expressing satisfaction with, a new device for eliminating vibration. This stabilizer is made of heavy gauge metal and die-stamped to form. It is easily and quickly installed without special tools. To install, it is only necessary to remove the floor boards, drop the support over the chassis frame and adjust four bolts.



This Support, of Heavy Gauge Metal, Is Designed to Relieve the Vibration in Ford Cars and Trucks and Prolong Their Life.

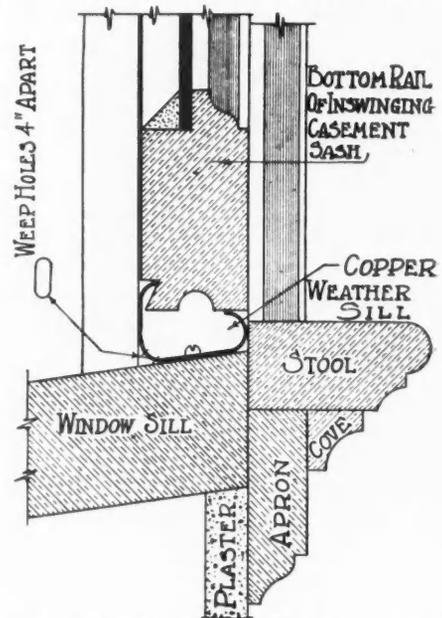
When installed the device fits snugly around the crankcase and acts as a strong support and firm truss, holding the motor securely in place. It has the effect of combining the motor and frame into a single unit with the result that vibration is greatly reduced and smooth motor performance is obtained at all speeds.



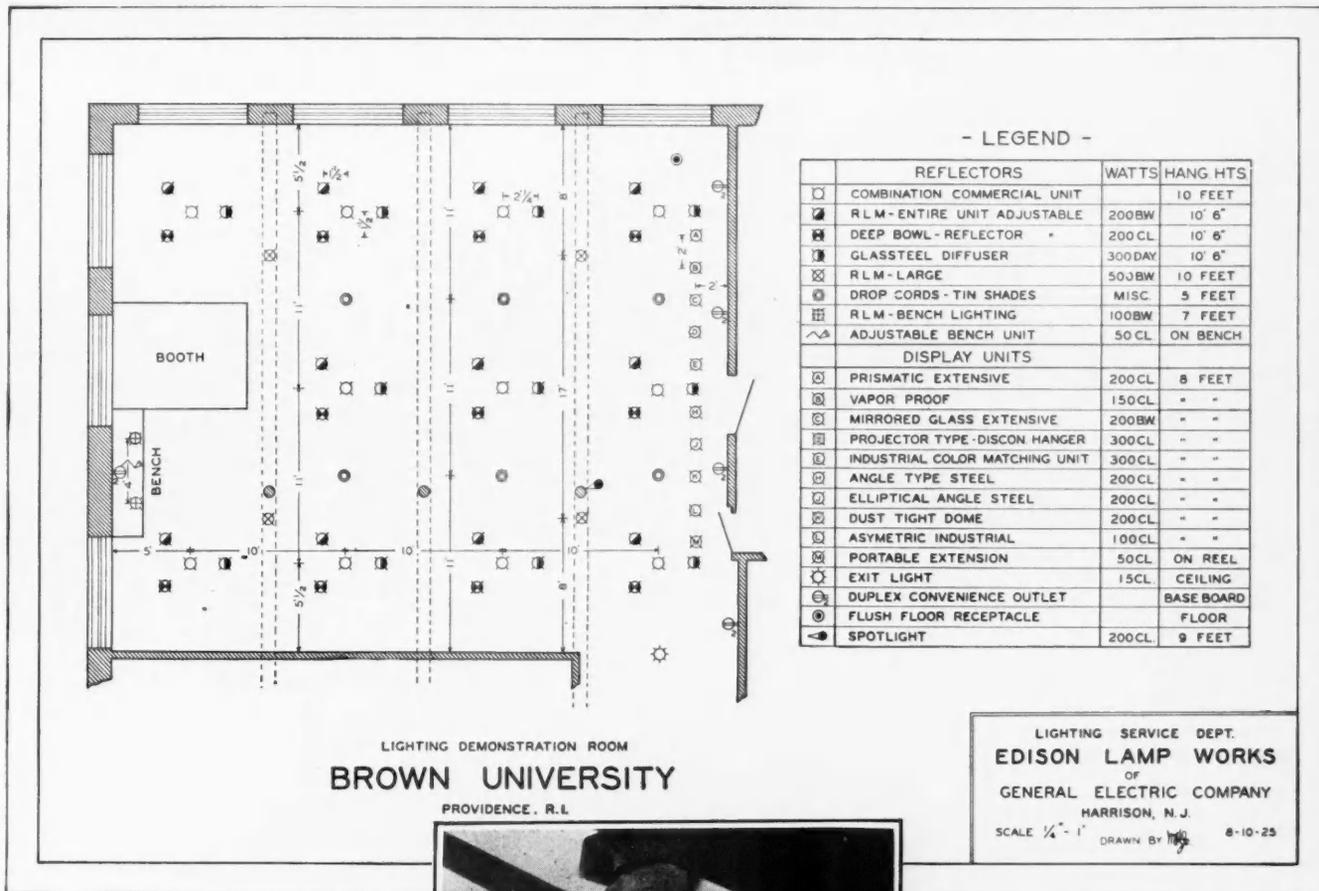
**Weather-Proofing Casement Windows**

**T**HE accompanying drawing illustrates the installation of a patented metal weather sill which is something entirely new and which has been proved in actual application. It is intended for application to casement windows that swing inward; and when installed as shown here will make such windows absolutely weather-proof under all conditions.

As can be plainly seen this weather sill is extremely simple and easy to apply, and being made of copper will last indefinitely.



The Sketch Shows How a New Copper Weather Sill Is Installed to Make Casement Windows Weather-Proof Under All Conditions.



The above illustration is an untouched photographic reduction of a drawing lettered throughout with WRICO Lettering Guides. It is reproduced through the courtesy of the EDISON LAMP WORKS.

In this drawing only a few sizes of vertical lettering are used. Complete samples of all sizes of both vertical and slant lettering are shown in the new 1926 WRICO catalog.



**WRICO**

# LETTERING GUIDES

Among the many prominent users of WRICO LETTERING GUIDES are:

Stone & Webster, Inc.  
International Harvester Co.  
Darling Valve & Mfg. Co.  
Carnegie Steel Co.  
United States Rubber Co.  
Brooklyn Edison Co.  
Edison Lamp Works  
The New York Central Railroad Co.  
Allis-Chalmers Mfg. Co.  
Western Electric Co.  
General Motors Corp.  
Baldwin Locomotive Works  
American Steel Foundries

Westinghouse Air Brake Co.  
New York Life Insurance Co.  
Ford Motor Co.  
Edison Electric Illuminating Co.  
Western Union Telegraph Co.  
Elgin National Watch Co.  
Brown & Sharpe Mfg. Co.  
Pennsylvania Railroad System  
International Motor Co.  
General Electric Co.  
United Fruit Co.  
Fisher Body Corp.  
Bethlehem Steel Corp.

Yawman & Erbe Mfg. Co.  
United Electric Light & Power Co.  
American Telephone & Telegraph Co.  
Addressograph Co.  
Union Pacific System  
Standard Oil Co. of N. J.  
Standard Oil Co. of N. Y.  
Howe Scale Co.  
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Ingersoll-Rand Co.  
Detroit Edison Co.  
Worthington Pump & Machinery Co.

Newport News Shipbuilding & Dry Dock Co.  
Pacific Fruit Express Co.  
New York Transit Commission  
Pennsylvania Power & Light Co.  
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Link Belt Co.  
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Globe Auto. Sprinkler Co.  
Fairchild Aerial Camera Corp.  
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Otis Elevator Co.  
American Can Co.  
Chicago Surface Lines

### ASK YOUR DEALER

Wrico Lettering Instruments are carried in stock by dealers in architects' and engineers' supplies. If your own dealer cannot supply you, mail coupon.

**THE WOOD-REGAN INSTRUMENT CO., INC.**  
154 Nassau Street  
New York City

**THE WOOD-REGAN INSTRUMENT CO., Inc.**  
154 Nassau St., New York City

Please send me a copy of your new 1926 Catalog and Price List containing full particulars concerning WRICO LETTERING INSTRUMENTS.

Name.....

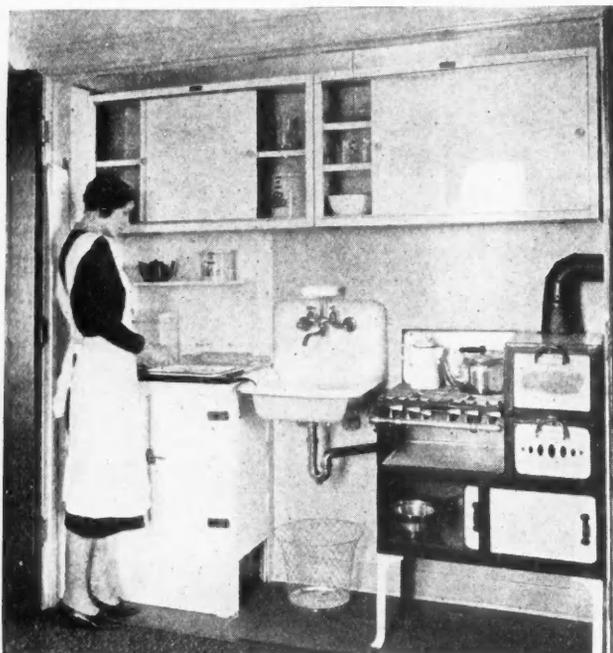
Address.....

..... A. B.

### Improved Steel Cabinets

THE latest improvements, introduced by one of the leading manufacturers of built-in steel kitchens, is the sliding door which is never in the way and eliminates the possibility of cracking one's head on the door of raised cabinets. These units are of heavy furniture steel, spot welded into a permanently rigid unit. They are finished in white or gray enamel applied under pressure and porcelain enameled doors may be had at a small extra cost.

The wall cabinets come in a number of sizes to meet all requirements. The company also manufactures steel kitchen cabinets of the usual type and broom closets, table cabinets,



The Latest Feature of These Kitchen Wall Cabinets Is the Sliding Doors Which Are Never in the Way, and Eliminate Bumped Heads.

medicine cabinets, ironing board cabinets and refrigerators. The same high grade material, construction and design are found in all these units.

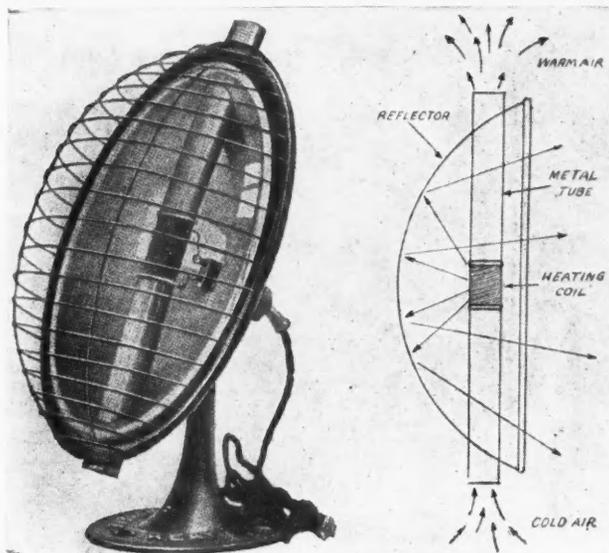


### A New Type of Electric Heater

AN electric heater is being marketed which is basically different from the type of radiant heater usually seen. The manufacturers claim that it gives 100 percent effective heating from the current consumed because it makes use of all three of the principles involved in the generation of heat—that is, convection, conduction and radiation. The result is that it gives both reflected heat and hot air without extra cost for current.

This heater is built on a heavy metal base and the copper reflector is insulated from the sheet steel back or casing with porcelain. This gives perfect insulation and eliminates the chance of an electrical shock when touching the heater. There is also an air space between the reflector and casing which insulation prevents overheating and burning the hands when handling. A wire guard prevents the hands and garments from coming in contact with the heating element and in case the heater is knocked over causes it to turn on its back.

The reflector is oval in shape, an essential feature of the efficient design. A copper tube passes through from bottom to top. Cold air is taken into this tube at the bottom, heated as it passes the resistance coil and discharged as hot air at the top. This action is in addition to the ordi-



The Sketch Shows the Construction and Operation of the Electric Heater at the Left Which Embodies an Entirely Different Principle of Heating.

nary radiation of heat from the reflector and in no way reduces it.

Only the best materials are used in the manufacture of this heater and it is furnished with a perfectly insulated, 8-foot cord and attachment plug. The heating elements, which can be quickly and easily replaced, are manufactured to range from 32 to 220 volts, allowing for a variation of 20 percent in voltage and the voltage furnished is optional.



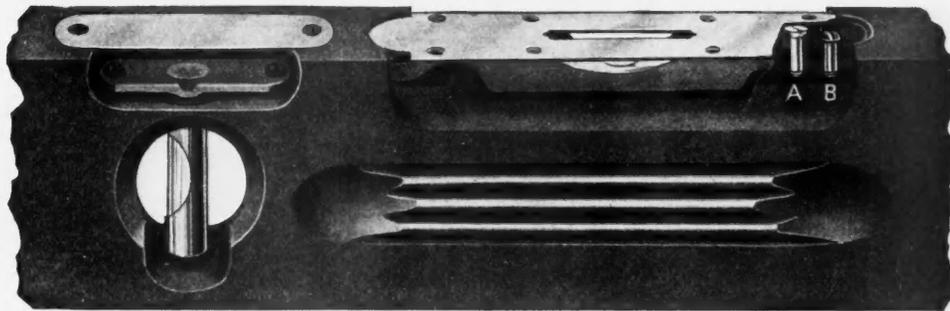
### Spray Brush Makes It Easy to Paint Stucco Work

PAINTING stucco work with bristle brushes is liable to prove difficult for the workman and also destructive to the brushes. The rough surface makes it difficult to turn out a satisfactory job. By means of the paint spray brush, operated by a small gasoline-driven unit, this work can be greatly speeded up and the paint can be applied with uniformity, resulting in a saving of time and producing a much more satisfactory appearance when the work is completed.

Such a brush can be obtained in two types of different capacities and with several sizes and style of compressor. A third type is also made which is a gravity feed outfit and is suitable for certain kinds of work in the shop.—G. F. PAUL.



This Paint Spray Brush Can Be Obtained in Two Sizes and Either Compressed Air or Gravity Feed Types.

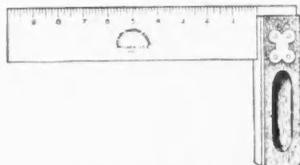


**Disston Adjustment for Plumb and Level**

Exclusively in Disston Levels. When guard plate has been removed, the bubble is trued by turning a screw. A second screw locks the adjustment. Both screws work in wood—always easy to turn. No springs to get out of order.

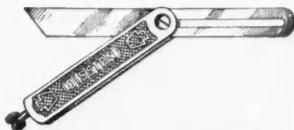


## You get "Disston Saw" quality in Disston Tools



**Disston No. 5½ Try Square**

Toughened blade of Disston Steel fastened accurately to nickel-plated iron stock with heavy steel rivets. An Assembly that cannot work loose. A reliable tool that will always be accurate.



**Disston No. 3 Bevel**

Has the patented Disston Lock that actually holds the blade at any angle. Just a quarter turn of the thumb-screw locks it. Nickel-plated iron stock. Toughened steel blade.



"The Saw Most Carpenters Use"

**J**UST as Henry Disston discovered a better steel, perfected the hardening and tempering, improved taper and balance—until he perfected the Disston Saw—

So Disston tool makers developed new features that make better tools.

Features that you can get only in Disston Tools.

The adjusting device in levels that is always quick and sure—

The patent lock in the bevel that really locks the tool—

The assembly of the try square that keeps the angle true—

A toughened steel that is Disston-made which gives spring and life to the blades. And so on.

In every Disston Tool you'll find them . . . . features that save you time and speed your work . . . . that give you the same satisfaction that you get from your Disston Saw.

**Henry Disston & Sons, Inc.**

*Makers of "The Saw Most Carpenters Use"*

Philadelphia, U. S. A.

# DISSTON

## SAWS TOOLS FILES

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

### A New Type of Screen

IT is now possible to install window screens as permanent installations which need never be put up or taken down, are always in place when needed and are out of the way when so desired. This new screen is designed along the line of the window shade. It has a metal frame which is easily and quickly installed in the window frame and which obstructs the light far less than the old, wooden screen frame.

This frame carries a wire screening which is of specially made wire and which rolls up out of the way like a window shade. The screen is adaptable to any type of window, old or new, and is particularly convenient for the casement window, the screening of which is always a problem. It is equally practical with either the in-swinging or out-swinging casement.



An Entirely New Departure in Home Equipment Is Seen in This Window Screen Which Rolls Up Just Like the Ordinary Window Shade.

flower boxes and operating awnings or shutters. They also eliminate the annual expenses of removing, repainting, repairing, storing and reinstalling the screens.—L. G. RAVENSCROFT.



### Economical Shower and Stall

A COMPLETE shower and shower stall which is particularly popular for hotel installations is also excellent for the home or wherever bath equipment is required. Its features are economy of space and of water used and simplicity of construction.

The stall is an integral fixture, absolutely waterproof and low in cost. It is equipped with a shower head, duck curtain and waste outlet fitting. The walls are made of No. 10 gauge copper bearing steel and with the riser are welded to the bottom. After installation the exposed surfaces are finished with waterproof enamel paint, either white or tinted. This stall is made in sizes 30 by 32 inches, 32 by 32 inches and 36 by 36 inches. The height is 6 feet. Special sizes are furnished to order.

The shower head and control are placed on the side of the stall near the front so that the flow may be adjusted before entering the shower and the shower head is 5 feet 6 inches from the floor, permitting the taking of a bath without wetting the head. The shower head is equipped with a flow control which regulates the force of water.

The regular control incorporates a mixer which makes water of the desired temperature instantly available by the operation of a single handle and prevents the waste of water.

The same shower head and control are furnished on a fixture with a 24 by 36-inch oval curtain ring for modernizing the ordinary bath tub. This is a permanent fixture which is easily installed at a small cost.



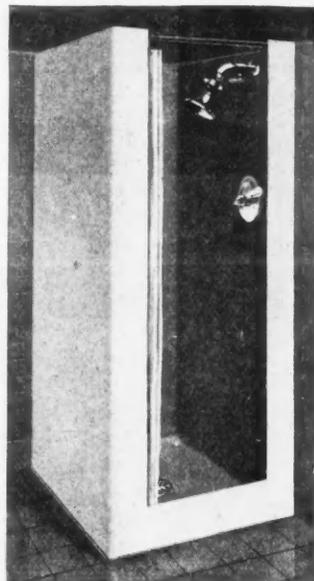
### New Type Garage Door Lock

A NEW type of garage door lock has made its appearance which has a number of features to recommend it. In the first place it is quite simple, with no springs or complicated parts to get out of order. It is not expensive and can be installed in a few

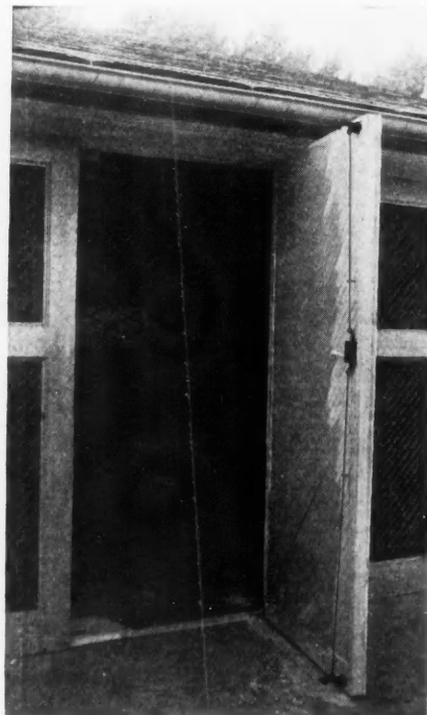
minutes time with a few simple tools.

The lock is installed in the large swinging doors and is operated from the outside with a key, the doors swinging open instantly when the key is turned. This makes it unnecessary to use a side door which is likely to be dark and invite holdups. When the doors are closed they lock automatically which again does away with the use of the side door. The key can not be removed from the lock until the doors are locked which eliminates the possibility of forgetting to lock the doors.

Turning the key operates an eccentric and studded roller which lifts the steel controlling rod. Lifting this rod releases powerful gripper jaws at the top and bottom of the doors, leaving them free to swing. These jaws relieve the hinges of much of the weight and strain and the steel controller rod forms a center support which prevents warping and sagging. The floor plate, which the gripper jaws engage, is flexible, allowing a one-inch play and this makes it possible to close the doors even when jammed with mud and ice.



A Complete Shower and Shower Stall Installation Which Is Equally Well Adapted for Hotels and Private Homes.



Here Is an Inexpensive Garage Door Lock Which Braces the Door, Does Away with the Need of a Side Door and Insures Against Leaving the Garage Unlocked.

# The WALLBUILDER is Here

— TRADEMARK —

*A Machine That Builds  
Walls—*

## THINK OF IT!

The Van Guilder Wallbuilder does by machine the work that for years has been done by hand. Furthermore it erects

### A Double Wall

The wall is separated by a 2½ inch continuous air space with all the insulating advantages of that type of construction. You can obtain this

### At a Lower Cost

This is because the Wallbuilder eliminates all wood and metal forms which have high first cost and rapid depreciation. In fact, the cost is much lower

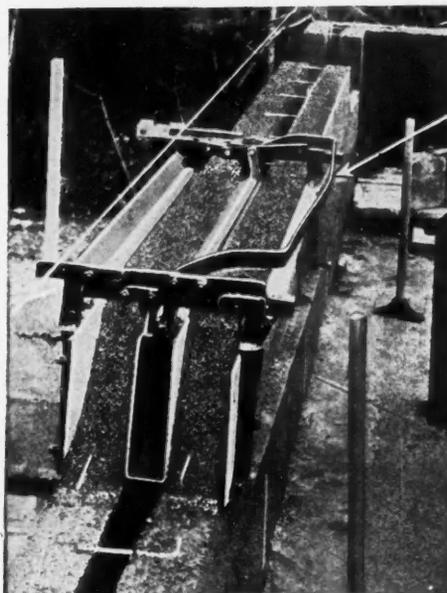
### Than a Solid Wall

Of great importance is the fact that the machines are not confined to use in simple unpretentious buildings but can be used

### For Any Kind of Building

The Wallbuilder has been used economically on buildings of all types and styles of architecture from beautiful homes and churches to plain simple structures such as cold storage plants, factories, garages, etc.

Before starting that wall obtain our literature. If you will furnish us with prices of cement, sand, aggregate and labor, we will tell you what the Wallbuilder can do for you.



The Van Guilder, Wallbuilder, shown in place on the walls, is filled with semi-dry concrete and tamped. Lever indicated by arrow is then lifted which collapses the center core and expands the outside plates, thereby freeing the concrete on all sides. The wallbuilder is then instantly slid forward. The wall is built at the rate of a foot a minute.

## 4 Savings

- 1—Saving on construction of the wall itself.
- 2—Elimination of furring and lathing.
- 3—Elimination of the scratch cost of plaster.
- 4—Reduction of size and cost of heating plant approximately 20% with a consequent saving in coal consumption.

## Van Guilder System Concrete Building, Inc.

15 East 40th Street, New York, N. Y.

There are still some choice territories open for sales agents

# MOTOR TRUCKS and TRAILERS



## Getting Your Trucks Ready for Winter Construction Work

**T**HE day when building operations were practically suspended during the winter months has passed and construction is rapidly becoming a balanced, all-the-year-around industry. For this reason the trucks serving the contractor and building supply dealer are expected to keep right on through the cold weather delivering the same high grade service that they did when the weather was more favorable. And the trucks will do this if they are just given a fair opportunity.

Before the cold weather every truck should be given a partial overhauling to see that the parts which will be affected by cold are in shape to meet the demand and adjustments should be made accordingly. The three points which do demand this attention are the cooling system, the electrical system, and the lubrication. After all these are prepared for winter the responsibility rests with the driver to see that the truck is properly handled and every owner should see to it that his drivers know how to handle a truck in cold weather and make use of their knowledge.

First of all care must be taken to prevent the freezing of the water in the cooling system. This seems obvious but it is a common thing to see the steaming radiator which indicates frozen radiator and possibly a cracked cylinder block. The instruction book, that is supplied with every truck or car, includes a table which shows exactly how much alcohol or glycerine is required to prevent freezing at certain temperatures. The anti-freezing mixture should be supplied and then tested frequently to see that it is, up to the required point.

Next the generator, starting motor and

wiring system should be checked over. Cold lowers the efficiency of the battery, not that it will not operate satisfactorily in cold weather, but it must be kept fully charged at all times. In winter, too, the lights are used more and the starting motor is quite likely to get more use because of the frequent necessity of starting a cold engine. The way to meet this is to have the charging rate of the generator set up.

This not only reduces the expense of frequently recharging a discharged battery, and forestalls possible stalling from the same cause, but also protects the battery from freezing. A fully charged battery will not freeze but one that is only partially charged will and a frozen battery means a heavy, and an unnecessary, expense. Tests should be made regularly.

Lubrication in winter is an entirely different problem from what it is in summer. Cold weather congeals the lubricants and retards carburetion which aggravates crankcase dilution and may ruin the cylinders and piston. This means that lighter lubricants should be used in the crankcase and also in the differential and transmission. Congealing of the heavier lubricant in differential and transmission places a tax on the starting motor and also aggravates dilution.

One last point should be kept always in mind. Because of the frequently mentioned crankcase dilution, which results from imperfect carburetion and even necessary use of the choke, the crankcase oil must be changed more frequently than is necessary in warm weather. The usual rule in summer is to change the oil every 1,000 miles, but in winter every 500 miles is the safe figure.



This Job Presents a Severe Test for Any Truck. Heavy loads and poor traction at the loading point put a strain on engine, running gear and tires.



## International Harvester Trucks

*in the*  
**New York Subway**

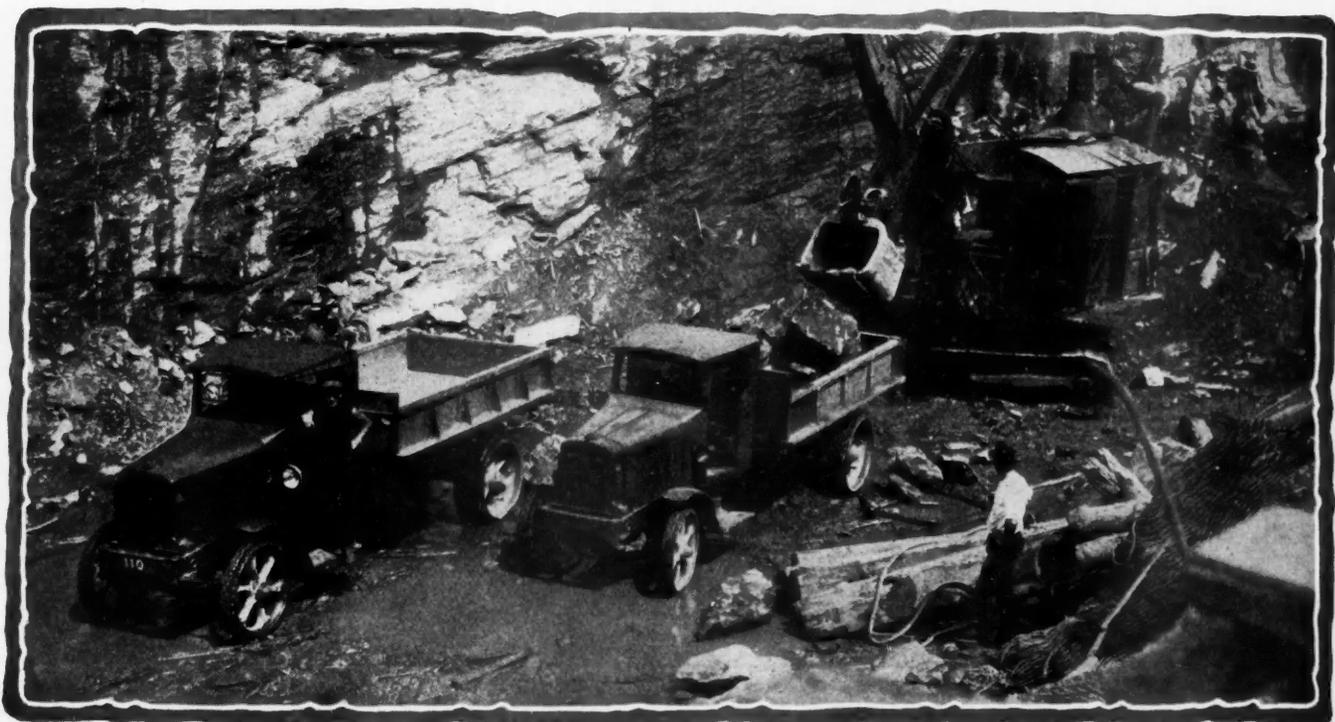
**B**IG JOBS want big trucks—trucks that dominate in quality, brute power, experience, and instant service.

That's why there are several fleets of Internationals in the New York subways, hauling the celebrated trap-rock and granite of Manhattan out from under the feet of New Yorkers. Here, on one of the biggest jobs in America, where the reserve supply of stamina and dependability gets a thorough testing, International Trucks fill the bill month in month out. Exclusive features—removable cylinders, ball-bearing crankshaft, auxiliary springs, steer-easy steering gear, and many others—all prove their worth in work like this.

International Trucks are popular in every conceivable line of business. Put *your* hauling in their hands. Rely on them for steady service year by year and you will get economy to boot. Sizes—2,000-lb. Speed Truck to 10,000-lb. Heavy-Duty Truck (max. cap.) As for service, remember that International has 111 branches—largest Company-owned truck service organization in the world.

*Write for specific information and address of nearest showroom*

**INTERNATIONAL HARVESTER COMPANY**  
 of America  
 606 S. Michigan Ave. [Incorporated] Chicago, Ill.





# CORRESPONDENCE

## Questions Answered—Ideas Exchanged

### Suggests Financing Plan

To the Editor: Philadelphia, Pa.  
The following method of financing home building may be in use; however, I do not know of its use and so am offering it for your approval.

John Smith and his wife wish to purchase a home and find that a house suited to their needs requires a cash payment of \$2,500. It so happens that while John Smith receives a good salary, he is unable to pay down more than \$1,000, which he has in a savings account.

The property is for sale at \$11,500, but is not selling due to market conditions. The builder may place a second Building and Loan mortgage on it and rent it for a year to carry the charges. In this case the first mortgage is \$6,000, and the second mortgage \$3,000, making a total of \$9,000 mortgages. The monthly carrying charges would be as follows.

Interest first mortgage.....	\$30.00
Interest second mortgage.....	15.00
Building and Loan shares (15).....	15.00
Premium (25 cents a share).....	3.75
Taxes and water rent.....	12.00

Total .....\$75.75

If the builder does rent the house at \$100.00 a month for a time and then tries to sell it, he has an old house to move and it may be in bad condition. Instead he may follow this plan:

John Smith places a deposit of \$1,000 on the house and makes regular monthly payments for the next three years, in the form of rent, but actually as payment on the purchase of the house. He will take better care of it than a renting tenant would because he will take title to the house at settlement or as soon as he completes the necessary payments.

Cash payment required \$2,500, less \$1,000 down payment, leaves a balance of \$1,500. Interest on this at 6 per cent for three years is \$270, making a total of \$1,770. In thirty-six monthly payments this is (in round numbers) \$50 a month. Plus the carry charges shown above, \$1.25 (in round numbers), is the monthly payment to be made in the form of rent.

The builder is relieved of all expenses, but holds title until all conditions have been met, when settlement takes place and John Smith takes title. LOUIS W. HERBERT.



### On Mixing Gypsum and Cement

To the Editor: Rainier, Ore.

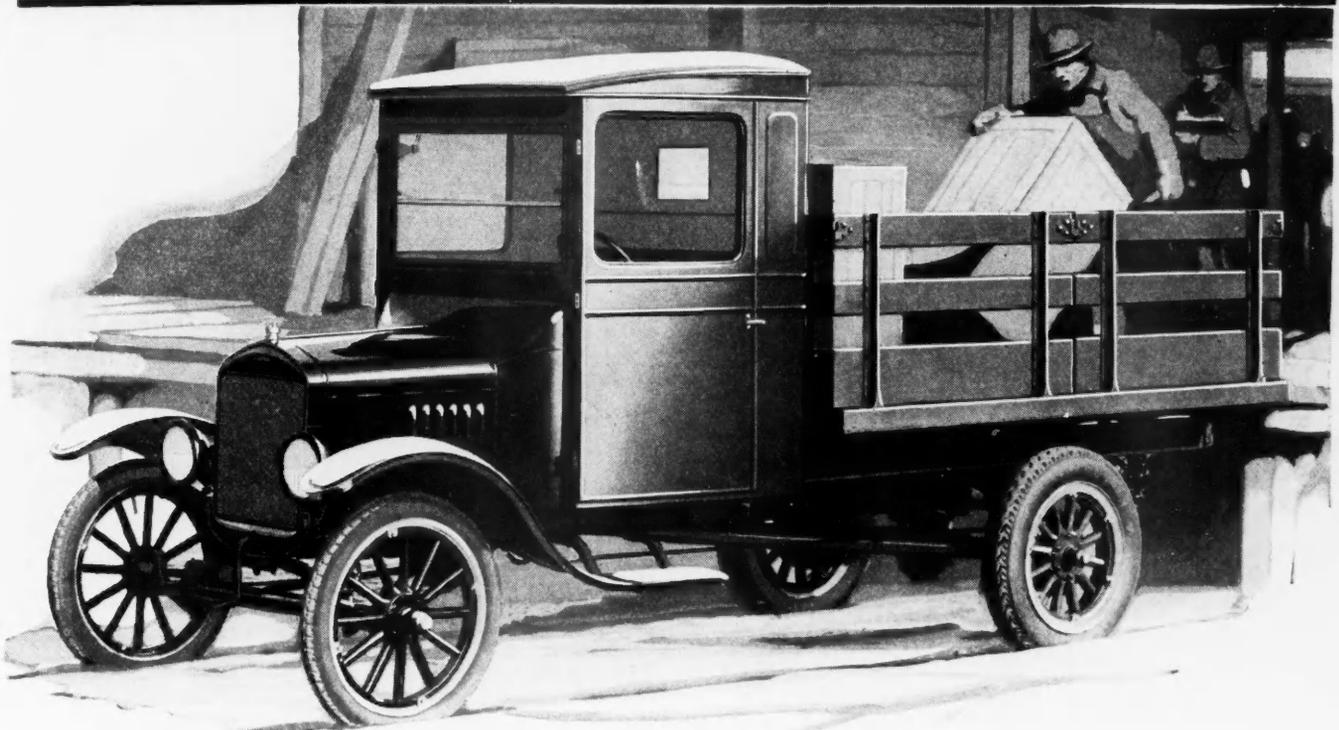
In the last issue of one of the popular magazines there is an article telling how the setting of concrete is hastened by adding gypsum. Many times someone thinks he has discovered something new, when in fact it has long since been tested and often discarded as unsatisfactory. There are many architects and builders who are not familiar with this use of gypsum and do not know that where gypsum and cement come in contact with each other and are subjected to moisture the gypsum deteriorates and rots. This is true even where gypsum plaster is applied to a cement wall and exposed to moisture.

The writer learned this years ago, to his sorrow, and has often observed it in work done by others. For years I have used a little cement to hasten the setting of gypsum for interior dry work with no apparent injury, although I do not believe cement and gypsum manufacturers recommend mixing them. I also believe, but have no absolute proof, that, while gypsum hastens the initial setting of cement, it also affects the permanent setting of cement. I believe this will be of interest to your readers.

L. E. GULKER.



The Office Plant and Yards of Frank L. Hill, Lumber and Building Material Dealer at Danville, Ill., Is Thoroughly Modern in Every Feature and Well Organized to Serve the Building Needs of This Growing Community.



## Adaptable for all Hauling Conditions

Ford trucks are ideal for winter deliveries as they can be readily maneuvered in crowded streets, alleys and loading yards. Light weight and compact construction make possible safe, easy handling in congested traffic and on icy streets.

The rush of holiday business is the supreme test of any delivery system. Ford trucks will meet this test in an economical and satisfactory manner.

Your nearest Authorized Ford Dealer will gladly explain the many advantages of Ford trucking equipment.

# Ford

CARS • TRUCKS • TRACTORS

### Stake Body

# \$515

Including Closed Cab

With loading platform 65" x 99", the new stake body provides ample room for bulky materials. Sectional side and end racks 26" high may be removed. Body frame is steel reinforced for extreme strength. Comes equipped with pneumatic cord tires. Closed all-steel cab affords every protection with plenty of comfort for driver and helper.

### Changing Decimals to Fractions in Roof Framing

To the Editor:

Prosser, Wash.

I want to ask if you have a question department which will explain some points in your September issue. In the Roof Framing article by John T. Neufeld, on page 196 of that issue, you say .04 inch equals  $1/16$  inch. I get  $1/25$  inch. You also say .88 inch equals  $7/8$  inch, while I get  $22/25$ . How do you arrive at these conclusions? Why not  $11/12$  for the latter figure?

H. B. KINNEY.

Mr. H. B. Kinney:

Chicago, Ill.

You are correct in saying that .04 is equal to  $1/25$ . However, the carpenter's rule is not graduated into 25ths of an inch, therefore we cannot use this fraction in laying out the length of the rafter.

We must use a fraction that can be measured by an ordinary rule. Carpenter rules are divided into 16ths of an inch, and sometimes into 12ths of an inch. Therefore we must either use 16ths or 12ths; .04 is not quite  $1/16$  of an inch, but it is more than  $1/32$  or more than  $1/2$  of  $1/16$ , therefore we call it  $1/16$ .

To change a decimal fraction to a common fraction, we first decide on the denominator to be used—that is, if we want our answer in 16ths, the denominator is 16, thus .04 times 16 is equal to  $.64/16$  or nearly  $1/16$ .

In the second example we must change .88 to 16ths of an inch; .88 times 16 equals  $14/16$  and this is equal to  $7/8$  of an inch.

JOHN T. NEUFELD.

### He Binds "Homes in Colors"

To the Editor:

New Canton, Pike County, Ill.

A few words in appreciation of the Annual Reference Number. IT HIT THE SPOT. Of course all numbers of AMERICAN BUILDER hit the spot, particularly with the Homes in Colors. Will tell you how I take care of mine. I clip the pages containing Homes in Colors, punch them and file in leather binder, keeping pages containing garden suggestions in a separate binder.

Another good "kick" I get from the AMERICAN BUILDER: I run a razor blade around the border of Front Cover Home, then clip all plans, details, etc., pertaining to same, then with a dab of Le Page's glue at corner of sheets, fold, placed in a 9 by 12 envelope, and paste Front Cover Home on outside of envelope. That makes a catchy plan service and can be filed in most any filing cabinet. Keep 'em coming.—RAYMOND MINTON.



### How Shingle a Hip Roof?

To the Editor:

East Bridgewater, Mass.

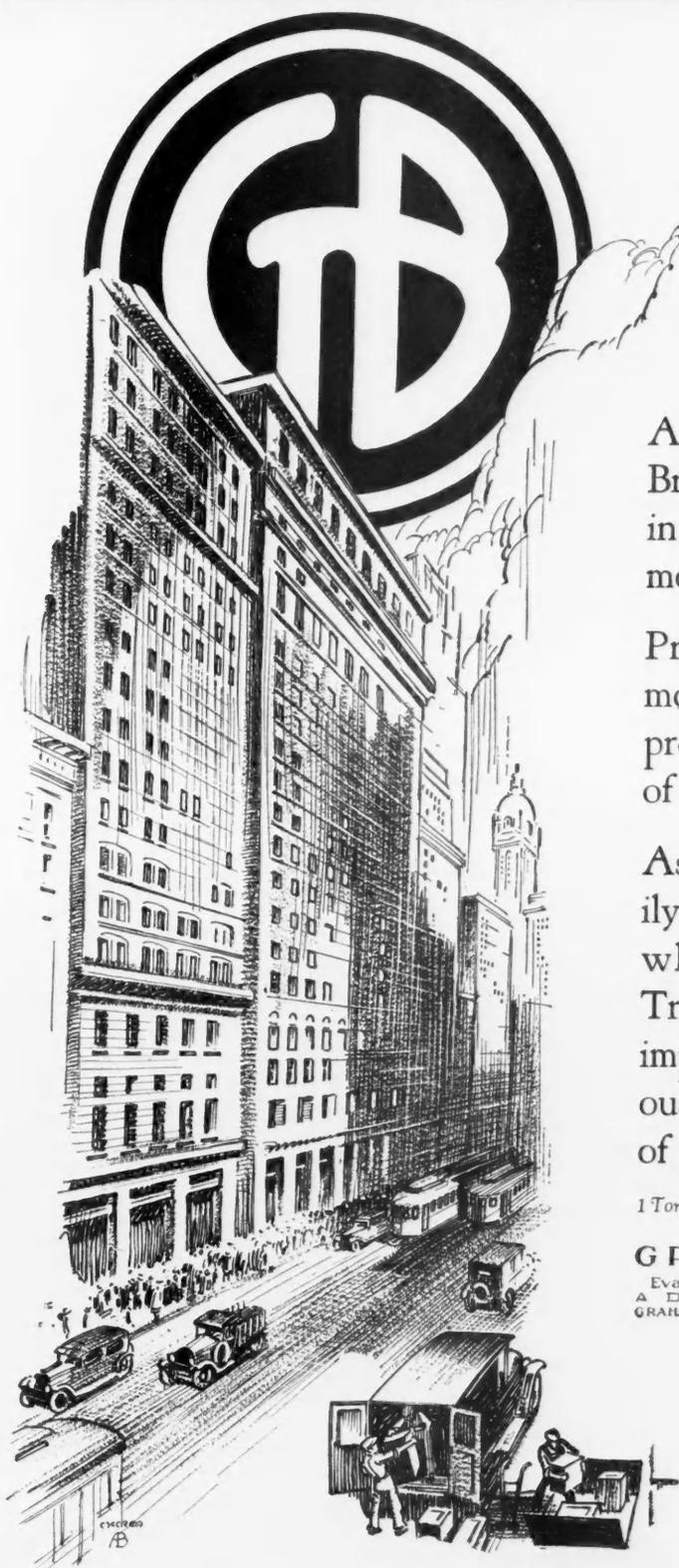
The instructions given in your AMERICAN BUILDER by Mr. John T. Neufeld are very valuable. They are so plain to understand. I should like to see a few details showing the way to shingle a hip roof or as it is called the Boston hip. Perhaps some of your experienced readers could give a few details in your AMERICAN BUILDER.—J. DAVIES.



OUR readers are invited to make use of these correspondence columns. Write in your questions or your answers.



An Attractive Corner in the Sales Room of the Hartwick Lumber Co. The miniature model house display is most interesting, while the provision of an attractive surroundings and comfortable furnishings for customers is in line with the best ideas of salesmanship.



## Growth

A typical example of Graham Brothers remarkable progress in the truck industry was the month of September.

Production for this single month was 171 per cent of production for the entire year of 1921.

Astonishing growth, yet readily understood by owners, to whom Graham Brothers Trucks have brought vastly improved service simultaneously with a sharp reduction of costs.

1 Ton Chassis, \$995; 1½ Ton Chassis, \$1280; f. o. b. Detroit

**GRAHAM BROTHERS**  
 Evansville - DETROIT - Stockton  
 A DIVISION OF DODGE BROTHERS, INC.  
 GRAHAM BROTHERS (CANADA) LIMITED - TORONTO, ONTARIO

# GRAHAM BROTHERS TRUCKS

SOLD BY DODGE BROTHERS  
 DEALERS EVERYWHERE

# Better Plastering

## Framing for Stucco Construction Requires Same Careful Consideration Accorded Other Structural Types

**W**ITH the foundation for the stucco house carefully laid as described in the last article, in this issue the attention of the builder must be turned to the erection of the framework. In stucco homes, as in all others, no matter what the type of covering material used, the framing is of the utmost importance, not only from the standpoint of the stucco, but also to insure long life and satisfaction in the floors, interior finish and woodwork.

By far the greater number of frame buildings are built of two by four-inch studs. This is because they have the minimum economical thickness which is sufficiently strong to support the floor loads common in this form of construction. The spacing of 16 inches on center is used most commonly and is the greatest interval which is permissible in good construction.

On the other hand, where rigidity and permanence of an unusual degree are desired, or where heavy floor loads are to be carried, studding more closely spaced or with larger cross-section or both should be used. However, two by six-inch studs, 16 inches on center, are amply sufficient in most buildings used for schools, warehouses or similar purposes. In some cases it is advisable to space the studs 12 inches on center. Spacing always should be 12 inches or 16 inches on center to accommodate wood or metal lath without waste.

Diagonal bracing in any building acts as the structural element which offers resistance to distortion caused by wind stresses or any other external force which would tend to rack the building and crack the stucco. In this it assists the sheathing, in sheathed construction, in bracing the entire structural frame.

In the better type of buildings of stucco and sheathed construction, this diagonal bracing should not be omitted.

One by four-inch stuff is considered sufficiently strong for the braces of an ordinary house having two by four-inch studs. These braces are cut into the surface of the studs so that they are left flush with the inner surface of the studs, ready to receive the inner lathing and plastering. A brace wider than 4 inches tends to take more cut out of the studs in strength than is gained by the additional width of the bracing, although in some instances it may be justified.

For larger buildings, where two by six-inch studs are used, the diagonal braces may be one by six inches or even two by four inches. Another method commonly used is two-inch material cut between the studs. For two by four-inch studs the bracing is of the same material except where back plastered construction is to be used, when the material is two by three inches, set flush with the inner surface of the studs so that the back plastering may not be interfered with.

The bracing should be from six to eight feet long, depending upon locations of windows, doors or other openings which may interrupt it, and should be securely nailed with at least two eight-penny nails at each stud which it crosses. Where there are no door or window openings to interfere and an especially good job is wanted, longer braces are advisable and should be used. These may run diagonally from sill to plate, intersecting as many studs as practical.

There should be at least two braces at each corner; one on each of the walls. The corner stud and at least

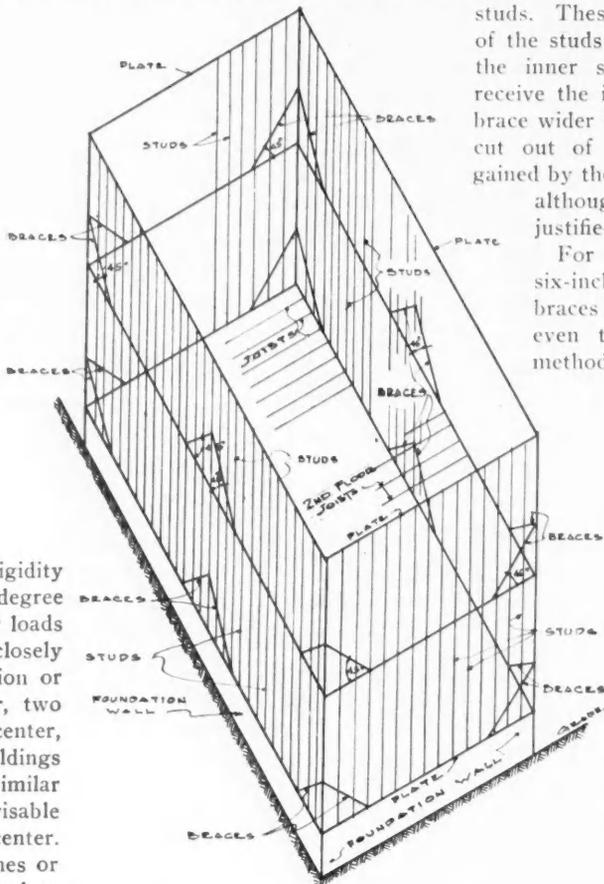


Fig. 1. Diagonal Bracing for Long Buildings.

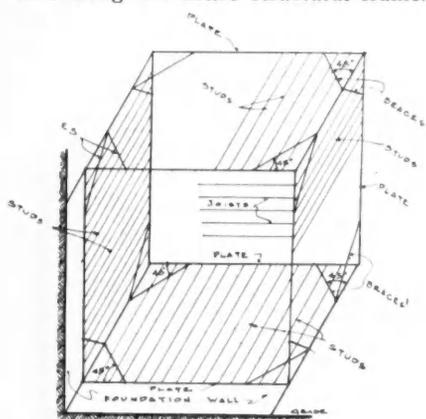


Fig. 2. Diagonal Bracing for One-Story Buildings.

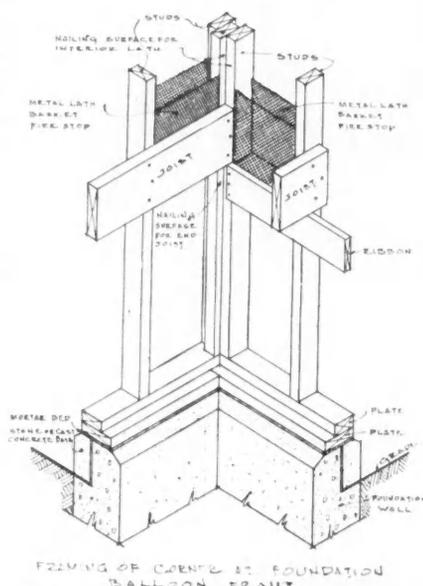


Fig. 4. Framing of Corner at Foundation. Balloon framing.

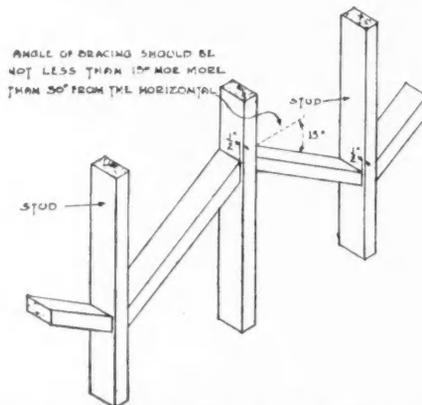


Fig. 3. Diagonal Bracing Placed Between Studs.



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three of the next adjoining in each direction should be joined by the brace. The angle of inclination should be not less than thirty degrees from the horizontal and preferably as nearly forty-five degrees as possible. The brace should present a continuous line from the corner stud to the fourth one distant at the line of the sill, joist or plate. For buildings two stories high or higher, bracing as indicated in Fig. 1 will be found satisfactory. For buildings one story high all the braces must be included between the sill and the top plate and bracing as shown in Fig. 2 should

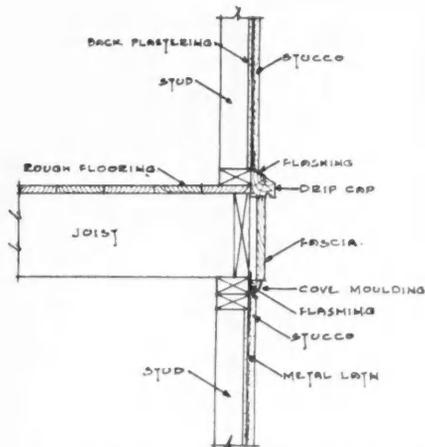


Fig. 5. Detail of Second Floor Level to Forestall Stucco Cracks.

be used. Buildings exposed to high wind velocities and those over thirty feet long in any horizontal dimension should be provided with intermediate diagonal bracing as indicated in Fig. 1. Horizontal bridging is important in the construction of the framework. It should be the same size as the stud- ding and should be set midway of the wall, between the floor and ceiling of the story. This bracing fulfills a variety of necessary uses. It stiffens the studs laterally, assisting the sheathing, it acts as a firestop to confine any fire between the studs to its place of origin and it breaks up the vertical channel between the sill to plate to prevent loss of heat through convection. When placed in a sloping position, as shown in Fig. 3, it bridges the load, so that should a settlement of the foundation occur under one stud, the load normally carried by that stud is distributed to the adjacent studs not in the settled area, thus preventing sagging and plaster cracks.

Going into the subject of lateral stiffness, it is natural to expect that a long stick of timber, on end, when loaded will tend to bend or deflect in the direction in which it is weakest—that is, in the direction of its smallest dimension. It, therefore, is most necessary to cut the horizontal bridging in between the studs.

The bridging as shown in Fig. 3 should incline at least fifteen degrees and not more than thirty from the horizontal.

Carrying out the idea of unity throughout the entire structure, especially as concerns resistance to settlement and distortion due to wind action, each end joist should be united with at least two ten-penny nails to each end wall stud. It acts as a girder and stud spacer preventing lateral deflection, thus serving in a capacity somewhat similar as the ribbon or false girt which links together all the bearing studs on the side wall in a balloon frame building. Details of the construction and a recommended method of

be used. Buildings exposed to high wind velocities and those over thirty feet long in any horizontal dimension should be provided with intermediate diagonal bracing as indicated in Fig. 1.

Horizontal bridging is important in the construction of the framework. It should be the same size as the stud- ding and should be set midway of the wall, between the

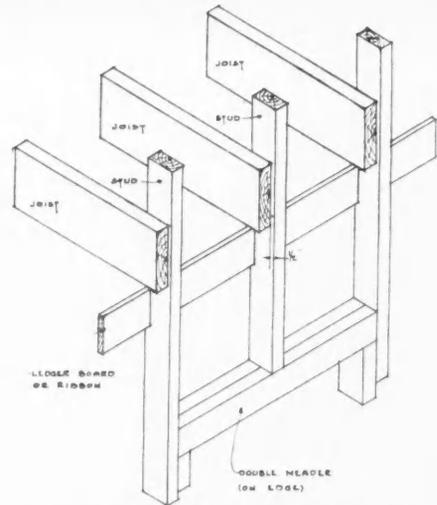


Fig. 6. Framing of Narrow Opening.

building up the corner stud are shown in Fig. 4.

This figure also shows how built up sills are lapped at the corner to form an acceptable joint. The lower and upper portions of the sill are "run by" alternately and where they lap, one over the other, are nailed securely together.

There is so much horizontal wood subject to shrinkage in the ordinary forms of frame construction that every precaution is to be taken where the balloon type is not used. A way out of the difficulty which suggests itself is omitting the stucco from the portion of the exterior where there is a concentration of wood in compression across the grain. Such a place occurs over the box sill construction at the second floor level. Instead of carrying the stucco continuously over this point, a wood belt course is used, making a cut off between the stucco above and below, as is shown in Fig. 5. Flashing should be used liberally at this point, as will be taken up in a later article.

Nowhere is skimping of material less justified than around the door and window openings. Not only should the studs at the sides of the openings be doubled, but similarly the headers above and below the openings should be doubled as shown in Fig. 6. The two members above the opening

should be placed on edge, side by side, to develop their greatest strength. Below windows, where the header is supported by studs, the members may be laid flat.

Doubling the studs flanking the opening insures the ample lateral stiffness to take care of the greater loads thrust upon this member due to cutting away the studs to make the opening. Although it might appear that the load on the flanking studs would be the same as on the other studs, this is not the case. The double header over the opening prevents unsightly sagging which is all too common with the inadequate single header laid flat.

All openings more than four feet wide should be trussed. The reasons for this are similar to those given above. The

load must be distributed advantageously to prevent sagging and consequent cracking of the stucco. The correct method of framing around a large opening, in this instance a triple window, is shown in Fig. 7.

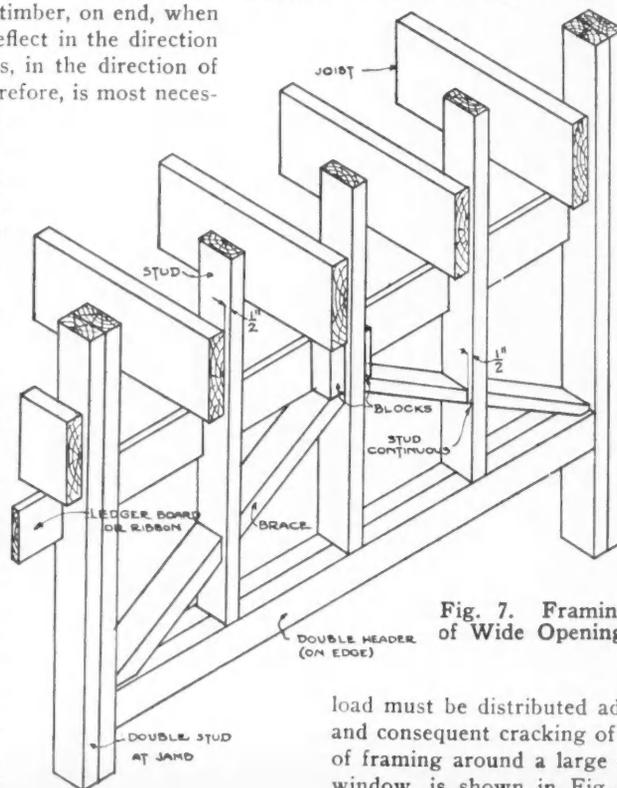


Fig. 7. Framing of Wide Opening.



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# INSTRUCTIONS IN ROOF FRAMING

*This Department Appears Every Month in American Builder*

## Uneven Pitched Hip Roof

By JOHN T. NEUFELD

**PROBLEM:** To find the lengths and cuts for a hip roof with two different pitches. The width of the roof in Fig. 41 is 16 feet, the total rise is 8 feet and the end rafter is 6 feet.

When framing this roof we would first cut the common rafters "A." As the roof is 16 feet wide the run is 8 feet. The rise is also given as 8 feet. The pitch, therefore, is  $\frac{8}{16} = \frac{1}{2}$ . A one-half pitch roof has a rise of 12 inches per foot run.

The length per foot run for the common rafter of a one-half pitch roof is 16.97 inches. The length, therefore, is  $8 \times 16.97$  inches = 135.76 inches = 11 feet  $3\frac{3}{4}$  inches.

This length may also be found by measuring across the steel square between the points 8 on the blade and 8 on the tongue. We will find this distance to be nearly  $11\frac{1}{2}$  inches. Therefore the length of the rafter must be nearly 11 feet 4 inches. Our calculations have shown it to be 11 feet  $3\frac{3}{4}$  inches.

Another way to find the length of this rafter would be to solve for the length of the hypotenuse of the right triangle formed by the run, rise and length of the common rafter.

The run is 8 feet, the rise is 8 feet. The length must be the square root of  $(8^2 + 8^2) = \sqrt{8^2 + 8^2} = \sqrt{64 + 64} = \sqrt{128} = 11.31$  feet or 11 feet  $3\frac{3}{4}$  inches.

The jack rafters D and C are spaced 2 feet on centers. The first one would be one-third of the length of the common rafter and the second rafter "C" would be two-thirds of the length of the common rafter. The rafter "D" is  $\frac{1}{3}$  of 11 feet  $3\frac{3}{4}$  inches = 3 feet  $9\frac{1}{4}$  inches. The rafter "C" is  $\frac{2}{3}$  of 11 feet  $3\frac{3}{4}$  inches = 7 feet  $6\frac{1}{2}$  inches.

The common rafters and the jack rafters have the same seat cut and also the same plumb cut at the top. As the rise per foot run is 12 inches the numbers 12 and 12 will give this cut.

The side cut for these jack rafters is obtained as previously explained by taking the length of the common rafter on one arm of the square and the distance from the foot of the first common rafter to the corner of the roof, on the other arm of the square. The length of the common rafter is 11.31 feet. The distance from the foot of the first common rafter

to the corner of the building is 6 feet. The numbers to be used for the side cut of the jack rafter, therefore, are  $11\frac{1}{3}$  and 6. The cut must be made along the arm on which the  $11\frac{1}{3}$  is taken.

The common rafter "B" on the end of the roof has a run of 6 feet. The rise is 8 feet or 96 inches. The rise per foot run is  $96 \div 6 = 16$  inches. This is a two-thirds pitch roof.

To find the length of this common rafter we use the square root method of measure across the steel square. By measuring across the steel square between the points 6 and 8 we obtain 10 inches. The length of this rafter, therefore, is 10 feet.

By the square root method we have:

$$\begin{aligned} \text{Length of rafter} &= \sqrt{6^2 + 8^2} = \sqrt{36 + 64} \\ &= \sqrt{100} = 10, \text{ 10 feet.} \end{aligned}$$

There are three different lengths of jack rafters on this side of

the roof. These are lettered "E," "F" and "G" on the plan and are spaced equal distance apart—that is, 2 feet on centers.

The rafter "E" is one-fourth as long as the common rafter "B" or  $\frac{1}{4}$  of 10 feet = 2 feet 6 inches.

The rafter "F" is one-half as long as the rafter "B" or  $\frac{1}{2}$  of 10 feet = 5 feet.

The rafter "G" is three-fourths as long as the rafter "B" or  $\frac{3}{4}$  of 10 feet = 7 feet 6 inches.

The plumb and seat cuts for these rafters are laid out by using the numbers 6 and 8 on the square, because the run is 6 feet and the rise is 8 feet; or we may use the numbers 12 and 16, because the rise is 16 for 12 of run.

For the side cut of the jack rafters we again use the rule as stated before: Take the length of the common rafter on one arm of the square and the distance from the seat of the first common rafter to the corner of the roof on the other arm.

The length of the common rafter is 10 feet. The distance from the foot of this common rafter to the corner of the building is 8 feet. Therefore the numbers 10 and 8 taken on the square will give the side cut of the common rafter. The cut is made along the arm on which the 10 is taken.

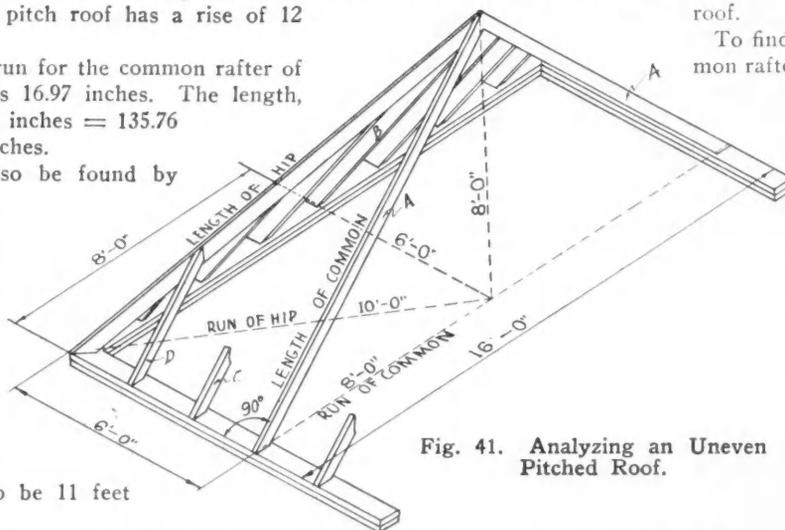


Fig. 41. Analyzing an Uneven Pitched Roof.

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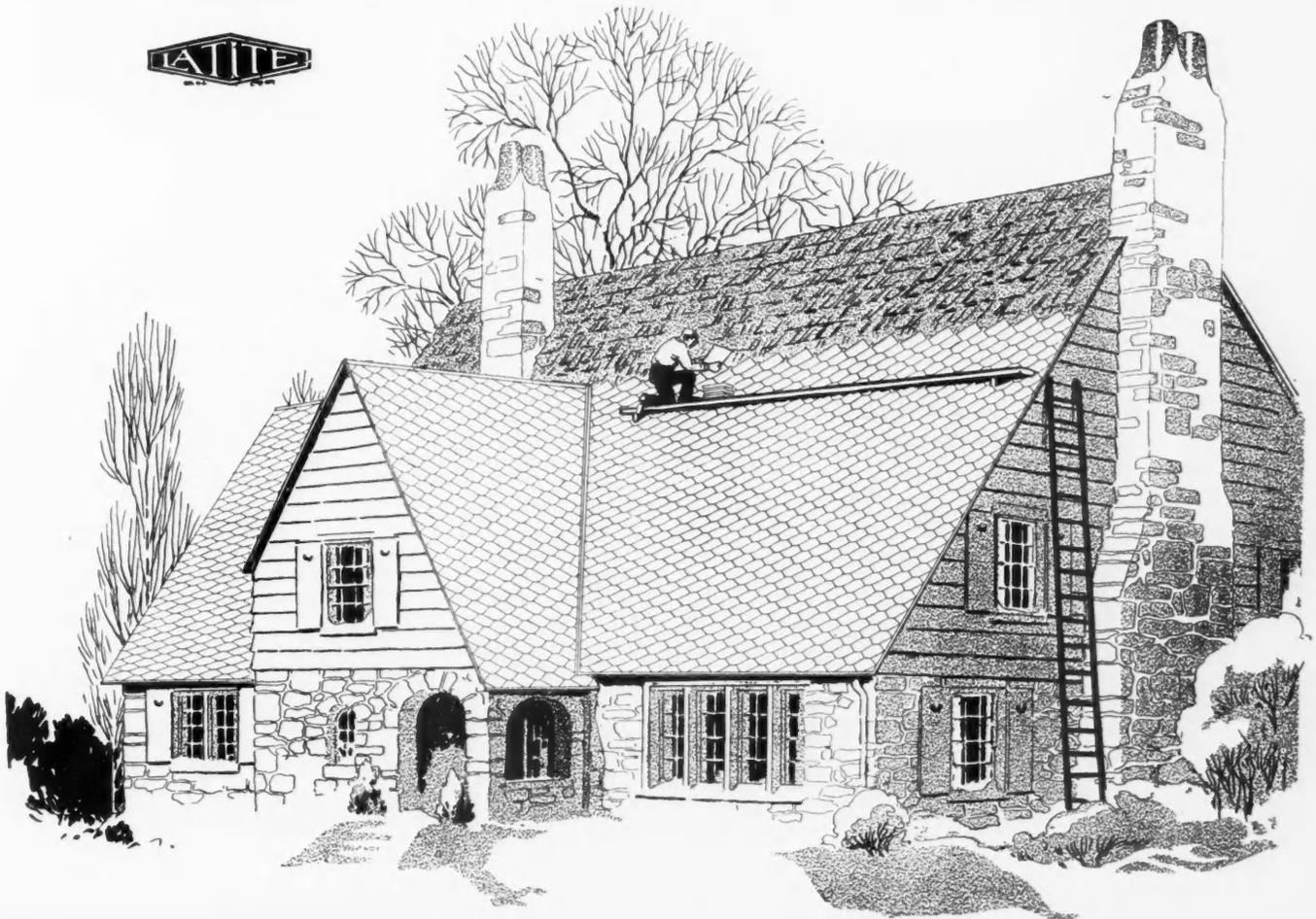
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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Our next problem is to find the length of the hip rafter. Previously we have learned of several ways to find the length of hip rafters for even pitched roofs.

The method that is most commonly used is to take the length of hip per foot run of common rafter from a table and multiply this length by the number of feet in the run of the common rafter. This method cannot be used in this case because there are no tables giving the length per foot run for hip rafters on uneven pitched roofs.

There are two methods that may be used. One is the square root method and the other is the method of measuring across the steel square. Both are based on the right triangle.

By inspection we will notice a number of right triangles, shown in Fig. 41. One right triangle is formed by the run of one common rafter, the plate and the run of hip.

Another right triangle is formed by the length of common rafter, the plate and the length of hip.

Another right triangle is formed by the run of the hip, the rise of hip and the length of hip.

As we have already found the length of the common rafter, we may find the length of the hip by solving the triangle formed by the common rafter, the plate and the hip rafter.

The common rafter at the end is 10 feet. The length of plate from the foot of this common rafter to the foot of the hip is 8 feet. The hip rafter forms the hypotenuse of the right triangle thus formed, and, therefore, the length of hip is the square root of  $(10^2 + 8^2)$  or length of hip =  $\sqrt{10^2 + 8^2} = \sqrt{100 + 64} = \sqrt{164} = 12.806$  feet = 12 feet  $9\frac{11}{16}$  inches.

The length of the hip rafter may also be found from the other side of the roof using the length of the common rafter "A" which is 11.31 feet and the length of plate from the seat of this rafter to the seat of the hip, which is 6 feet, and solving for the hypotenuse of the right triangle thus formed. Length of hip =  $\sqrt{11.31^2 + 6^2} = \sqrt{127.9161 + 36} = \sqrt{163.9161} = 12.803$  feet. This checks very closely with our first answer, which was 12.806. The last figure representing one-thousandth of a foot comes out different on account of dropping certain decimal places when taking the length of the common rafter.

Again we may find the length of the hip rafter by solving for the hypotenuse of the right triangle formed by the run of hip, rise of hip and length of hip.

To do this we first find the run of hip. This is the square root of  $(6^2 + 8^2)$ , or run of hip =  $\sqrt{6^2 + 8^2} = \sqrt{36 + 64} = \sqrt{100 + 64} = \sqrt{160} = 12.806$  feet, or 12 feet  $9\frac{11}{16}$  inches.

For obtaining the plumb and seat cuts for the hip we use the numbers 10 and 8 as the total run of the hip is 10 feet and the total rise is 8 feet. The side cut of the hip is a little more difficult to obtain.

The rule usually used is: "Take the length of hip on one arm of the square and the run of hip on the other arm." As explained previously, it is really the tangent to the run that is taken, but as this is the same as the run of the hip rafter, we usually state it as the run.

On an uneven pitched roof the tangent to the run is not the same as the run and, therefore, the above rule does not hold good. Fig. 42 illustrates two squares placed so as to indicate how the side cut for the hip may be found.

On one arm of the square we must take the length of the hip rafter and on the other arm the length as indicated in Fig. 42. This length may be found by laying out and measuring or by mathematical calculations.

The length of the hip rafter is 12.806 feet. The side cut on one side of the hip is  $12\frac{3}{4}$  and  $7\frac{1}{2}$ . The side cut for the other side is  $12\frac{3}{4}$  and  $13\frac{1}{3}$  (see Fig. 42).

### Problems

1. A house 32 by 32 feet is to have a hip roof with a 2-foot ridge. How may this be accomplished?
2. The total rise of this roof is to be 12 feet. What will be the pitch of each side of the roof?
3. Find the length of the common rafters for each side.
4. What will be the length of the total run of the hip rafter?
5. Find the length of the hip rafter.

### Answers

1. The rafters on two opposite sides of the roof must have a steeper pitch so that the rafters from these two sides do not meet in the center.
2. The pitch on two sides will be  $1\frac{1}{2} = \frac{3}{8}$ . The pitch on the other two sides will be  $1\frac{1}{3} = \frac{2}{3}$ .
3. On two sides the common rafter has a run of 16 feet and a rise of 12 feet. The length will be equal to  $\sqrt{16^2 + 12^2} = \sqrt{256 + 144} = \sqrt{400} = 20$  feet.
4. The runs of the hip rafter will be equal to the diagonal of a rectangle whose sides are 16 and 15 feet. Run of hip =  $\sqrt{16^2 + 15^2} = \sqrt{256 + 225} = \sqrt{481} = 21.931$  feet = 21 feet  $11\frac{3}{16}$  inches.
5. The length of the hip rafter is equal to the square root of (the run squared plus the rise squared) =  $\sqrt{21.931^2 + 12^2} = \sqrt{480.968761 + 144} = \sqrt{624.968761} = 24.998$  feet = 24 feet  $9\frac{11}{16}$  inches.



### Apprentice School Grows

A RECENT report of the Cleveland Apprentice School contains the interesting information that 36 classes, with a total enrollment of approximately 1,000 apprentices, are now in operation. Courses in the following major building trades are offered on a part time co-operative basis: bricklaying, plumbing, painting and electrical work.

Plans are now going forward for the second annual commencement of the school, which will be on the evening of December 2, 1925. At this time approximately 125 apprentices in the five trades will receive diplomas in recognition of their completion of a prescribed course of study involving practical as well as theoretical work.

One of the strong features of the Cleveland plan, which has contributed in a large degree to the success of the apprentice training movement, is the close supervision of all apprentices. This is administered through the office of the Director of Apprentices whose job it is, among other duties, to see that the boys temporarily out of work are placed with contractors other than those to whom they are indentured; to keep a check on the boys while on the job; to see that all grievances are adjusted either informally or brought before the committee if necessary.

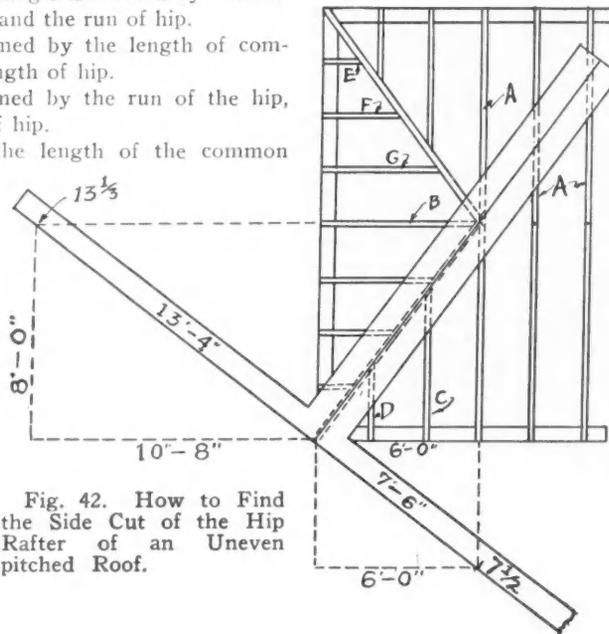
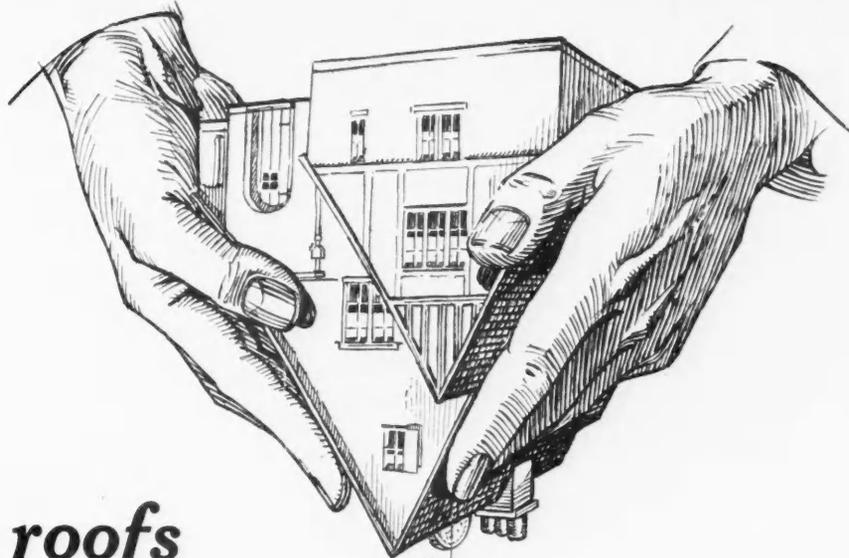


Fig. 42. How to Find the Side Cut of the Hip Rafter of an Uneven pitched Roof.

# There is money

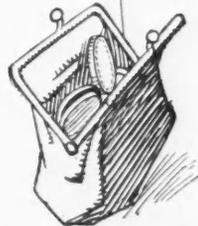


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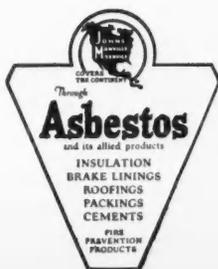
Let us send you a copy of "The Asbestos Roofer". It is packed with practical suggestions on sales methods which have been tested and found successful by distributors throughout the country. It's a real clearing house for ideas that you can cash in on at once.



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

Branches in 62 Large Cities

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



# JOHNS-MANVILLE Asbestos Roofings



# HOW DAN DOES IT.

*A Department for Passing "Life Savers" along to other Builders.*

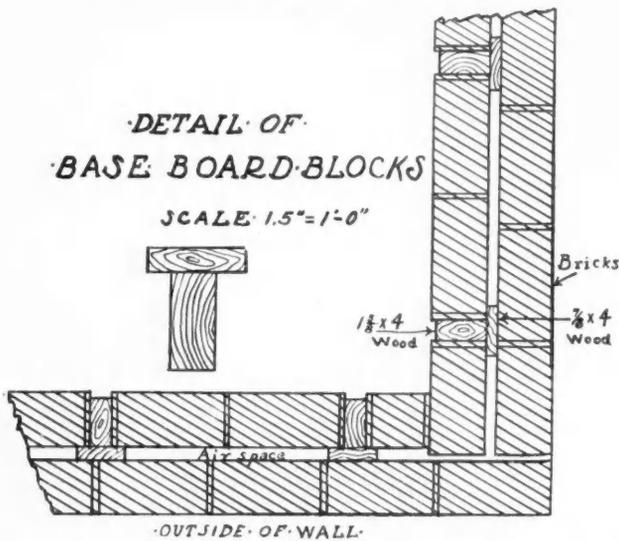
## \$2 for an Idea

Dan is an ingenious cuss. Nothing ever stumps him. He always knows the way out when he runs into a tough problem out on the job or in the office. Dan is going to edit this Department and will pay \$2.00 each for every good idea he can use here to show and tell other builders "how to do it." Send him a rough sketch and a short description of what the tough job was and how you handled it.

Address Dan-Do-It, care of American Builder, 1827 Prairie Avenue, Chicago, Ill.

### Brick Work Baseblock

I AM sending you a sketch of a baseblock design for brick work. Very likely this kind of work is known to some builders, but I believe there are many others who do not



This Sketch Illustrates a Baseblock for Brick Work Which Will Neither Drive Back Nor Draw Out When Nailing.

know of it and would appreciate knowing how to make a baseboard block that will neither drive back into the wall or draw out when nailing and at the same time will properly gauge the wall.

This block is a two by four about the length of the height of three courses of backing brick, with a piece of 7/8 by 4-inch nailed to it, forming a "T" shaped block. The 7/8-inch piece gauges the air space between the face and backing bricks so that the wall will be nearly 9 inches.—A. H. FEUERHAHN, Dutchtown, Mo.



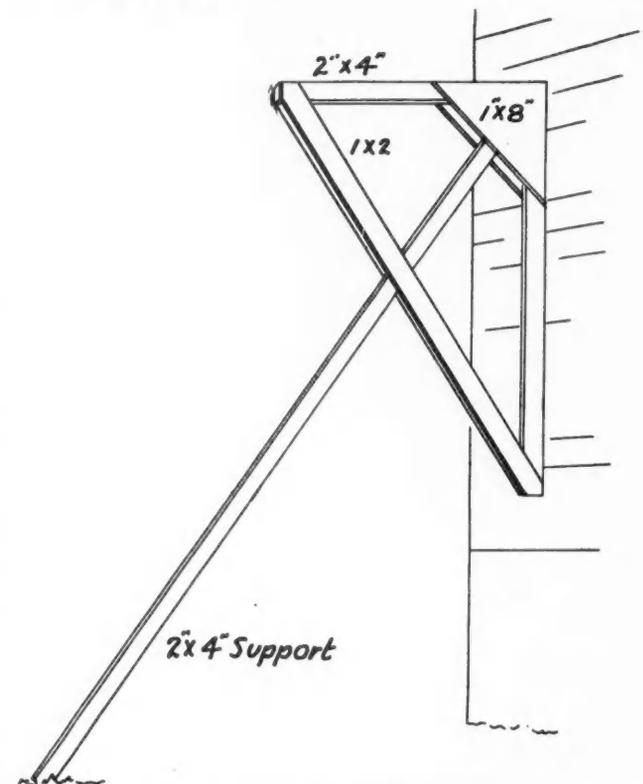
### A Movable Scaffold

HERE is a method of making scaffolds which is an old one, but which I have seldom seen in use and never in print, although it has been found satisfactory.

Take two pieces of two by four, one about 2½ feet long

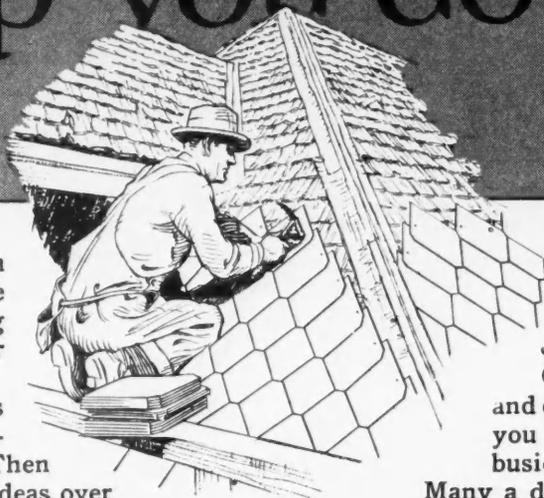
and the other about 3 or 3½ feet long. Nail the ends together, forming a right angle triangle. Take two pieces of one by two or a little wider. Nail these across the outer ends of the two by fours on each side for braces, and cut off even. Next nail a piece of board about 8 inches wide across the corners where the two by fours are nailed together and cut these off even also.

Now, by placing the longer side of this bracket against the side of the building and inserting a piece of two by four, any desired length, between the braces, so that one end fits up into the angle and the other end firmly onto the ground, you have a scaffolding which can be moved from one place to another or raised and lowered.—HARRY APPELFELER, Mt. Victory, Ohio.



A Scaffold of This Type Is a Convenience Because It Can Be Easily Moved Wherever It Is Needed.

# We show you how to increase your roofing business — and help you do it



BY ACTUAL field-work with Eternit dealers throughout the country, we've learned selling methods that will increase your roofing business.

Our plan is to give live dealers exclusive territory. Then we outline our practical selling plans. Then we work with them to put these ideas over and build up a roofing business that will be sure to grow and become increasingly profitable.

You get exclusive territory on a quality product that is priced right. Eternit Rigid Asbestos Shingles are easy to sell because they make beautiful roofs that are storm-tight, fire-proof and wear-free. Yet they are priced to let you go out and get business against substitute roofing competition.

To help you close sales quickly and easily, we have a financing plan that, when desired, lets you sell roofs on an easy-payment plan. With it you land business that would otherwise get away from you and you don't have to carry the accounts on your books.

**Eternit**  
Reg. U. S. Pat. Off.

**RIGID ASBESTOS SHINGLES**  
Make your first roof last

Ask about Eternit Asbestos Building Lumber—the same materials made up in sheet form.

Our national advertising—big color pages in the finest magazines—is constantly working for you. Our prompt shipping service and enormous reserve stocks keep you amply supplied even in the busiest seasons.

Many a dealer has started in with an order for a few squares of Eternit Shingles and found it the starting point of business that soon mounted to carloads. There is the same opportunity in your territory and now is the time to take advantage of it. Send in the coupon today.

AMERICAN INSULATION COMPANY  
Roberts Ave. and Stokley St., Philadelphia, Pa., or Hibernia Bank Building, New Orleans, La.

Send me details of your exclusive sales plan on Eternit Asbestos Shingles.

Name.....

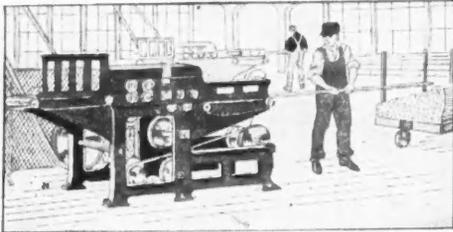
Business.....

Address.....

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

We can give you more definite information if you will also tell us what kind of roofing you now carry.....?  
And whether you buy in C/L or L/C/L.....?

## An Oak Flooring finished at the factory



like furniture



Compare the finish of CROMAR with  
that of your finest furniture.

### The CROMAR Ten Points of Prime Importance

1. Factory finished — like furniture.
2. Finish stands hardest wear.
3. Coating four sides protects against moisture.
4. V-typetongue and groove easy to lay.
5. Beveled tongue prevents damage in nailing.
6. Cleanable surface groove.
7. Convenient and damage-proof bundle.
8. Laying contracts need not be subtle.
9. Promotes extra sales for occupied houses.
10. Laid and used the same day.



IMAGINE furniture being sold and delivered unfinished, and then scraped, sanded, filled, varnished and waxed after it was set down in the customer's home! Funny?

That's the way oak flooring has been sold. It's no longer necessary.

CROMAR—milled from the finest oak grown—is completely finished at the factory, by patented machines. You nail it down and your job's done! Bigger profits more often!

Write for name of nearest CROMAR Dealer, free sample and full details of how CROMAR is made and sold.

The Crooks-Dittmar Company  
Williamsport, Pa.

# CROMAR

READY FINISHED  
OAK FLOORING

LAI D AND USED THE SAME DAY

## NEWS of the FIELD



### Disston Branch Moves

HENRY DISSTON & SONS, INC., of Philadelphia, manufacturers of saws, files and tools, announce that their Australian branch has moved to larger quarters in a new two-story factory and sales office building at Camperdown, Sydney, N. S. W. In line with their policy of maintaining complete factory and service organizations throughout the English-speaking world, this branch is provided with complete equipment for manufacturing saws and knives from steel furnished from the Disston works in Philadelphia and for all kinds of repair work.



### Western Forestry Meeting

THE 1925 annual Forestry Management Conference of the Western Forestry and Conservation Association will be held at Victoria, British Columbia, December 9 and 10. Preceding the general conference there will be meetings of publicity and protection committees representing all Pacific Coast private and public forest agencies.



### STATEMENT OF OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

OF AMERICAN BUILDER, published monthly at Chicago, Ill., for October 1, 1925.

State of Illinois }  
County of Cook } ss.

Before me, a notary public in and for the state and county aforesaid, personally appeared E. L. Hatfield, who, having been duly sworn according to law, deposes and says that he is the general manager of the AMERICAN BUILDER and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

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

Publisher—American Builder Company, Chicago, Ill.

Editor—Wm. A. Radford, Chicago, Ill.

Managing Editor—Bernard L. Johnson, Chicago, Ill.

Business Manager—E. L. Hatfield, Chicago, Ill.

2. That the owner is: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and addresses of the stockholders owning or holding one per cent or more of the total amount of stock should be given.) Wm. A. Radford, Chicago, Ill.; H. M. Radford, Chicago, Ill.; Roland D. Radford, Chicago, Ill.; Wm. A. Radford, Jr., Chicago, Ill.; E. L. Hatfield, Chicago, Ill.; B. L. Johnson, Chicago, Ill.; G. W. Ashby, Chicago, Ill.

3. That the known bondholders, mortgagees, and other security holders owning or holding one per cent or more of total amount of bonds, mortgages, or other securities: (If there are none, so state.) None.

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

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is. (This information is required from daily publications only.)

E. L. HATFIELD.  
Sworn to and subscribed before me this 29th day of September, 1925.  
ANDREW JOHN NAUMANN.

(My commission expires October 23, 1925.)

# LET IT RAIN

Zinc is always ready for rain.

It cannot rust. Zinc roofing

equipment is permanent protection against the elements;

heat or cold, rain or snow do not affect it. It will last

a lifetime without repair.

And it is not expensive.

The cost of Horse Head Zinc, figured on the basis of its long life and its freedom from expense either for repair or replacement, is lower than that of any other metal.

**The New Jersey Zinc Company**

Established 1848  
Products Distributed by

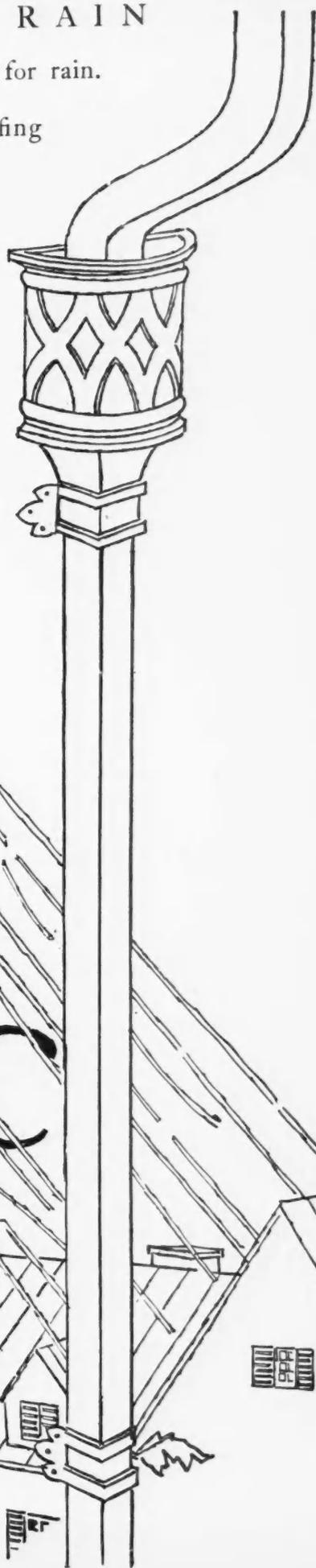
**The New Jersey Zinc Sales Company**

160 Front Street, New York City

CHICAGO • PITTSBURGH • CLEVELAND • SAN FRANCISCO

# zinc

New Jersey  
**zinc**



## First National Heating and Ventilating Exposition

THE First National Heating and Ventilating Exposition will be held in the New Madison Square Garden during the week of February 1 to 6, 1926. This is the week following the convention of the American Society of Heating and Ventilating Engineers in Buffalo.

The exposition is national in scope, managed by the National Exposition Company of which the veteran exposition director, H. A. Cochrane, is president and E. P. Frenz, also an experienced exposition manager, is business manager. An advisory committee of engineers, experts and leading men in the industries represented are lending a hand. Practical demonstrations of heating and ventilating systems will be shown and lectures given by experts. The talks will be of interest to the trades represented, and to the public as well.

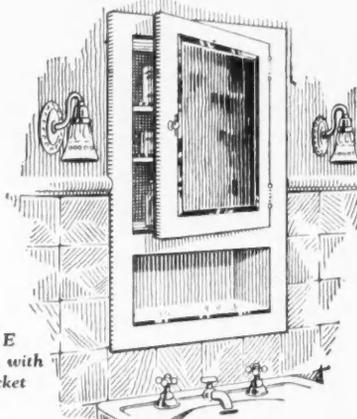


### Build New Factory

CONSTRUCTION has been started on a new factory building, an addition to the plant of F. E. Myers & Bros. Co., Ashland, Ohio. Work will be pushed forward as rapidly as possible in order to relieve the crowded condition which has been felt for some time in the Meyers plant due to the growth of the business.

The new building, which is to be of the flat slab design, of reinforced concrete, will be fire-proof throughout. It will be five stories in height and finished with brick facing to match the other buildings of the group. A feature of the structure will be a special ventilating roof designed to carry off the fumes from the brass foundry which will occupy the fifth floor.

**HESS** CABINETS  
*and MIRRORS*  
Snow-White Steel



STYLE E  
to recess with  
open pocket  
below.

**H**ESS Cabinets and Mirrors are **matchless** in their satiny snow-white coats;—**hand rubbed** in the manner the finest furniture is finished. Best polished plate glass mirrors, brass handles and hinges, heavily nickel plated.

They are suitable for the finest bathrooms,—low enough in price for the moderate price builder. Specify them and please your client; See Sweet's Catalogue.

HESS WARMING & VENTILATING CO.  
Makers of Hess Welded Steel Furnaces.  
1220 S. Western Avenue, Chicago

# 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

76-80 FREE STREET, SYRACUSE, N. Y.



A wash room in SANI ONYX—black base, gray panels, blue ceilings

## Greater utility made more beautiful!

The increasing use of Sani Onyx in every type of better building is due to its unique and exclusive advantages.

Sani Onyx combines permanence with beauty at no sacrifice of either. It is quickly installed in both new and old buildings. Sani Onyx reduces maintenance to an irreducible minimum. It never wears out in service.

### A Privilege to Co-operate

The Marietta Engineering Department is ready with valuable co-operation for architects and builders.

This service is free on any project. Ask for it.

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

**MARIETTA MANUFACTURING COMPANY**

Main Office and Works - 80 BROOKSIDE, INDIANAPOLIS, IND.

Canadian Factory - Sani Products Co. Ltd., 284 St. Helen's Ave., Toronto

*Distributors in Principal Cities throughout the United States and Canada*

### Facts about Sani Onyx

**PHYSICAL CHARACTERISTICS**—Sani Onyx is a dense, uniform, vitreous material, wear-resisting, non-porous, and non-absorbent; that is acid, alkali, stain and weather-proof. It combines every advantage of quarried marble, tile, slate and granite with other desirable features all its own.

**FIVE COLORS SUPPLIED**—Sani Onyx is supplied in white, ivory, black, blue and gray. Coloring is uniform throughout the entire thickness of the material. Surface wear does not result in any change of tint.

**PLAIN OR TILE PATTERN**—To provide still greater range in decoration, Sani Onyx is supplied in both plain and tile pattern sheets. Tile pattern is in six-inch squares.

**PERMANENT DECORATION**—By special process, stock or special designs may be etched into the surface of Sani Onyx, giving two and three tone effects. In addition, ceramic coloring can be fused into the surface so that the decoration becomes an integral part of the material. Both methods are equally lasting.

### Thomas F. Manville Dies

THOMAS FRANKLIN MANVILLE, chairman of the board of directors of Johns-Manville, Inc., died at 6:45 p. m. Monday, October 19, 1925, in New York City. Mr. Manville was one of the country's great business builders. For the past twenty-five years he has been the directing head of Johns-Manville, Inc. His brother, H. E. Manville, who succeeded to the presidency of Johns-Manville, Inc., in 1924, was closely identified with him during this entire period and will continue to direct the policies of the organization.

### New Crooks-Dittmar Plant

AN impressive new factory, which the engineers say will be the most advanced type of woodworking mill in the United States, is being erected for the Crooks-Dittmar Company at Williamsport, Pa. The operation is now being rushed to completion for occupancy January 1.

This mill, which has been designed and is being erected by the H. K. Ferguson Company, engineers and builders of Cleveland and New York, will more than double the floor space and the output of the present factory of the company.

The new plant has been made necessary because of the tremendous increase in demand for the company's product.

### A. G. C. to Meet in Portland

THE Executive Committee of the Associated General Contractors of America, meeting in Dallas, Texas, voted to hold the next annual convention of the organization in Portland, Ore., on January 18-23, 1926. This will be the seventh annual meeting of the association and plans are being made which give assurance that it will be the biggest and most important yet held. Special trains will

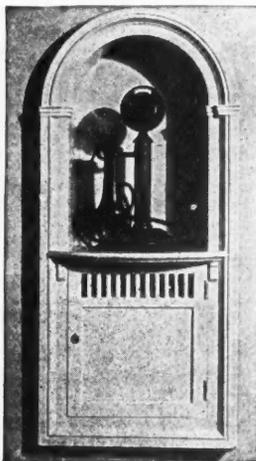
be provided and one of them will leave Chicago January 13, and another on January 14.

### Directory of Specifications

THE National Directory of Commodity Specifications, which is being issued by the Bureau of Standards, with the co-operation of the Bureau of Foreign and Domestic Commerce, is now on the press and will be ready for distribution shortly.

The directory contains in convenient form information regarding the best known specifications for more than six thousand commodities.

Copies can be obtained by sending \$1.25 in any convenient form to the Superintendent of Public Documents, Government Printing Office, Washington, D. C.



### The Phoenix Phone Cabinet

For hotels, apartment houses, homes and offices.

A decorative wall niche for the telephone.

Practical and most convenient.

Can be readily installed in old or new work in a wall or partition from 3 to 5 inches or over in thickness. It can be supplied in designs to meet your needs. Lower part conceals the bell box.

Prices on request.

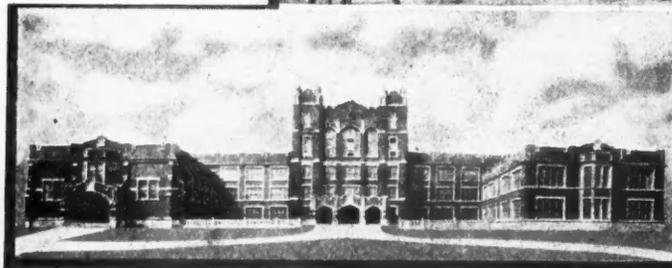
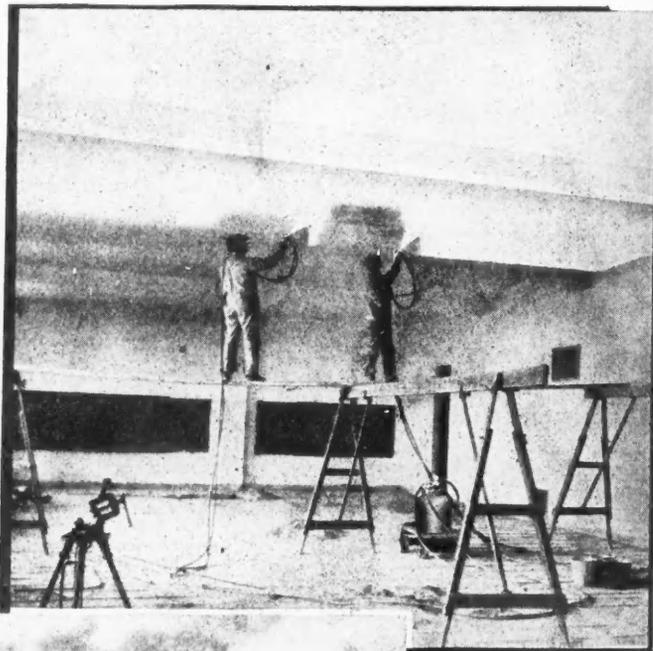
Phoenix Cabinet Co., Inc.  
419 Union Bldg., Syracuse, N. Y.

## Winter Spray-painting

The wall and ceiling surface of this high school building was painted the DeVilbiss way.

It was three-coat work, with a coverage of over 600 sq. ft. to the gallon of paint.

Spray-painting on this job made it possible for the contractor to do a highly superior quality of work and to effect a saving in excess of 70% on labor alone.



### Increased painting profits for every month in the year

The many available "cold weather" jobs can be painted the DeVilbiss way to the same advantage as are the jobs of other seasons.

Year 'round operation of the DeVilbiss Spray-painting System insures a FULL year of increased painting profits.

Painting this improved, modern DeVilbiss way you will do more thorough, more uniform and cleaner work. You will do 3 to 5 times faster work. So that no matter what season of the year it is, you can sell a greater amount of painting with the definite promise of doing it (1) more promptly, (2) with less confusion and muss, (3) in an improved, better way, and (4) at the right cost.

We'll gladly mail you further facts on the DeVilbiss System and its year 'round profitable operation. Address—

THE DEVILBISS MFG. CO.  
238 Phillips Ave. TOLEDO, OHIO

*DeVilbiss*  
Spray-painting System

# For a Few Men—now selling weatherstrips Here is Opportunity

*Many weatherstrip agents have entirely cut out profit losses thru this extraordinary service*

**HERE** is the reason some few men make money and build good businesses selling weatherstrips—while most weatherstrip agents just get along; never show a real profit.

It's a question of *service*. Delay on delivery that hold up your workmen. A few poorly made, bent, or damaged strips that run up labor costs on each job. These eat up profits. Waste your time. Keep you from the business and money you ought to get.

*Read these Service Ideas—are you getting as much?*

These bothersome, profit-sapping details, heretofore considered unavoidable, are no longer a necessity. By a *new idea of service* one manufacturer has found a way to insure his agents against them.



Compact working models of solid mahogany are supplied to Ceco agents

So now many agents don't worry about these things. Here is what *they* get. From the makers of Ceco, an old and large manufacturer. Read these. Are *you* getting them?

1. Shipments in 24 hours—any style or size strip.
2. Strips absolutely straight, mechanically perfect.
3. Careful packing and delivery—no damaged strips.
4. Complete selling and advertising aid.
5. Square dealing on every order.

This is **Ceco Super Service**. It *must* satisfy you.

97 percent of the original Ceco agents are still with us. They have sold 45,375 individual jobs. Every job helps them sell others. Each year their business grows and their profit increases.



The Ceco Sales Manual gives you in a minute all the selling points years have developed

## A chance in your own town

There is an opening here for any man who has sold or installed weatherstrips. Perhaps you can become Ceco agent for *your own town*. Write today for full details.

Connection with Ceco makes you sure of profit on every job. It keeps your business relations pleasant. You don't have to keep changing. No matter what your present connection it will pay you to find out what Ceco agents are earning and how they are doing it.

The most profitable weatherstrip season is here. Only prompt action can get you the territory you want. Mail the coupon today to Ceco Weatherstrip Co., Chicago, Ill.

**Ceco**  
**METAL WEATHERSTRIPS**  
"Keep the Weather Out"

**Clip and Mail—Be Sure to Fill In All Data**

Ceco Weatherstrip Co.,  
Dept. A-3—1926 So. 52d Ave., Chicago, Ill.  
Without obligation tell me about Ceco Strips and your Agents plan.

I am an experienced Weatherstrip man   
I have never sold or installed Weatherstrips

My present occupation is .....

NAME .....

ADDRESS .....

### Books, Bulletins and Catalogs for You

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

Henry Disston & Sons, Inc., Philadelphia, Pa., has issued a small pamphlet, "How a Disston Hand Saw Is Made," which tells the complete story of the manufacture of these tools.

Ransome Concrete Machinery Co., Dunellen, N. J., has a complete set of bulletins, bound together in a neat card binder, which cover the entire line of machinery manufactured by this company.

"Wrought Iron of Distinction" is the title of a most attractive catalog issued by The Florentine Craftsmen, 45 E. 22nd St., New York City, makers of hand wrought iron lanterns and fixtures in a wide variety for the home.

The Structural Materials Research Laboratory, of Lewis Institute, 1951 W. Madison St., Chicago, has just issued bulletin No. 15, "Studies of Curing Concrete in a Semi-arid Climate." This is a report of tests made at Sacramento, Cal., to determine strength and other properties.

Leonard-Rooke Company, Providence, R. I., presents a most complete and attractively prepared catalog of its thermostatic water mixing valves.

The American Society for Testing Materials, 1315 Spruce St., Philadelphia, Pa., has published the 1925 edition of its "Tentative Standards," which is issued annually. Price, in paper binding, \$7.00, in cloth binding, \$8.00.

The Hissey-Wolf Machine Co., Cincinnati, Ohio, has issued a bulletin No. 108, announcing and describing a new moderate price standard duty motor drill.

The Ohio Concrete Products Association, 530. Dublin St., Columbus, Ohio, has published a pamphlet under the

title "Concrete Masonry Fire Walls in Ohio," which contains the recent modernizing amendments to Ohio State Building Code and related material.

The Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., offers a booklet describing its type CL carbon circuit breakers designed for industrial application. It is fully illustrated.

"Producing Color Schemes Automatically" is the title of a booklet published by the National Lead Company, 111 Broadway, New York City, on decoration based on the Dutch Boy Color Chart with Automatic Color Scheme Selector, price, \$1.50.

"Panelouvre Folder No. 1," the Ventilouvre Company, Inc., Bridgeport, Conn., is a pamphlet prepared for filing in the A. I. A. system which describes and illustrates this company's doro ventilator and furnishes prices, installation cost and specifications.

The De Walt Products Company, Leola, Lancaster County, Pennsylvania, has just published a handsome new catalog covering its complete line of woodworking machinery. It is well illustrated with photographs throughout.

"The Story of Edge Gluing" is a new booklet prepared by the James L. Taylor Manufacturing Company, Poughkeepsie, N. Y., which furnishes information on clamping devices.

John W. Kiesling & Son, Inc., 1797-99 Atlantic Avenue, Brooklyn, N. Y., has issued a new catalog of its ball bearing, hand power dumb waiters, elevators and lifts.

"Water Softening" is a new booklet published by the National Lime Association, 918 G Street Northwest, Washington, D. C., which contains an interesting, valuable and non-technical treatment of this subject.

The Oak Flooring Bureau, 828 Hearst Building, Chicago, Ill., has sent out an attractive blotter with a beautiful celluloid cover in colors showing a room finished with polished oak floor.



*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

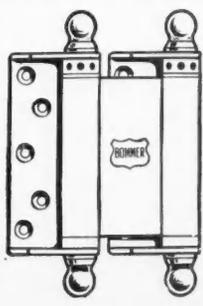
## CABOT'S Heat ~ "QUILT"

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 Cresote Stains, Stucco Stains, Old Virginia White, Double-White, etc.*

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

For more than 48 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.





## The Case for Casements

*"There is something about the expression 'wide flung casements' that instantly conjures up an alluring vision of a picturesque cottage with climbing ivy, and broad sills inside holding orderly rows of blooming plants in tidy pots, a bird-cage somewhere near, and flecks of sunlight and shadow on a well-scrubbed floor. All women (and many architects, too) plan the ideal house with casements."*

From "The Case For Casements" by Mrs. Hazel C. Becker in the June BETTER HOMES & GARDENS.

**Y**OU can cash in on this universal appeal of casement windows, so ably expressed in Mrs. Becker's article. Home lovers have always wanted steel casement windows. They've always thought that this better kind of windows cost more. But that's not true today. You can meet this rapidly increasing demand with Fenestra Casements that cost no more, and sometimes even less, than wood windows. And you can more readily sell the houses you build.

Besides their many advantages for the home owner, besides their quick selling advantages for you, they are easy to get from your lumber and building supply dealer and exceptionally easy to install. Let us send you literature for the realtor and builder together with complete installation details.

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### 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 Book of Lawn Furniture," published by The Long-Bell Lumber Company, Kansas City, Mo., is a beautifully illustrated booklet, "dedicated to those who wish to make their lawn, whether large or small, just a little more alluring."

The Fred Medart Manufacturing Co., St. Louis, Mo., has prepared a pamphlet completely describing its steel lockers and explaining the reason for each feature of their construction.

"Elastica French Finishes" is a beautifully illustrated booklet published by the U. S. Materials Co., Chicago, the American Materials Co., New York, the Art Stucco Materials Co., Detroit, and the Northwest Materials Co., St. Paul, presenting the wall finish possibilities of this new material.

The Ramp Buildings Corporation, 21 E. 40th St., New York City, offers a new booklet on "Building Garages for Profitable Operation," which is fully illustrated and contains much information on the subject covered.

The Community Arts Association, 33 E. Perdido St., Santa Barbara, Cal., announces a popular edition of its book of "Small Home Designs," which has just come off the press. Price, \$1.50, post paid.

"Hollow Walls of Brick and How to Build Them" is published by The Common Brick Manufacturers' Association of America, 2121 Guarantee Title Building, Cleveland, Ohio. This 24 page illustrated booklet contains complete information on the construction of the Ideal Rolok-Bak, the All-Rolok, and the All-Rolok in Flemish bond walls.



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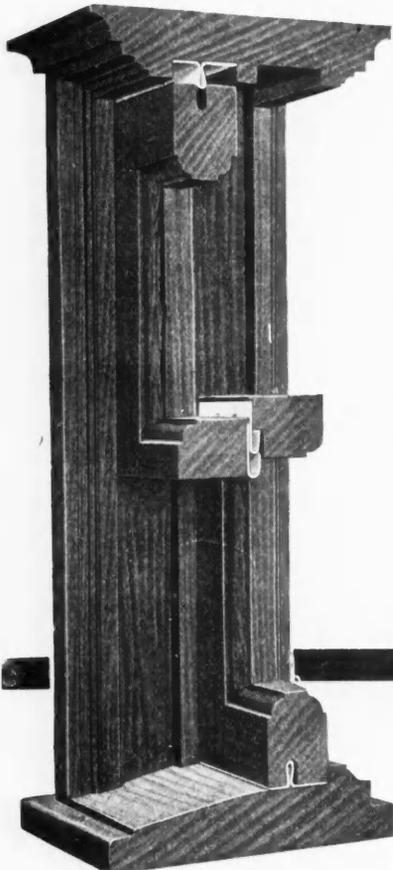
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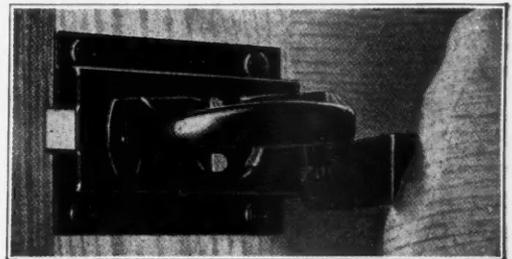
Based upon years of experience in the design of builders' hardware, Frantz has produced a new, improved door latch, which wins favor for its compactness, neatness and certain operation. It has special features that commend it to every one who sees it. Note the illustrations to the right. This latch is adapted for all swinging doors from  $\frac{3}{4}$  to  $2\frac{1}{4}$  inches thick, and is adjustable for any intermediate size. Backed by the Frantz guarantee, this promises to be a popular 1926 number. Write for prices.

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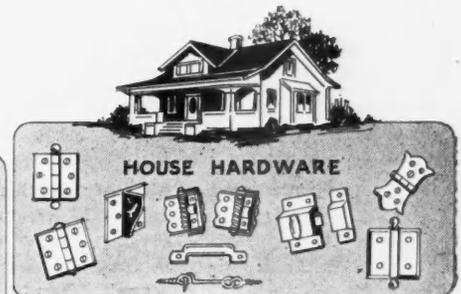
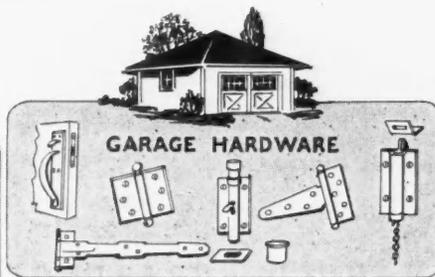
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**No. 23 Swinging Door Latch**  
 This view shows the new Frantz latch on the closed door. The bolt is galvanized, the spring is of brass and the handles are rolled.



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