

# AMERICAN BUILDER

## THE WORLD'S GREATEST BUILDING PAPER

Vol. 43.

CONTENTS FOR MAY, 1927

No. 2.

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

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

**PROTECTION FOR OUR READERS**—The publishers of the AMERICAN BUILDER reserve the right to decline any advertising they believe is detrimental to the interest of its readers; to edit advertising copy and to change or eliminate any statements that reflect injuriously or cast discredit upon other building products, machinery, equipment, supplies or tools.

Be sure in writing to advertisers to say: "I saw your advertisement in the AMERICAN BUILDER."

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MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

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## Comments on April Issue

Easton, Pa.

Editor of AMERICAN BUILDER:

We want to congratulate your artist or engraver for the excellent blue gray slate roofed house shown on color plate 2-F-XV in your April annual number.

He has brought out the color of slate admirably and without prejudice we can safely say that the harmonious spirit produced by this color is more effective than any shade that we know of. We want to commend you likewise in exhibiting specimens of sound construction, as your publication is universally considered the Bible of the building trade which the average carpenter and realtor looks to for the "latest fashions."

The writer personally knows of frequent instances in this locality where speculative builders rely entirely upon your publication for their designs and material specifications.

VENDOR SLATE COMPANY,

W. H. Sharp,  
Advertising Mgr.

Chicago, Ill.

Editor of AMERICAN BUILDER:

It was with much interest that I read the editorial article on concealed beds on pages 258 and 260 of your special April issue. It is a splendid article and well illustrated, and we know that it will have its influence in the home building field.

We have heard this article commented on and complimented by several who have visited us, and we feel that everyone who has read it cannot help but realize the interest that your magazine is taking in promoting better constructed and more efficient homes.

CONCEALED BED CORP.,

H. W. Bowman,  
Vice-President.

Battle Creek, Mich.

Editor of AMERICAN BUILDER:

We appreciate very much the use of the illustration which appeared on page 240 of your April number. Also are very pleased to say that this is a very fine number. Yours is one of the few publications that come to my desk which I read carefully and incidentally I get a lot of information out of the ads as well as the editorials.

A-B STOVE COMPANY,

F. M. Fluke,  
Advertising Manager.

Milwaukee, Wis.

Editor of AMERICAN BUILDER:

Your April reference number contains many very splendid articles and the reference to the chimney-fed incinerator will no doubt help to put over this incinerator equipment with many of your readers. We appreciate this co-operation very much indeed.

KERNER INCINERATOR Co.,

George Gaffney,  
Adv. Manager.

April 20, 1927.

Editor of AMERICAN BUILDER:

We have just received a copy of the AMERICAN BUILDER for April and have carefully noted your article regarding insulation. We certainly appreciate the consideration you have given this important subject in this article. It is really a very fine piece of work.

WOOD CONVERSION Co.,

Howard Simmons,  
Sales Manager.

La Crosse, Wis.

Editor of AMERICAN BUILDER:

We were very much interested in your article on heat cabinets in the April issue of the AMERICAN BUILDER.

This article is nicely printed and we want to thank you for the display you gave this subject.

THE TRANE COMPANY,

N. Downey,

Bangor, Pa.

Editor of AMERICAN BUILDER:

We wish to congratulate you on the successful reproduction of a slate roof which you show in your annual April number, color plate 2F-XV.

Not only is the color of the roof good, but you have printed it very well with the surroundings and altogether succeeded in making a very attractive illustration.

BANGOR SLATE ASSN.,

H. M. Van Cleve,  
Secretary.

Cincinnati, O.

Editor of AMERICAN BUILDER:

In calling attention through your letter of the 9th to the four-page editorial titled "Tendencies in the Use of Concrete," you ask if we have any suggestions to make in respect to forthcoming articles, as you intend running a series of eight or ten.

Anything we say in this connection we want you to take as constructive criti-

cism. While we consider the article "Tendencies in the Use of Concrete" a very fine tribute to precast concrete building units it is the writer's personal opinion that your article may be too elaborate for a good majority of your readers.

I would say that you could better interest them by featuring dwellings or residences of moderate price intermingling your articles with some residences of the better type so as not to give them the idea that blocks or tile as the case may be are only suitable for cheap structures; for, after all, for every one large structure being built up of precast concrete building units there are one hundred or more smaller ones; and it's the mass, of course, that you want to impress with the idea of manufacturing and using precast building units.

THE IDEAL CONCRETE MACHINERY Co.,

R. Niehaus,  
Sales Manager.

Adrian, Mich.

Editor of AMERICAN BUILDER:

I was delighted, upon my return from the East, to find your letter of April 9th. I had fully intended, after reading your April issue, to write you in appreciation of the effort which you are making to promote the quality and use of concrete products.

ANCHOR CONCRETE MACHINERY Co.,

Eugene F. Olsen,  
V. P. & Gen. Mgr.

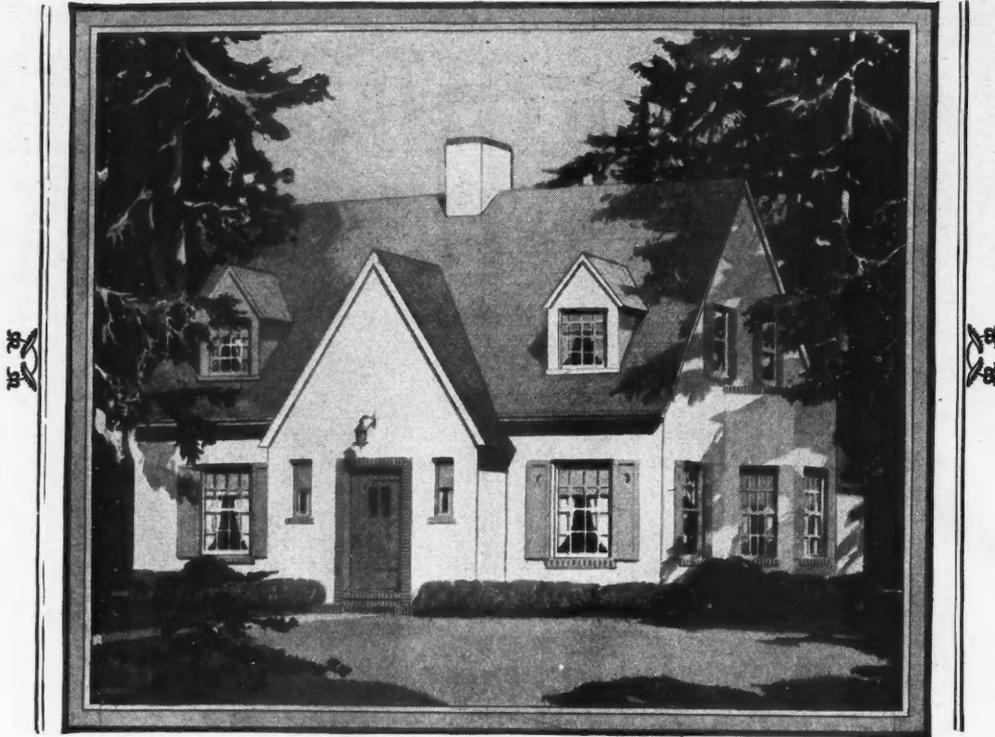
Narberth, Pa.

Editor of AMERICAN BUILDER:

Whenever I have wanted to know anything relating to the building or even the remodeling of old houses I have found the close friendly handclasp of a representative who advertised in the AMERICAN BUILDER. I know of no magazine which renders such valuable and at the same time, friendly, co-operative service as the AMERICAN BUILDER.

Referring to the April reference number, ColorKeed Plan XV, "The Fort Ann," would appreciate your immediate response regarding a request for complete literature, etc., relative to this rugged construction, also relative to new, modern equipment for interiors and exteriors, as well as the steel casements, metal lath, etc.; in fact, all necessary materials, etc., for such a type of house. This your advertisers are requested to forward to my address, 25 Montgomery Avenue, Narberth, Pa.

DUDLEY C. T. SLEATER



The cottage type lends itself to an almost unlimited variety of color treatments

## More contracts for colored stucco

**T**HAT'S what hundreds of builders are enjoying right today—through Bishopric Unit Wall construction.

Our booklet, "The Renaissance of Colored Stucco"—free to builders—points the way to new profits, more contracts, and better jobs in colored or plain stucco.

This valuable booklet gives the facts on the present popular trend to colored stucco, and shows how its rich beauty may now be combined with great strength and endurance—in the Bishopric Unit Wall. Illustrated with full color plates, diagrams, etc.

Send for your copy *today*. Mail the coupon.

The BISHOPRIC MANUFACTURING CO.  
Este Avenue, Cincinnati, Ohio

THE BISHOPRIC MFG. CO. OF CALIFORNIA  
Los Angeles

Get full details in valuable  
booklet—free to builders!

MAIL  
THIS  
COUPON



THE BISHOPRIC MFG. Co.,  
705 Este Avenue, Cincinnati, Ohio

Please send me without charge your new booklet,  
"The Renaissance of Colored Stucco."

Print Name and Address Plainly

Name.....

Address.....

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

# BISHOPRIC

## THE UNIT-WALL CONSTRUCTION

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

# AMERICAN BUILDER



Formerly AMERICAN CARPENTER AND BUILDER

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

## Building Activity Increasing

CONSTRUCTION contracts to the amount of \$620,738,200 were awarded last month in the 37 states east of the Rocky Mountains, according to F. W. Dodge Corporation. This tops the previous high record of August, 1925, by \$9,000,000. The increase over March, 1926, was nearly 4 per cent and the increase over February of this year was 57 per cent.

The situation in the building field shows a progressive improvement since the first of the year. 1926 was a banner year and many thought that 1927 would show a substantial falling off. The start-off pointed that way with January 16 per cent behind last year. However, at the end of February we were only 10 per cent behind, and now with this big March record the first quarter of 1927 is only 4½ per cent behind the first quarter of last year.

Last month's record included the following important items: \$250,078,300, or 40 per cent of all construction, for residential buildings; \$113,766,000, or 18 per cent, for commercial buildings; \$106,826,900, or 17 per cent for public and utilities, \$48,076,600, or 8 per cent, for industrial buildings; and \$36,521,800, or 6 per cent, for educational buildings.

Contemplated new construction was reported in March to the amount of \$1,198,090,900, an increase of 16 per cent over March, 1926. This record total of contemplated work indicates an upturn in construction demand.

## Good Record in the East

Building and engineering contracts awarded during the month of March in New York state and northern New Jersey amounted to \$153,890,200. This was a 49 per cent increase over February and a 2 per cent decrease from March of last year.

The March total for building contracts in the New England states, amounting to \$44,990,000, was the highest March figure yet recorded for this district. It was more than double the amount for the preceding month, and 30 per cent ahead of the corresponding month of last year.

Construction started in March in the Middle Atlantic states (Eastern Pennsylvania, Southern New Jersey, Maryland, Delaware, District of Columbia and Virginia), amounted to \$80,814,900. This was the largest March contract total on record for this district. It was 96 per cent over February and 17 per cent over March of last year.

March building and engineering contracts reached a total of \$63,716,700 in Western Pennsylvania, West Virginia, Ohio and Kentucky. This figure exceeded February by 12 per cent, but declined from March of last year by 27 per cent.

The Southeastern states (the Carolinas, Georgia, Florida, Tennessee, Alabama, Mississippi, Arkansas and Louisiana), had \$73,544,800 in contracts for new construction work during March. The above figure represents an increase of 59 per cent over February and a loss of 15 per cent from March of last year.

## Record March Total in the Central West

Building and engineering contracts let in the Central West (Illinois, Indiana, Iowa, Wisconsin, Southern Michigan, Missouri, Kansas, Oklahoma and Nebraska), during the month of March reached a total of \$168,444,900. This was the highest March contract total on record for this district. It was 54 per cent ahead of February and 29 per cent ahead of March, 1926.

Total work started in the first quarter of this year has amounted to \$362,878,500, the increase over the first quarter of last year being 23 per cent.

Contemplated new work reported in this district last month amounted to \$424,104,100, which was more than double the amount reported in February and 55 per cent over the amount reported in March of last year.

March building contracts in Minnesota, the Dakotas and Northern Michigan amounted to \$10,472,900. This figure shows the considerable increase of 265 per cent over February, but declined from March of last year by 13 per cent.

Construction started last month in Texas amounted to \$24,863,800. This figure is the largest March contract total on record for this district. It was 102 per cent ahead of February and 18 per cent ahead of March, 1926.



## Code Protects Home Buyers

A CODE of ethics to protect the public in buying houses in Long Island has just been adopted by the newly organized Subdividers Division of the Long Island Real Estate Board. This code is a stringent statement of the standards which the subdividers pledge themselves to maintain in their business operations. It follows, in general, the lines of a similar code adopted some months ago by the Subdividers Division of the Chicago Real Estate Board, which codes has also been made the base of a tentative code now being worked out by the Subdividers Division of the California Real Estate Association. Similar codes are under consideration in other member boards of the National Association of Real Estate Boards, supplementing the general code for real estate practice which is required by the Association for all members of its constituent boards.



## Building Costs Analyzed

IN making assessments of property valuation for taxation purposes, the Rochester (N. Y.) City Board of Assessors uses the cost of walls per square foot as the basis of computation. This basis, which establishes the comparative cost of many classes of dwellings and other buildings, is calculated for the Board by a large number of experienced builders. Every reliable source of information was used in setting these values. The leading contractors, architects, material dealers and real estate dealers of Rochester gave freely of their time and the costs entering into every phase of the construction of a large number of buildings were carefully analyzed.



Driveway, Blackhawk Oil Co. Filling Station, East Moline, Ill., was placed and ready for use in 3 days thru use of fully tested methods and standard [not special] Universal cement. Schadt Service Co., Sylvis, Ill., contractor. For further details use the accompanying coupon.

## "I Must Have Quick Use of the Job," Says Your Customer

### *Here's One Way to Meet His Demand*

"Sorry I can't give you more time, but I simply must have this concrete ready for use quickly."

With fully tested methods and standard [not special] Universal cement, you can obtain concrete with a 3-day strength equal to the 28-day strength of ordinary concrete. In addition to this, High-Early-Strength concrete has a higher *ultimate* strength and is also *permanently* better and stronger than concrete as ordinarily placed.

Use *High-Early-Strength* Universal Concrete on *any* job calling for early use, better concrete, or both. Full details as to methods for obtaining this concrete will be sent promptly on receipt of the coupon.

The accompanying coupon will bring full details on High-Early-Strength Universal Concrete promptly.

This background shows  
Universal Cement Stucco-English Cottage Texture-  
Made with Universal cement—a standard cement for universal use

**Universal Portland Cement Co.**  
Chicago - Pittsburgh - Minneapolis - Duluth - Cleveland - Columbus - New York  
Concrete for permanence

UNIVERSAL PORTLAND CEMENT CO.  
210 South La Salle Street, Chicago.

Without obligation, send me detailed information on methods for securing strong concrete in 3 days with standard Universal cement

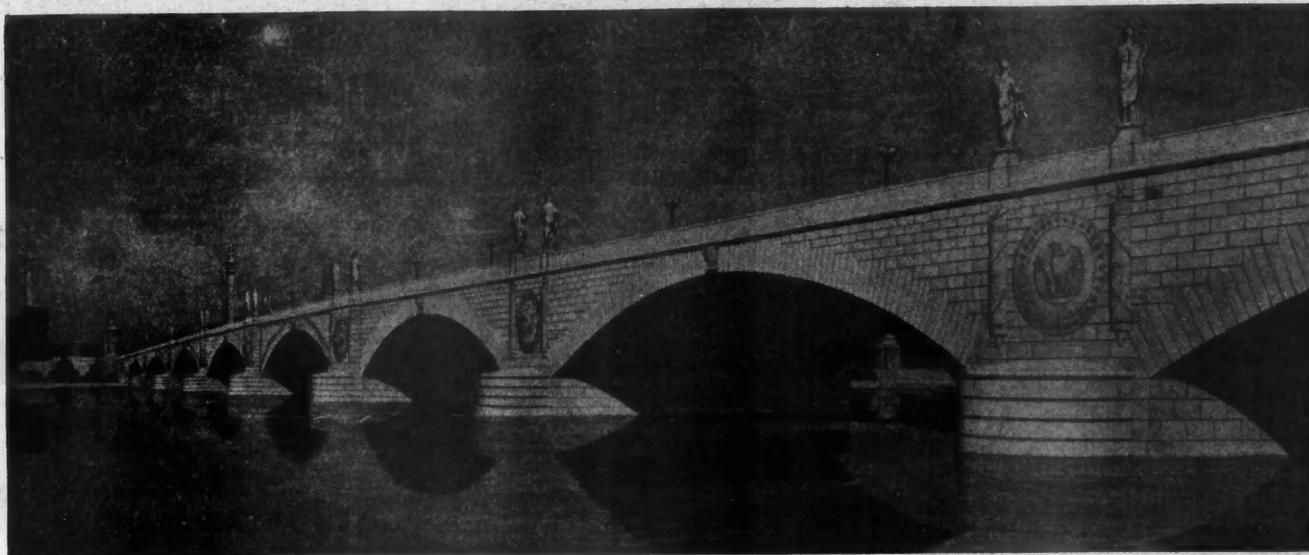
Without cost or obligation send me book showing attractive stucco finishes made with a standard Universal cement

Name.....

Address..... AB 5 27

# Arlington Memorial Bridge

This Link Between the City of Washington and Arlington County, Virginia, Will Open New Home Building Opportunities



Nine Low, Graceful Arches of White Granite Will Span the Potomac River Between the Lincoln Memorial and Arlington National Cemetery, When the Arlington Memorial Bridge, Which Will Connect the City of Washington, D. C., with the Virginia Hills, Is Completed.

**T**HROUGHOUT history the building of bridges has been an all important influence in the building of great cities. Most of our great cities are located on waterways which were, in the early days, essential to city-building traffic. Today, even with the development of other means of transportation, waterways carry a greater volume of that city-building traffic than ever before. But without ample bridges these highways of trade form barriers which seriously hamper the physical growth of the cities themselves.

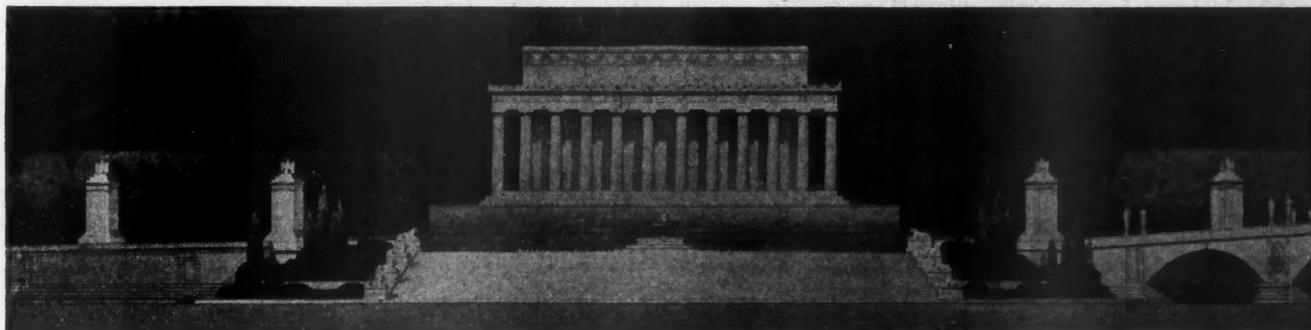
Increasing population must be housed and new homes must be provided within an accessible radius. The construction of properly placed bridges is a vital concern to the builder, especially the builder of homes. It opens new fields of building activity.

Across the Potomac River from the city of Washington, D. C., there lies a beautiful sweep of Virginia hills which, within but a short distance of the national capital, offers an ideal location for the home builder. Several bridges have already spanned the Potomac and suburban development has promptly made its appearance in Arlington County. But these bridges have been unable to keep up with the constantly growing demands of suburban residence development.

For more than seventy-five years the idea of constructing a memorial bridge across the Potomac from Washington to the Arlington Cemetery has been considered from time to time, having been first suggested by President Andrew Jackson, prior to 1851. Since then frequent efforts have been made to carry the project through but, until city growth combined its pressure with the sentimental and artistic demand, the efforts made no real progress.

In 1901, when the Senate Park Commission reported on the development of the park system of the District of Columbia, it suggested for the first time the desirability of placing a Memorial Bridge at the Lincoln Memorial instead of at the site farther up the Potomac which had been contemplated in all previous suggestings. This marked the beginning of the Arlington Memorial Bridge project which is now well under way and being pushed toward completion.

The Arlington Memorial Bridge Commission, which was created to develop this project, decided on a low level bridge with a draw span, to be erected on a line joining the Lincoln Memorial with Lee Mansion by a roadway in the axis of the bridge, leading directly to Lee Mansion with a suitable memorial gate, or other appropriate treatment, at the entrance to Arlington Cemetery. From the Virginia terminus there is contemplated a main roadway leading along



A Water Gate at the Washington End of the Bridge Is a Part of the Plan. The steps leading to the water will form a landing for small boats. At the right is the entrance of the bridge.



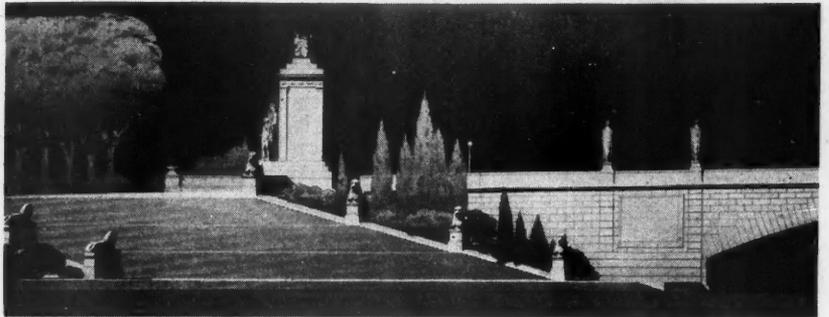
The Entrance to the Arlington Memorial Bridge Will Be Between Two Tall Pylons, 40 Feet in Height and Surmounted by Sculptured Eagles, Symbolic of the United States of America.

the north end of the cemetery between Arlington and Fort Meyer and ultimately a second roadway toward the south end of the cemetery for traffic in the direction of Richmond.

The area of the Mall axis, at its junction with the Potomac, will be treated in such a manner as to recognize the importance both of the final feature of a parkway extending from the Capitol to the Potomac and that of a plaza from which will radiate the bridge and important park roads, including access to the Lincoln Memorial and to the river bank. Between the bridge and the road will be a monumental flight of steps leading to the river, the whole composition thus forming a water gate giving access, through the Mall with its splendid monuments, to the Capitol. The steps will provide landing places for small boats, while the piers at either end of the steps will form landing places for larger vessels.

The bridge will consist of nine spans. A draw span at the center, to permit river traffic, will be flanked on either side by four masonry spans of graceful profile. The total length between terminal pylons will be 2,138 feet and the width 90 feet in the clear. This will permit a roadway 60 feet wide providing six lanes for vehicular traffic, bordered on each side by 15-foot sidewalks. The structure will be faced with white granite and will harmonize with the Colorado Yule marble of the Lincoln Memorial.

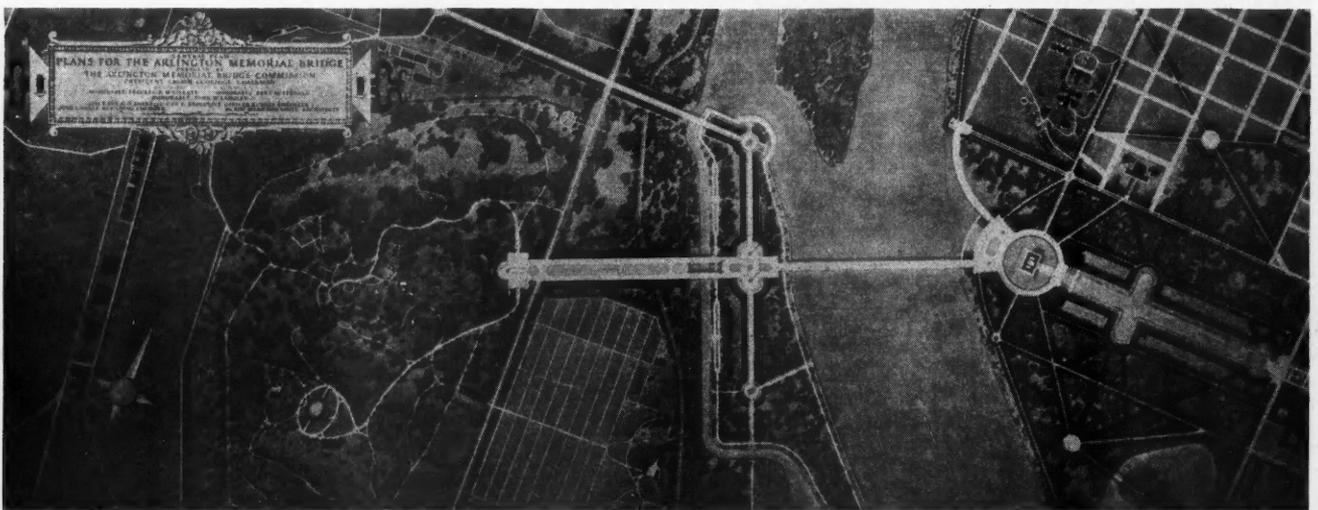
In order not to interfere with the view of the Lincoln Memorial from Columbia Island, it has been decided to build the bridge as low as possible, consistent with sound engineering principles. As already mentioned, the bridge



Water Gate and Entrance at the East, Washington End of the New Bridge.

is to have nine segmental arches. The center span will be 184 feet long with the length of the other spans decreasing gradually to 166 feet. The main structure will be of reinforced concrete faced with white granite and the central draw span will be of steel, faced either with white granite or with metal painted white to harmonize with the masonry spans. All the operating machinery, tenders' houses, look-out stations and so forth will be kept below the bridge deck and out of sight, as far as possible, so that, when closed, the draw span will appear as an integral part of the bridge.

The architecture has been kept as simple and severe as possible, the structure depending for its beauty mainly upon the perfection of its general proportions and its adornment with significant sculptural pieces. The Washington entrance is to be marked with two pylons, to be located about 500 feet from the Lincoln Memorial. Similar pylons are to be placed at the entrance to the shore road



Plans for the Arlington Memorial Bridge Include the Development of Columbia Island, a Parkway for the Virginia Shore and Memorial Entrance for the Arlington National Cemetery, a Plaza and Water Gate West of the Lincoln Memorial and the Widening and Extension of Two Streets.

and are to be duplicated at the Virginia entrance to the bridge. These pylons will be 40 feet high and adorned on their sides with sculptured groups and appropriate inscriptions and surmounted by eagles, symbolic of the United States of America. These symbols will also appear on the sides of the bridge as the only sculptured ornaments, where they will be shown in large discs on the ends of each of the river piers.

Being so closely related to the bridge, it was thought proper that plans for the ultimate development of Columbia Island should be included as a part of the bridge project, and this will be carried through. The axis of Columbia Island gives an opportunity to recognize the great Lee Highway undertaking and to make it a part of the whole composition.

This highway, which at present passes over the Francis Scott Key Bridge into Washington, by a circuitous route, can be given a most desirable, direct approach over the brow of Arlington Heights, exactly on the prolongation of the axis of the Mall. From this point a superb view of the new bridge, the Lincoln Memorial, the Washington Monument and the Capitol will be enjoyed by the traveler over this route.

Continuing along the main avenue on the axis of the bridge and after crossing the waterway separating Columbia Island from the Virginia shore on a small twin bridge harmonizing with the Memorial Bridge, there extends a formal parkway, within an extensive park area, with two roadways and a "tapis vert" between, bounded by hedges and elms and rising on a slight but uniform grade to the foot of the slope to the Lee Mansion. This change of grade suggests the placing of the chief memorial entrance to the Arlington National Cemetery at this point. Here is to be a plaza, a part of which is to be excavated into the side of the hill whence will radiate the roads to the Mansion, the Memorial Amphitheater and other sections of the cemetery.

The approved cost of the entire project, which has been but partially outlined here, is \$14,750,000, of which \$7,250,000 is for the bridge proper; \$1,000,000 for the bridge plaza and water gate immediately west of the Lincoln Memorial; \$2,880,000 for the improvement of Columbia Island; \$1,390,000 for the parkway on the Virginia Shore and the Memorial Entrance to the Arlington National Cemetery; \$2,070,000 for the extension and widening of B Street from the Capitol grounds west to the Potomac River; and \$160,000 for the widening of Twenty-third Street from B Street

northward to Washington Circle. The commission hopes to have completed the Arlington Memorial Bridge, the water gate and the main avenue across Columbia Island and the parkway leading to the cemetery by July 1, 1930, and to have finished the project completely by the year 1935.

ROBERT F. SALADE.



### A Bridal Altar

A NEW bride's altar before which many brides and grooms will swear life long allegiance to each other has recently been installed in the Church of the Transfig-



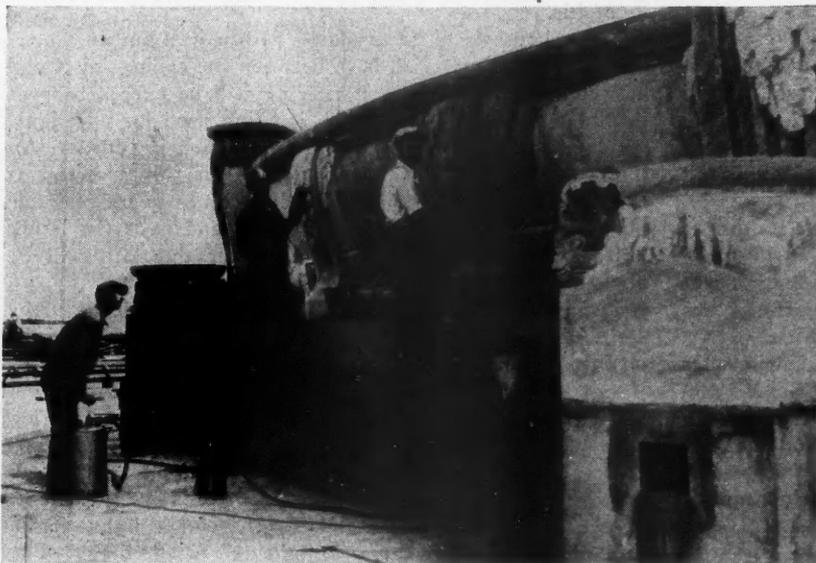
This New Altar Has Been Installed in the Famous "Little Church Around the Corner" in New York City.

uration, known lovingly to thousands of men and women throughout the world as the "Little Church Around the Corner." Funds for the altar were contributed by hundreds of bridal couples who were married at the church. More than 50,000 persons, it is estimated, have been married at the hospitable little church since its founding.



### Waterproofing Rocks

IT sounds paradoxical to think of attempting to keep water out of rocks and stones, but the new process is being widely adopted by builders and architects for preserving masonry and adding to its life. The process is simple and founded on scientific principles. First the stone is heated by the flame of a blow torch, so that the structure of the surface is expanded. Then into the opened pores paraffine is plugged with a brush, thus effectively closing the surface to the action of rain, frost and gas fumes in the air. The picture shows workmen engaged in waterproofing the stone work in the \$650,000 Buckingham Memorial Fountain, which is nearing completion in Grant Park, Chicago.



Workers Applying a Waterproofing Treatment to the Stonework of the New Buckingham Memorial Fountain, in Chicago.

# Building 1,679 Homes

This Program, One of the Largest Ever Undertaken by a Single Firm, Calls for 600 to 700 Buildings a Year and Involves About \$25,000,000.

By E. M. OREN



The First of the 1,679 Homes to Be Erected by Mills & Sons in Their Westwood Development, Chicago, the Culmination of 40 Years of Building in Which Approximately 3,000 Houses and Apartments Have Been Built and Sold by This Organization.

**T**HE first 214 homes in the Westwood development of Mills and Sons, which will comprise 1,679 homes and 146 pieces of business property when completed, are under construction. This enormous building project is located in Chicago between 76th and 80th avenues, with Grand Avenue on the south and Belmont Avenue on the north. It will take from two to three years to complete and will involve approximately \$25,000,000.

The houses are of ten different types, of five and six rooms, and of ten different architectural styles. All of them will have good sized attics, rough floored, that the purchaser can finish off into extra living space. Prices range from \$8,500 to \$11,000, dependent on size, type and location.

The principal business section is to be at the southwest corner of the development and will be circular in form, with a landscaped five-acre park set with a magnificent French type fountain in the center and with the stores and offices on the outer rim of the circle. Sunset Drive, one of the principal thoroughfares of Westwood, will enter and leave from this circular street. A second business section will be along Belmont Avenue on the north of the development. Only 25 feet of business frontage are allotted each estimated 100 of population, considerably less than the recommendation of the Regional Planning Association, which puts 47 feet as a fair allotment.

The houses all are to be of the bungalow type, of brick construction on poured concrete foundations, with fronts of face brick, ornamented with terra cotta. The basements

are to be full height, with cement floors and a steel center beam on steel supports. Hot water heating plants with a five-section boiler will be installed. Plumbing will include a built-in tub with shower, vitreous china toilet and square lavatory, and an enameled apron kitchen sink, with a swinging spout. The bathroom and vestibule floors will be of tile.

Every house is to be insulated with a well-known wood-fibre insulating material, both between the ceiling joists and between the wall studs. Plastering will be over a base of incombustible rock lath, which is being used for additional insulation, as well as for the fire-protection it affords. An interesting comment in connection with this material is that though it is a gypsum board it comes in unbreakable bundles and requires only the hatchet and nails the lather customarily uses for application. Over this lath will be applied a brown and a white coat of plaster.

Window frames are to be of a special type designed by Mills and Sons. These eliminate cast iron weights and chains, cut out the window box frame and insure a tight job of brick and mortar around the frames. Modern hardware of solid brass will be used throughout the interior, and will include semi-automatic locking and unlocking devices for bathroom and other doors. Wiring will include a switch in the reception hall for the porch light, switches at the head of the stairs for the basement light, at the foot of the stairs for the attic light and in all rooms. Fixtures will be of an unusually high quality.

In the living rooms there will be fireplaces with a gas

unit, surmounted by a mirror and flanked with built-in bookcases of the open shelf type, with circular heads. There will be medicine cabinets in the bathrooms, ironing board cabinets in the kitchen and walnut buffets in the dining rooms. Off each bedroom will be a good sized closet. There also will be coat closets off the vestibules, a linen closet adjacent to the kitchen or bath, and, in some cases, a broom closet in the kitchen.

The lots are 30 by 120 feet. In most cases there will be a 20-foot alley in the rear. Twelve by 20-foot garages will be built for each house. These will be on a cement floor foundation and will accommodate one car. Street improvements include all underground mains, all underground stubs, all laying of electrical pipes, conduits, cement sidewalks, paved streets, paved alleys and an ornamental street lighting system.

Transportation is by train, 22 minutes to the heart of the city, by street car and by motor bus.

The firm of Mills and Sons was organized 40 years ago with a limited capital and a consequent limited credit. Its purpose then as now was "to provide solid, modest homes on a quantity basis, both bungalows and two-apartment income homes, to the man of small means on the easiest possible payment."

To date the firm has built and sold approximately 3,000 homes and two-apartments. Its present program calls for the construction of between 600 and 700 buildings a year. This work of housing thousands of people has been carried on with a quietness that is surprising when one considers the immensity of the project. Block after block around the West North Avenue section of Chicago is lined with bungalows and two-flat buildings built by this organization. Community projects have been fostered through the promotion of banks, theaters and so on. To protect the quality of the business section along one mile of North Avenue an agreement has been obtained from every property owner to restrict buildings to two stories or over.

Commenting on one phase of this large-scale building, John Mills, Sr., said in a recent address:

"In selling homes on very low payments the builder must protect his huge investment by seeing to it that a high grade community standard is maintained during the years following the birth of each community. Thus it is of first importance to select as purchasers only high grade and desirable citizens. This careful selection, in turn, becomes a safeguard in the interest of purchasers. Other plans provide a continuing protection as to desirable neighbors. By this mutual protection the home-buyer is assured of the right atmosphere in which to raise a family.

"Perhaps someone is asking: How about the fellow who strikes hard luck? In the first place, our payments are so

comfortably low that such cases are very rare. To illustrate: Out of our collection accounts at this time, aggregating \$12,000,000, we have less than \$750 of arrears 30 days old, or less than 1/100 of one per cent. This is not an unusual, but a normal condition. When we do strike a real case of hard luck, we are equipped, first, with a desire to help, and second, with the financial ability to do so, and we will go to almost any length to maintain our record of 40 years building and selling homes without a foreclosure.

"Soundness of our building program would seem to be proved, for out of the thousands of homes we have constructed, we have never had a building unsold at the date of completion."

Interesting comments on this organization, testifying to its growth and the soundness of its growth, are furnished in letters from three of the firms with which it does business. Writing to Mills and Sons, on October, 1926, W. F. Schlake, sales manager, Illinois Brick Company, says:

"We feel that you will be interested, and justly proud, to realize that you used more brick in 1925 than any other firm or individual in Chicago. An analysis of our records divulges this fact, your account running substantially greater than the second best."

Writing George B. Haynes, passenger traffic manager, Chicago, Milwaukee & St. Paul Railroad, Edward Hines, president of the Edward Hines Lumber Company, says:

"To give you some idea of the volume of business we have enjoyed with Mills and Sons . . . in looking over our records for the past five years we have furnished them approximately 20,000,000 feet of lumber, which you can appreciate is a very large quantity because this equals approximately 1,000 carloads of lumber."

And this to Mr. Haynes from H. S. Cody, vice-president of the Chicago Trust Company:

"We have been making real estate loans to Mills and Sons for about five years, and during this period have made them 706 loans aggregating \$4,974,500.

"After personally investigating all building operations in our leading cities, I am of the opinion that they have built and sold more houses and two-apartment buildings than any other firm in this country . . ."

These letters are cited simply as evidence of the extent of the operations of Mills and Sons and to support the statement that it is remarkable that operations of this magnitude can be carried out with so little blare of trumpets and general "hoo-rah." The writer of this article, though somewhat intimately connected with the building materials business, had barely heard of the firm, before his recent trip to their offices in West North Avenue. These offices, a three-story building, are fitted out like a bank.



A Lather at Work in One of Mills and Sons' Westwood Houses. The photograph shows the insulation which is being used in the walls and ceiling and the application of gypsum lath, construction methods which play their part in producing first class houses.

# New Type of Architecture for Apartments and Hotels

The Tower Type of Design Now Being Used for These Buildings

**G**REAT activity in the construction of apartment buildings and hotels is developing new architectural applications, especially where ground values are high. Apartment buildings have been reaching to greater heights from year to year in the large cities and the tower, which was formerly associated with public, memorial and office buildings, is now being used for apartment and hotel buildings. A good example of this is the design by F. P. Platt & Bro. of an apartment hotel, included in this month's selection of perspectives.

## Daniel Boone Apartment Hotel, St. Louis, Mo. Pleitsch & Price, Architects

In this 14-story, million dollar structure the architects have embodied a pleasing exterior and an exceptionally well designed and equipped interior.

The exterior of the building is designed in an American adaptation of Flemish architecture and the principal facade will be of a light shade of hard burned brick and terra cotta. The accented vertical lines of the front terminate in two gables with roofs of tile.

On the ground floor of the building, with access obtained directly from the alley on the rear, will be an up-to-date garage, with capacity for 100 cars. Tenants will have direct access to the garage by elevator.

The apartments on the floors above will embody all of the latest conveniences applicable to a building of this type. While it is the present intention of the owners to lease the apartments unfurnished, the floors will be richly carpeted throughout and all service will be furnished to the tenants, including mechanical refrigeration, gas and electricity.

Special attention has been given by the architects to closet space and to the arrangement of the kitchens to afford the occupants the maximum of efficiency. The kitchens will be completely equipped with built-in refrigerators and kitchen cases, cabinet gas range and other conveniences. It is planned to finish each of the apartments in different color schemes. Suitable lighting fixtures will be furnished.

The building will have two high-speed elevators with all of the latest safety devices, including dual control.

## Masonic Temple for Joppa Lodge, A. F. A. M. Minneapolis, Minn.

Clyde W. Smith, Architect

The design of this building is effective and appropriate, with exterior designed along the lines of the Romanesque, while the interior is suggestive of Italian and Spanish architecture. One feature of the building which adds to its attractiveness is the garden treatment in front, with fountain and flowers, made possible by setting the building back 42 feet from the sidewalk. The building is of fire-proof construction, two stories and basement in height, and is of brick with stone and tile trimmings, surmounted by a tile roof.

The building is to cost \$75,000 and will have a lobby, lounge, recreation and locker rooms on the ground floor. There is also an assembly room on this floor, equipped with stage facilities. The main lodge room is on the second floor, having a balcony of Spanish design and a massively beamed ceiling. The dining room is located in the basement.

## 46th Street and Sixth Avenue Hotel, New York City

F. P. Platt & Bro., Architects

A 26-story hotel housed in a beautiful Gothic tower is shown in the architect's rendering of this building. The twenty-first and twenty-second stories, which will be set back, will each contain a complete housekeeping roof garden apartment with unusually large living and dining rooms, with wood-burning fireplaces, and a private bedroom and bath for a personal maid. Hotel service will be supplied to these apartments in keeping with the balance of the building. The studio apartments will have direct elevator service and private foyers and galleries.

The avenue and street fronts will contain shops and also a dining room catering to hotel guests and transient trade with seating for about 100 persons. The office is of black marble and bronze, the walls will be treated in subdued soft glazed tones and the ceiling will be illuminated.

The exterior of the building will, at the first story, be faced with colored marble and bronze; sandstone trimmings of various shades and terra cotta will be used for embellishment to the fourth story. The shaft of the building will be of brick in various shades, the general tone being buff. The upper stories of the building will be of the same brick and embellished with terra cotta of the sandstone shades, together with polychrome inserts.

As the building will carry well above the adjoining structures to the East and South and will be visible from all directions in the near vicinity, the architectural treatment will be similar on all four sides and the tower will be crowned with a copper roof and an illuminated cresting.

## Community Building, School and Rectory for the Church of Our Lady of Loreto, New York City

Silvis A. Minoli, Architect, and Anthony J. De Pace,  
Associate Architect

The triple design comprises separate buildings, all having individual entrances but intercommunicating on the interior. The auditorium, seating 800, is entered directly from Bleeker street and, with an auxiliary clubroom, may be separated from the school proper and utilized for community functions. The school comprises 16 classrooms, offices on the first floor and gymnasium, swimming pool and boys' and girls' clubrooms in the large basement.

The rectory section of the building is differentiated from the school by the lower ceiling heights. Here the 9-foot height, as against 12 feet in the school section, permitted of an additional story, giving, in the six stories of the rectory section, facilities for seven priests and their attendants. An automatic elevator serves this section.

The total building height is 70 feet. The structure is faced with buff face brick, while limestone trim is used around windows and doors and as a cornice, surmounted by a brick parapet wall, stone coped. The building has a total length and width of 90 feet.

Window ventilation is used throughout. Construction is wholly steel and concrete of flat slab type. Interior partitions are terra cotta. The masonry was executed by Guidone & Bottino of New York. Steel was placed by the Harris Structural Steel Co.

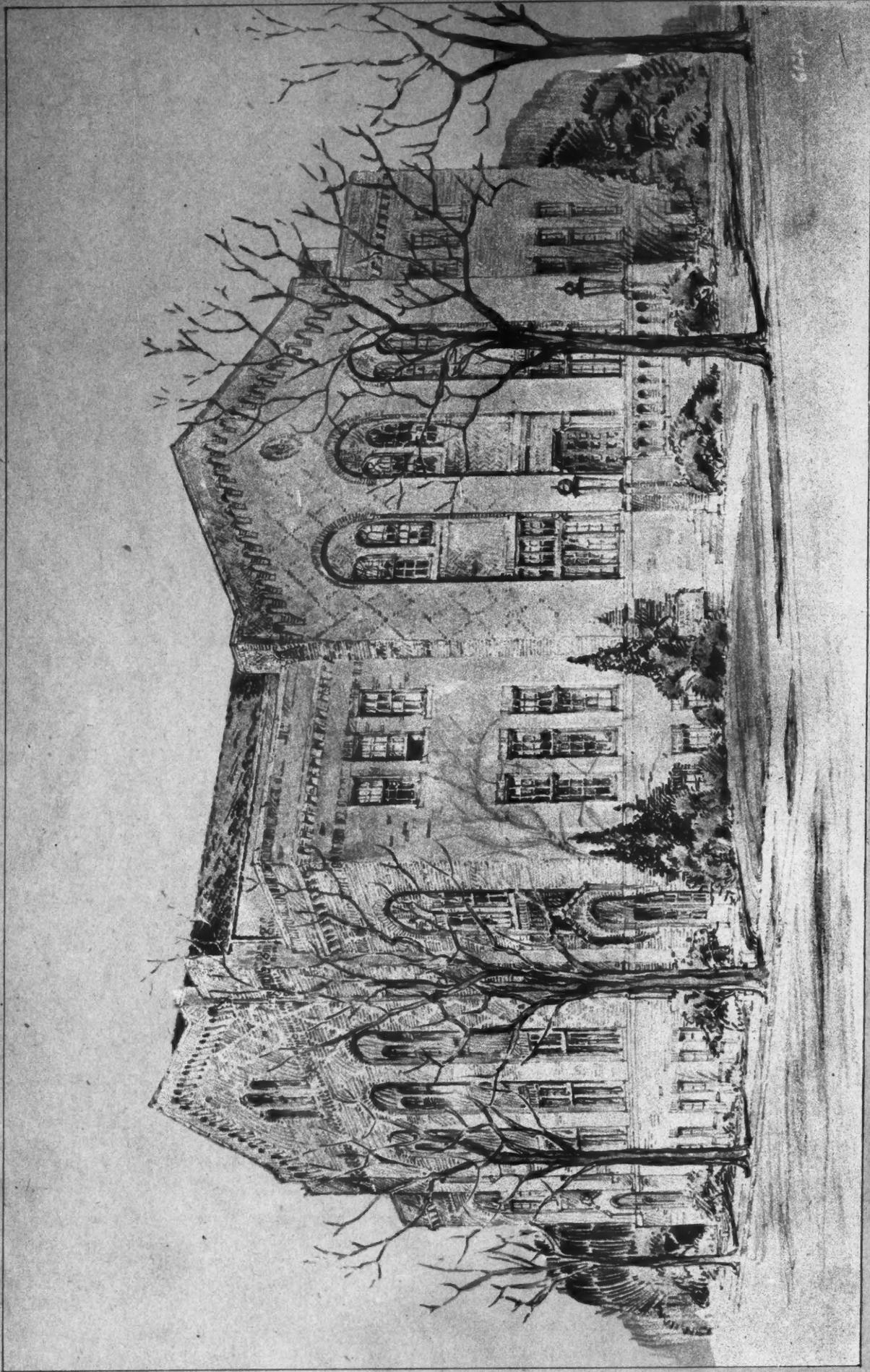
# ART SUPPLEMENT *of* NOTABLE ARCHITECTURE



PLATE 133

*The DANIEL BOONE APARTMENTS, Lindell Blvd., St. Louis, Mo.;*  
Pleitch & Price, Architects.

*The AMERICAN BUILDER, May, 1927*

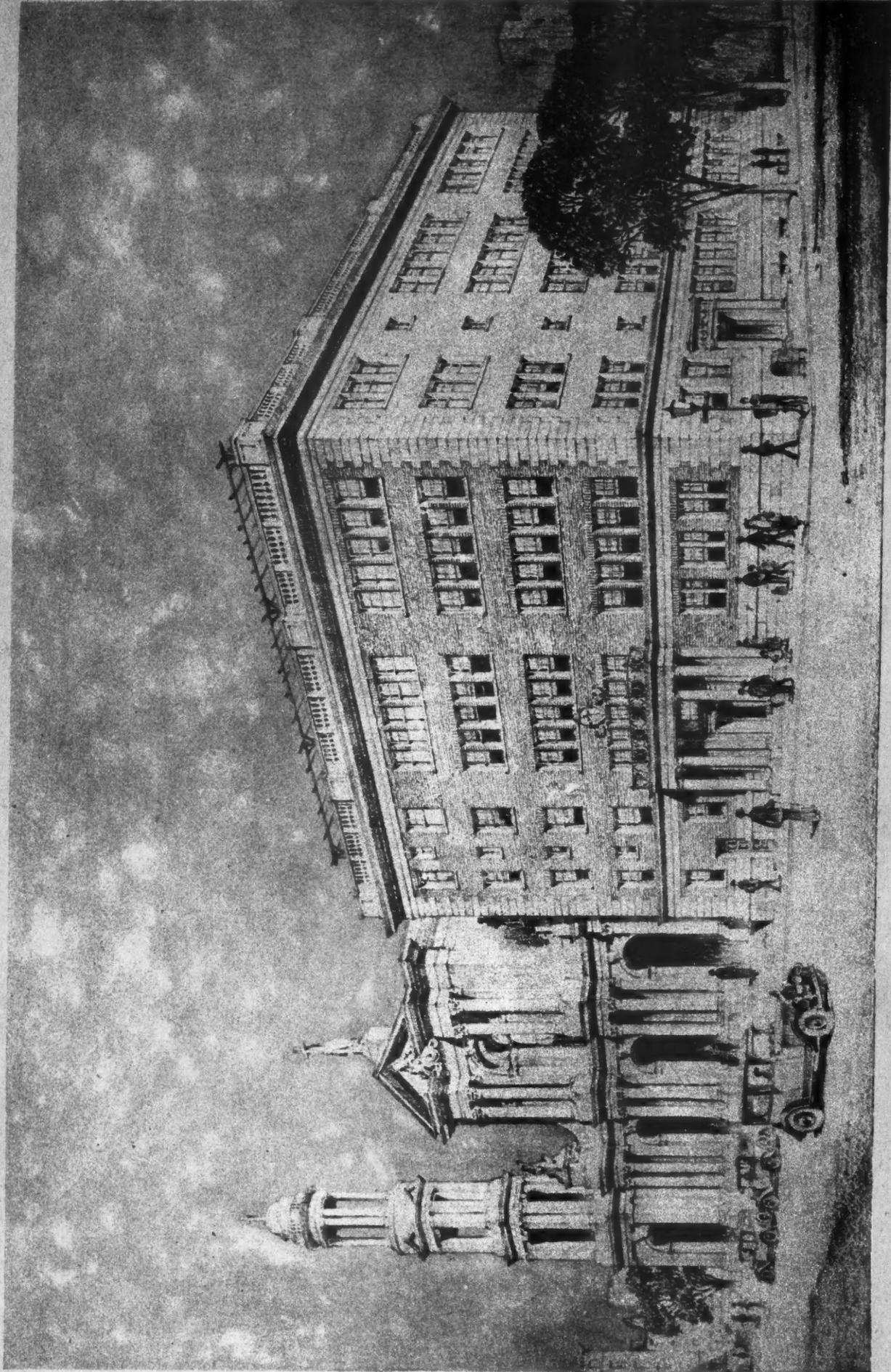


MASONIC TEMPLE for Joppa Lodge, A. F. & A. M., Minneapolis, Minn.;  
Clyde W. Smith, Architect.



PLATE 135

GOTHIC TOWER APARTMENT HOTEL, 46th Street and 6th Avenue, New York City;  
F. P. Platt & Bro., Architects.



COMMUNITY BUILDING, SCHOOL AND RECTORY for the church of Our Lady of Loreto,  
New York City; Silvis A. Minoli, Architect.

# Joins Staff of Contributors to American Builder

Floyd W. Parsons, Distinguished Writer on General Business Conditions and Current Affairs, to Present His Interesting Feature, "Everybody's Business," Monthly

## Everybody's Business

By FLOYD W. PARSON

"THE Good Old Days." What a misnomer! Prejudice was rooted deep, science condemned, and everything new regarded with suspicion. Many believed that nothing should ever be done the first time. They were sure that the really important discoveries in chemistry and physics had been made, and that future progress was dependent upon mere refinement in elements already known. No one had ever heard of anything smaller than a molecule, and the sensation of the day was Harvey's announcement of a system of blood circulation. Although cast into the Garden of the Gods, the folks of "the good old days" were content to subsist on weeds.

All worth-while advances were misunderstood and opposed. The press was dead set against the introduction of gas for illumination, chiefly on the grounds that it might encourage late retiring and frighten horses. One state taxed bathtubs \$30 a year. The Board of Education of a Pennsylvania town refused to permit the use of their public school auditorium for a debate about railroads and telegraphs on the ground that it would be rank infidelity to allow open discussion of such nefarious institutions. The waltz was denounced as a foreign abomination, for no lady could possibly allow a gentleman to place his arm around her waist. Joshua Coppersmith was suspected of fraud and jailed in New York for trying to interest people in a device that would transmit the human voice over wires, while a woman in Providence was arrested for going without a petticoat.

The people of yesterday saw Robert Fulton ridiculed, Westinghouse rebuffed and Edison jeered. They laughed at Goodyear when he became a showman and donned India rubber clothes in order to prove his point. Many of them read the words of the Ohio editor who lauded the bicycle,



Floyd W. Parsons is a graduate of Lehigh University. After serving as editor of various business publications, he became the author of the "Everybody's Business" pages which ran in *The Saturday Evening Post* for nearly four years. He is now editorial director of several business periodicals, and at the same time his writings continue to appear regularly in *The Saturday Evening Post*, *World's Work* and other magazines of national circulation.

It is probable that no other writer of business and popular science stories reaches such a large audience as does Mr. Parsons. His contacts with America's leaders of industry are unexcelled, and the organized methods he has developed to keep abreast of current happenings put him closely in touch with the advances in thought and practice in dozens of important fields of activity.

Mr. Parsons' articles are not only brimful of inspiration, but they contain workable suggestions designed to save time and effort. He is able to exercise his imagination and at the same time keep his feet on the ground. All of which is calculated to render service to busy executives who appreciate the advantage of having their opportunities broadened by a wider viewpoint.

but added, "A man has invented a horseless wagon. Some day he will go back to his grocery and do some good in the world." Yesterday was as much like the present as the Indian's smoke signal is like a flash of a radio message to a ship at sea.

Now the waltz is nothing more or less than a breath restorer to the disciples of jazz. The newly-born babe has a life expectancy of 59 years, as compared with 32 a century ago. When Lincoln was president, twenty babies out of every 100 died before a year had passed—now only ten die. No longer need our men of science turn themselves into clowns in order to get a hearing, and it takes something more than the mere effort of a utility to increase the cost of a street-car ride or the price of a telephone call to start a mob marching on the City Hall.

Smart executives have come to realize that our greatest industries are in lineal descent from research laboratories. Nearly everyone appreciates how fortunate we are to have people among us who look at the apple on the tree and wonder why it grows, rather than how it tastes; and who are more interested in the structure of gold than in its possession. This new attitude has made possible the harnessing of the River

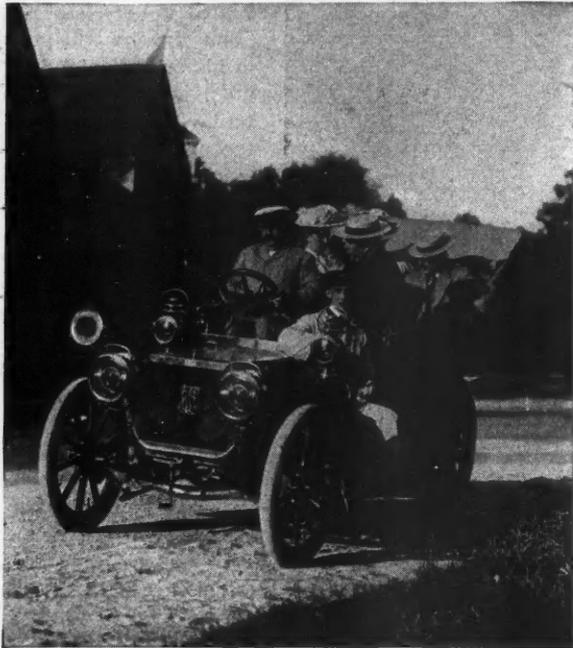
Shannon and the construction of a railroad through Robin Hood's Sherwood Forest. It has built a dam across the Jordan and put automobiles on the Roar to Mandalay.

The most startling happenings in history are now coming from men and women who, a few years ago, were classed in the category of dreamers. They are the ones who have made it possible for us to produce radio dials from the hulls of oats, buttons from corncobs, poker chips from cheese, and umbrella handles from milk. A dozen new synthetic products in the last two years have revolutionized basic businesses. Not a day passes without some far-reaching change in style, habit or viewpoint. The average person is almost as much annoyed at present when

he misses a section of a revolving door as was his forefather when he failed to catch a stage coach that ran three times a week.

No human is wise enough today to know where the benefits of a new discovery will fall. Without telephones there would be no room on city streets for people carrying important messages. Without elevators we could not live and work in skyscrapers.

It was atmospheric conditions that made England the world's center of textile manufacturing not so many years



© Brown Bros.

**There Has Been as Much Progress in Building Equipment in the Past Twenty Years as in Automobiles.**

ago. It was also climate that prevented us from locating our cotton mills down South where the plants grew. Then along came some engineers and chemists who gave the problem their attention and now we can produce indoors any kind of climate that one desires. Textile manufacture is now carried on even in Southern California, which climate, because of its extreme variation from noon to night, would have been the last one selected a few years ago in which to manufacture textiles.

This same discovery is already exerting its influence in dozens of other industries. It saved the day for the Rayon (artificial silk) business by doing away with climatic hazards. It has shortened skirts by placing attractive stockings within the reach of more millions of women. It has made it possible for New York City to house a great national convention in the summer time in a building where the weather is manufactured and "Every day is a good day."



### A. B. C. Headquarters Moves to New Builders Building

**T**HE Audit Bureau of Circulations is now engaged in moving its headquarters from the Century Building to the eleventh floor of the new Builders Building, Wacker Drive and LaSalle Street, Chicago. Movers began to pull down the machinery in the printing plant on March 26 and the complete transfer of all equipment was accomplished by April 16.

The A. B. C. is the co-operative organization to which practically all the worthwhile publications of Canada and the United States belong and through which they report to the advertising world regarding the size and distribution of their circulations and their methods of winning and

holding subscribers. In addition to the publisher members, of which this publication is one, the Bureau has in its membership most of the great national advertisers and important advertising agencies of the continent. Its managing director is O. C. Harn, for 21 years advertising manager of the National Lead Company.

The Builders Building is one of the great new structures which were started before the completion of Wacker Drive, and upper-level thoroughfare running along the southern shore of the Chicago River, which is recognized as the most desirable location for office buildings in the business section. The builders of Chicago united to erect the structure and it is looked upon as one of the finest and best arranged in the city. The Bureau's lease will run for six years.

This move will be in keeping with the rapid expansion of the Bureau and will add to its efficiency. For the first time in its 12 years, it will have its entire plant—its printing shop, its mimeographing room and its general office—on one floor. Its printing shop has been housed in the Rand-McNally Building about half a mile from the Century Building. The mimeographing room has been on the floor above the general office, requiring many trips up and down stairs daily. Furthermore, the new offices will be much more commodious than the old.

With the more than 1,450 publisher members who report semi-annually through the Bureau, and whose circulation records must be examined and reported upon annually by the Bureau's traveling auditors, the work carried on at headquarters is both extensive and detailed. The force consists of about 100 men and women, including a dozen employed at the New York City office, 152 W. 42nd Street.



### Only Chinese Hospital in America



**The Chinese Hospital in San Francisco's Chinatown Is the Only Chinese Hospital in the United States. It is of semi-Chinese architecture, the entrance being a copy of the Rockefeller Foundation at Peking, China, with a beautiful Chinese lantern at each side of the entrance.**

C. W. Geiger.

# New Uses for the Basement with Gas or Oil Heat

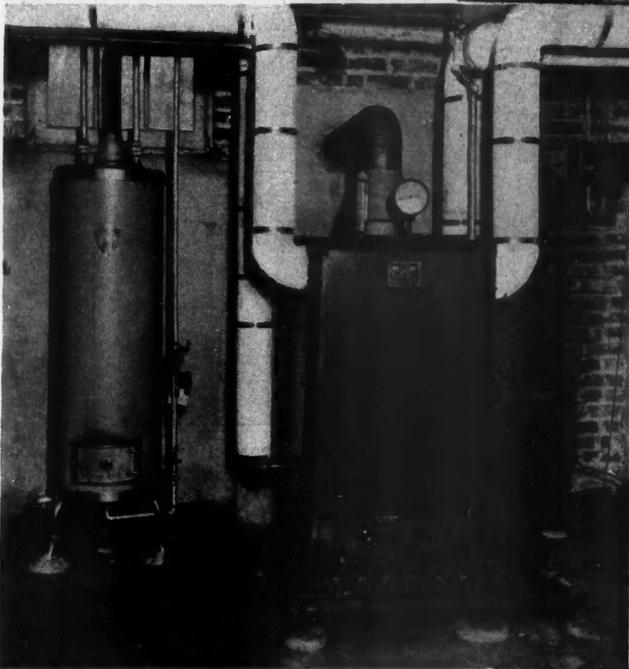
Rooms Attractive Enough to Live or Play in Can be Finished in the Basement

**T**HE possibilities of the basement for added recreational or living comfort have only been fully realized with the advent of gas and oil burning heating plants. On extremely hot days, a clean, well ventilated basement is a delightfully cool retreat and a basement dining room would be a great advantage if the kitchen and food supplies were conveniently accessible. Basement space is more often used for billiard rooms, workshops, offices or "dens," lounging rooms, sewing rooms or children's play rooms. One of the pictures on this page shows basement space being used for living and bedrooms. Another shows a kiddies' play room, where the children can have all the fun



A Clean, Comfortable Basement Fitted Up for Living and Bed Rooms. The heating plant with automatic oil burner and the hot water heater show at the left of the picture.

uses, but, if the space is to be used the year round, it is feasible to cement down linoleum. Wallboard or plaster board nailed to the underside of the first floor joists will provide an attractive ceiling when properly painted or decorated.



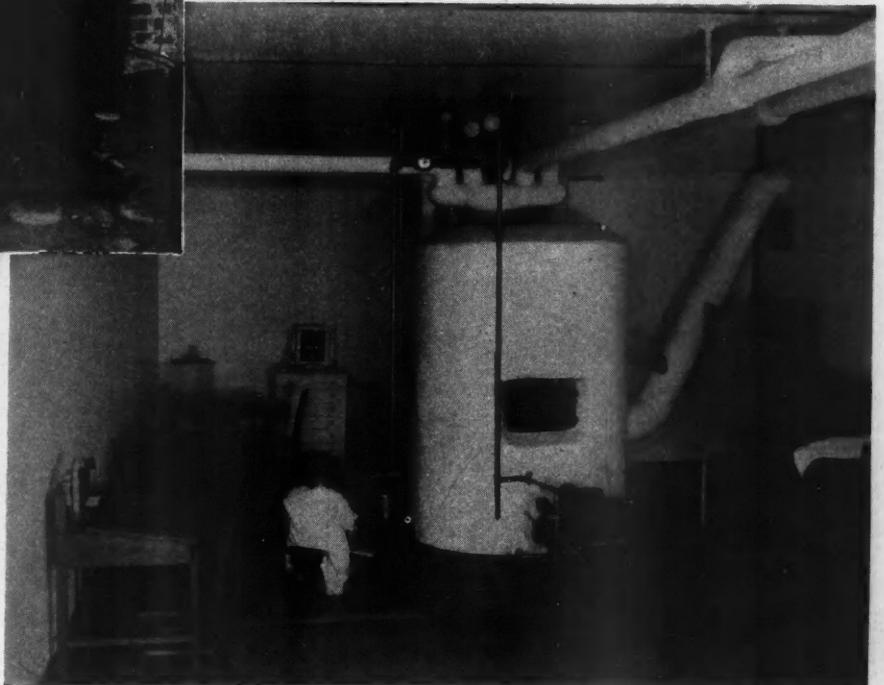
Gas Fired Boiler and Automatic Hot Water Supply Conserve Basement Space and Provide Heat Without Dirt or Dust.

and make all the noise they want.

One householder in a large residence heated by gas went so far as to install costly decorations in his spacious basement and celebrated the event with a dance there. The affair was voted a huge success.

It is essential that oil or gas burning heating plants be thoroughly insulated, so that the basement rooms may not be overheated but have a well distributed warmth.

The ordinary, well made concrete floor is sufficient for some basement



Here Is an Ideal Children's Play Room in the Basement of a House Heated by a Warm Air Furnace. The oil burner which banished the coal bin shows in the foreground.



# REAL ESTATE AND SUBDIVISION WORK

## Quality Plus Advertising

This Has Been the Success Formula of the Busby Building Corporation of San Antonio, Texas

**F**IRST, perfect a quality product, then let the world know about it," was the concise formula for succeeding in business given in a talk by Crawford H. Ellis, vice-president of the United Fruit Company, in reviewing before a group of advertisers and other representative business men, the remarkable success of his organization in supplying the world with bananas.

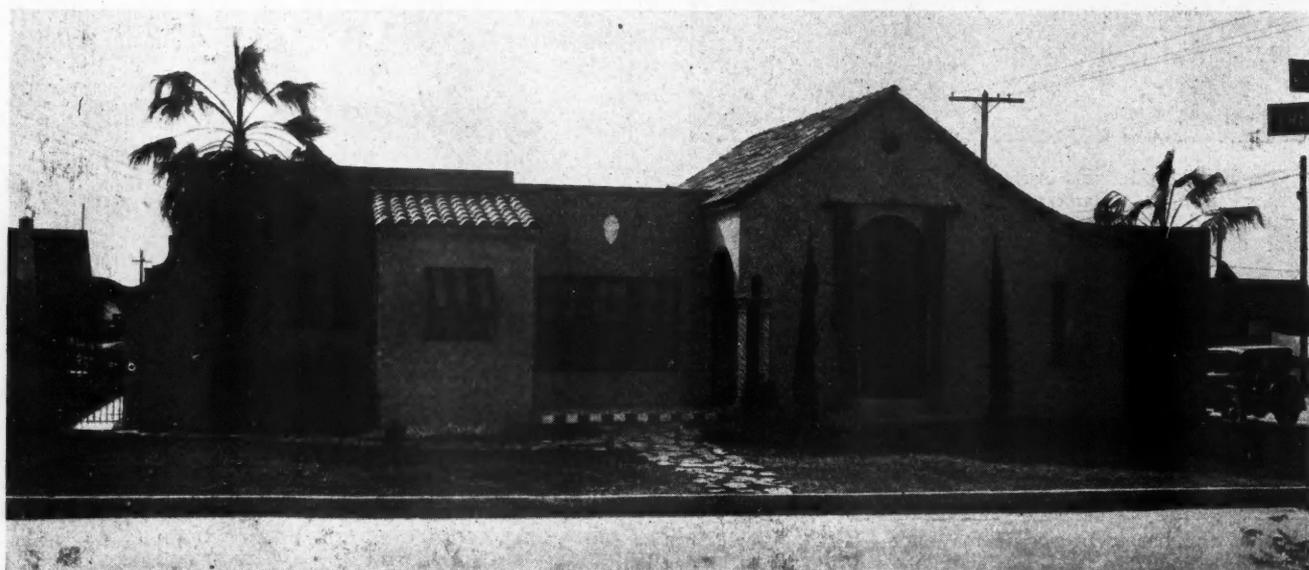
That this formula of first having a quality product and then bringing it to the attention of prospective purchasers through advertising can succeed in the home building business has been proven time and again by home builders over the nation. It has been put to the acid test and found to be effective by Leland S. Busby, president of the Busby Building Corporation, who has been building and selling homes of a distinctive type in San Antonio, Texas, for the last eight years.

But Mr. Busby is a judicious spender of advertising money. It is easy for an advertiser to waste dollars on fanciful schemes, but the permanent demonstration home that the Busby corporation recently opened at the entrance of Busby properties in San Antonio is not chimerical in the least.

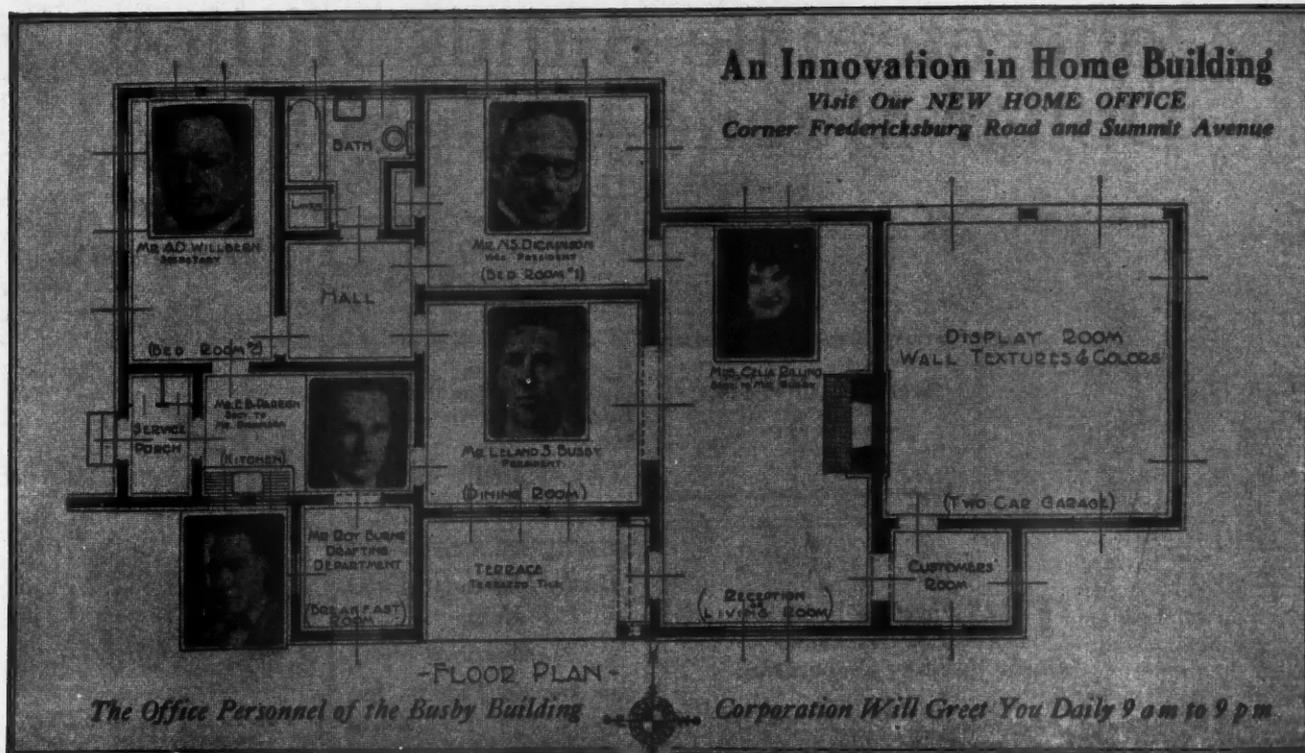
Employed as an office building, this home has utilitarian uses of the highest order, for when prospective buyers call they have right before their eyes an example of how attrac-



Leland S. Busby and Members of His Organization Grouped About a Permanent Demonstration Showing the Type of Reinforced Concrete Foundation Which Supports All Busby Built Houses.



This Demonstration Home Was Built at the Entrance of the Busby Properties and Is Used as an Office Building by This Organization. It attracts many visitors who here have an opportunity to see how attractive, well designed and well built Busby houses really are.



Newspaper Advertising That Is Both Striking and Effective Is Used by Leland S. Busby, Who Is a Judicious Spender of Advertising Money. Portraits of Mr. Busby and his organization, superimposed on a plan of the Busby demonstration house and office, were here presented in a newspaper advertisement to the prospective home owners of San Antonio, Texas, with an invitation and offer of service.

tive, convenient and permanent Busby built homes are. Commanding the entrance to properties now being developed by the Busby corporation, this demonstration building is bound to attract the favorable attention of persons as they drive past.

Of course, Mr. Busby never passed up the golden opportunity of securing publicity from the newspapers when he opened this home, but he finds a permanent display in the arcade of the Palace Theater one of the best mediums through which people are led to pay the home a visit. Thousands of people pass through this arcade each day, and many of them are bound to stop and view the enlarged, colored photographs of the Busby Demonstration Home.

With regard to this arcade display, it should not be thought that Mr. Busby uses it exclusively to show pictures of the demonstration home. Instead, he has made up from time to time enlarged views of homes that he has finished and which have been placed on the market. These serve to interest home seekers in the homes that they see pictured.

Billboards of a distinctive type are also used by Mr. Busby. He is securing good results from a board that shows two of his homes in actual colors. These paintings were made from photographs and carry a convincing note that the usual lithographed bulletin lacks.

But back of this advertising campaign stands quality houses that are in themselves permanent advertisements of Busby built homes. Mr. Busby maintains his own architectural staff, working under his direct supervision, and every home is carefully planned from the viewpoint of the location it will occupy as well as from the point of convenience in arrangement of the floor

plan. The exterior design must harmonize not alone with the contour of the site but with the type of the homes that will surround it. For this reason, the corporation controls both sides of a street or block on which it has building operations.

"I honestly believe that the very best results in city building can only be achieved when the builder controls both sides of a city block and can specify the types and character of homes that can be built there," Mr. Busby said. "If a builder can secure both sides of one or more blocks, then he can control the entire appearance of that section,

(Continued to page 138)



The Front End of the Living Room in the Demonstration House Is Used as a Reception Office and Is an Excellent Example of the Completeness with Which This Building Has Been Finished and Furnished.

# Concrete Tile Builds Million Dollar Mobile High School

By J. D. WILDER

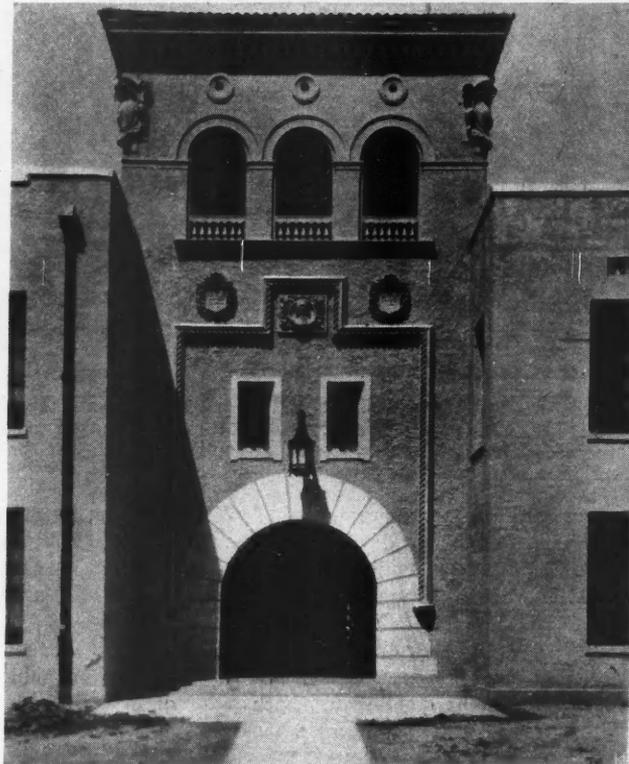
**T**HE completion late last year of Mobile, Alabama's new million dollar high school, a structure built of reinforced concrete frame and concrete tile manufactured on the school site marks a significant advance in the use of this material in the South. Concrete masonry units—block, tile and brick—now occupy a place of first importance among building materials in the South. While the production of concrete masonry units increased from 175,000,000 units in 1921 to 700,000,000 units in 1926 for the country as a whole, production and use in the South maintained a proportionate increase.

This new structure is the work of George B. Rogers, one of the South's most prominent architects. The buildings, though of no definite school of architecture, strongly suggest the Spanish style, especially in the soft tones of the buff colored stucco that covers the exteriors of all the units. An additional departure from established school construction is noticeable in the general layout of the school which is composed of five separate units of two stories each rather than one building of several stories.

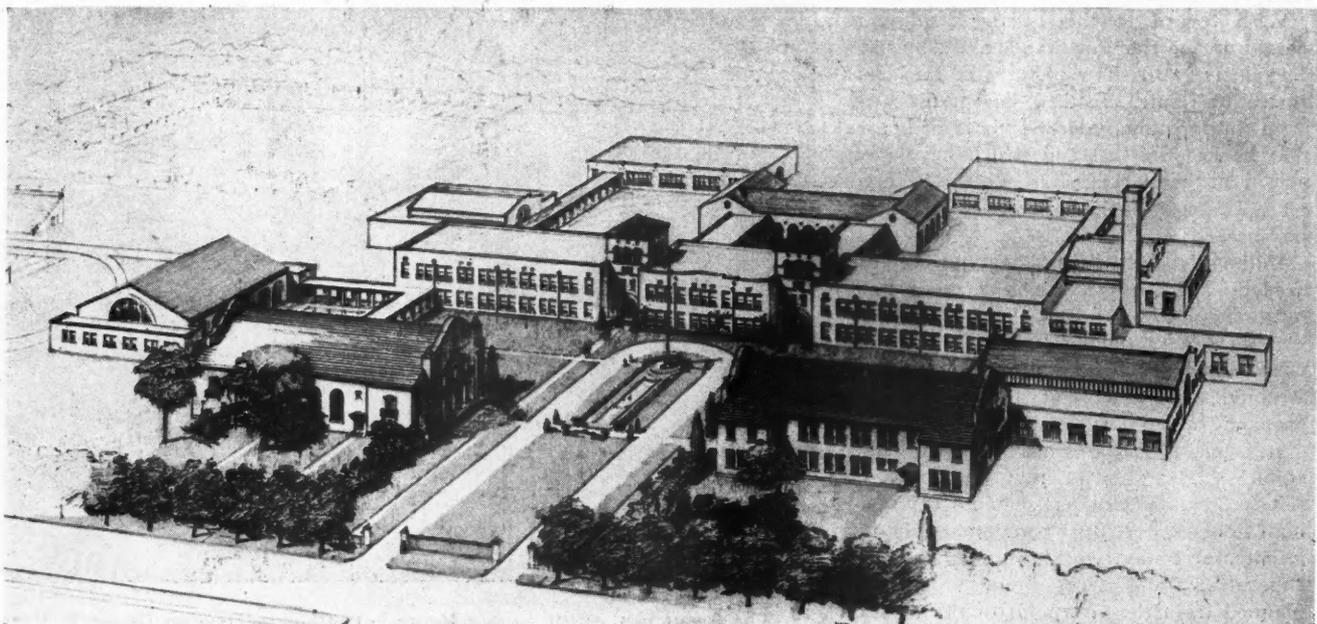
There are five separate units—an academic, main building with two other units in front of it and two more units in the rear. These separate units house the manual training department, domestic science department, biology department and an auditorium equipped with a stage and necessary accessories for the presentation of student plays and concerts. Two further units—a gymnasium and a cafeteria, are to be built at a later date. The plan of the school is such that these and other needed units can be added without destroying the beauty or serviceability of plan. At the present time there is a seating capacity for 1,700 students.

After Mr. Rogers drew up the preliminary plans for the school he spent some time in Miami studying the Spanish style of architecture. And on his return to Mobile he completely redrew his plans, incorporating many of the features he saw on the Atlantic coast.

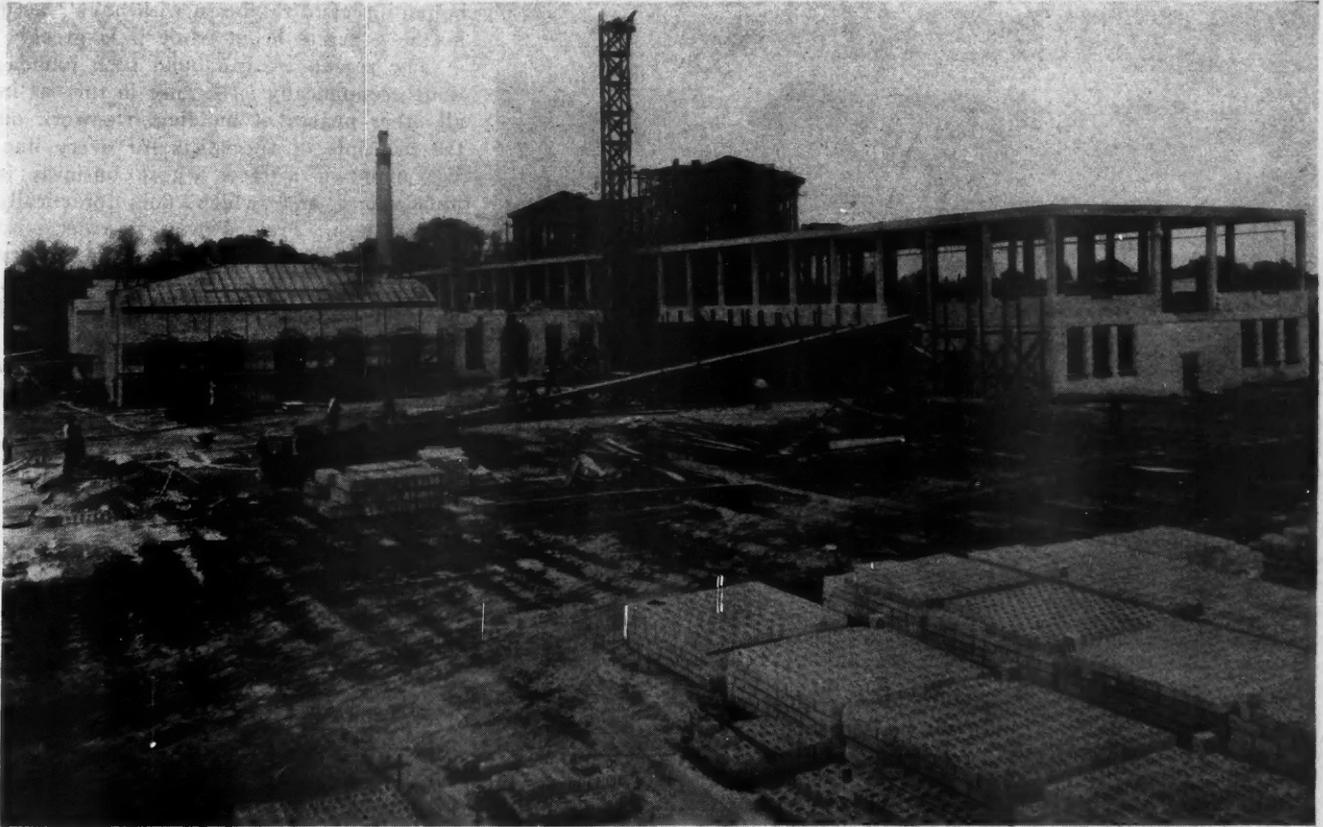
During the recent hurricane this building suffered no damage, a test showing the great strength of the structure. Concrete was used throughout the building. The structural frame is of reinforced concrete, the exterior walls are of concrete tile



Twin Towers, Forming the Entrance to the Main Building, Are the Only Break in the Severely Plain, Exterior Architecture.



Architect's Perspective of the New Million Dollar High School in Mobile, Alabama. Which Is Built of Concrete and Finished in a Buff Toned Stucco, in Accordance with the Plans by the Architect, George B. Rogers, Who Was Influenced by the Spanish Architecture of Miami, Florida.



To Avoid the Expense of Shipping, a Concrete Block Plant Was Erected on the Site of the New Mobile High School and Here More Than 300,000 Tile Were Produced for Use in Its Construction. A separate tile company was organized for the production of the tile for this building.

manufactured on the job, the floors are concrete unsurfaced and also covered with colored concrete tile, and the exterior is portland cement stucco. The structural frame is of the beam and girder type. Reinforced concrete columns support the girders which in turn carry the concrete beams and floor slabs. The walls of concrete tile are carried on the outside girders, each floor-level girder carrying the curtain walls for that one floor.

More than 300,000 concrete tile were required for the huge building. Mobile is ordinarily far removed from the center of cement production so, in order to overcome the difficulty and expense of shipping the concrete tile units to Mobile, the Toulmin Tile Company was organized and the company's first plant erected right on the school property. The tile were manufactured and cured on the grounds. Steam curing chambers were erected at the school and the tile after being molded were cured and stacked on the school grounds. As can be seen in one of the accompanying illustrations, thousands of tile were kept ahead of the building schedule so that well cured units were assured during all periods of construction.

The use of concrete tile was new to both the contractor and the workmen and although handling a new material, better time than planned for was made in erecting the structure. Accurate costs were kept during all phases of the work and upon final compilation it was found that the cost per cubic foot of enclosed space was less than any other school of the same size in Alabama. Because the tile were made on the ground there were no hauling costs and the item of breakage was negligible.

The concrete tile were fitted into the structural frame and the exterior stucco was applied directly to the tile. Furring and lathing was not used either inside or out. On the interior of the buildings the plaster finish was applied directly upon the tile just as the stucco on the exterior was put on. The exterior stucco was given an attractive Spanish texture to harmonize with the style of the architecture. The soft buff

color of the stucco has been especially commended because of its beauty and because it so well fits in with the dignity of the buildings and their architecture. In constructing the concrete floors long steel pan forms were used to lighten the floor weights. These steel forms were placed row after row over a large area of floor so that an entire section of floor or the floor for the entire unit could be placed in one continuous operation. Reinforcing for the floor slab was laid in the channels between the forms in the usual manner. When the concrete had set the steel forms were removed and used in another section of the buildings.

The concrete floors of the main corridors are covered with concrete tile designed and manufactured to give indefinite wear under traffic and to lend color and attractiveness to the corridors. Along both sides of corridors are the lockers for the students, which feature, added to the usually heavy traffic of a corridor, influenced the adoption of a tile that should be wear-proof, easily cleaned and sanitary.

The exterior architecture of the building is severely plain. On the main academic building, which is an unusually long structure, the only architectural note that breaks this severity of appearance is the twin towers which rise on both sides of the main entrance. These towers are three stories in height and topped with an overhanging and paneled cornice. Doorways in the towers are rounded and up both sides and over the top of these doors runs a carved moulding with relief panels above it. The doorways of the two buildings flanking the entrance to the main building are also ornamented with iron grilled balconies and capped half columns. Ornamental lights flank these entranceways.

The concrete tile used in the walls were manufactured by the Toulmin Tile Company. The colored floor tile used in the main corridors were manufactured by the National Cement Tile Company. The heating and plumbing contracts were handled by Leahy & Landry of Mobile and the J. W. Hull Plumbing Company of Memphis. The electrical work for the building was done by the Cox Electrical Engineering and



Thousands of Concrete Tile Were Manufactured, Cured in Steaming Curing Chambers, and Stacked on the Grounds in Advance of Their Use so That Well Cured Tile Were Assured for All Portions of the Structure.

Supply Company and the O'Donnell Electric Company, both of Mobile. The Underwood Coal and Supply Company furnished all the sand and cement for the frame work and for the tile. B. E. Buffalo & Company of Memphis were the general contractors for the buildings. Perkins, Fellows and Hamilton, of Chicago, were consulting architects for the new school.



### Quality Plus Advertising

(Continued from page 135)

and with proper designing and varying types of home he can more nearly approach perfection than is possible under any other conditions.

"He must avoid monotony as he would avoid plague. To this end each home must have a sharply individual identity and yet in its design and placement must so co-ordinate with the homes on its right and left and across the way as to be a part of the harmonious whole. Thus, the control of the planting of the parkways can be made a greater advantage than is otherwise possible."

In line with the production of quality houses, particular attention is given by the Busby Building Corporation to foundations.

"There was a time in San Antonio when foundations were a simple matter," Mr. Busby said. "An allowance of \$40 to \$50 was made for small holes in the ground, 22 to 30 inches deep, in the bottom of which a small amount of concrete was poured, and cedar post blocks were set on the concrete, extending above the ground to the desired height. That was your foundation as it used to be in San Antonio.

"Two years ago the Busby Building Corporation went on record as building only on reinforced concrete foundations for all types of homes, using the isolated pier and beam construction plan. Excavation goes down to a proper footing 5 feet square, 10 inches thick for stucco and 12 inches thick for brick buildings. A concrete pier comes from the center of the footing, connecting with a surface beam 20 inches deep, 6 inches wide for stucco and 10 inches wide for brick veneer, all concrete being reinforced with steel of a size that reputable engineers endorse, and the building is

bolted direct to the beam with bolts placed in the concrete beam while it is green.

"The reason we can build such foundations economically is because in this, as in all other phases of building, we work on the principle of specialists for every line. We maintain a crew whose business is foundations and which does practically nothing else. Trained men are a necessity in this, as in any business. I think it very necessary to have trained men for every job and a proper foreman in charge of all work to insure the best results.

"After the foundation is completed, a crew of carpenters take charge. When the building has been framed properly according to specifications, there follow the various and sundry groups who do the flooring, the sheathing, the plumbing, the wiring, the roofing, etc., each job being done by a special crew of experts in their respective lines, who, like the foundation men and the framers, go from one job to the next as rapidly as the first is completed. And thus from operation to operation, the house is completed.

"Building as many homes as we do, it is vitally important that we should avoid repetition and monotony in texture and color no less than in exterior design. I always take the position that the man and woman who buy their home ready for occupancy are entitled to the same consideration as those who plan their structures in minute detail. In each instance they want something different, something new, and it's my job to provide just that."

As mentioned before, Mr. Busby has been building homes in San Antonio for the last eight years. Of late he has been specializing in homes of the Mediterranean type, producing some novel designs. The Demonstration Office home, referred to above, is an example of pleasing Spanish architecture. Nearly all of the Busby homes have either stucco or brick exteriors. They are built to sell at \$7850 and up.

A. W. Roe.



### Building Officials Conference

THE thirteenth annual meeting of the Building Officials Conference was held at the Hotel Sherman, Chicago, from April 25 to 29, inclusive, and the program, in addition to numerous important speeches and discussions, included trips to some of the industrial plants in the vicinity of Chicago.



### Wood an Important Fuel

IN connection with the observance of American Forest Week a most surprising fact was brought out by the American Forest Week Committee. It is that more wood is used every year to heat the houses of the American people than to build them.

"Surprising as it is to learn that a greater quantity of wood, used as fuel, goes up in smoke each year than goes into our dwelling," says the Committee, "the fact is borne out by statistics of the United States Department of Agriculture which show that 9,500,000,000 cubic feet of wood is removed from the forests annually for fuel and 8,256,000,000 for lumber."

And these are only two of the 4,500 uses of wood, many demanding large annual quantities and new ones being added constantly. These facts indicate beyond a question of doubt that there is no danger that wood will cease to be a necessary commodity in this country.

# Filling Station Design

## PART II—Proper Size Lot—Layout—Arrangement of Drives, etc.

*A series of four articles prepared by a member of the American Institute of Architects for S. F. Bowser & Co., pioneer manufacturers of gasoline pumps and other filling station equipment.—Editor.*

*(Continued from page 195, April issue.)*

**W**HILE this general crouping of filling stations may be carried further, yet nearly every filling station may be properly placed in one of them and in some cases a filling station may be placed in two groups. The following discussion of the layout, drives, building and landscaping will apply to all groups.

In the first place it is absolutely essential that the lot be large enough for the needs of the filling station. While this requirement is quite obvious, yet it is surprising to note the number of lots that have been bought for filling station uses, which, while not quite impossible, are rather impracticable and, at best, offer a combination of crowded and dangerous drives and inadequate building facilities. The size for a corner lot should not be less than 50 feet by 50 feet and preferably 60 feet by 80 feet, or longer. For an inside lot the size should not be less than 50 feet deep by 70 feet frontage, while a frontage of 80 feet would be much better. The above sizes will allow for a small building about 12 feet by 18 feet and the installation of a drainage pit, but if a greasing rack is to be installed and space provided for air and water service then a larger lot will be needed. It is much better to have plenty of room and space which will be inviting to motorists than to have a crowded station into which motorists would not want to drive except in case of absolute necessity.

Under ordinary circumstances the drives should be about 12 feet wide and the pump island, if not carrying canopy supports, should be not less than 2 feet 6 inches wide. A step at least one foot wide should be between the inside drive and the building. If there is a canopy over the drive

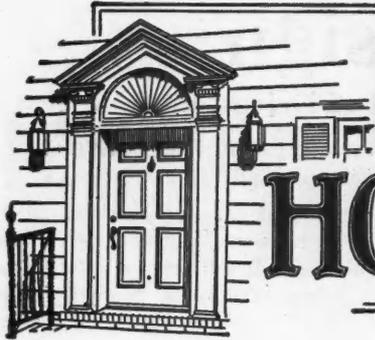
and canopy supports are carried on pump island, then the pump island should be at least one foot wider than the canopy support so that the island will form a protecting curb for the supports. The pump island should be of concrete and should be about 4 inches above the drive. Where the drives are practically straight or approached by long-radius curves and where space is at a premium the width of the drives may be reduced to 10 feet 6 inches. Where the drives are approached by sharp curves it may be necessary to widen them to 13 feet or 13 feet 6 inches. However, the 12-foot width drive is the best and will serve very well in all but the most unusual cases.

The air and water tower should be so located that cars may approach and depart without interfering with cars approaching or departing from the gasoline pumps and should also be available to cars leaving or approaching the gasoline pumps. The locating of the air and water tower on one side of the building and the drain pit on the other side out of the direct path of approaching or departing cars is a logical arrangement. The placing of an air and water tower at the curb for passing cars is encouraged by some filling station operators, as it keeps the second tower in the station proper, available for customers, and makes it easier for those not needing gasoline or oil at the time to fill their tires and radiators without inconveniencing the attendants, or blocking the entrance of other cars. Of course, quite a few people use this service who never patronize the station. But that in itself is negligible and might be the means of eventually bringing in more business. Provision should be made for water on the

*(Continued to page 194)*



Filling Station at Great Neck, L. I., N. Y. Stucco is bright orange, window and door trim light blue, roof intermingled brown and blue.



# DETAILS OF HOME BUILDING

## Characteristics of the Spanish Type

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

THE discussions to follow on the characteristics of different types of homes relate to somewhat delicate subjects. The study of architecture implies a study of the history of architecture, but it should demand a study of history, or, better still, of tradition. Just now America is fortunate in having a variety of traditions from which to draw in building the more pretentious homes.

The Spanish type of home has a full quota of ancestors. Going back to the beginning, we contrive to find Spaint with every type of climate, from a warm, moist west coast, up the hills to a sharp, vigorous atmosphere and landscape, across a dusty, flat, treeless plain, and down to a nearly tropical Andalusia. Weather of all sorts, topography of all sorts. Then we have the inhabitants. The original natives have lost themselves like the American Indian, the Romans control the country, the northern barbarians succeed the slipping Romans, and they in turn slip so far as to be run out of the picture by the spreading Mohammedans.

Rome always left her mark in roads, walls, bridges and monuments, especially masonry arches. The Goth at that time left nothing that was not useful, and he had little use for anything. But the Mohammedan spreading from his tribal life in Arabia took along a patient culture of his own, picked up his workmen en route, and by the time he had dusted himself off and settled in Spain, he was ready to enjoy himself. Since he stayed there many centuries we hope he did, for some of his architectural marks are still worth striving for.

Taking it all around Spain is a rough land in some respects. Hence the Spaniard has exceeded most of us in methods of providing enduring comfort. His ease is not a matter of laziness, but a consequence of studied decorum. When he is at home he is certainly "at home." He is as much averse to spring house-cleaning as I am. And therein lies the secret of the Spanish type. It is devoid of dirt catchers. On this practical side we wish to point out that the plain stuccoed walls, tile and little or no paint, simple composition, awnings, or very plain shutters or grills, in fact, "nothing elaborate" marks the real Spanish house. For its chief characteristic we should put down "plain."

Now, "plainness has a closer relation to beauty" than any word I know. Most plain things have been relieved of all the non-essentials and are therefore comforting. And most plain things have arrived at that state by a long process which has provided better taste in selection. For example, Fig. 4 shows a house wall that would look blank to many. It is even quite Mexican and stands, no doubt, in a rather hot, bright locality. Suppose there were more windows, a pavement, and a show of roof. Would the place be comfortable to the eye and would the cluttered shadows show up so well? Scarcity of these windows and doors

indicates that there is an inner court cool enough to persuade the owner that he is little interested in the stranger's viewpoint.

In Fig. 6 we come to a hill land and a more generous setting. You may notice here that the best type does not stickle for form or structure. The roof is cedar shingle. And a balcony roof is also shingled. There is not a whit of detraction in that. (If necessary you can put on wheat straw thatch and a five-eighths pitch roof and be as Spanish as ever.)

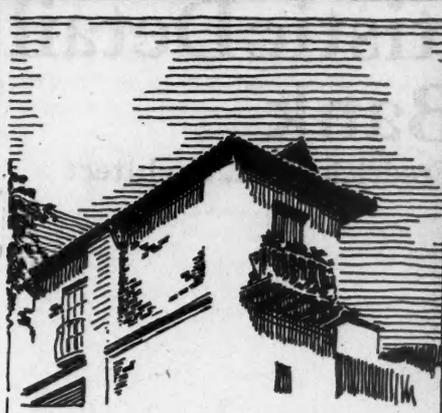
This house has a chimney where every one can see it. When you are tempted to hide the chimney to prove your Spanish style think of what chills Don Quixote suffered for lack of a hearth. Bear in mind, please, that reference is not made to the Mexican desert type of house nor to those localities where the real estate men never heard of a natural frost. This deals with such places as you will find in the western hills, or the plain ranchos, or along the warmer seacoasts.

Fig. 5 shows a porticoed entrance which includes an elliptical masonry arch and a pointed series on typical spindles. Both are true to form, but as separate examples. The inadequate Moorish pillars with the heavy ornamental arches are real beauty, even if the Moors themselves did bolster them with timbers, and they can furnish a fine contrast for the plainer background. But an elaborate background will tend to muss it all. These arches curtaining a walk or terrace will give inspiration to a gardener.

In Fig. 6 you will see a peeling stucco disclosing the rough masonry. The climate was too wet for the plaster, or so it was in Spain, perhaps. However, the wall would look better intact. Here it would be well to point out that Spanish types do not bar brick or stone masonry. Many of the handsomest are so composed. But what all of the walls do require is color, as Alhambra, the red, or the total of all colors, pure white.

On the inside the building is often plain in the extreme to allow an assortment of personal effects. More than in any other dwelling, the furnishings of a Spanish home are personal. Not knickknacks, or a set of period furniture, or "a few good etchings," as Bunker Bean puts it. The rooms are, therefore, on a more intimate standing, there are arches instead of doors, and consequently less trim. Since the owner may require to walk in or out more readily, windows reach to the floor in many places.

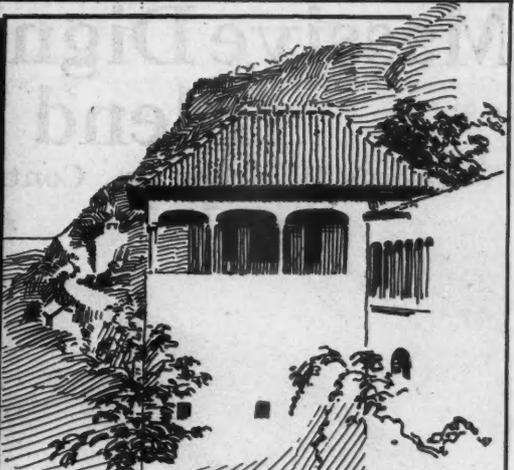
The walls are usually built for convenience with niches for shelves and deep set window ledges for seats. The fireplace is part of the wall, but a fireplace nevertheless. The ceilings may be low, beamed or smooth, or for coolness, as high as you like. The chimney shown in Fig. 7 would look much better under a high ceiling. The floors are smooth and hard and usually dark.



THE IMPRESSION OF HEIGHT.  
FIG. 1.



FIG. 2.



THE APPEARANCE OF DISTANCE.  
FIG. 3.

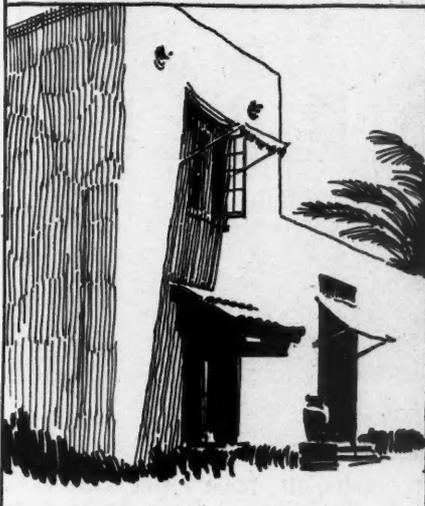


FIG. 4.  
SIMPLE LINES.



FIG. 5.  
MORE COMPLEX  
AND A RATHER STRANGE ONE.

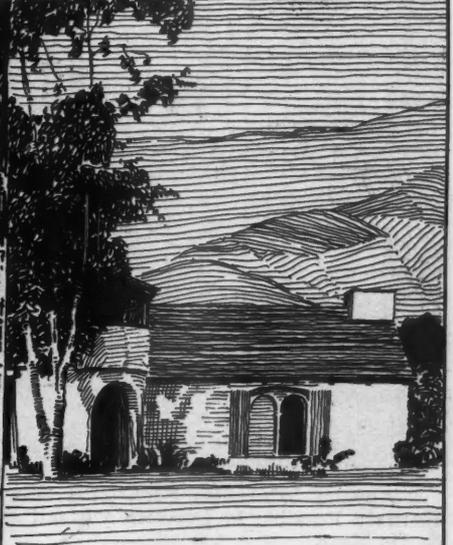


FIG. 6.  
PLAIN.  
AN UNUSUALLY FINE SPANISH  
TYPE WITH PLENTY  
OF HISTORICAL AND  
NATURAL BACKING.  
NOTE THE ROOF.

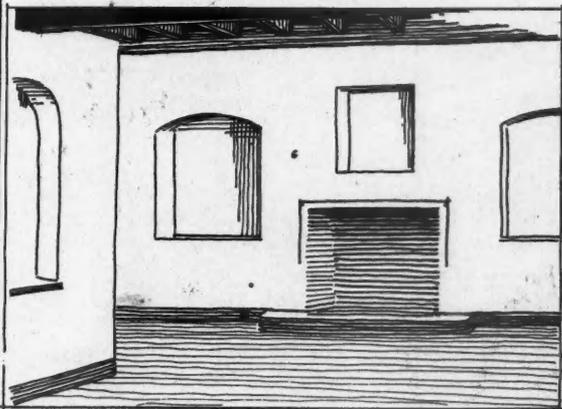


FIG. 7.  
A BEAM CEILING, PLAIN, THICK  
WALLS, AND A SMOOTH, COMPO-  
SITION FLOOR. AN AVOIDANCE OF  
DUST AND A CONSEQUENT COOLNESS.

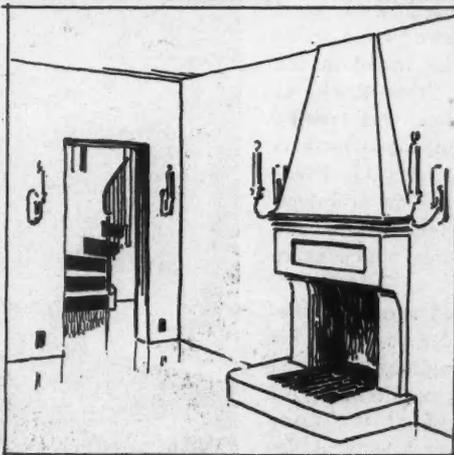
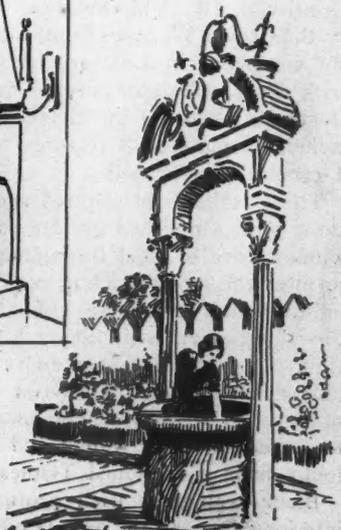


FIG. 8.  
A MORE ELABORATE  
HEARTH AND ONE A  
LITTLE TOO HEAVY  
FOR A LOW CEILING.



*U. L. Sherman 7-4-27*

# Massive Dignity and Artistic Detail Blend in Small Bank

George W. Stiles Co., Contracting Engineers—H. Fredrick Beck, Architect



Anyone Who Has Seen This New Building of the Moore State Bank, at Monticello, Ill., Must Agree That It Is Entirely Possible to Produce a Small Bank Building Which Will Live Up to All the Traditions of Bank Architecture at Its Best.

**A**N example of the small bank building in which the massive type of architecture has been used with good effect, with its severity relieved by a refining touch of detail, is to be found in the new home of the Moore State Bank, at Monticello, Ill. This building was erected by the George W. Stiles Company, contracting engineers, of Chicago, with H. Fredrick Beck, Chicago, serving as architect. It covers a plot 40 by 93 feet in area and includes a number of features which make it especially noteworthy.

The exterior is of selected statuary limestone with a polished granite base and the windows are of steel throughout, designed to meet the most exacting requirements of lighting and ventilation and at the same time harmonize with the architectural design. The main entrance doors are glazed, hollow bronze and the interior fixtures are of polished rose tavernelle marble with a top screen of black walnut and glass. The lobby floor is of honed Tennessee marble.

Black walnut is used profusely in the interior finish and the private offices, includ-

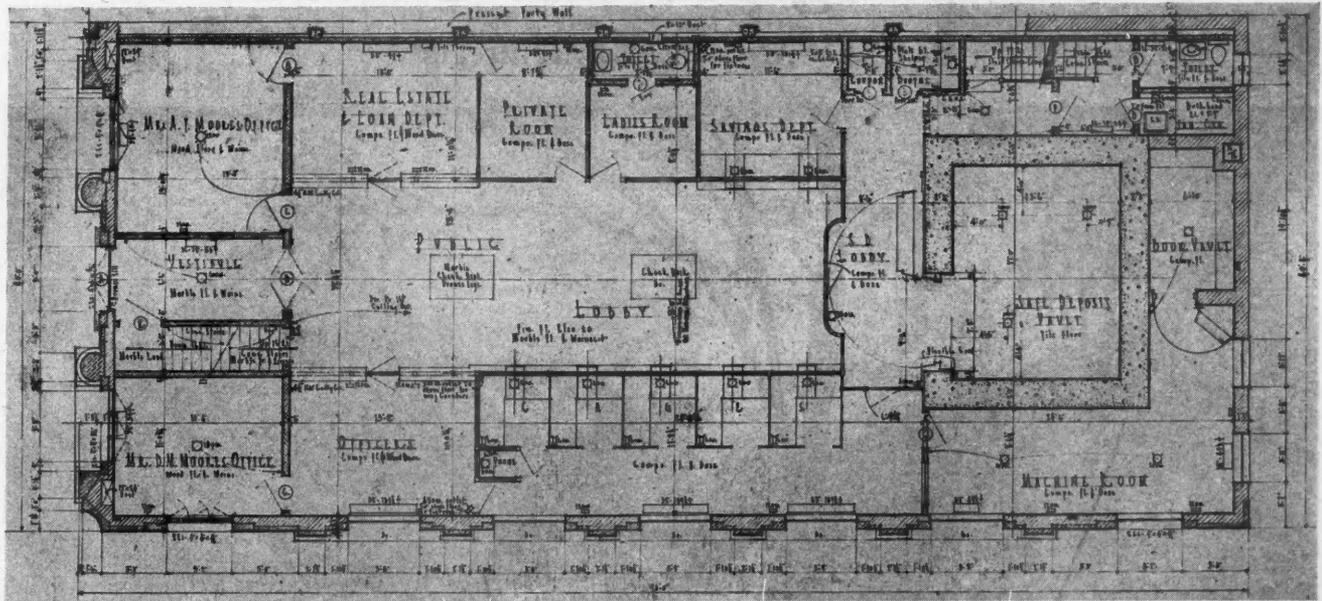


In All the Private Offices Black Walnut Woodwork, Paneling, Floors and Furnishings, Are the Predominating Feature Achieving a Sense of Solid Dignity.

cluding those of the Moore Investment Company, which is quartered on a mezzanine floor, are paneled in this wood and even the floors are finished in native black walnut produced at a local mill. One wall of the main banking rooms has a series of five panels decorated with life-size

mural paintings representing Art, Industry, Commerce, Agriculture and Science, and the opposite windows are draped with neutral toned velour hangings.

A portion of the basement is devoted to a community room, fully equipped with stage, ante-room and kitchen.



The Main Floor Plan Shows the Arrangement of the Usual Private Offices, and Departments, Tellers' Cages, Book and Safety Deposit Vaults. Above one end a mezzanine floor provides space for the Moore Investment Company, while in the basement there is a community room for local meetings and other gatherings.



The Main Banking Room Is Finished in Marble for the Floor, Marble, Black Walnut and Glass for the Top Screen and Ornamental Plaster for Ceiling and Cornice. At the left may be seen five arched panels in which mural paintings represent Art, Industry, Commerce, Agriculture and Science.

# Planning the School House is Building for the Future

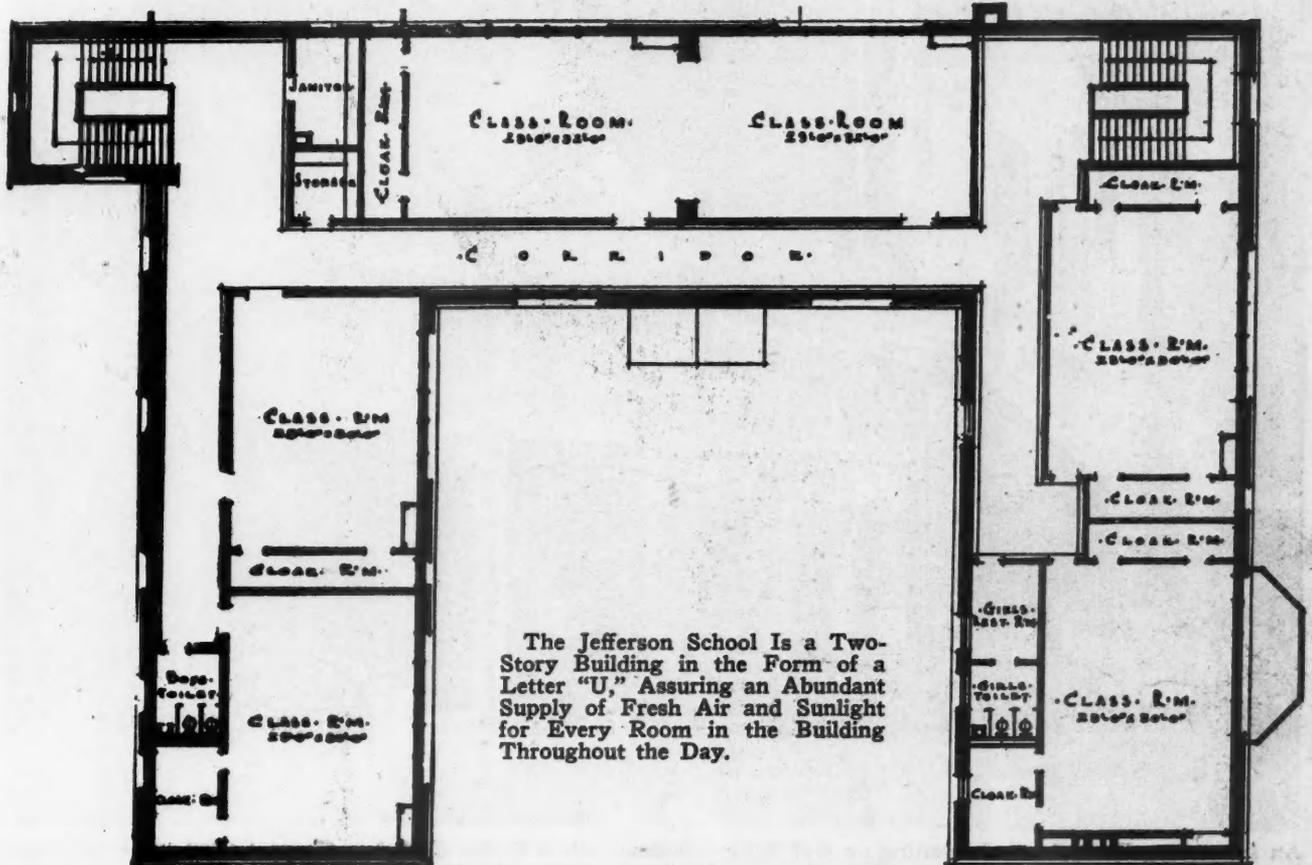
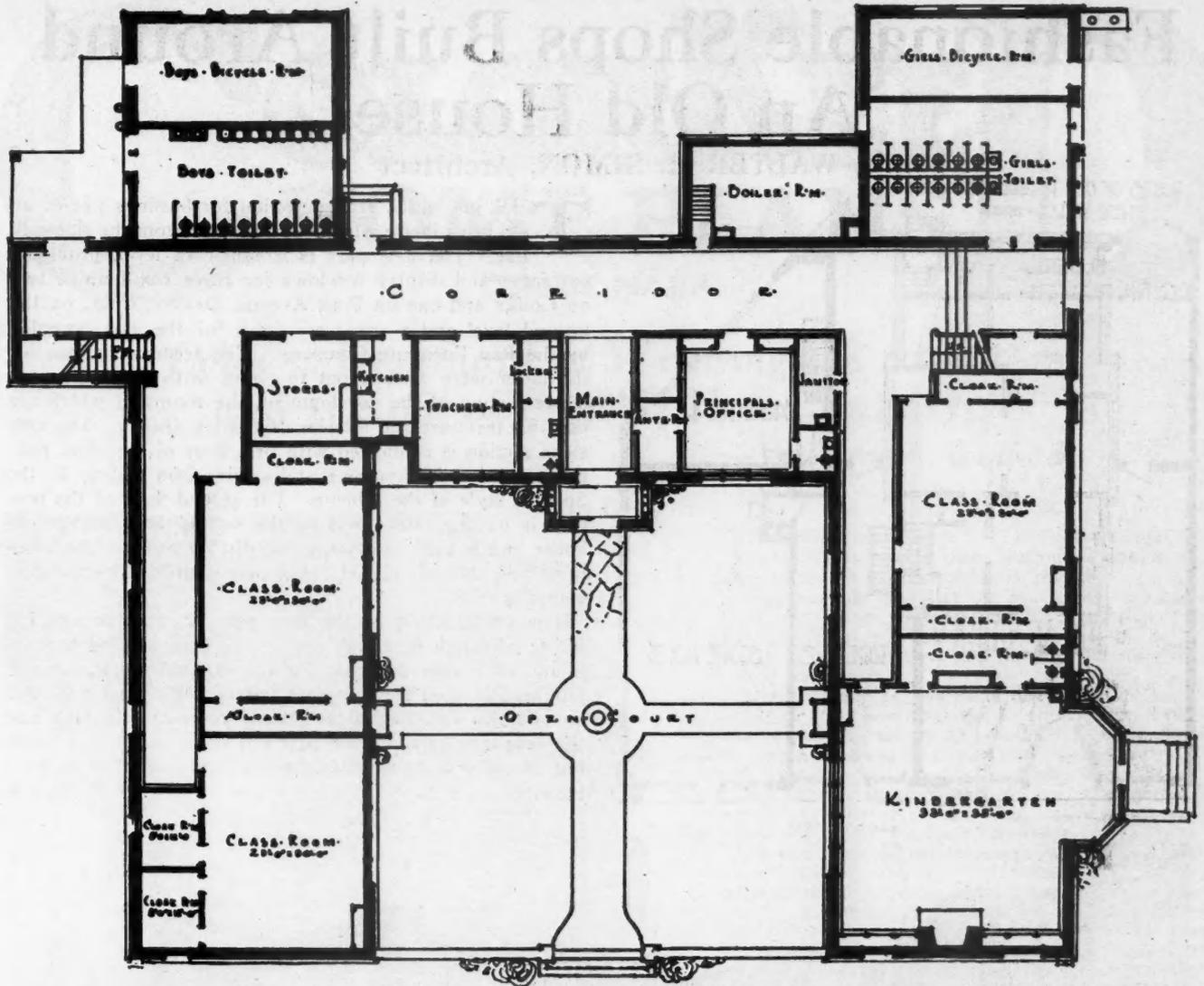
DEAN AND DEAN, Architects



The Jefferson School Building in Sacramento, Cal., Is a Substantial Piece of Evidence That the Community Appreciates the Importance of Providing Its Children with the Proper Equipment to Prepare Them for the Future Years.



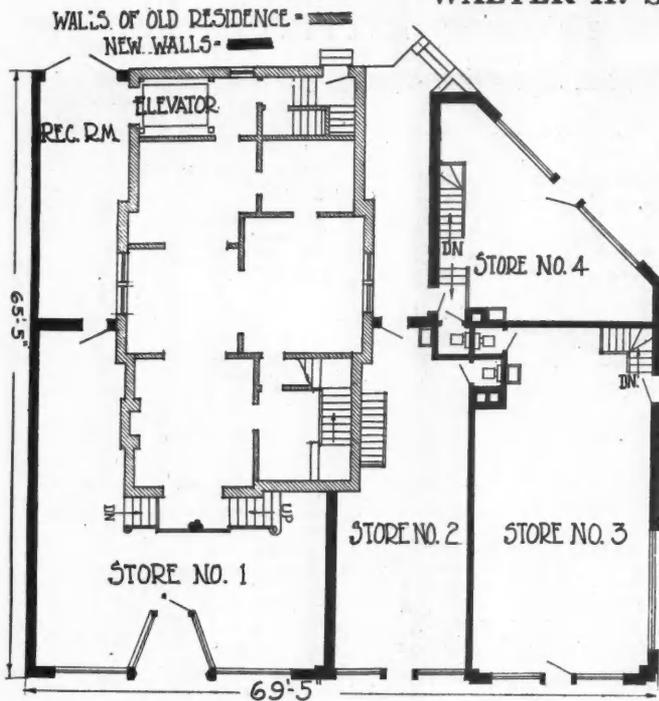
The Kindergarten Room Is Light and Cheerful and Well Ventilated, a Place Where the Smallest Pupils Can Be Kept Busy and Happy at the Small Tasks Which Form Their First Experience in the More Formal Type of Education Which Begins When They Enter the Public School.



The Jefferson School is a Two-Story Building in the Form of a Letter "U," Assuring an Abundant Supply of Fresh Air and Sunlight for Every Room in the Building Throughout the Day.

# Fashionable Shops Built Around An Old House

WALTER H. SIMON, Architect



**T**HE job was a reconstruction for business use of an old brick house which set well back from the sidewalk line. The new part is irregular in level, providing entrances and display windows for three small units, two on Colfax and one on Park Avenue, Denver, Colo., on the ground level and a two-story front for the part occupied by the Rau Furniture Company. The accommodations for the latter were worked out to tie up with the older residence section of the development, the rooms of which are used for furniture and interior decoration display. The new store section is connected with first floor of the older residence section by concrete stairs with iron railing in the Spanish style of the scheme. The second floor of the new part is on the same level as the second floor of the old house and is used as a large rug display room. The basement and attic of the old house part is utilized by the Rau company also.

The construction of the new part is of brick and the facing of rough cast pink stucco has been applied both to it and as a new covering for the original house. A tile bulkhead is used for the store fronts. We must vote this an effective handling of a difficult reconstruction job and the resultant building one that not only serves new needs but is, too, a handsome improvement for that part of the city.

THEO. M. FISHER.



An Interesting Example of Converting an Old Brick Residence Into a Group of Modern Shops, Colfax and Park Avenue, Denver, Colo., Walter H. Simon, Architect.

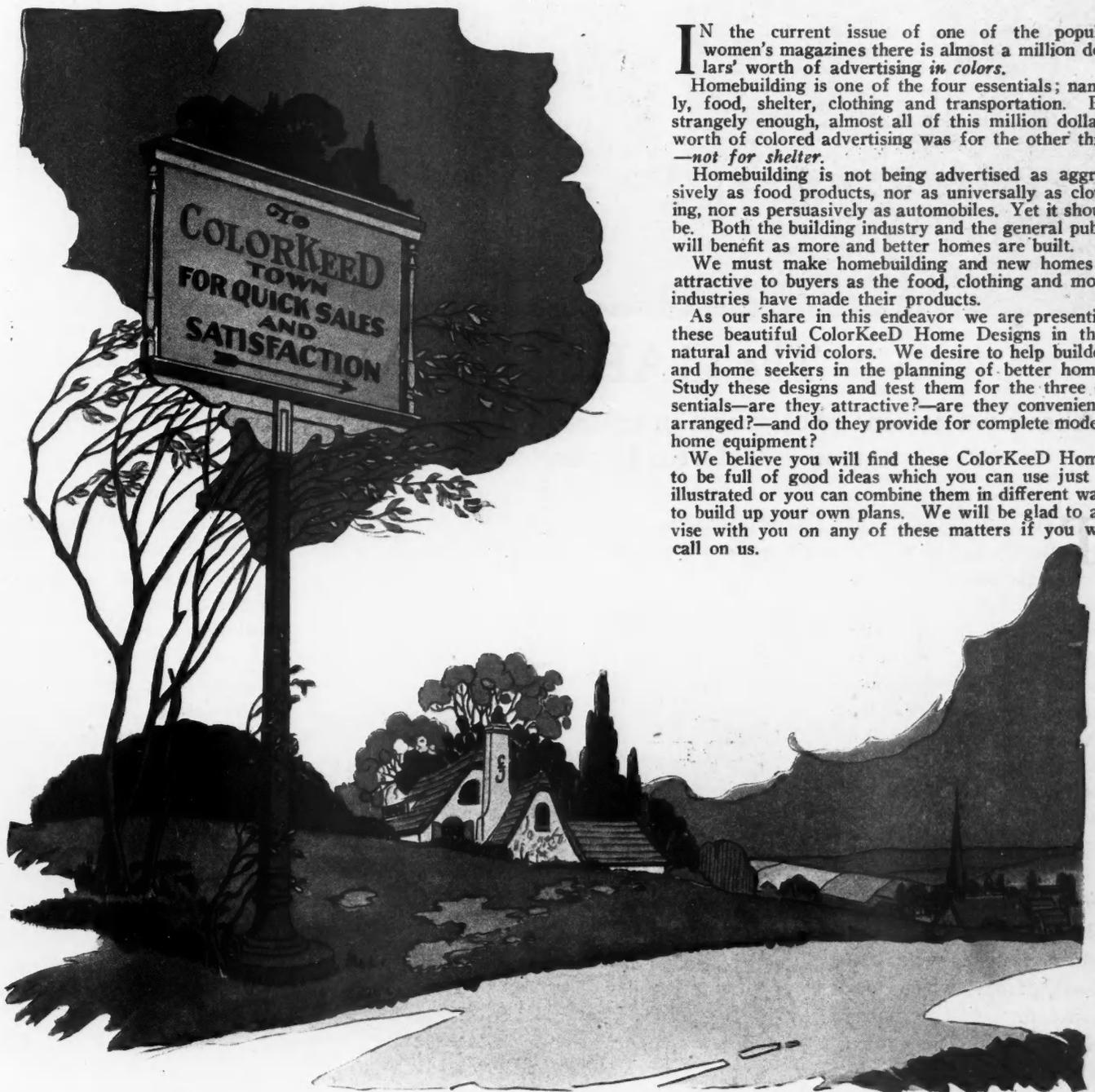
# COLORKEED

## HOME PLANS

TRADE MARK

*"Color is Dominant in Winning the Attention  
and Interest of Possible Home Builders."*

*—William A. Radford*



**I**N the current issue of one of the popular women's magazines there is almost a million dollars' worth of advertising *in colors*.

Homebuilding is one of the four essentials; namely, food, shelter, clothing and transportation. But strangely enough, almost all of this million dollars' worth of colored advertising was for the other three —not for shelter.

Homebuilding is not being advertised as aggressively as food products, nor as universally as clothing, nor as persuasively as automobiles. Yet it should be. Both the building industry and the general public will benefit as more and better homes are built.

We must make homebuilding and new homes as attractive to buyers as the food, clothing and motor industries have made their products.

As our share in this endeavor we are presenting these beautiful ColorKeeD Home Designs in their natural and vivid colors. We desire to help builders and home seekers in the planning of better homes. Study these designs and test them for the three essentials—are they attractive?—are they conveniently arranged?—and do they provide for complete modern home equipment?

We believe you will find these ColorKeeD Homes to be full of good ideas which you can use just as illustrated or you can combine them in different ways to build up your own plans. We will be glad to advise with you on any of these matters if you will call on us.



## The GARDENDALE

Above we present photograph in colors of this modern city home with attached garage—ColorKeeD plans on the opposite page.

**T**HE present-day home makes provision for the family car in a heated garage or motor room attached directly to

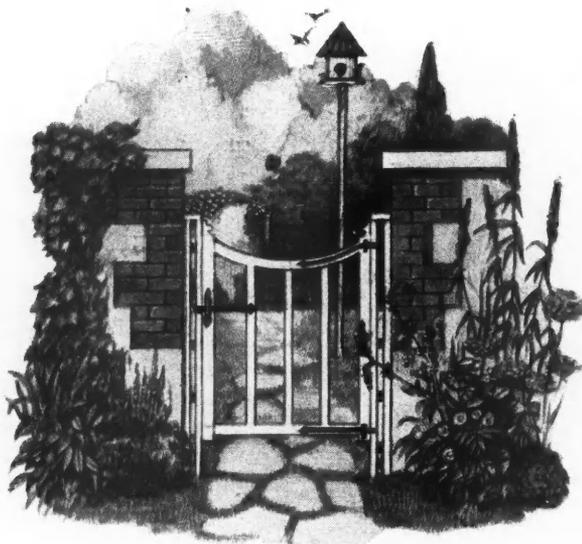
the house. It is not an easy problem of design to handle this attractively; yet satisfactory and pleasing results are possible, as witness the illustration above. The garage balances the sun room, and the space between is a flagstone terrace.

The main entrance to this house is through the attractive gateway at the right. This side entrance opens into a vestibule with coat closet, from which one passes to the large central living room. The garden side of the house has the dining room, breakfast

room and kitchen. The second floor shows three large bedrooms, sleeping porch and bathroom.

The basement plan illustrated on the opposite page will serve not only for this design but also will prove a suitable guide for all of the other designs insofar as desirable basement equipment is concerned.

Notice in particular the modern equipment and appointments recommended for this home as indicated by the small numbered circles and explained in the Key to Equipment on the opposite page. Include these modern improvements and guarantee to yourselves the permanence of your home investment.

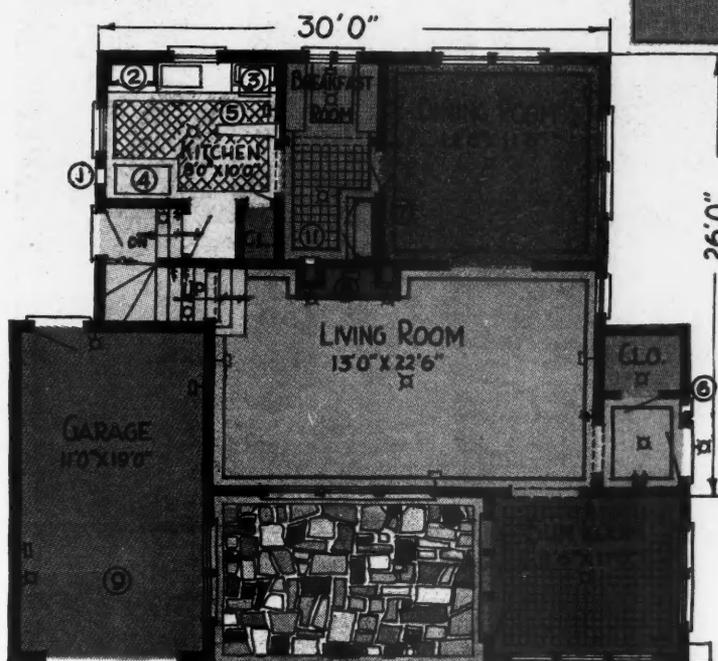
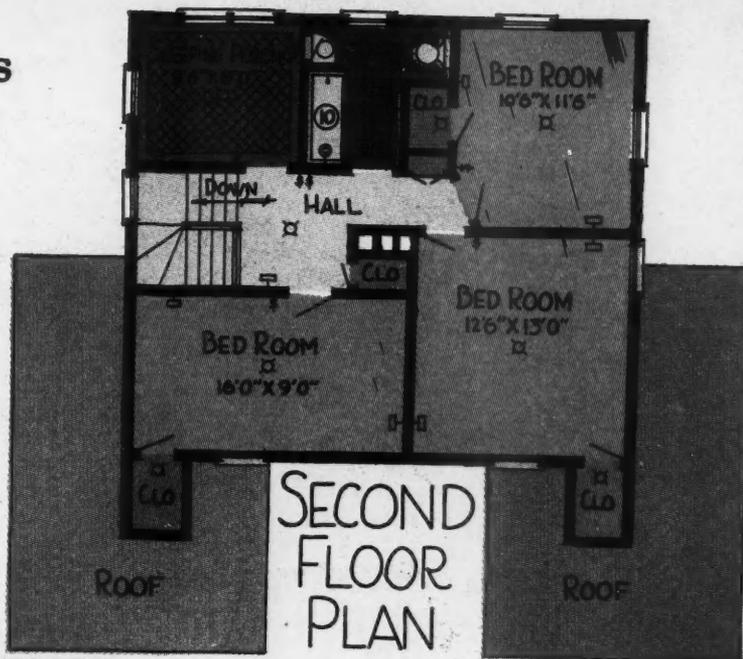


Detail of Entrance Gate

# The Gardendale Floor Plans

## Key to Equipment

- |                                    |                     |
|------------------------------------|---------------------|
| ① Fan Ventilator                   | ⑭ Water Meter       |
| ② Kitchen Cabinet                  | ⑮ Laundry Drier     |
| ③ Electric Refrigerator            | ⑯ Ironing Machine   |
| ④ Range                            | ⑰ Washing Machine   |
| ⑤ Built-in Ironing Board           | ⑱ Laundry Stove     |
| ⑥ Built-in Mail Box                | ⑲ Electric Panel    |
| ⑦ Thermostat                       | ⑳ Heating Plant     |
| ⑧ Fireplace Throat and Damper      | Weatherstrips       |
| ⑨ Coal Chute to Fuel Storage Below | Storm Sash          |
| ⑩ Tub Shower                       | Screens             |
| ⑪ Incinerator                      | Lighting Fixtures   |
| ⑫ Water Softener                   | Convenience Outlets |
| ⑬ Hot Water Supply                 | Water Supply System |
|                                    | Radiant Gas Heaters |
|                                    | Casement Windows    |



## KEY TO ELECTRICAL SYMBOLS

- |                      |                    |
|----------------------|--------------------|
| □ CEILING OUTLET     | ⊠ FLOOR RECEPTACLE |
| ⊞ BRACKET OUTLET     | ⊙ SPECIAL OUTLET   |
| ⊡ CONVENIENCE OUTLET | ⊣ SWITCH           |

FIRST FLOOR PLAN

## COLORKEY HOME PLANS

- |  |               |
|--|---------------|
|  | Living Room   |
|  | Dining Room   |
|  | Kitchen       |
|  | Pantry        |
|  | Halls         |
|  | Closet        |
|  | Bed Room      |
|  | Bath and Lav. |
|  | Porch         |
|  | Roof          |
|  | Basement      |
|  | Fruit Cellar  |
|  | Fuel Room     |
|  | Stairs        |



BASEMENT PLAN

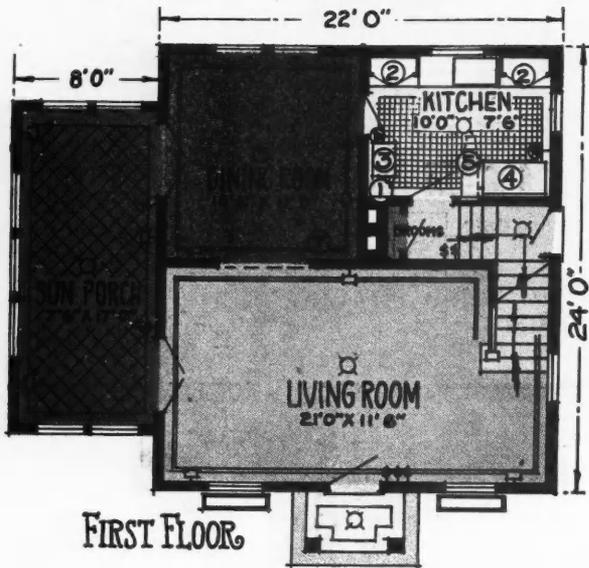


## The GARWOOD

MORE houses of the square type are built than any other because this style combines the maximum of economy and convenience. In addition to these, The Garwood has unusual attractiveness. The ColorKeeD Plans show six rooms and bath besides the big sun porch in a house 24x22 feet, plus the eight-foot porch addition.

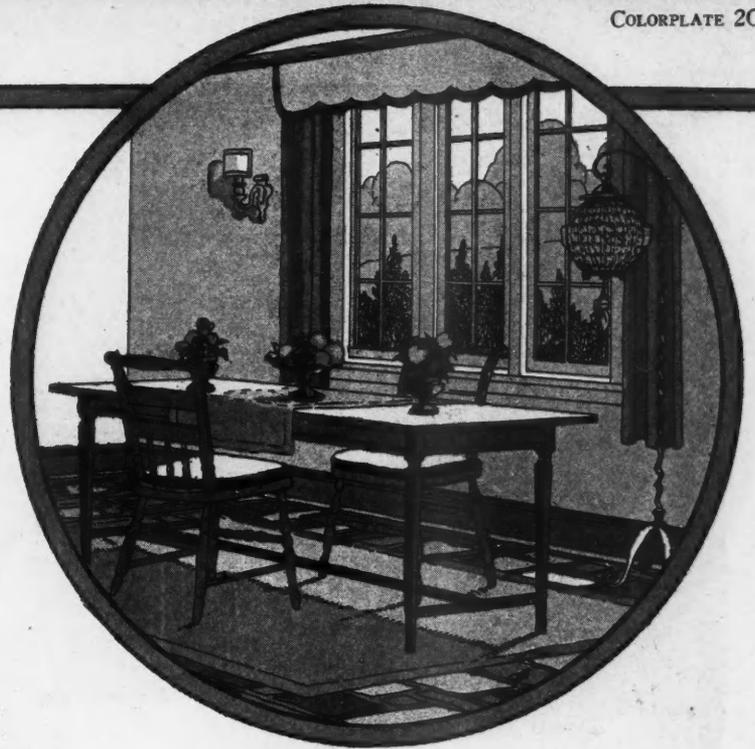
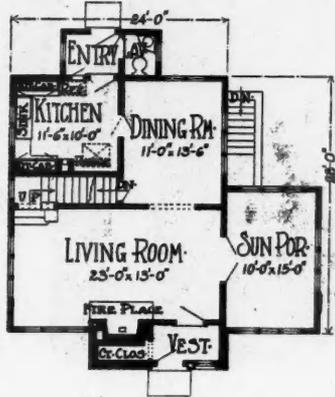
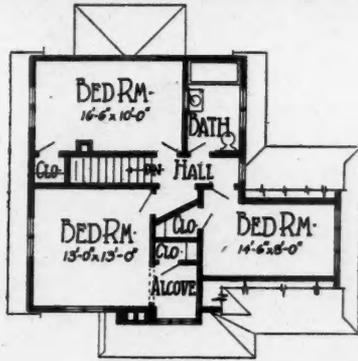
### COLORKEED HOME PLANS

- |  |             |  |               |
|--|-------------|--|---------------|
|  | Living Room |  | Closet        |
|  | Dining Room |  | Bed Room      |
|  | Kitchen     |  | Bath and Lav. |
|  | Pantry      |  | Porch         |
|  | Halls       |  | Roof          |



### Key to Equipment

- |                         |                     |                     |
|-------------------------|---------------------|---------------------|
| ① Incinerator           | ⑨ Garment Hangers   | Coal Chute          |
| ② Kitchen Cabinets      | Weatherstrips       | Heating Plant       |
| ③ Electric Refrigerator | Storm Sash          | Water Supply System |
| ④ Range                 | Screens             | Hot Water Supply    |
| ⑤ Ironing Board         | Lighting Fixtures   | Water Softener      |
| ⑥ Incinerator           | Convenience Outlets | Radiant Gas Heaters |
| ⑦ Thermostat            | Electric Panel      | Casement Windows    |
| ⑧ Tub Shower            | Washing Machine     |                     |
|                         | Clothes Drier       |                     |



## The GABLES

A BRICK and stucco cottage of unusual charm, the cheerful brick colors and the green shingled roof contrasting vividly with the cream colored stucco. Six rooms, bath and solarium are provided in this well arranged plan. Dimensions on the ground are 28 x 24 feet, plus the ten-foot extension for the sun room. Above is a view of the diningroom showing appropriate furniture and a satisfactory curtain treatment for the triple window.



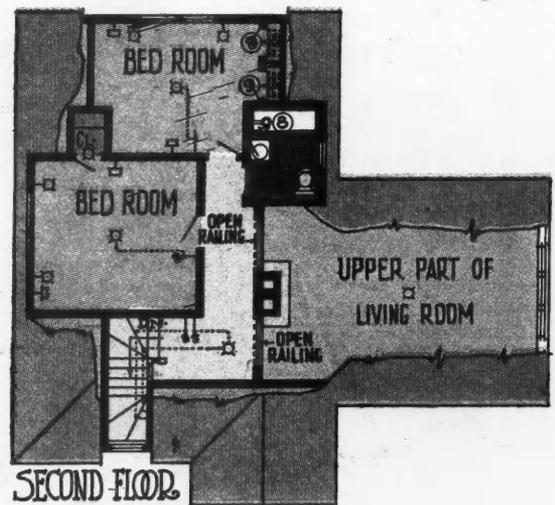
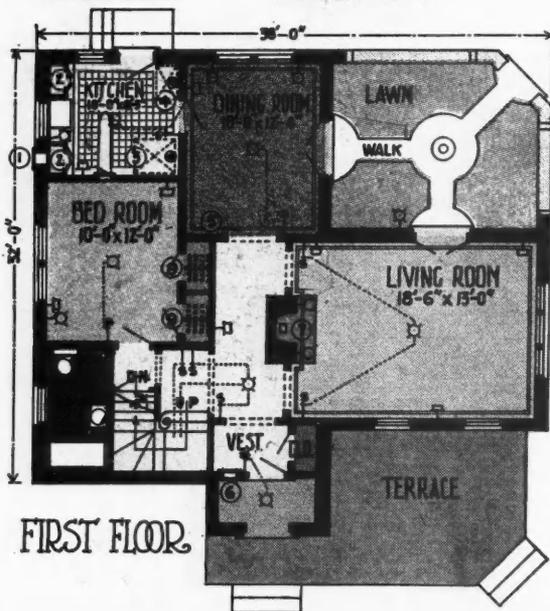


## The GIFFORD

HERE we present an Irish cottage containing a studio living room and five other delightful rooms and two baths. The brown shingles, brown shutters and touch of brown brickwork around the doorway give this house a charming appeal.

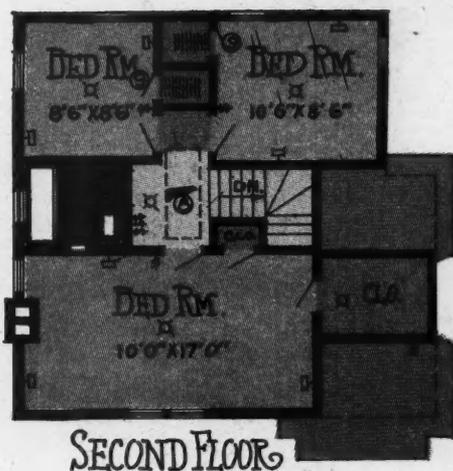
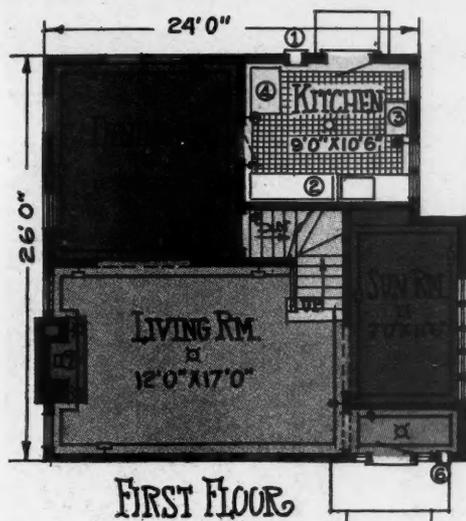
### COLORKEED HOME PLANS

- |  |             |  |               |
|--|-------------|--|---------------|
|  | Living Room |  | Closet        |
|  | Dining Room |  | Bed Room      |
|  | Kitchen     |  | Bath and Lav. |
|  | Pantry      |  | Porch         |
|  | Halls       |  | Roof          |



### Key to Equipment

- |                               |                     |                     |
|-------------------------------|---------------------|---------------------|
| ① Ventilating Fan             | ⑥ Tub Shower        | Screens             |
| ② Kitchen Cabinets            | ⑦ Garment Hangers   | Lighting Fixtures   |
| ③ Range                       | Weatherstrips       | Convenience Outlets |
| ④ Electric Refrigerator       | Hot Water Supply    | Electric Panel      |
| ⑤ Thermostat                  | Water Softener      | Washing Machine     |
| ⑥ Built-in Mail Box           | Garbage Incinerator | Clothes Drier       |
| ⑦ Fireplace Throat and Damper | Radiant Gas Heaters | Coal Chute          |
|                               | Casement Windows    | Heating Plant       |
|                               | Storm Sash          | Water Supply System |



**COLORKEY**  
HOME PLANS

-  Living Room
-  Dining Room
-  Kitchen
-  Pantry
-  Halls
-  Closet
-  Bed Room
-  Bath and Lav.
-  Porch
-  Roof

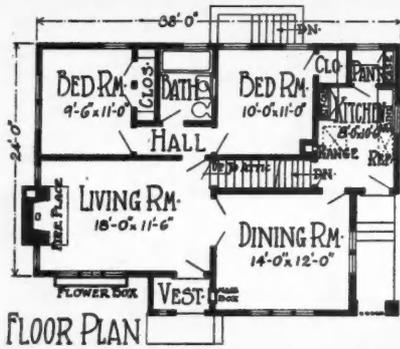
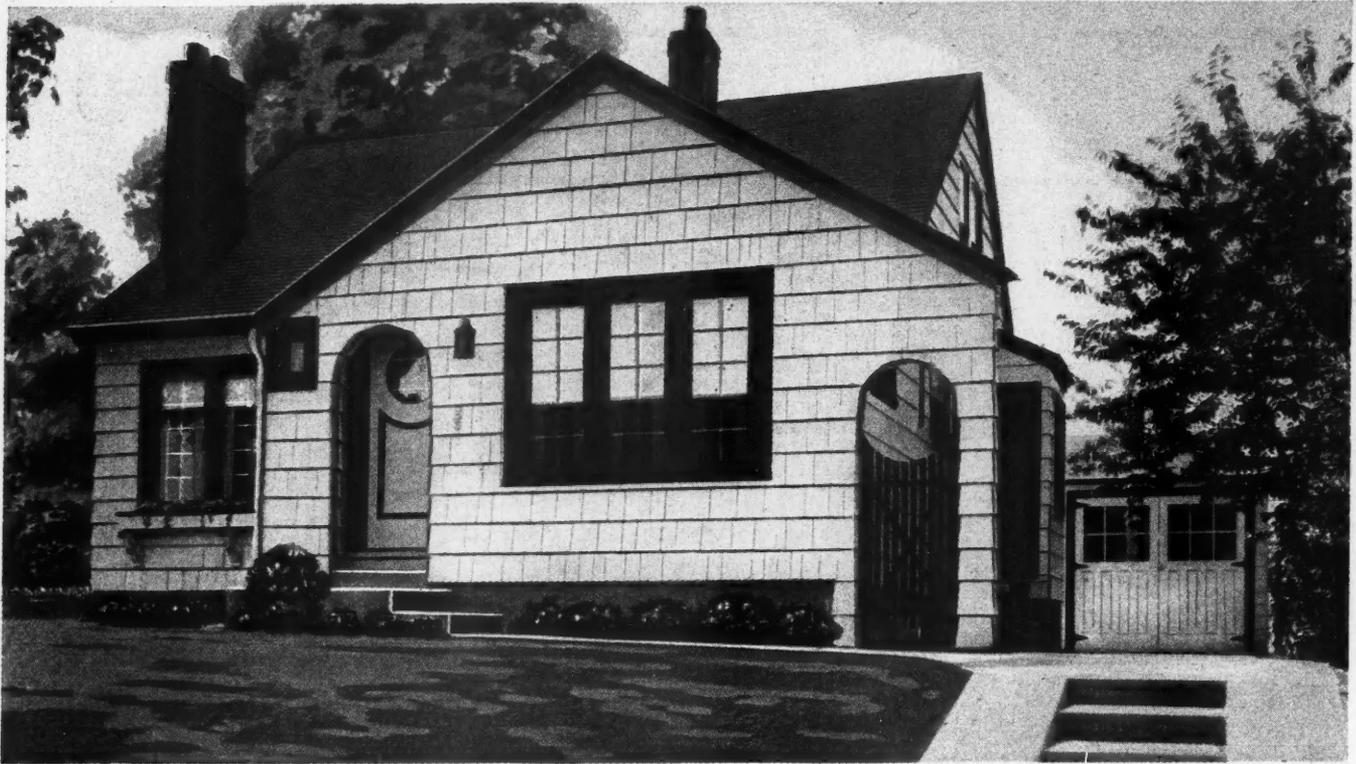
### Key to Equipment

- |                               |                     |
|-------------------------------|---------------------|
| ① Ventilating Fan             | Lighting Fixtures   |
| ② Kitchen Cabinet             | Convenience Outlets |
| ③ Electric Refrigerator       | Electric Panel      |
| ④ Range                       | Washing Machine     |
| ⑤ Thermostat                  | Clothes Drier       |
| ⑥ Built-in Mail Box           | Coal Chute          |
| ⑦ Fireplace Throat and Damper | Heating Plant       |
| ⑧ Disappearing Stairs         | Water Supply System |
| ⑨ Efficiency Wardrobes        | Hot Water Supply    |
| Weatherstrips                 | Water Softener      |
| Storm Sash                    | Garbage Incinerator |
| Screens                       | Radiant Gas Heaters |
|                               | Casement Windows    |

## The GAINESBORO

A NEWER style Colonial with entrance at the side in connection with a sun room, this is an example of that often wanted but seldom found "small house with many large rooms in it." Not a square inch is wasted in the 24x26 feet and the four rooms on the first floor and three rooms on the second are supplemented by a large, well lighted third floor space which is made available at small extra expense by the disappearing stairway operating out of the ceiling of the second floor hall. There is great economy in stairways all through this house. The main stairs go up from the corner of the living room and practically consume no space at all, while the stairs to the basement are directly underneath, going down out of the dining room. Every room is cheerfully lighted and enjoys cross ventilation. The exterior with its true Colonial white paint and green shutters and green shingled roof is cheerful and inviting.



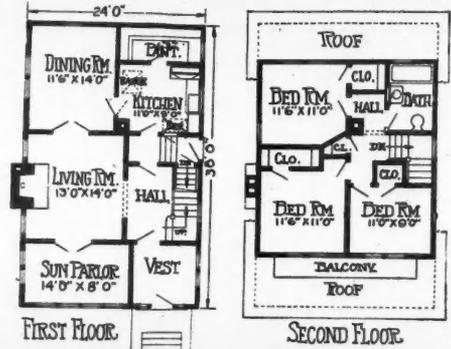


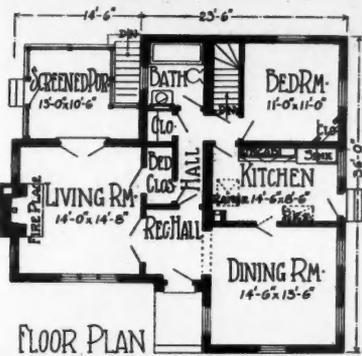
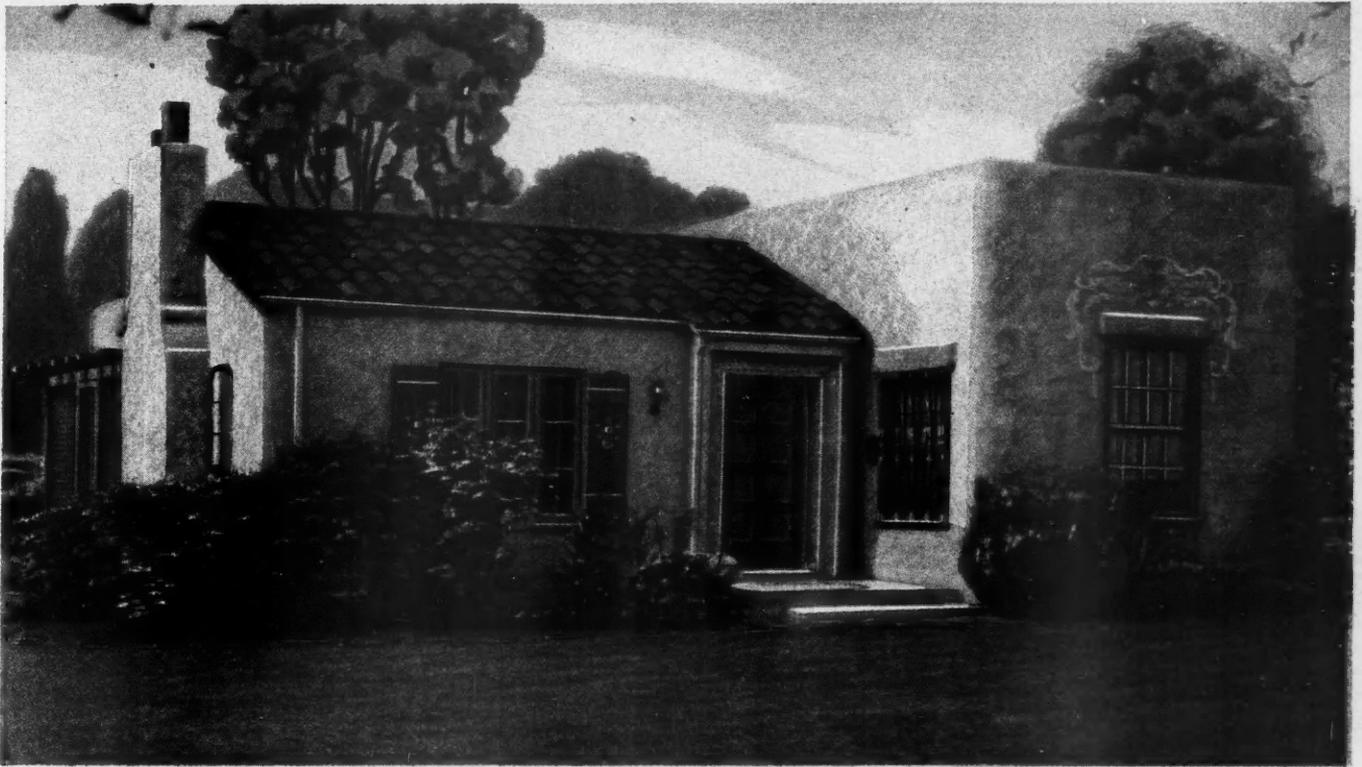
### The GILEAD

Above and to the left is a delightful five-room house, small and inexpensive but making a delightful home.

### The GILTEDGE

Below and to the right is a most popular six-room home, really seven rooms counting the sun parlor. This layout, 24 x 38 feet, goes on a narrow lot and makes a very satisfactory home.



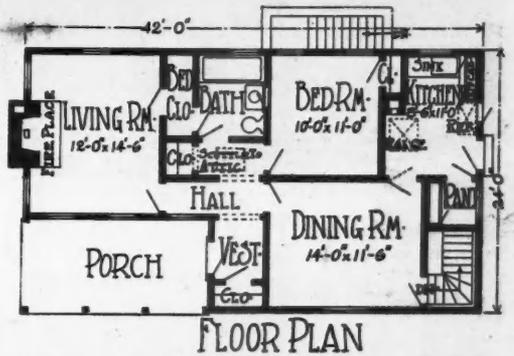


**The GLENADA**

Above and to the left is a little gem of Spanish architecture. Four rooms are provided, a put-away bed in the living room closet providing a second bedroom.

**The GLENFORD**

Below and to the right is a clever little Colonial cottage of four rooms but with five-room efficiency. These little homes prove that size is not necessary for distinction.



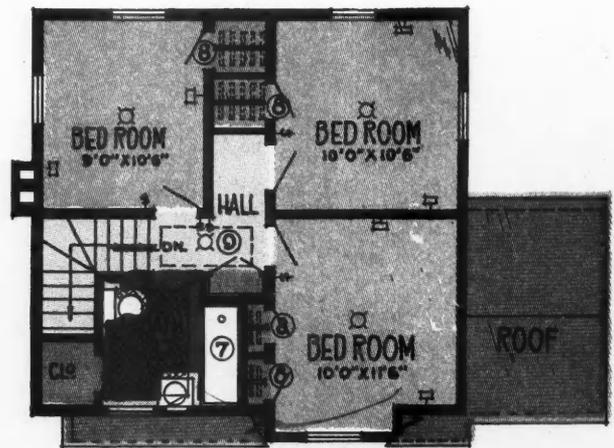
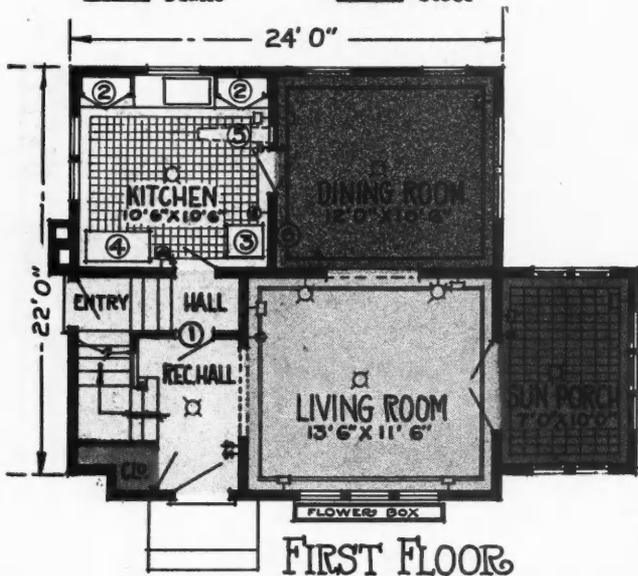


## The GOODRICH

THIS shingled home of English lines presents six rooms, bath and big sun porch. The arrangement as shown in the ColorKeeD Plans is very satisfactory.

### COLORKEED HOME PLANS

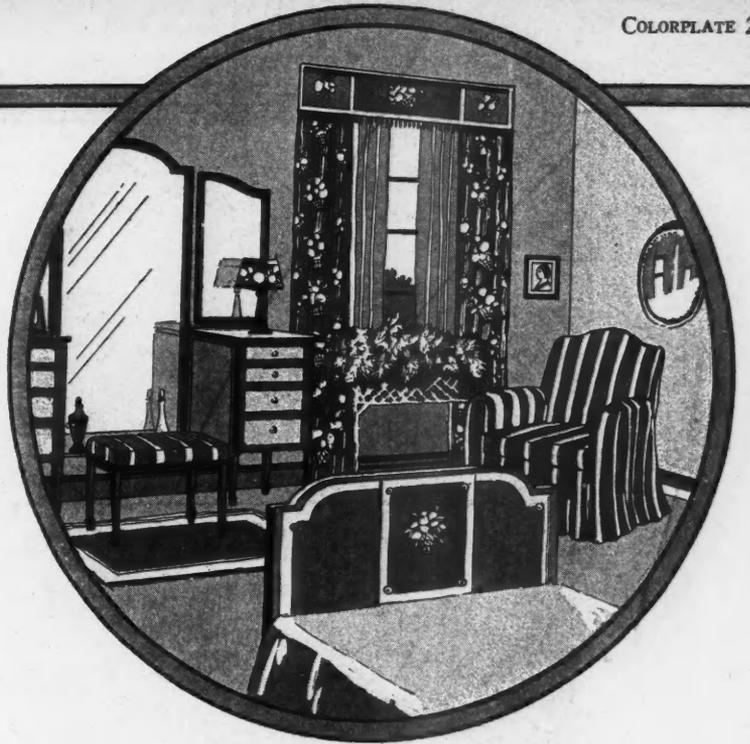
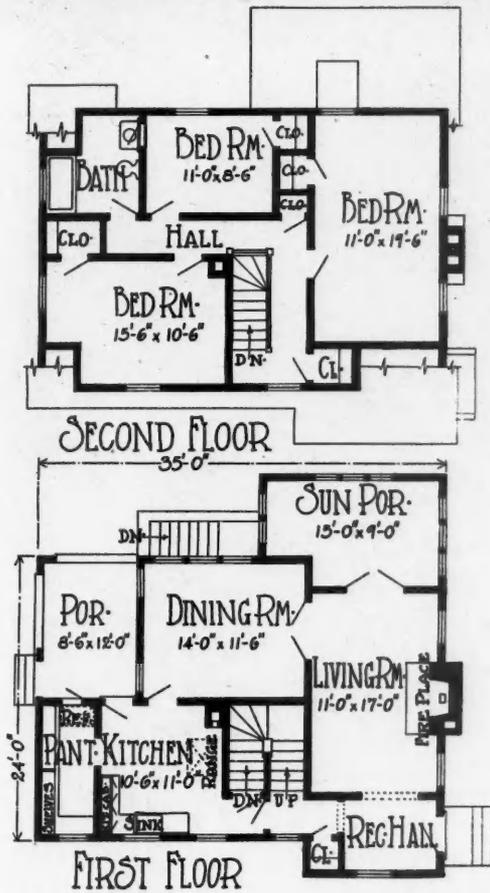
- |  |             |  |               |
|--|-------------|--|---------------|
|  | Living Room |  | Closet        |
|  | Dining Room |  | Bed Room      |
|  | Kitchen     |  | Bath and Lav. |
|  | Pantry      |  | Porch         |
|  | Halls       |  | Roof          |



SECOND FLOOR

### Key to Equipment

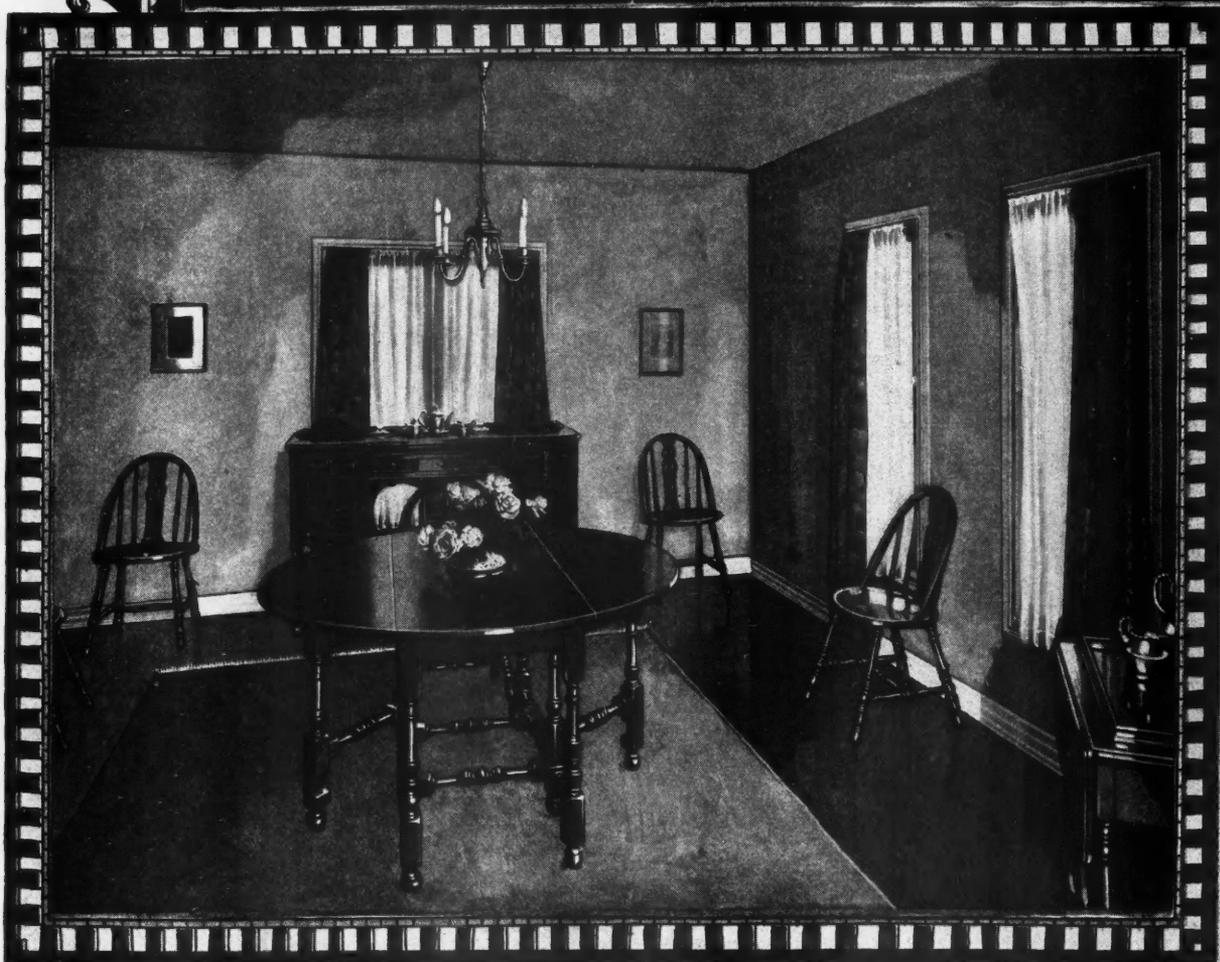
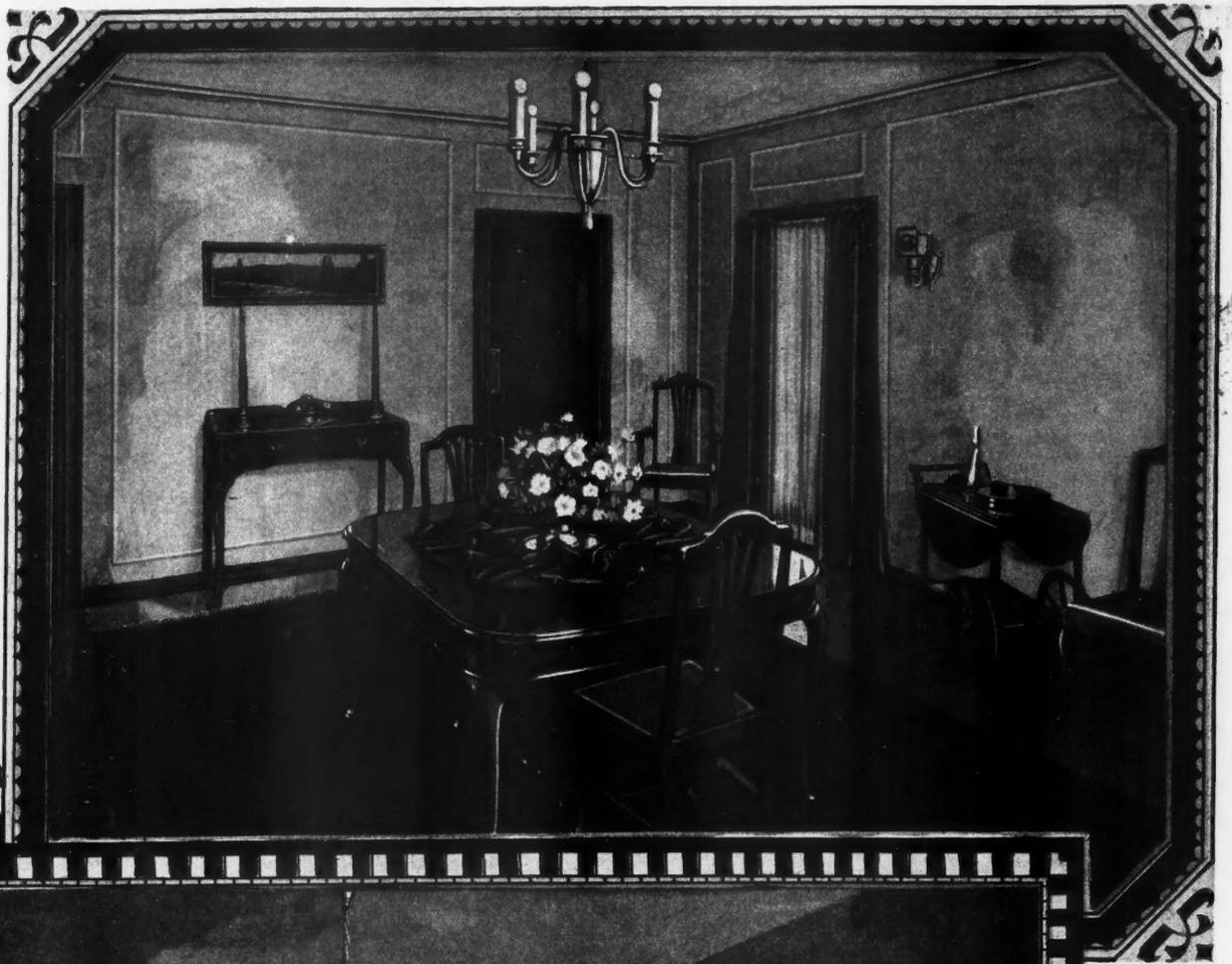
- |                         |                      |                     |
|-------------------------|----------------------|---------------------|
| ① Mirror Door           | ⑨ Disappearing Stair | Clothes Drier       |
| ② Kitchen Cabinets      | Weatherstrips        | Coal Chute          |
| ③ Electric Refrigerator | Storm Sash           | Heating Plant       |
| ④ Range                 | Casement Windows     | Water Supply System |
| ⑤ Ironing Board         | Screens              | Hot Water Supply    |
| ⑥ Thermostat            | Lighting Fixtures    | Water Softener      |
| ⑦ Tub Shower            | Convenience Outlets  | Garbage Incinerator |
| ⑧ Garment Hangers       | Electric Panel       | Radiant Gas Heaters |
|                         | Washing Machine      |                     |



## The GRANBY

A HOME in the English Colonial style is presented herewith which contains several unusual features. The reception hall, living room and sun porch arranged across the front have the prominent position, while the kitchen, dining room and enclosed rear porch have the quiet and privacy of the garden. On the second floor three large bedrooms, five closets and the bathroom are located. Above in the circle is shown a glimpse of one of the bedrooms with appropriate furnishings.

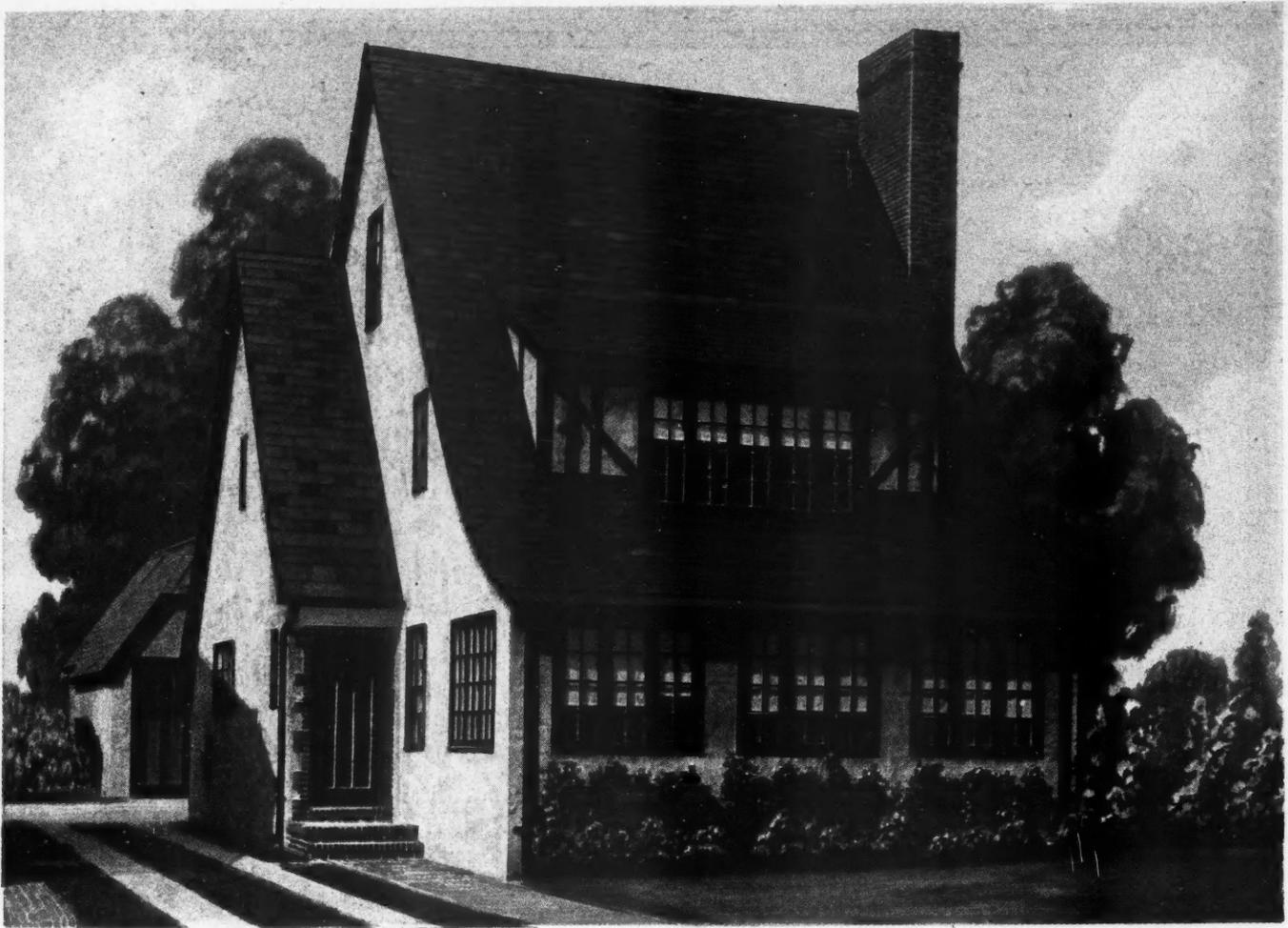




Two Dining Room photographs that are full of suggestions for the Home Planner and the Home Furnisher.



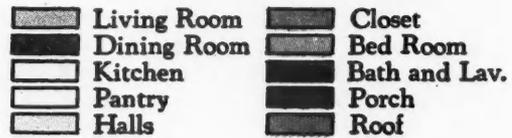
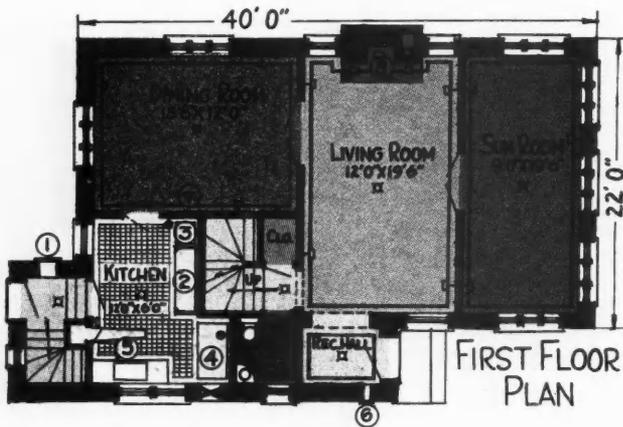
Dining Rooms both large and small are illustrated in these photographs.  
They will prove a safe guide.



## The GRANITE CITY

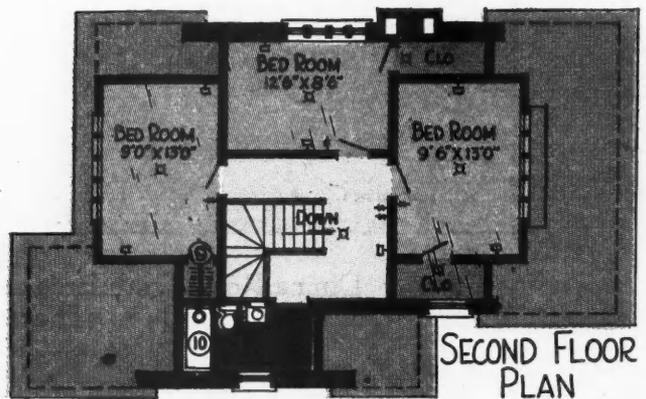
HERE is a popular narrow lot design 26 x 40 feet. Six rooms and bath are provided besides an extra toilet on the first floor and the immense sun room extending across the front of the house. This design is a most satisfactory city house.

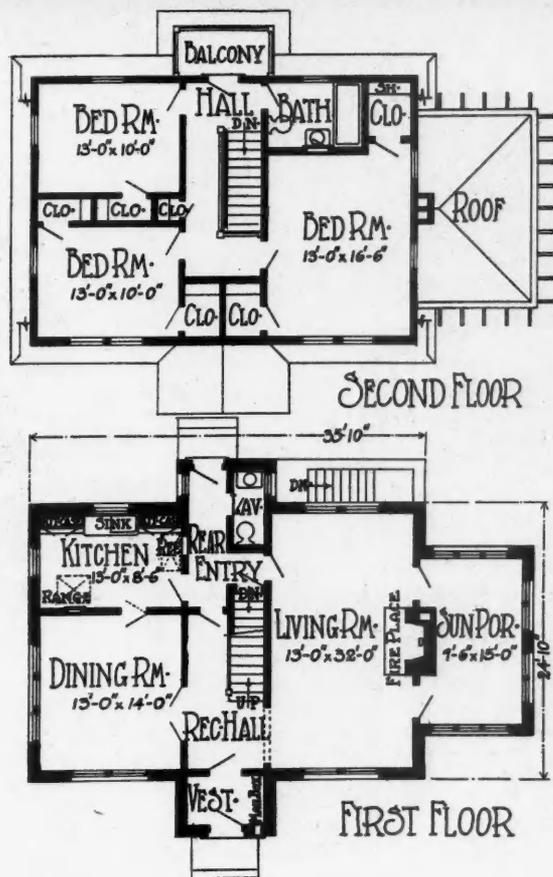
**COLORKEY**  
HOME PLANS  
TRADE MARK



### Key to Equipment

- |                               |                        |                     |
|-------------------------------|------------------------|---------------------|
| ① Package Receiver            | ⑨ Efficiency Ward-robe | Clothes Drier       |
| ② Kitchen Cabinet             | ⑩ Tub Shower           | Coal Chute          |
| ③ Garbage Incinerator         | Weatherstrips          | Heating Plant       |
| ④ Range                       | Storm Sash             | Water Supply System |
| ⑤ Ironing Board               | Screens                | Hot Water Supply    |
| ⑥ Built-in Mail Box           | Lighting Fixtures      | Water Softener      |
| ⑦ Thermostat                  | Convenience Outlets    | Garbage Incinerator |
| ⑧ Fireplace Throat and Damper | Electric Panel         | Radiant Gas Heaters |
|                               | Washing Machine        | Casement Windows    |





## The GRAYLING

THE DUTCH Colonial home with brick veneer to the low eaves, with siding and shingles above continues very popular. There is a substantial look and a pleasing balance of materials, heavy at the bottom and lighter as we go up, which is entirely pleasing. The home illustrated here is about 25 x 36 feet plus the sun porch. Six rooms and bath are contained. All rooms are well lighted and provided with cross ventilation. A house of this kind is inexpensive to build and there is little about it to depreciate through the years. In the circle above we illustrate a corner of the big living room.



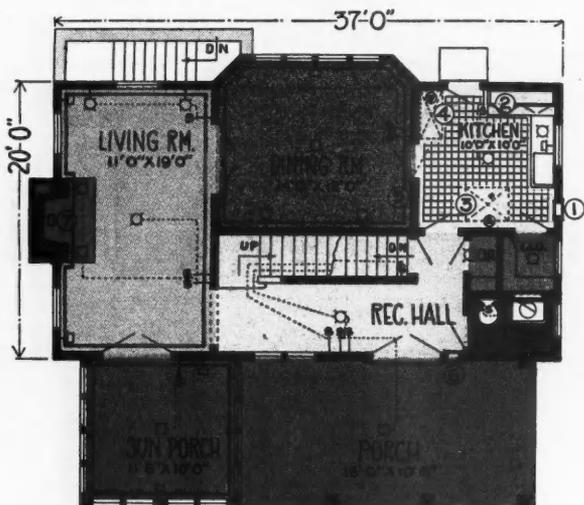


## The GREENPORT

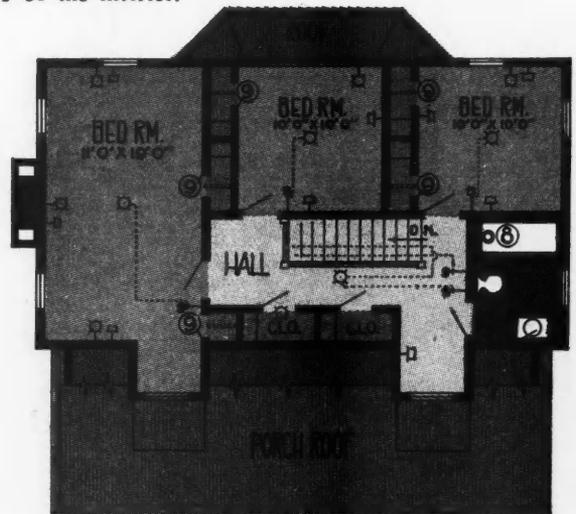
WHAT could be more delightful than this Colonial home with its inviting porch. The greenish grey slate roof and the brown brick chimney and brown shutters contrast brightly with the white Colonial walls. Study the ColorKeeD plans below for the special features of the interior.

### COLORKEED HOME PLANS

- |  |             |  |               |
|--|-------------|--|---------------|
|  | Living Room |  | Closet        |
|  | Dining Room |  | Bed Room      |
|  | Kitchen     |  | Bath and Lav. |
|  | Pantry      |  | Porch         |
|  | Halls       |  | Roof          |



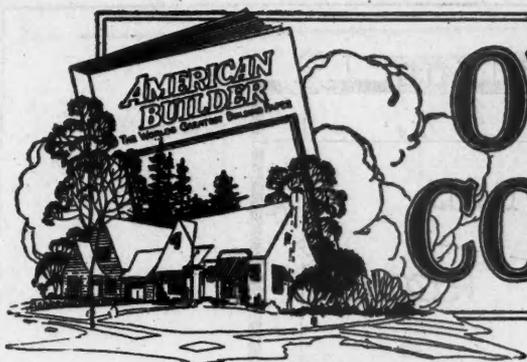
FIRST FLOOR



SECOND FLOOR

### Key to Equipment

- |                               |                     |                     |
|-------------------------------|---------------------|---------------------|
| ① Fan Ventilator              | ⑧ Tub Shower        | Clothes Drier       |
| ② Kitchen Cabinet             | ⑨ Garment Hangers   | Coal Chute          |
| ③ Range                       | Weatherstrips       | Heating Plant       |
| ④ Electric Refrigerator       | Storm Sash          | Water Supply System |
| ⑤ Thermostat                  | Screens             | Hot Water Supply    |
| ⑥ Built-in Mail Box           | Lighting Fixtures   | Water Softener      |
| ⑦ Fireplace Throat and Damper | Convenience Outlets | Garbage Incinerator |
|                               | Electric Panel      | Radiant Gas Heaters |
|                               | Washing Machine     | Casement Windows    |



# OUR FRONT COVER HOME

## *A Colonial House with a Personality That Pleases and Makes a Lasting Impression Upon the Memory*

**I**F ever a house possesses personality, our Front Cover Home does so, in good measure. It is safe to wager that anyone passing along the street would remember it long after its neighbors were forgotten and recall its pleasing appearance with an assured feeling that its owners were the sort of people one would like to know. Just what it is that gives this, or any house, such a personality is hard to define and yet it can be said to be due to a perfectly harmonious blending of many details which are pleasing and artistically correct in themselves.

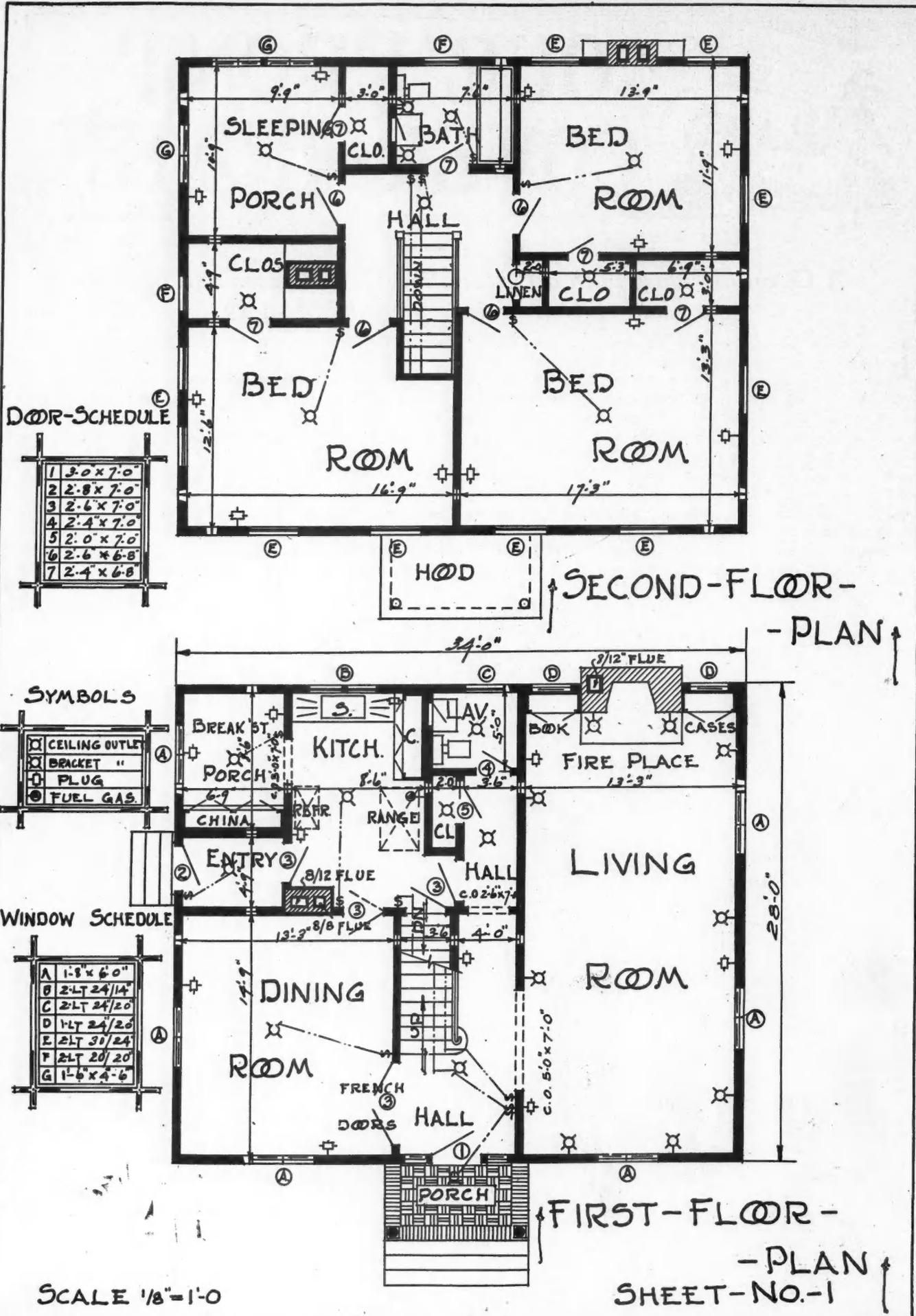
Here is a simple, not to say severe, Colonial house of nearly square outline. But the severity is relieved by

the graceful entrance, the charming shuttered windows and the lattice work with its beautiful vines and shrubbery setting off the building proper. Then, too, the brickwork of the porch and chimney add a brightening touch which is important.

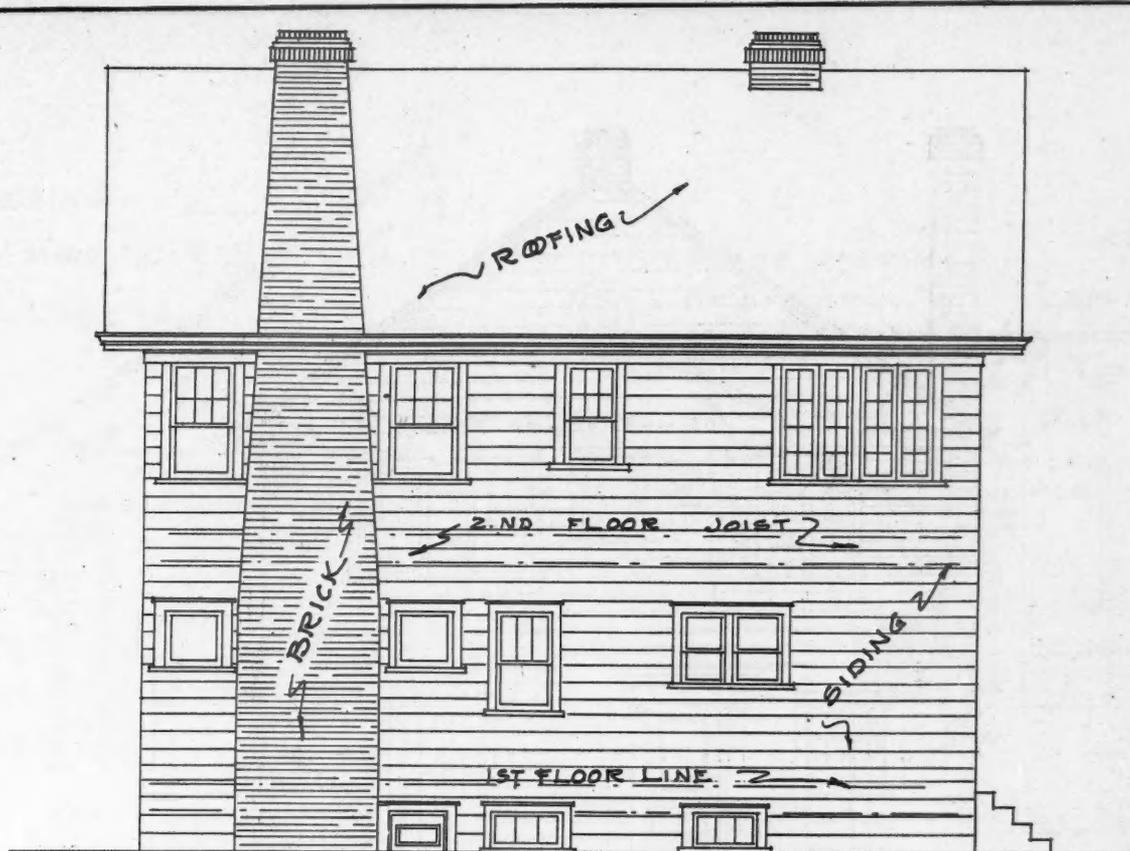
The plans, reproduced on the pages which follow this, show a design well adapted to the requirements of the average American family and providing the many conveniences which go to make what we call a "modern" house. In addition to the second floor bath room there is a lavatory on the first floor and a handy breakfast porch is provided off the kitchen. In the basement are found equipment to reduce the labor of housekeeping.



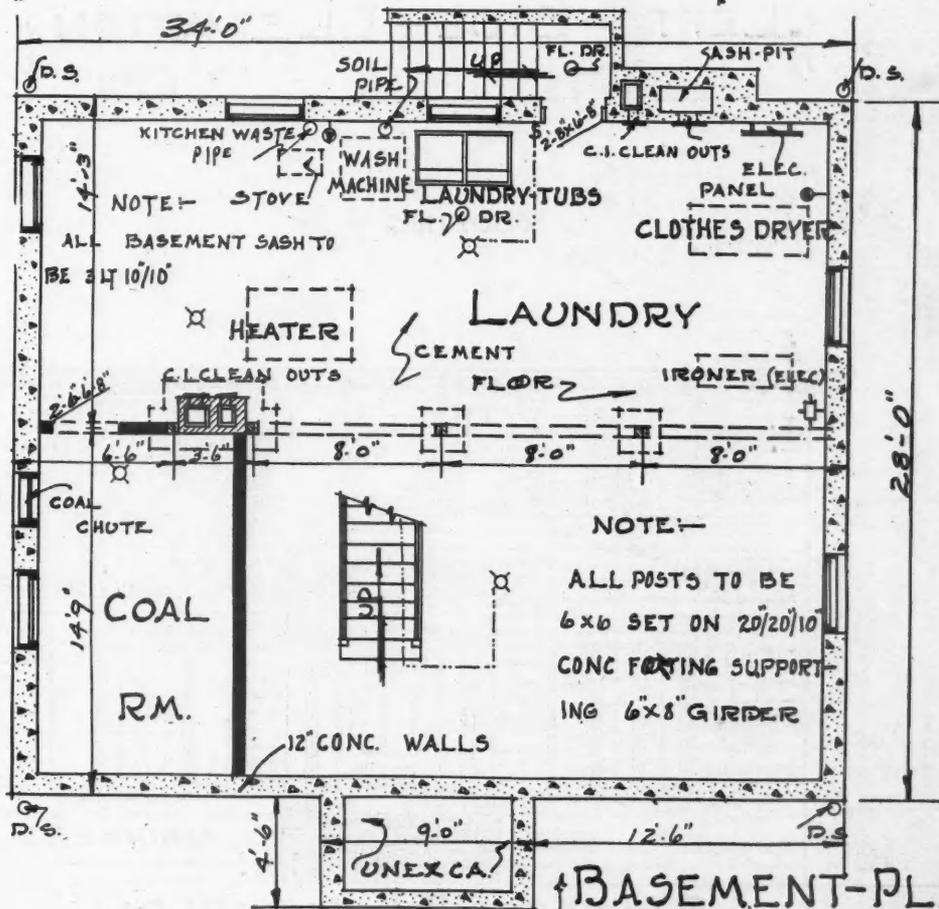
The Severity of Its Colonial Style Has Been Given a Dignity and Charm Which Are Unforgettable in This Our Front Cover Home with Its Graceful Entrance and Well Planned Landscaping.



The Floor Plans of Our Front Cover Home Are Typical of the Modern House at Its Best.



REAR - ELEVATION



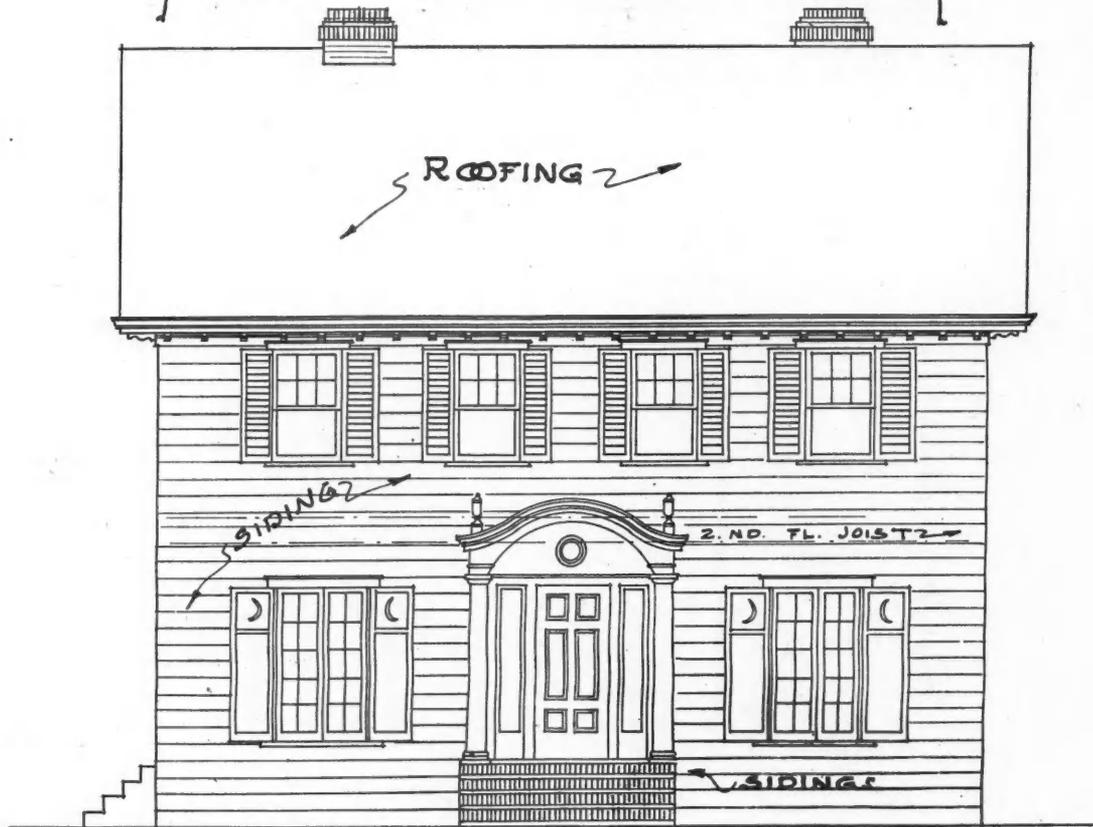
SCALE 1/8" = 1'-0"

SHEET - NO. - 2.

The Basement Has Received the Attention Which It Deserves. Further plans on the following pages.



LEFT - SIDE - ELEVATION



FRONT - ELEVATION

SCALE 1/8" = 1'-0"

SHEET-NO. - 3.

Simple Elevations, Made Pleasing by Well Placed Doors and Windows, Characterize Our Front Cover Home.



# Better Plastering

## Ornamental Plaster Cornices and How They Are Made

By ERWIN M. LURIE, C. E.

*This is a continuation of the article which appeared on pages 186 to 189 of our February issue.*

**I**N the previous article we detailed the various preliminary steps necessary to "run" a cornice or an ornamental beam beginning with the making of the template, the application of the scratch coats of plaster to that portion of the ceiling or beam where the cornice is to be run and finished up with the description of the method of applying the screeds and the runner guides to the wall and ceiling. Illustration of the template used on this job are shown in Fig. 4. We are now ready to proceed with a description of the actual steps taken in the running of the cornice.

Fig. 1 is a diagrammatical illustration of the various steps taken in building up the rough plaster core. There are several steps as indicated in this diagram, beginning with the first rough application of plaster with the trowel, then the placing of the rough intermediate "filling" containing fibre or hair so that it keeps just back of the rough template and then the running with the template to the rough outline. On a large cornice some hair is usually necessary in the last coat in order to offer a better bond for the finishing coats.

The plaster is applied in big "dabs" on the backing of

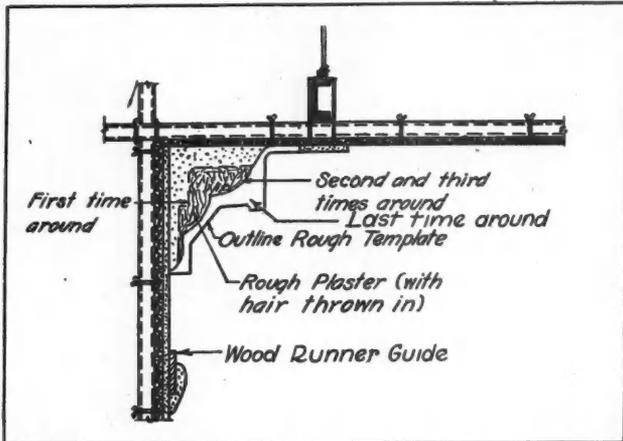


Fig. 1. Diagram Showing the Various Steps in Building Up a Cornice to the Outline of the Rough Template.

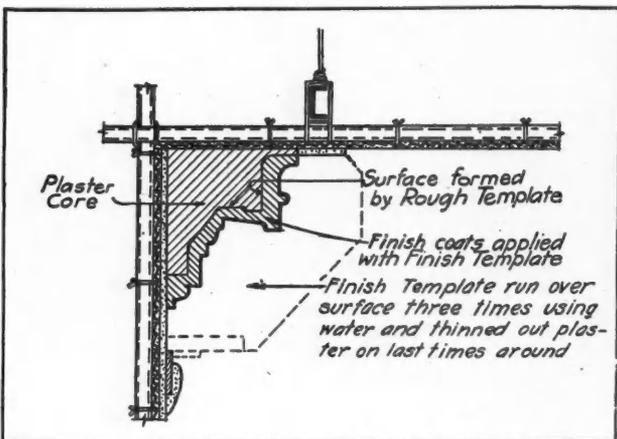


Fig. 2. Diagram Showing the Relation of the Surface Formed by the Rough Template to That Formed by the Finished Template.

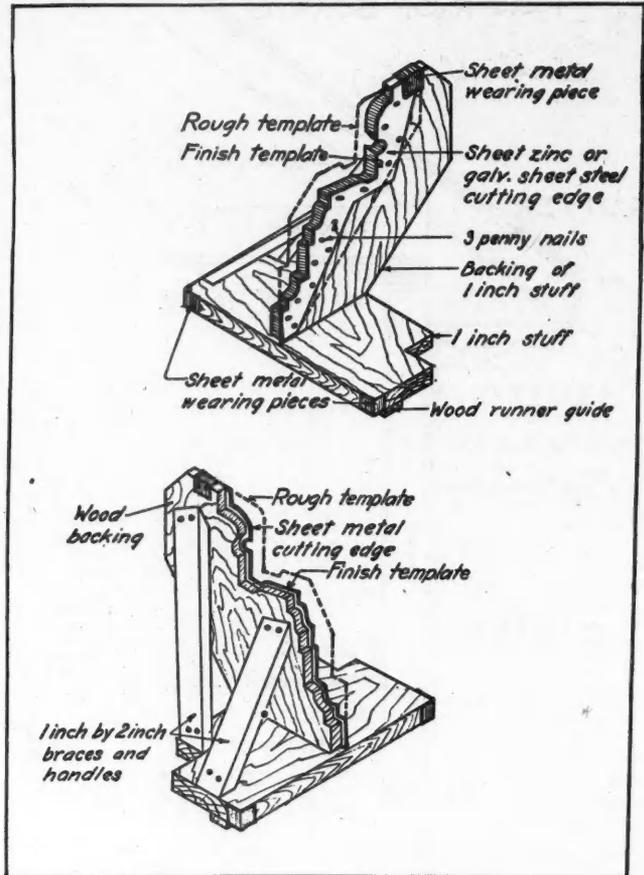


Fig. 4. The Finish Template Cutting Edge Nailed Over the Rough Template Cutting Edge.

the plaster cornice using the same plaster as is used for scratch coats in other parts of plastered walls. Generally an extra amount of fibre should be used in this portion in order to stiffen the thick dabs of plaster so they will stick in place. When this has been completed for as long



Fig. 3. The Portion of the Cornice at the Right Is Seen as Produced by the Rough Template While That at Left Is Finished.

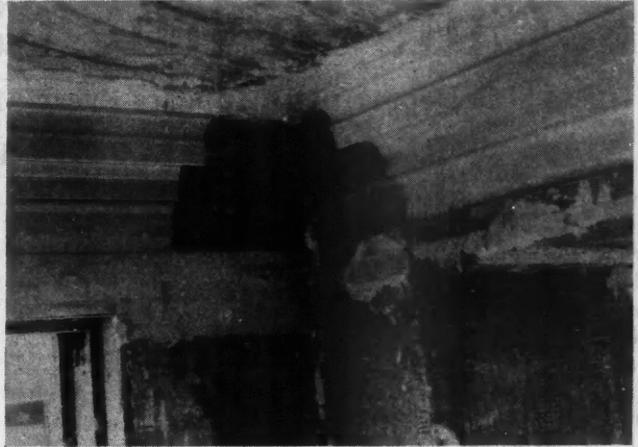


Fig. 5. The Finishing Template as It Appears in Use.

Fig. 6. The Juncture Where Cornices Meet in a Corner.

a section as can be handled before the plaster sets up, the plasterer puts his rough template up against the wall and resting it on the wall runner pushes it along, cutting the surplus plaster off and applies more plaster until the surface conforms to the outline of the template. The wall runner is attached to the wall by means of gobs of plaster which hold it in place while in use and are easily removed when the cornice has been run.

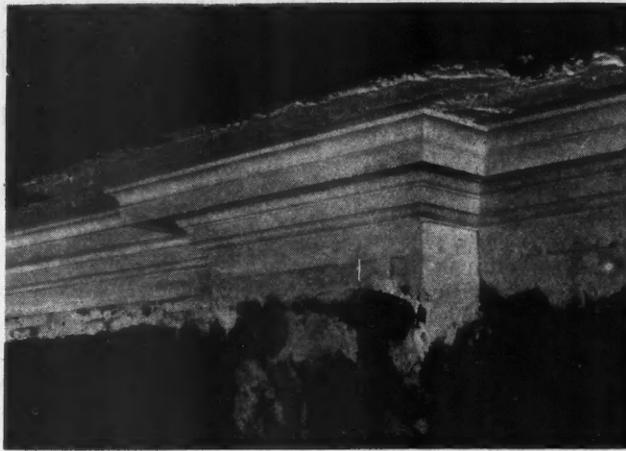


Fig. 8. A Close Up of a Finished Column Cornice in Place.

When completed the surface formed by the rough template bears the relation to the finished outline of the cornice as shown in Fig. 2. See also Fig. 3 for a comparison. The rough plaster base ready for the finishing coats is shown at the right and the finished plaster cornice at the left. This picture also shows very clearly the rough plaster on the ceiling.

The cornice is now ready for the finishing coats. The first thing to do is to scrape the rough template clean and nail the finish template cutting edge over it. See Fig. 4.

The application of the finished plaster is usually done in three or more separate operations. It is usually a two-

man job, the helper putting the plaster on just ahead of the template as it is pushed ahead by the plasterer. The plaster is applied over the rough plaster cornice to the approximate thickness to be cut down by the template.

The first time around there are naturally a lot of pockets because the work must be done rapidly in order to prevent the plaster from setting so hard that the template will not be able to cut it. For this reason there is only a relatively small amount of plaster applied each time. On the second and third time

around, all the voids are filled in with thin plaster to make the arrises clean cut and sharp and on the final round a very thin coat of plaster of soupy consistency is applied with a brush and the surface is given its final finish with the template.

Fig. 5 clearly shows the template, which for the sake of the picture has been propped up against the cornice. The effect of the water in producing a flawless surface is shown at the right in contrast with the texture of the plaster previous to the application as at the left. As explained heretofore, only so much of the cornice should be run each time as can be worked and finished completely before the plaster has set hard. The work then proceeds to the next section of cornice until all are finished.

The material most commonly used for this type of work is Keene's cement plaster, gaged with lime putty. It should be stated at this point that there are many advantages for the use of Keene's cement inasmuch as it does not set up as quickly as ordinary gypsum plaster and can be retempered a number of times so that the plasterer is given the maximum time in which to do a good job. He also can lay out more work with Keene's cement plaster than with ordinary gypsum because he need not fear that the plaster will set up before it can be finished.

Fig. 6 shows the juncture of the finished cornice on the wall at the left with the finished cornice on the beam at the right. Because of lack of working room it is impossible to run the cornice completely to its juncture and this portion must be run on a table and mitred and "stuck" in place.

Fig. 7 shows a table used for this purpose. On big

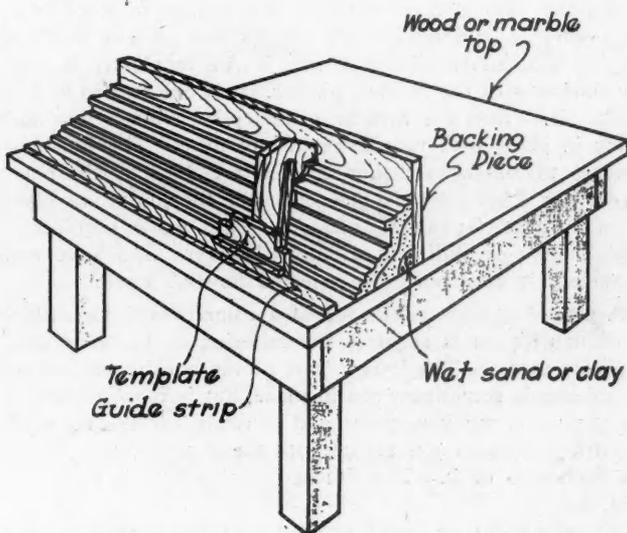


Fig. 7. Table for Running Cornices to Be "Stuck" in Place as in the Corner Shown in Fig. 6.

(Continued to page 170)

# Cuts for the Common Rafter

This Department Appears Every Month in American Builder—Editor

By JOHN T. NEUFELD

IT is well to know some of the names or terms applied to the different cuts on a common rafter. There are really only two cuts, one at the upper end and one at the lower end. The cut at the upper end is usually referred to as the top or plumb cut but sometimes it is called the ridge cut. The cut at the lower end is called the bottom cut, heel cut, toe cut, seat cut or horizontal cut.

In Fig. 1 we have drawn a square on the side of a rafter in order to illustrate how the principles of the square may be used to obtain the cuts for the common rafter.

In the illustration, Fig. 2, we have four different methods of cutting the lower end of the rafter. We have also, in each case, shown the theoretical measuring line. This theoretical measuring line should pass through the upper and outside edge of plate.

From the illustration in Fig. 1, we have seen how the blade of the square may be taken to represent the rafter and how the tongue of the square may be taken to represent the rise of the rafter. If we take the total run as given in feet and assume that 1 inch on the blade stands for 1 foot on the actual building, we may use the figures representing the run and rise and obtain the cuts for the rafter. Thus, in this case, we have a run of 20 feet and a rise of 10 feet. Therefore, to lay out the top and bottom cuts we use the numbers 20 and 10, taking the 20 on the blade and the 10 on the tongue of the square and marking along the plate for the seat cut and along the tongue for the top cut. This is illustrated in Fig. 3. Here the square is laid on the rafters with these points coinciding with the measuring line.

In Fig. 4 we use the same numbers to obtain the cuts, but in this case we are working from the edge of the rafter.

When studying the different methods of finding the lengths of rafters we learned what was meant by the "length per foot run" and the "rise per foot run." We see in Fig. 5 that the "rise per foot run" may be taken on the tongue of the square and 12 inches on the blade to obtain the cuts for the rafters. In this case the building has a 10-foot rise and 20-foot run which is equal to a 6-inch rise per foot run. Therefore the numbers 6 and 12 are used on the square to lay out the cuts.

Where a ridge board is used we must allow for the ridge board when cutting the rafter. This may be done in various ways. For example, in Fig. 6, allowance is made for the thickness of the ridge board by assuming that the run of the rafter is taken only to a point directly underneath the edge of the ridge board. That is, that the thickness of the ridge board is not included in the run of the rafter when figuring the length of the rafter. This gives us the exact length of the rafter without any further deductions.

Fig. 7 shows another method of deducting for the ridge board. In this case we assume that the length of the rafter found is to the center of the ridge board. We, therefore, deduct one-half the thickness of the ridge board on a horizontal line as shown at "A" or we may take a piece of lumber the same thickness of the ridge board and lay it over the end of the rafter in the position shown at "B." Then, marking along the edge of the board we obtain the exact distance that must be allowed on the rafter for the ridge board.

Very often it is desired to cut the tail end of the rafter parallel to the line of the building, that is, to make a straight vertical cut. To do this we may use the same numbers on the square as are used for obtaining the other

cuts, only in this case we reverse the square. This is really a reversed top cut. See Fig. 8. This figure also illustrates what is very often referred to as the "bird's-mouth" cut and shows the square applied for making this cut.

## Problems

1. What is the pitch of the roof illustrated in Fig. 1?
2. A building has a total rise of 8 feet and a total run of 14 feet. What numbers may be used on the square to obtain the cuts?
3. If the rise is 8 inches per foot run, what numbers are used on the square to obtain the top and bottom cuts?
4. What numbers on the square will give the cuts of the common rafter on a one-half pitch roof?
5. What numbers on the square will give the top and bottom cuts for a rafter having a span of 28 feet and a rise of 7 feet?

## Answers

1. For this building the rise is one-fourth of the span, therefore, it is a one-fourth pitch.
2. The numbers 8 and 14 on the square will give the cuts.
3. The numbers 8 and 12 on the square will give the top and bottom cuts.
4. On a one-half pitch roof the rise is 12 inches per foot run, therefore, the number is 12 and 12 which would give the cuts for the rafter.
5. If the span is 28 feet then the run is 14 feet, the numbers 7 and 14 on the square will give the cuts.



## Better Plastering

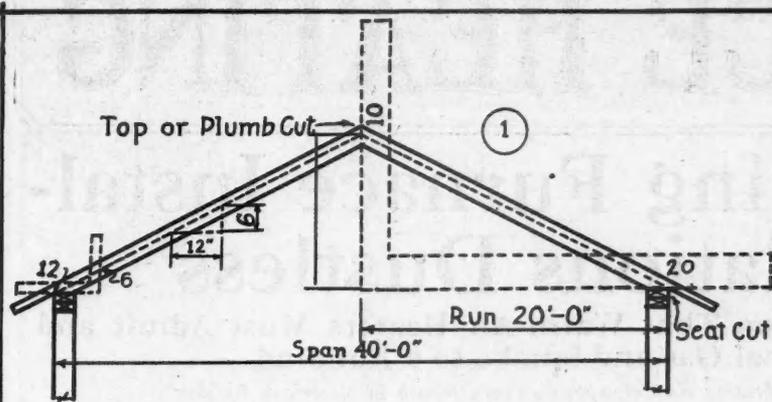
(Continued from page 169)

jobs a table with a marble top is sometimes used in order to make a cleaner cut job, but for ordinary purposes any table can be used providing it has a level top. As a rule, the table is from 8 to 12 feet long so that a long piece of cornice can be run at one time.

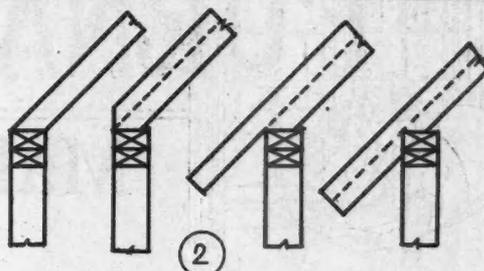
The same template, see Fig. 4, as was used to run the cornice on the wall is used on the table. In order to lessen the difficulties in mitering the cornice in place it is customary to run table work over a bed of wet sand or clay so that substantially all that is run in plaster is only the thickness of the finished plaster, from one to two inches thick. It is then cut with an ordinary carpenter's saw and stuck in place with neat gypsum and fibre. The finishing touches to join up abutting sections are done by the plasterer with a special finishing tool after the joints are filled in with neat (sandless) plaster. This work requires a high degree of skill and usually plasterers who have had considerable experience are selected for this work.

A plaster cornice at the top of a column calls for skilled workmanship as it requires the mitering of three or four separate pieces. The longer part of the cornice at the top of column is sometimes run in place, but is more often run on the table, stuck in place and is ready for the mitering reentrant parts to connect up with the cornice on the beam on each side of it. The finished cornice job is shown in Fig. 8.

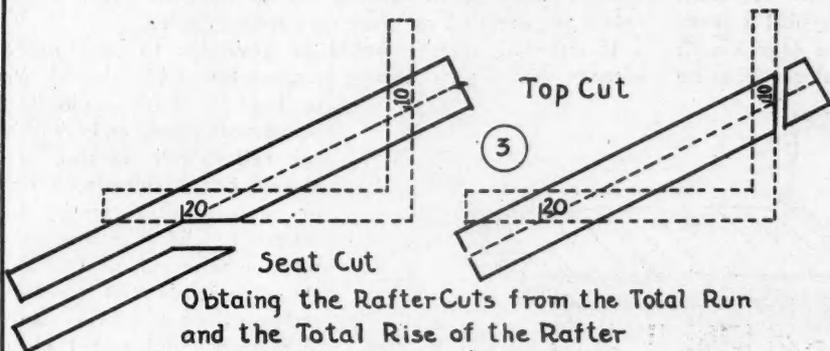
Further details showing the construction of large plaster cornices will be given in the next article.



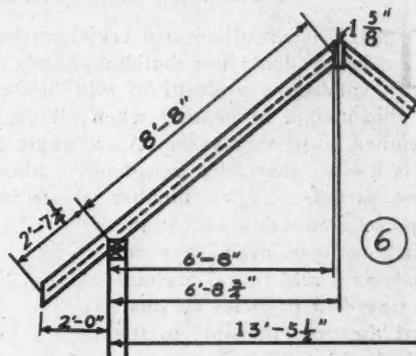
A large square drawn on the side of a rafter to see how the top and seat cuts are obtained



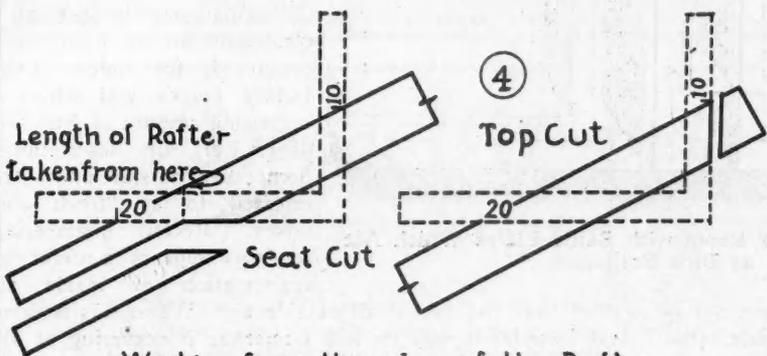
Showing the points from which measurements are taken at the lower end of the rafter



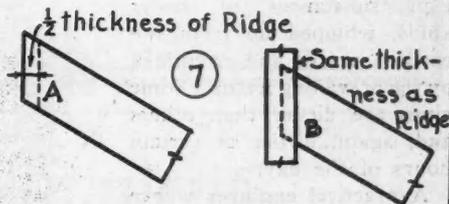
Obtaining the Rafter Cuts from the Total Run and the Total Rise of the Rafter Working from the "Measuring Line"



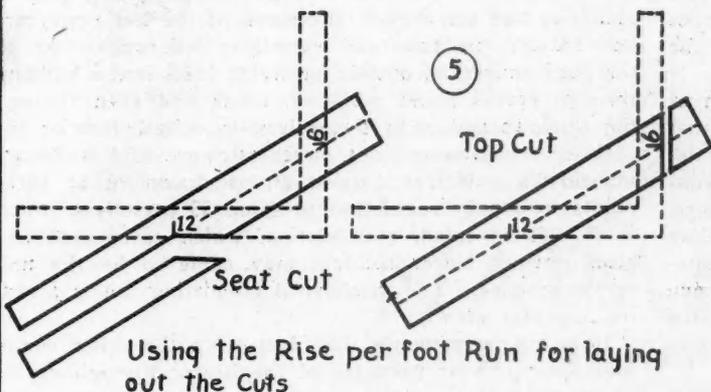
Showing the deduction made for the Ridge-board



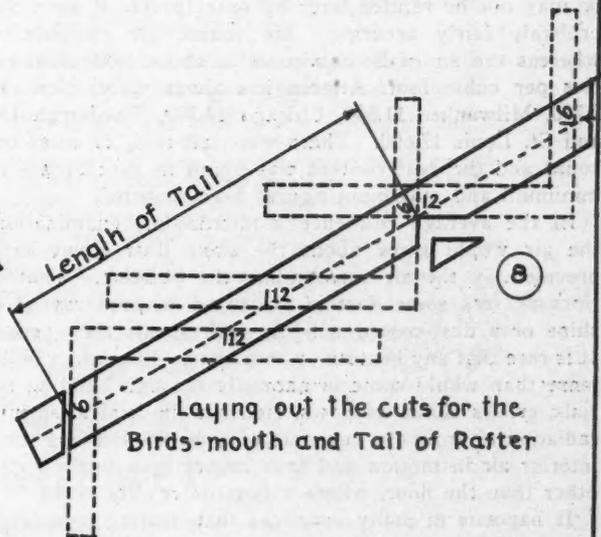
Working from the edge of the Rafter



Other ways of deducting for Ridge



Using the Rise per foot Run for laying out the Cuts



Laying out the cuts for the Birds-mouth and Tail of Rafter



# FURNACE HEATING

## Making Furnace Installations Dustless

**Facts to Invalidate the Assertion That Warm-Air Heaters Must Admit and Circulate Dust, Coal Gas and Smoke to a Building**

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

**T**HE frequently heard criticism that warm-air heaters bring dust into buildings and thus make interior conditions unhealthful will be recognized as unfair to this method of heating when all the evidence has been weighed in the balance. As a point of physical science it is known that all atmosphere is filled to a degree with dust particles. Their number is less in rural sections, on tops of mountains and at the seashore, yet even here an analysis would reveal myriads of tiny dust particles so small that they are invisible to the naked eye.

It is in the large cities that the dust nuisance is most important, however, for here the air we breathe is polluted with smoke, bits of metal and foreign substances of many kinds, whipped up from the earth's surface and circulated by the prevailing winds. Some cities are dirtier than others and, again, dirtier at certain hours of the day.

A practical engineer whose hobby is dust and its separation secured data on the atmospheric dust content of a number of cities of the United States. The information may or may not be refuted later by other practical men, but is probably fairly accurate. He found, for example, that whereas the air of Boston contains about 5,000 dust particles per cubic foot, Atlanta has about 9,000, New York 9,700, Milwaukee 11,500, Chicago 14,300, Pittsburgh 15,100 and St. Louis 17,600. There were, all told, 23 cities under count and the dust content was found to vary between the minimum and maximum figures here reported.

In the average residence a microscopic examination of the air would show about the same dust count as that prevalent in the air surrounding the building. That interiors possess some dust is evidenced when a ray of sunshine or a dust-coated window still reveals their presence. It is rare that any heating system brings dust into a building more than would come in naturally through building materials, cracks about windows, etc., but the heat arising from radiation or from the registers of a warm-air plant sets the interior air in motion and thus causes it to settle in places other than the floor, where it is more readily noted.

It happens in many instances that heating installers are not careful in the selection of the locations of fresh air inlets, known as cold-air boxes. If these are placed near the ground, as is true when cellar windows are used, and

the surroundings are dusty it is not surprising that in fall and late spring, especially, dust will be drawn into the cold-air boxes. Cases, too, are by no means rare where cold-air inlets abutt directly on an alley or court where ashes are emptied or there are rubbish piles.

If either is true it would be advisable to construct a plenum chamber, or settling box, somewhat like that shown in Fig. 1. This would best be placed immediately within the cellar wall opening and should be provided with one or more cloth screens, arranged as slides so that they may be removed, shaken and the cloth renewed at intervals.

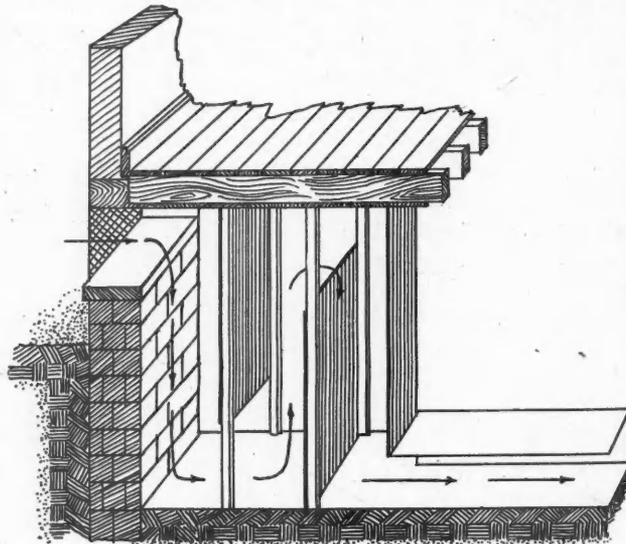
As to the cold-air box itself, if made of galvanized sheet steel the joints would best be lock seamed and tight fit assured. It is when boxes are of unmatched lumber that complaints are more often encountered, for unless fitted tightly cracks will admit a surprising amount of dust and debris of all descriptions. Sometimes outside inlets are referred to as "fresh air" boxes. Recent engineering tendency appears to prefer the recirculation of inside air

rather than the use of all outside air. When this is done dust complaints will be less numerous if occurring at all.

It was formerly believed that outside air supply is necessary due to impurity of inside air. This was in the era when little attention was paid to hygiene, modern plumbing and ventilation. Research of the last two years has brought us new and surprising information as to the huge amount of outside air which leaks into a building through cracks about windows, doors and even through the windows and walls themselves, to refresh interior air.

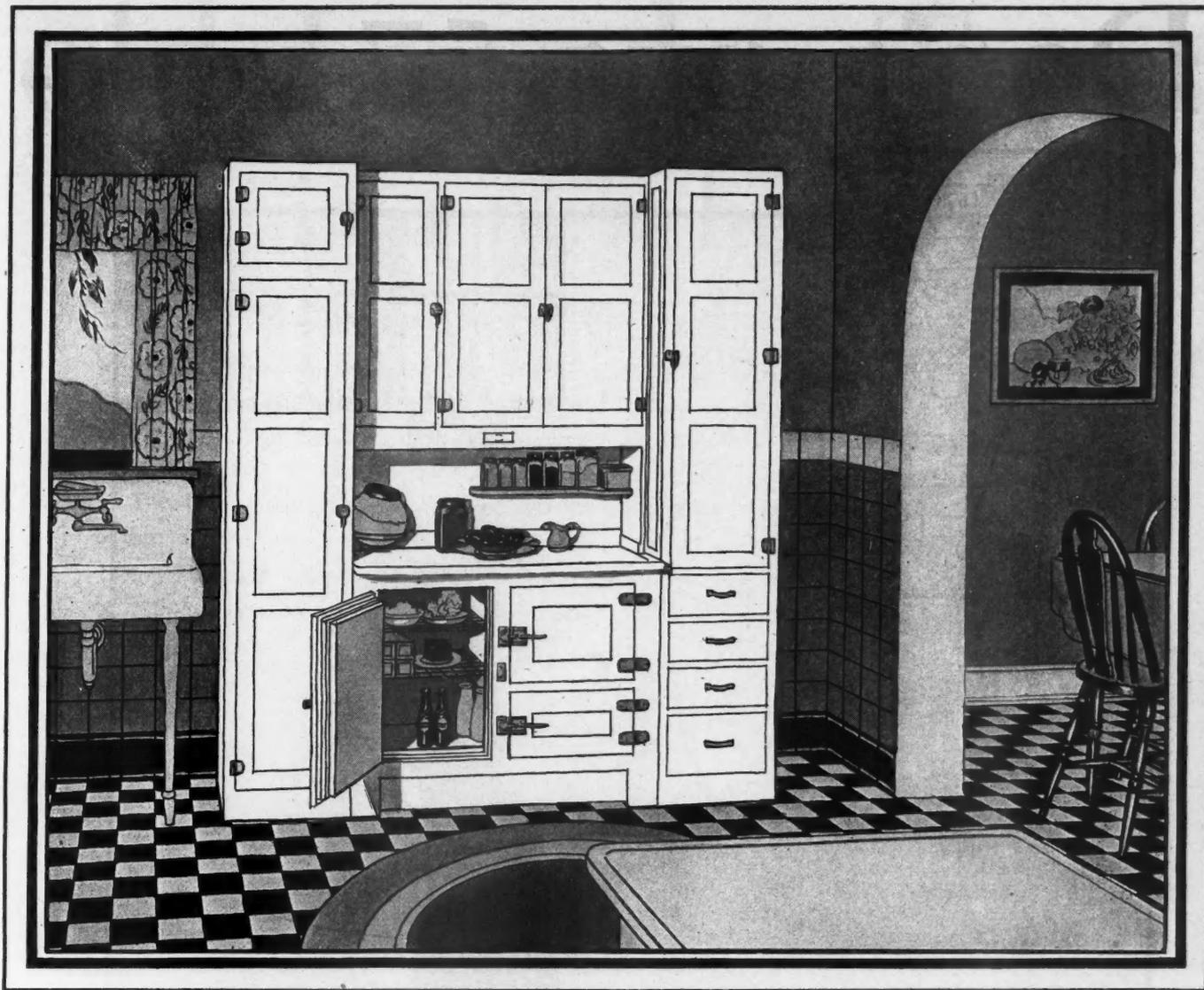
When windows are not weatherstripped and walls are uninsulated sufficient outside air is drawn in at these points to supply ventilation to some 35 persons at once. With this in mind, recirculation, which saves coal and also provides better heating, may come to be the universal practice. The mechanical circulating fan is assisting the idea greatly.

It is not infrequently that dust from the cellar comes into the warm-air passages of the heater through cracks about the bottom of the casing. To prevent such cracks and provide a tight fitting front the heater must be set on an absolutely level foundation of brick or cement and cement slushed in around the casing ring.



**Fig. 1—Fresh Air Room with Baffle Plates Which Act as Dust Collectors.**

(Continued to page 176)



## Sound, Well Built Equipment to give longer better service

**T**HE integrity of Napanee units is the result of our sincere effort to make the finest kitchen and pantry equipment that money can buy. We frown upon short cuts. We tolerate no slighting. Everything is for quality.

There are many items of unusual construction in Napanee products about which we would like to tell you. The gist of it all, however, is this: Napanee units are the ones to use when you want equipment that will serve a home owner or tenant year in and year out without trouble.

The combination illustrated above includes a 40½ inch refrigerator-cabinet, a 16½ inch broom closet and a 16½ inch dish cupboard with four linen drawers. The overall width is 73½ in.; height 85½ in.; depth of base 21 in.;

depth of porcelain top 25¼ in.; depth of cabinet top 12 in.; depth of side units 21 in.

There is a Napanee unit or group of units for all needs to fit any size space and any arrangement of doors and windows.

**COPPEBROS. & ZOOK** - - - Napanee, Ind.

COPPEBROS. & ZOOK, Napanee, Ind. AB5  
Gentlemen: Please send me your illustrated catalog of Napanee Dutch Kitchenet Units. (Please check square.)  
I am  Builder  Architect  Owner

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*Mail this Coupon*

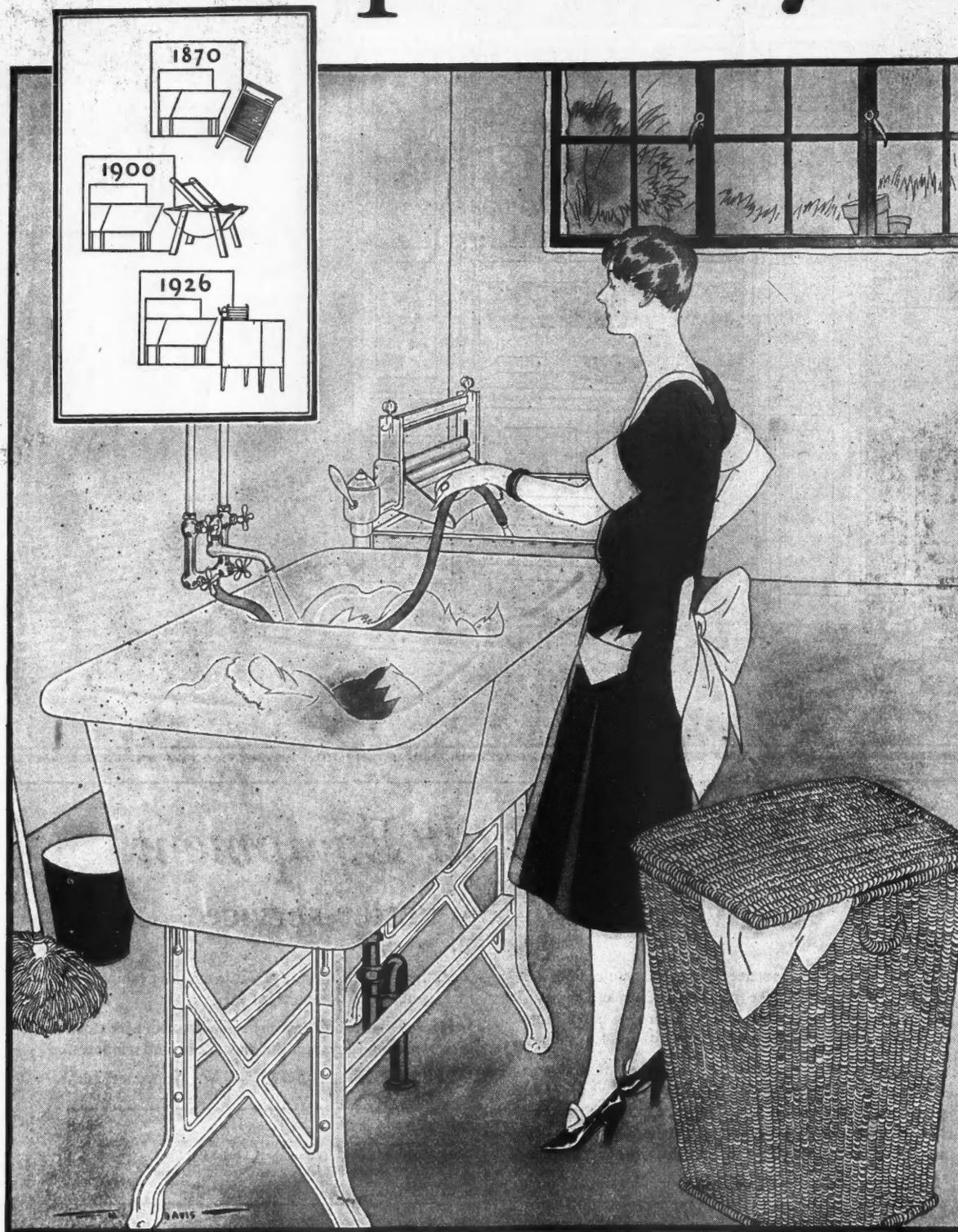
# NAPANEE

## DUTCH KITCHENET

*Built Like Fine Furniture*

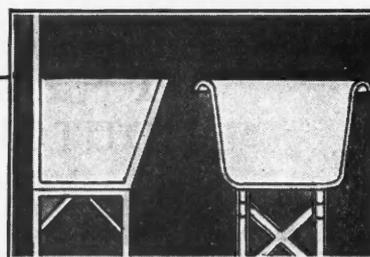
OUR GOLDEN ANNIVERSARY YEAR

# Don't put 57-year-



*"Standard" Dutray P 7308 B*

*This new Tray represents another step in "Standard" progress. See how the slope of the old-style Tray cuts away much of the bottom. The new Tray is much handier and roomier.*



FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

# old Laundry Trays in a new house

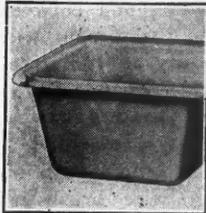
*The new "Standard" is the only really new Laundry Tray since 1870*

You would never put an 1870 Sink in a new house — but even today houses are being equipped with Laundry Trays designed exactly like the Laundry Trays of 1870. They still have a sloping front for a washboard, though washboards have been out of date for years.

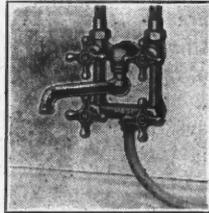
Now "Standard" offers a Laundry Tray that's 1927 from Faucet to finish. The "Standard" Acid

Resisting Enamel—special washing machine connection—unobstructed inside walls—adjustable height—these are among the exclusive features of the new Tray which stands away from the wall and is all white, inside and out.

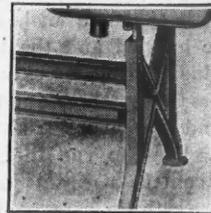
You know that a modern laundry helps sell your house. Here is a modern Laundry Tray that helps sell the laundry.



*With no Faucet in the walls of this new Tray, it is easier to keep clean.*



*Swinging-Spout Faucet serves both Trays. Hose for washing machine always attached.*



*These sturdy legs are adjustable. The Tray is placed at any desired height.*

## *Away From the Wall*

Instead of hugging the wall, the new Tray stands on its own sturdy legs and is located to suit the user's convenience. Time and strength are saved when the washing machine can be drawn alongside the Tray—it's easier to work around than to bend over. The "washboard slope" is gone—adding space that the slanting front cuts away.

## *The "Washing Machine Faucet"*

The new Tray has a special outlet—a sort of extra Faucet—for the washing machine's exclusive use. Once a hose is attached to this outlet, there's no more connecting or disconnecting. Even while the washing machine is being filled, the regular Swinging-Spout Faucet is free to pour hot, cold, or "tempered" water into either Laundry Tray.

## *High, Low or Medium*

Women accommodated themselves to the height of the old-style Tray—they'll like the way the new "Standard" accommodates its height to them. For this Tray is high for the tall woman—low for the short—it is adjustable at time of installation to whatever height is best for the woman using it.

## *Standard Acid Resisting Enamel*

The new "Standard" Laundry Tray is finished inside with "Standard" Acid Resisting Enamel which prevents streaks and stains, and is proof against the ingredients of washing compounds. It looks well when it's new—and it looks new when it's old.

And with the Faucet above the Tray, nothing obstructs the china-white smoothness of the inner walls—there are no corners where dirt can collect. It is easy to clean and keep clean. Write for Catalogue.

Standard Sanitary Mfg. Co., Pittsburgh

# "Standard"

PLUMBING FIXTURES

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

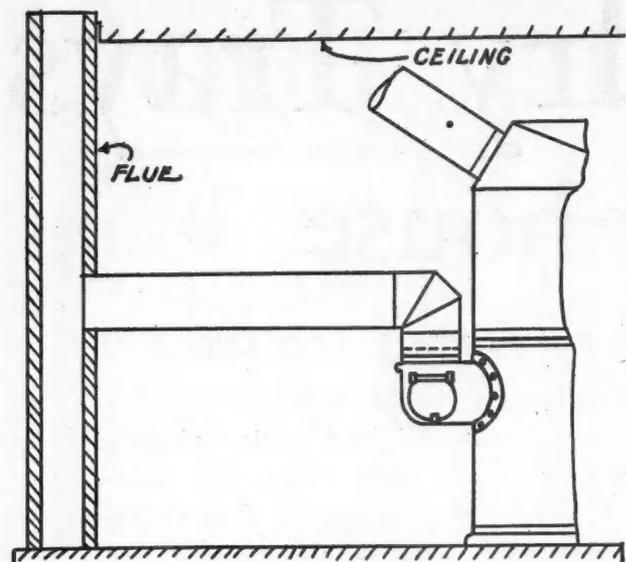


Fig. 2—Horizontal Smoke Pipe Offers Opportunity for the Deposit of Soot and May Interfere with the Draft.

(Continued from page 172)

### Cementing Section Joints

How often are we reminded, when it comes to the use of furnace cement, that "haste makes waste." Here is a job that cannot be hurried and the installer who thinks he can furnish an installation quickly so he can obtain his pay, which comes upon completion of the work, and hustles cementing and the firing trial to end his part of the contract, usually lives to rue the day. There is too much poor furnace cement used in joining sections of a cast-iron heater and too little care paid to using sufficient cement to make a tight job. No furnace, nevertheless, will have tight joints long unless the heater has been properly leveled,

Here is one of the chief causes of complaint, so far as transmission of gases, smoke and dust is concerned; for, if there is a leak between the furnace castings and the free, encased area surrounding the heating elements gas and smoke may be mixed with the warm air and thus delivered to the upper parts of the building.

Furnace cement is a heavy, plastic material weighing approximately 15 pounds per gallon. Exposed to the air it dries slowly, remaining pliable after several months. The formation of the initial skin is variable, at times a film forming on the surface within 30 minutes in a dry atmosphere, while in a moist atmosphere this film will not be formed, the cement remaining soft due to the absorption of moisture.

If the moist condition continues a state will be reached where the cement will be softened to a point when it will sag and run, thus pulling away from the casting. The excess moisture absorbed dissolves, leaches out the binder and the solution may flow from the cement. Hence, the cement will be weakened because it has lost some of its binder and, when fired, the cement will have a tendency to powder.

### Starting Newly Cemented Furnace

Heated slowly to a temperature of 400 to 500 degrees Fahrenheit, the cement bakes to a hard, stone-like mass, solid and compact and comparatively free of pores. With increased temperature greater hardness is developed. Asbestos cement, when properly made, will not shrink when burned, but has a tendency to expand and fill the joint and, when precautions are taken that heat is not raised too rapidly, a close-grained cement with minimum of porosity is the result. When quickly heated it swells and blisters, is porous and cracker-like and easily broken.

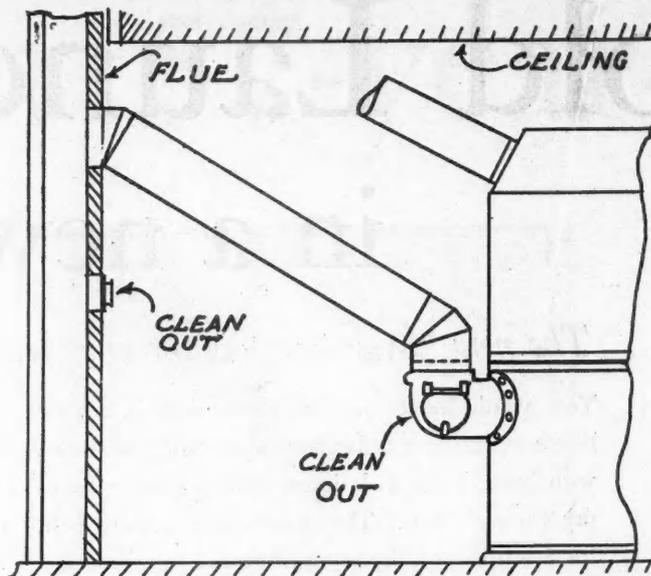


Fig. 3—A Better Method Is a Sloping Smoke Pipe; Better Draft and Freedom From Soot Accumulation Are Thus Provided.

The method of heating is important for the heat must be raised slowly to expel the moisture contained. If this precaution is not taken the bond between the metal and the cement is broken and the cement will become honey-combed. Instead of porosity of from zero to two per cent in a well cemented joint the porosity may run up to 20 per cent where quick heating has been resorted to. In applying the cement it is essential that the castings be clean as otherwise the cement will not adhere to the metal. Securing with a wire brush is advised and a gasoline saturated rag will remove grease, oil and paint.

A can of cement is sent with every furnace the size of which has been determined as being sufficient for the complete job. In many cases only one-half of the cement is used and, consequently, the joints are not properly filled. When cement is simply daubed into the cup a strong, substantial joint is impossible. Some installers thin asbestos cement with water to consistency of paint and brush this mixture into the joints, after which the cups are filled with heavy cement. This is found to be an excellent practice and is recommended.

After filling the joint care should be taken to allow the sections to settle of their own weight, avoiding twisting, which pulls the cement from the castings in spots and forms air pockets. The cement which is forced out when castings are put in place should be beveled to a feather edge against the casting. When properly fired, furnace cement  $\frac{1}{8}$  inch thick will support a load of 100 pounds without breaking.

Too little attention is paid to the smoke pipe by the average heating installer. In some cases pipes are permitted to protrude into the chimney flue beyond the inside surface and in others they are merely inserted into the opening without the protection of a collar. Both conditions are bad. When the smoke pipe protrudes into the flue the draft is diminished and a sluggish fire results. When merely inserted into the flue without filling in the surrounding opening there is likely to be escape of gas and smoke into the cellar.

Many times a warm-air furnace is condemned for failure to produce good heating results when the actual trouble is lack of draft. While the heater is, of course, incapable of producing draft, failure to install the smoke pipe correctly often interferes with the draft. Not only must the smoke pipe be connected to the chimney properly, but it is advisable to give it a slight elevation, say, about three feet.

(Continued to page 198)

# Both *builder* and *home owner* save money with Celotex

**B**ECAUSE Celotex is a great time and labor saver, it is a profitable material to use on any building job.

But Celotex does more than add to your *immediate* profits . . . it adds to your reputation because it makes homes more livable summer and winter . . . because it can reduce fuel bills one-third.

Builders who have used Celotex know that it is exceptionally easy to handle and apply. Light, strong boards of Celotex are sawed, erected and nailed just like wood lumber, only with less work. Used as sheathing or under plaster, broad Celotex boards brace a wall stronger than narrow wood sheathing or lath.

Celotex boards are always uniform—4' wide, 8' to 12' long, 7/16" thick and

**Celotex is applied easier and quicker than wood lumber, and makes homes more comfortable all year 'round**

weigh about 60 pounds per 100 square feet. There are no short pieces or odd sizes; every board is usable—free from cracks, knotholes or stain.

Because Celotex is not an extra item in building it adds little or nothing to costs. As

sheathing it replaces wood lumber; under plaster it replaces lath. There are many other Celotex uses that bring in extra profits on every building job. Interiors finished with Celotex combine attractive appearance with greater comfort. Attics or basements lined with Celotex cut fuel bills and make homes more livable. Celotex makes an ideal garage lining, too.

All lumber dealers can supply Celotex. Mail the coupon for the Celotex Building Book and Specifications showing how to apply Celotex.

### *How Celotex Is Used*

Celotex should always be built into both roof and walls. As sheathing, Celotex replaces wood lumber and building paper . . . adds strength . . . costs no more. Under plaster, replacing lath, Celotex builds stronger walls and ceilings . . . less apt to crack . . . free from lath marks. Celotex is also used as interior finish and attic lining either in its natural tan color or decorated. As roof sheathing Celotex provides insulation where it is most needed. As garage lining it helps protect the car against freezing.

*"We build houses to sell," says F. J. Fisher, Superintendent of Construction for H. & S. Som, Inc., White Plains, N. Y., Builders. "We are consequently on the lookout for materials that bring the most satisfaction to homeowners. Celotex, I think, is one of the best selling-points a builder can put into houses today. We have sold over forty Celotexed houses within a reasonably short period."*



## **CELOTEX** INSULATING LUMBER

THE CELOTEX COMPANY, Chicago, Ill.  
Mills: New Orleans, La.

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

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

THE CELOTEX COMPANY, Dept. T-505 Am. Bldr.—5-27  
645 N. Michigan Ave., Chicago, Ill.

Please send me the Celotex Building Book and Specification Book showing how to apply Celotex.

Name.....  
Street.....  
City..... State.....

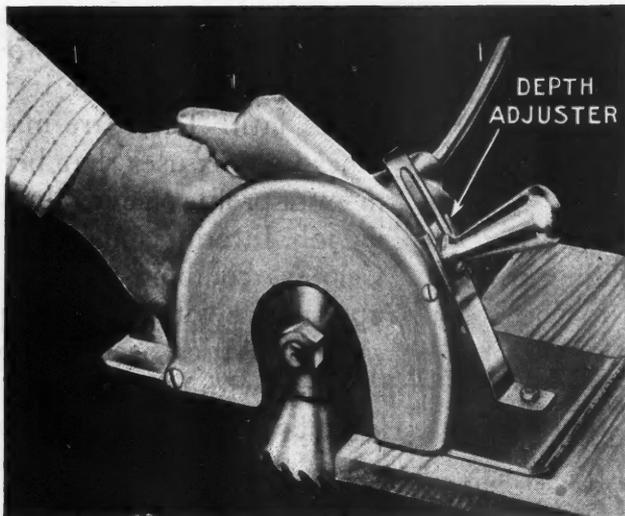


# WHAT'S NEW ?

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

## Light Weight Power Hand Saw

**T**HIS new, light, electrically driven, hand saw has been developed to meet the demand for an inexpensive tool of simple and efficient design. The outstanding characteristic of this saw is that the saw is mounted direct on a special motor armature which runs in two precision ball bearings, packed in grease. This allows the full power of



A Simple and Inexpensive Electric Hand Saw Developed by a Company Known for Its Quality Machines.

the motor to be applied direct to the saw and eliminates, it is said, all trouble and friction caused by the use of gears, couplings and extra spindles.

The weight, complete, of the saw is only 10 pounds and it can be operated easily with one hand, leaving the other free to support the work. The wide supporting shoe carries the weight of the tool, prevents tipping and insures perfectly square cuts. The front shoe is graduated into  $\frac{1}{4}$ -inch scale. The edge allows the operator to follow the line in cutting. The opposite edge, which is parallel to the saw, allows the use of a miter gauge.

By loosening the front handle, the hinged supporting shoe can be set for any depth of cut up to 2 inches. This makes the saw a practical tool for electricians and plumbers as with it they can cut out sections of flooring without injuring sleepers. Contractors find it especially convenient for removing the ends of siding, roofing and flooring and it is said to save hours of hand labor in pattern shops, shipping rooms and carpenter shops. It operates at high speed and leaves a smooth edge often eliminating the necessity for planing.

This saw is built to withstand weather conditions as almost all parts are of aluminum and duralumin. The ventilation of the motor is protected and the exhaust of air is inside the guard, which blows the sawdust away from the work and the operator. It is well guarded as may be

seen from the illustration. Standard equipment consists of 10 feet of conductor cable and armored duplex plug and one 7-inch combination saw which may be used for both ripping and cross cutting. The voltage of the motor is 110 or 220 as specified. It will operate on direct or alternating current of 25 to 60 cycles. Hollow ground saws for particularly smooth cutting or special saws can be furnished when required as well as miter gauges and grinding attachments.



## Improved School Wardrobe

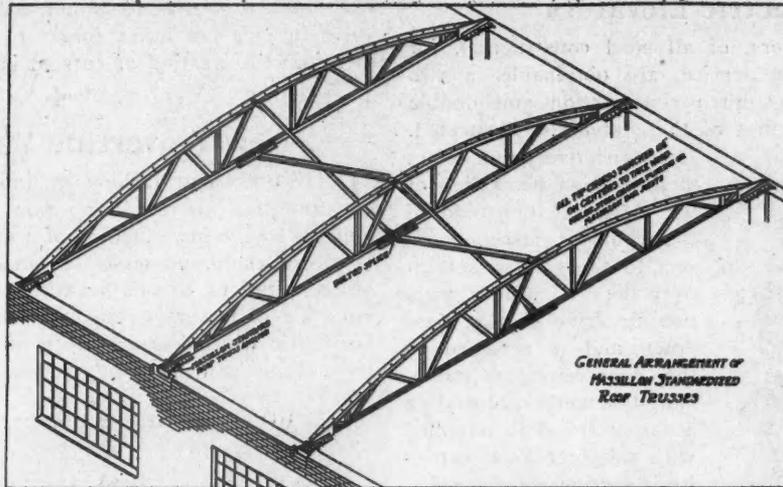
**F**OR more than nine years a certain manufacturer has been turning out vanishing door wardrobes for schools which, with only minor changes such as improved hinges, have enjoyed a continuous popularity and have been installed in thousands of schools. Recently this manufacturer has announced sixteen new designs of which the one illustrated here is the feature design and considered the best. As compared with previous models it is said to represent a saving of 33 per cent in hanging space and money.

This wardrobe contains three compartments. A two-foot compartment for the use of the teacher and two five-foot units for the pupils, so that the boys' and girls' wraps may be separated. The latter units have a capacity of 24 hangers each, a total of 48. The hangers are removable avoiding congestion and allowing the wraps to be properly placed on the hanger before it is hung on the metal rod. A double hat rack above the hanger rod takes care of hats without pulling them out of shape or permitting them to be knocked down, as is the case with hooks, and without getting soiled as with a shelf or slats. This consists of a row of heavy rods, which will not collect dust.

The space required for this wardrobe, taken from the finished plaster lines, is 12 feet wide, two feet two inches deep and six feet two inches high. The doors project  $2\frac{1}{4}$  inches beyond the trim, only sufficient for a metal bar pull and not enough to block the aisles.



A Successful Maker of School Wardrobes Has Recently Announced 16 New Designs, This One Being Particularly Featured.



# Standardization that Benefits the Building Industry

## Steel Building Products that You can Use

WHEN steel joist floor construction was first introduced it was a mystery and avoided by contractors. The standardized features of Massillon Bar Joists made it a practical economical method of building fireproof buildings. Erected by the ordinary building trades, without cutting or fitting in the field and without special plant equipment, Massillon floors have become a standard construction for contractors in all parts of the country.

In the same manner the Massillon Roof Truss has set new standards for the construction of rugged roofs for garages and other buildings requiring clear open space. They are built in standardized sizes, to standardized designs with standardized shop and inspection methods.

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

The use of Massillon construction results in good economical buildings. The products are particularly adapted for ease and simplicity in erection. It will pay you to submit your plans and get an estimate based on Massillon construction.



\*Massillon Roof Trusses are standardized, shop fabricated trusses for roof construction where clear spans are desired. Used for garages, gymnasiums, auditoriums, and in industrial and commercial buildings. Carried in stock for prompt shipment.

\*\*Massillon Metal Lath—All weights and types. Complete line of corner beads, base screeds and furring channels. Warehouse stocks maintained at convenient points.



†Massillon Bar Joists—Rugged steel joists that are shipped from stock ready for installation without cutting or fitting in the field. They are used for building fireproof floors and roofs in all types of buildings.

Massillon Steel Windows—Complete line of copper alloy steel sash, architectural and industrial projected windows, double hung windows, casement and basement windows.

Massillon Bank Vault Reinforcing, Partition Studs, Lintels, Standard Steel Doors, Sidewalk Doors, etc. Fabricated Structural Steel and Steel Reinforcement.

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

To Obtain Estimates—Furnish us with a sketch or set of plans. Sales Offices in all principal cities.

\*New "Massillon Roof Truss Catalog"—full designing data for both "Curve Chord" and "A" Type Trusses.

\*\*New "Massillon Metal Lath Catalog"—recommended spacing of supports for various weights and types of lath and uses.

†"The Handling and Erection of Massillon Bar Joists"—a contractor's publication illustrating and describing the different methods of erecting Massillon Floor Construction.

Catalogs sent on request

THE MACOMBER STEEL COMPANY, 909 Belden Ave., N. E., Canton, Ohio  
Successors to THE MASSILLON STEEL JOIST CO. and THE CANTON BRIDGE CO.

Canadian Manufacturing and Sales Agents: Sarnia Bridge Co., Ltd., Sarnia, Ontario

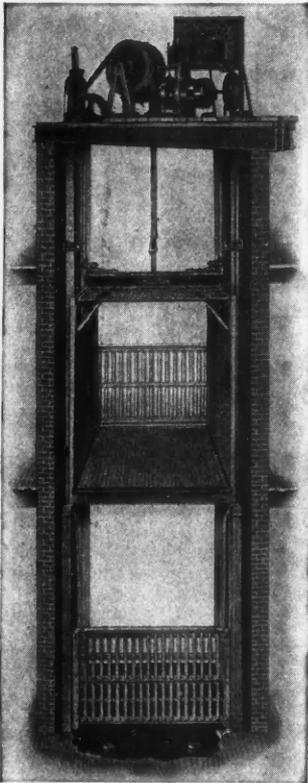
# M A S S I L L O N

## STANDARDIZED STEEL BUILDING PRODUCTS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

### Light Electric Elevators

**L**IGHT electric elevators, of all steel construction, for passenger or freight service, are obtainable in two styles described as direct hitch construction and double back construction. The first of these styles is illustrated.



This Light Electric Elevator is Made in Two Styles for Light Fast Work and for Heavy Slower Lifts.

of 1,000 to 1,500 pounds and speed of 55 to 100 feet. For the second style the capacities range from 1,500 to 2,000 pounds and the speed from 60 to 84 feet per minute.

Its descriptive name refers to the roping or cabling of the elevator. One end of the cable is attached direct to the car, passes up over the "V" groove traction or drive sheave, then down and is attached to the counterweight string. With this method of cabling a faster speed is obtained with a lighter load; capacity is sacrificed for speed.

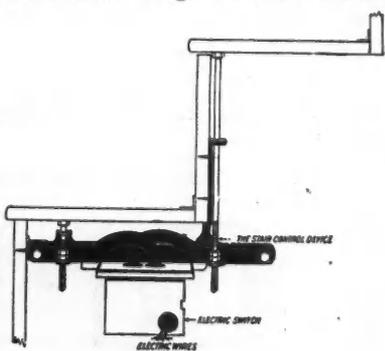
In the double back construction, or two-to-one roping, one end of the cable is dead ended on the overhead beams, thence down around the "U" groove sheave in the car crosshead, up over the "V" groove traction or drive sheave, then down around the sheave in the counterweights and dead ended again on the overhead beams. By cabling in this manner a greater leverage is obtained and a greater load is raised at a sacrifice of speed.

These elevators are furnished with motors of three to five horsepower and with capacity for the first style

### Automatic Light Control

**I**NSTALLED on basement or attic stairs, this practical device makes the house more salable for the builder and more liveable for the buyer. It is simply an electric switch controlling the basement or attic lights and so designed that the pressure of the foot on the step to which it is attached operates the switch.

Once installed this switch is entirely automatic. When you step on the next to the top step of the basement stairs the basement lights are switched on. When you step on



An Automatic, Stair Switch Controlling Basement or Attic Lights is a Great Convenience.

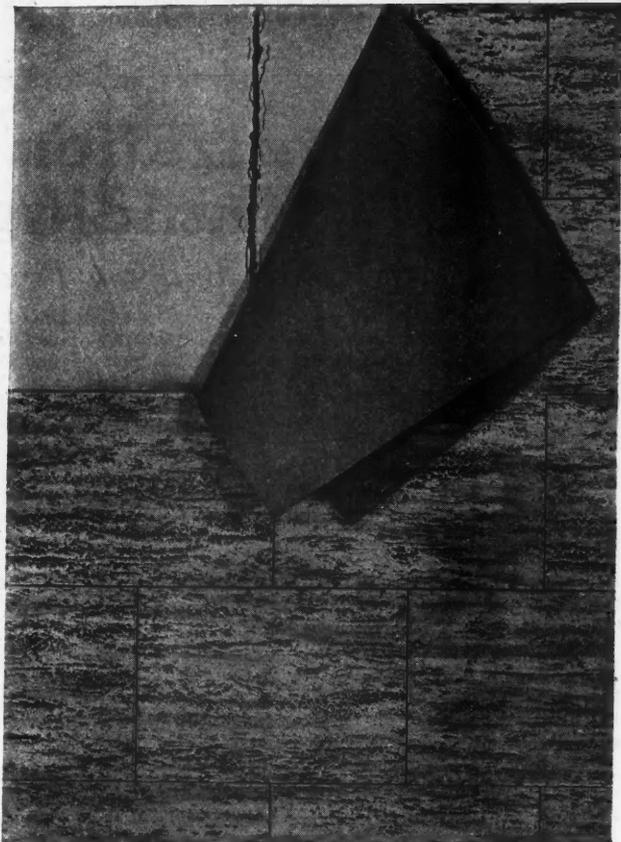
the same step coming back up they are switched off. In the same way it is used on the attic stairs under the bottom step. It may also be used on any stairway as a burglar alarm, lighting the house at night or ringing a bell or buzzer. The cost of this switch is small and the installation simple, requiring only a hammer

and screw driver as tools and about two hours of labor. Once in you can never forget to turn off the lights and therefore the wasting of current is stopped.



### New Travertine Wall Covering

**T**HE prevailing fashion of imitating Italian travertine stone for interior decoration has been given a new impetus by the introduction of a material which, the manufacturers claim, possesses a number of advantages over other imitations of this beautiful and unusual stone. This imitation of travertine comes in the form of a wall covering fabric which has already gained a widespread popularity and the new travertine is similar to the other familiar



Imitation Travertine Walls Are Now Reproduced in a Fabric Material Which is Said to Be a Perfect Reproduction.

patterns except in its finish which is an effective imitation of the original stone.

This material is built up in a combination of linseed oil, lithophone, wood flour and other materials which, together with the fiber backing, make a pliable sheet through which surface cracks will not show. It may also be removed, quite easily, leaving the wall in its original state, if so desired. It is entirely impervious to water and can be washed with soap and water if it becomes soiled. Wall blemishes caused by gouging can be quickly and satisfactorily repaired by cutting out the damaged surface and replacing with the same material.

This material may be obtained in a variety of colors either plain or decorated. It is easily applied, permanent and inexpensive. Attention is particularly called to the non-repeating design of blocks which to a great extent eliminate the usual mechanical effect resulting from reproductions of this type. In addition there is a duplication of the matching line on both sides of the sheet. These being identical the decorator is able to reverse every other sheet thereby further eliminating any pattern repeat that otherwise might occur.



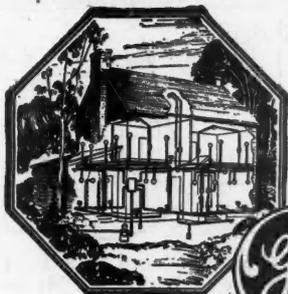
## Better wiring will sell your house

The G-E Wiring System is a system of housewiring embodying adequate outlets, conveniently controlled, and using G-E materials throughout. If interested, address: Sec: AB-5

Merchandise Department  
General Electric Company  
Bridgeport, Conn.

A complete G-E Wiring System adds only a few dollars to the cost of building a house, but it gives you selling points in every room. It is real interest, not simply curiosity, which prompts thousands of women to inspect the model "electrical home." The handy switches, numerous convenient outlets and "pilot" lights—vital parts of the G-E Wiring System—get attention because they represent comfort, convenience, and the means to artistic lighting.

As a selling argument, the installation of the G-E Wiring System is becoming more and more effective. Builders everywhere are finding that it pays. It speeds up the sale and makes your building more profitable.



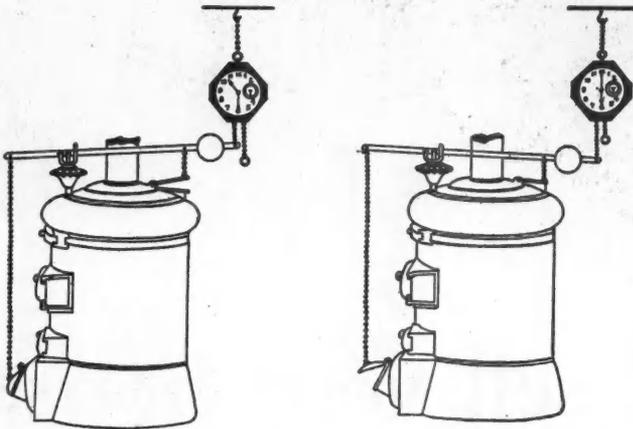
**WIRING SYSTEM**  
*—for lifetime service*

# GENERAL ELECTRIC

### Furnace Control Clock

IT is opposed to both comfort and health to crawl out of bed on a cold winter morning and go shivering down to the basement to open the furnace drafts and get the furnace started. If you don't catch cold, under such circumstances, you can hardly escape starting the day with a grouch and that is almost as bad. But it is not necessary to suffer this discomfort for any furnace can be equipped with the furnace clock seen in the diagrams and it will do the unpleasant task for you.

This automatic regulator can be installed easily and quickly and once installed it is only necessary to shut the drafts at night, set the indicator, just as you would an alarm clock, and forget it till morning. The indicator is set for the time you want the fire started up in the morning, usually about three-quarters of an hour before the time you arise. When the clock hand reaches the hour for which the indicator is set the weight is released, the



**No Need to Get Up in the Cold to Start the Furnace on Cold Winter Mornings If You Have an Automatic Furnace Control Clock.**

drafts opened and by the time you arise your house is comfortably heated.

With this device the drafts are adjusted gradually by the patented releasing device and are not allowed to bang shut so that there is no injury to the casting possible. The whole device is built to withstand all ordinary basement conditions without damage. In addition to the comfort which it insures this device is also a coal saver and, it is said, its small cost will be saved in coal within a short time. It is adaptable to either steam, hot water or warm air furnaces.

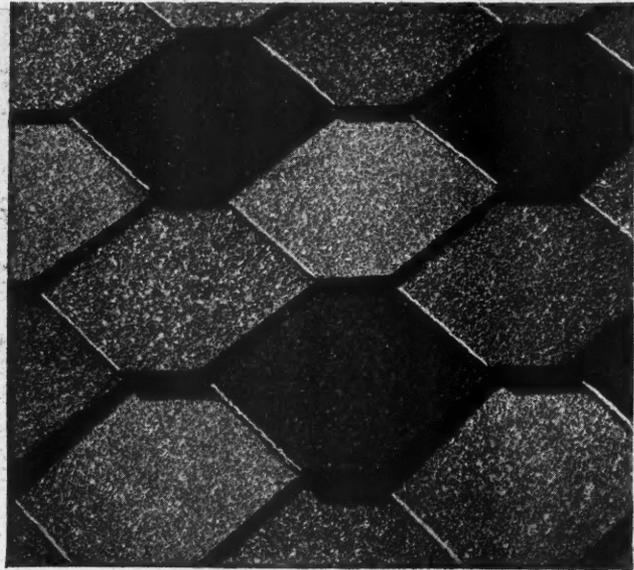


### Permanent Colored Roofs

THE roof of a house serves a double purpose, to protect the house and its occupants against the elements and to beautify the house and make it more attractive to its owner or a prospective owner. In the latter function, particularly, it is an important factor in determining the salability of the house, and in the beautifying of roofs great strides have been made in recent years. This advance includes, conspicuously, a tendency toward the use of color in the roof, and the type of roofing shown here meets this requirement with a variety of colors.

These strip shingles offer a choice of six rich, non-fading, natural slate tones and two attractive four-tone combinations to choose from. The four tones are pre-assorted, assuring application in the proper sequence of colors and a harmonious roof. They give a depth of coloring and of shadow lines which is highly effective and suggest a ruggedness which forecasts permanence.

Nor is the suggestion of permanence without foundation



**Strip Shingles in a Variety of Colors to Meet Every Requirement Produce a Roof of Permanent Beauty.**

in fact for they have an added thickness of 40 per cent and are built with the heaviest, high grade felt possible to use and their high quality of materials and manufacturing standards assure long life.



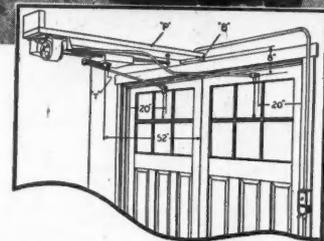
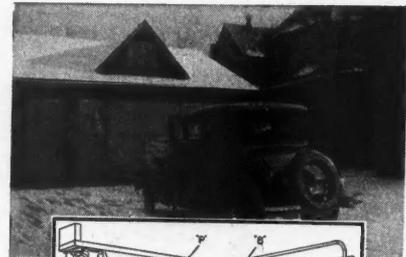
### Automatic Garage Door Opener

AN automatic device which will be found a great convenience by the owner of the private garage and which will increase the salability of the houses for the builder is an automatic garage door opener which eliminates the necessity of getting out of the car to open the garage door. The doors are opened by merely pressing a button placed on a post in the driveway, accessible from the driver's seat, or placed in the house.

On leaving home, after taking the car out of the garage, the driver merely presses the button, reaching it from the seat of the car as he passes, and the door closes behind him. When returning he pauses at the post, again presses the button and the doors open as he rolls up to them. By a simple arrangement the garage lights may be turned on automatically as the doors open.

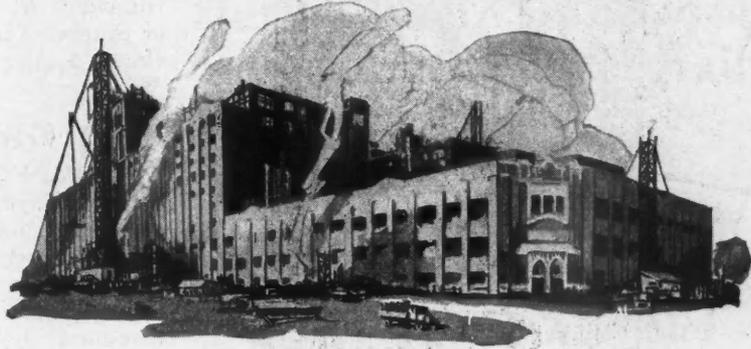
While designed primarily for private garages this device may also be applied to commercial garages, factory doors and other places and can be used for doors swinging either inward or outward. It eliminates the necessity for bolts and locks, is simply constructed and requires no attention when once installed. It is not affected by ordinary winds or snowfall, being sufficiently powerful to open or close the doors in the face of a strong wind or to push away six to eight inches of ordinary snow.

This device can be installed on either old or new garages and, except for some accident, will last a lifetime, it is said.



**A Button Placed in a Post by the Driveway or Inside the House Opens and Closes the Garage Door.**

# CARNEY CEMENT helped this builder gain six weeks on a penalty contract!



WHEN the B-W Construction Company agreed to erect the mammoth Sears-Roebuck Building at Atlanta, in seven months, they picked a real job—with a heavy penalty clause if they failed.

The prime factors in selecting materials were quality and adaptability to speedy handling. From past experience, this builder chose Carney Cement for the mortar. They knew that in Carney they had a material that would save hours and hours of mixing time—soaking would be unnecessary and lime was not needed, enabling one man to supply mortar to 30 masons easily.

Old time-sheets showed a definite increase in the number of brick each mason could lay in a day with Carney Mortar. Its slower setting quality before entering the wall, eliminated tamping and retempering, and its smooth working quality permitted a much wider mortar spread with each swing of the trowel.

It's just another case of the facts bearing out claims—and the builder who has these facts stays with Carney to the last ditch.

## THE CARNEY COMPANY

DISTRICT SALES OFFICES:  
CLEVELAND, CHICAGO, DETROIT, ST. LOUIS, MINNEAPOLIS

CARNEY Cement was used exclusively by the B-W Construction Company in erecting the following buildings:  
Ambassador East Hotel, Chicago.  
Cass Superior Studio Apartment, Chicago.  
Keystone Hospital Building, Chicago.  
Sears-Roebuck Building, Atlanta.  
Sears-Roebuck Building, Kansas City.  
Sovereign Hotel Addition, Chicago.

**Specifications:**

1 part Carney Cement to 3 or 4 parts sand depending upon quality of sand.

Cement Makers



Since 1883

# CARNEY CEMENT

*for Brick and Tile Mortar*

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

### Labor Saving Laundry Drier

**W**ASH DAY means plenty of hard work even without the labor of carrying heavy baskets filled with wet clothes up the stairs and out into the uncertainties of the weather, not to mention the back stretching lift of pinning them on the line and the additional steps necessary to bring them back to the house after they are



**No Matter What the Weather the Washing Can Be Handled Quickly and Easily When This Gas Operated Laundry Drier is Installed in Your Home.**

dried. And when rain makes outdoor drying impossible so that the house must be cluttered with the drying clothes, or a boisterous wind whips and tears at the clothes, or a sagging line treacherously drags them in the dirt, then you have wash day at its worst.

But, regardless of weather conditions, washday need never be delayed. With a laundry drier installed in your laundry room you are assured of perfect drying conditions always. You can wash, dry and iron all in one day and in the same room. It is the connecting link in the labor-saving chain of laundry appliances—washer to drier to ironer.

This laundry drier occupies a space only two feet by five feet plus about a foot for flue pipe and to permit access to the burner. The height is six feet. It is made of 24 gauge, rust-proof galvanized metal. The walls, base and top are fitted together with interlocking joints make the whole assembly strong and rigid.

The rods on which the clothes are hung are of rust-proof, non-breakable metal. They afford 60 feet of drying space, more than enough for a tubful of clothes, and can be moved up or down on the rack on which they rest. There is plenty of space between the rods so that the clothes dry quickly, eliminating the danger of colored clothes staining other pieces.

A thermostat device automatically controls the heat within the drier, maintaining a temperature high enough to thoroughly sterilize the clothes and dry them quickly, but the heat cannot rise enough to scorch. Clothes may be left in the drier for hours or even days without the slightest damage to the most delicate fabrics.

The heating system is of the indirect type, a completely enclosed gas burner which, with a series of tubes, forms a radiator. This insures that only clean air passes

through the clothes compartment and the flue gases are carried away through a separate outlet. Fresh air is drawn in at the bottom of the drier, evenly heated by passing around the tubes and sent up dry and sterile to the clothes.

The drying requires approximately one hour for the average run of family washing, less for light weight pieces of a single thickness, so that the first tub of clothes is dry, ready to make way for another in the drier, when the next tub has been washed. There is never any discoloration of clothes, white fabrics are not yellowed or grayed, and colored fabrics are not faded. In addition, the clothes are left clean smelling and free from clothes pin tears, dust or clothesline marks. This drier can also be supplied with electric heating units.



### Damp-Proof Cement Paint

**A** COMPANY which specializes in various kinds of painted materials for structural repairs and plant maintenance offers, among other products, a damp-resisting cement paint for use with stucco and cement finishes, concrete, brick, hollow tile or masonry surfaces to beautify and make them waterproof. This paint is made in white, limestone, gray, buff and tan colors and is applied with an ordinary paint brush. It adheres perfectly without danger of peeling, cracking or streaking.

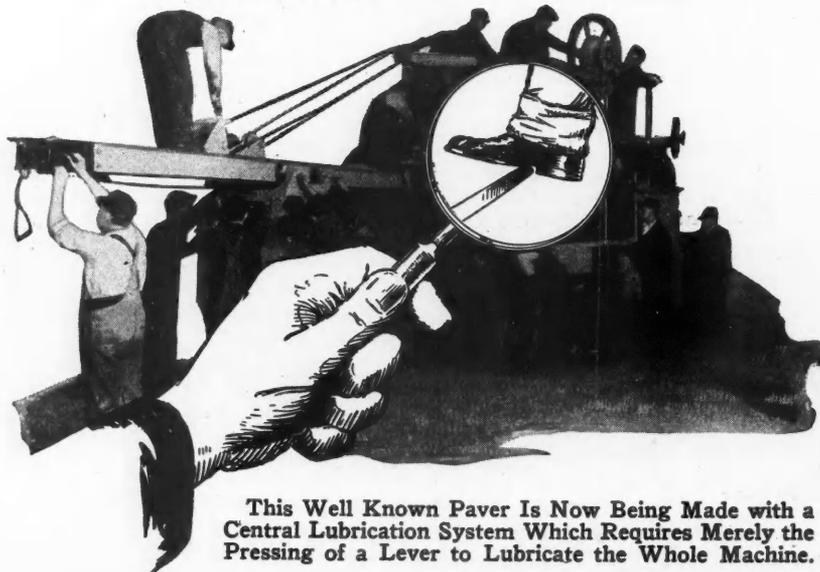
This damp-resisting paint is made of crushed stone, finely pulverized and blended with the highest quality of natural colors and a weather impregnable binder. It fills the pores, cracks and defects completely and seals the walls against all moisture, giving it a surface as hard as glass, it is stated. It is not affected by snow, rain, extreme heat or cold.



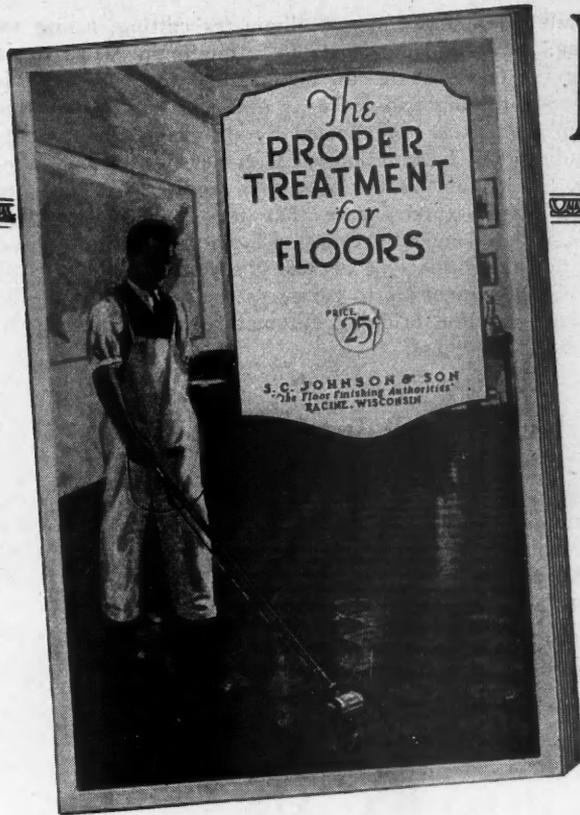
### Paver Has Central Lubrication

**I**NSTANT central lubrication from the operator's platform has recently been installed as standard equipment on a well known concrete mixer which is of the six-bag paver type. This enables the operator to force lubrication simultaneously to the bearing surfaces in the machine by simply pressing a level with his toe. Such a system is decidedly new for pavers and is considered a real advance in design.

One man is now able to do the work of 30 in a fraction of the time, it is said, and the ease with which this central system is operated not only insures perfect and consistent lubrication but encourages frequent attention on the part of the operator. It is believed that this system will result in smoother action and greater dependability from this already efficient machine.



**This Well Known Paver Is Now Being Made with a Central Lubrication System Which Requires Merely the Pressing of a Lever to Lubricate the Whole Machine.**



# FLOORS

Hard-wood, Soft-wood  
Open-grain, Close-grain

*Dance Floors*

*Linoleums      Rubber Tile*

*Cork Carpet*

*Cork Tile      Magnesite*

*Mastic      Terrazzo*

*Cement*

## ALL FLOORS

**H**OW to finish them. Where and When and *Why* to use Filler, Varnish, Wax, Shellac, Oil, etc. Covering capacities, proper methods of cleaning and refinishing. A gold-mine of practical information for Builder, Contractor or Architect.

### JOHNSON'S INTERIOR FINISHES

*Varnishes*

*Fillers*

*Waxes*

*Wood Dyes*

*Enamels*

*Undercoats*

*Wall Finishes*

**FREE** This new Johnson Book is free to the building trade. USE THIS COUPON NOW.

*Clip to your business card or letter-head, please.*

S. C. JOHNSON & SON, Dept. A. B. 5, RACINE, WIS.  
"The Wood Finishing Authorities"

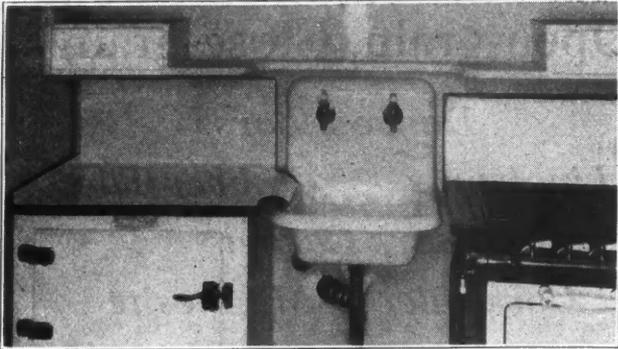
- Please mail me immediately the new Johnson Floor Book—no charge—no obligation.
- We do our own finishing and are also interested in *Wholesale Price List on Johnson Finishes* and your **FREE** offer on the new Johnson Electric Floor Polisher.

Signed \_\_\_\_\_

(Address given on attached card or letter-head)

### Work Table and Drain Board for Close Quarters

A NEW specialty has recently come onto the market to make the small, compact kitchen as in modern apartments still more efficient and satisfactory. This is a combined drain board and work table of enameled iron to go on top of the refrigerator standing alongside the sink. It is made with an ample lip to carry over into the sink and with a turned-up back and end to protect the



This Specialty Designed for the Small Kitchen of the Modern Apartment Combines Work Table and Drain Board, Fitting Over the Refrigerator.

wall and prevent spilling anything over behind the refrigerator. It is solidly attached with screws, pitched slightly to drain.

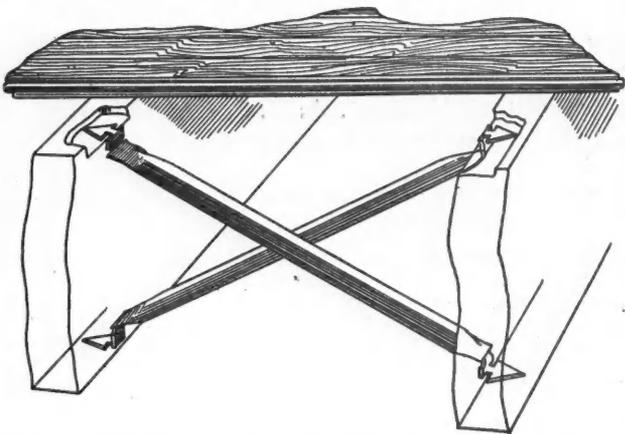
Several stock sizes are offered, and at a small increased cost special sizes can be made up to fit exactly the space available in any kitchen layout. It is made either right or left drain and can be furnished with or without the shelf at the back. Also the height of the back and end can be changed to suit conditions. The standard colors are pure white with black borders; however, special border colors are obtainable.

This new specialty is being picked up rapidly by the Chicago builders and architects for some of the best hotels and apartments now being built in that city; and it is certain that others will find it equally desirable to perfect the small kitchens where every square inch is valuable.



### Economical Steel Bridging

THE bridging shown in the accompanying illustration is manufactured from a special rolled steel and painted with a black carbon paint to prevent corrosion. It requires



Easy and Economical to Apply Yet Absolutely Dependable and Unaffected by Shrinkage Is the Way This New Steel Bridging Is Described.

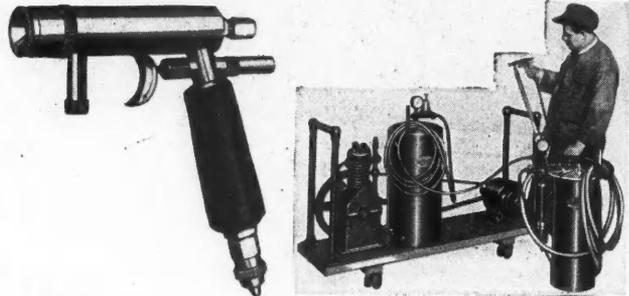
no nails for application and eliminates cutting, fitting and nailing, reducing labor costs to a minimum. The manufacturers state that it can be installed ten times as fast as wood bridging and makes a neater, stronger and more lasting job. It is not affected by shrinkage and therefore cannot split or become loose. It comes in all sizes at one price. A hammer is the only tool required for installing.

The manufacturers state that the usual shrinkage of joists, which frequently causes a loosening of the bridging, does not affect this type because the contraction or shrinkage of the joists tends to compress the body portion longitudinally and the bridging automatically tightens, increasing its effectiveness.



### Improved Paint Spray Equipment

A PROMINENT manufacturer of paint spray equipment has just announced a new spray gun which is said to embody a new principle of atomization. It is used with this company's compressed air painting outfit and marks an important improvement in this type of equipment.



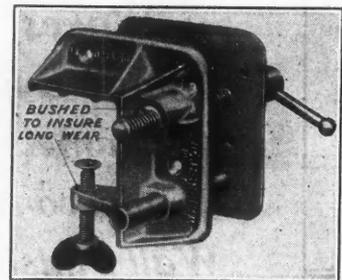
Here Is a Type of Spray Gun Which Is Said to Mark a Distinct Improvement When Used with This Company's Compressed Air Painting Outfit.

The new gun is designed and balanced like a revolver and has no exposed parts to be damaged or broken. It has a sensitive, one-finger material control which enables the operator to change instantly from a paint stroke wide enough for a wall to one narrow enough for a window frame. It is non-clogging and practically self-cleaning, it is stated. Quick changes can be made in color or weight of material. It uses any kind of finishing material and does remarkably even, rapid work with an increased coverage per gallon.



### Aluminum Woodworkers' Vice

HERE is a light and practical woodworkers' vise which is said to be a real time-saver. This vise, which is 5 inches long, is constructed entirely of aluminum, with the exception of the adjusting and clamping screws, which are of steel. To insure against stripping of the threads, steel bushings are inserted in the body for the clamping and adjusting screws to run in. The clamping screws permit fastening to anything from  $\frac{7}{8}$  to  $2\frac{1}{4}$  inches thick. The weight of this vise complete is only  $2\frac{1}{2}$  pounds.



This Woodworkers' Vise, Because of Its Aluminum Construction, Is Extremely Light, Weighing Only  $2\frac{1}{2}$  Pounds.



## \$75 Adds this Machine to your Working Equipment

The New American Universal Financing Plan makes it easy to add the American Universal Floor Surfacing Machine to your regular equipment and thus keep for yourself the profits you are now losing on floor surfacing work. The American Universal is a big money maker. The profit it earns a day or two a month easily takes care of the twelve small payments leaving you a substantial income besides.

It is always ready when you want it—No delays waiting for someone else to do the job—speeds up the work—saves time and money—no special training necessary to efficiently operate this machine.

Electrically operated, built for years of service, by the oldest and largest manufacturer of floor surfacing machinery in the world.

The American Universal way—is today the best; most efficient method of surfacing, or resurfacing floors. Produces a surface of unrivaled beauty and smoothness. The American Universal should be a part of the equipment of every contractor and builder in the country.

# American Universal FLOOR SURFACING MACHINE

### *Floor Surfacing as a Business*

For those who want to take up Floor Surfacing as a business the American Universal offers an opportunity for steady work and big profits.

American Floor Surfacing Machine Co.,  
515 South St. Clair Street, Toledo, Ohio.  
Send complete information about the "American Universal."

I am contractor.  Interested in floor surfacing as a business.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

# NEWS of the FIELD

## Consolidation Announced

**A**NNOUNCEMENT of the consolidation of the Lockport Paper Company, Lockport, N. Y., with the Beckman-Dawson Roofing Company, Chicago, has been made by B. C. Beckman, president of the Chicago firm. The combined properties will be operated under the name of the Beckman-Dawson Roofing Company, with manufacturing plants at Argo, Ill.; Detroit, Mich., and Lockport, Ill. As a result of the consolidation the capital of the enlarged company now exceeds \$1,000,000. The present officers of the company are: B. C. Beckman, president; A. L. Dawson, vice-president; Arthur O. Herzog, secretary.

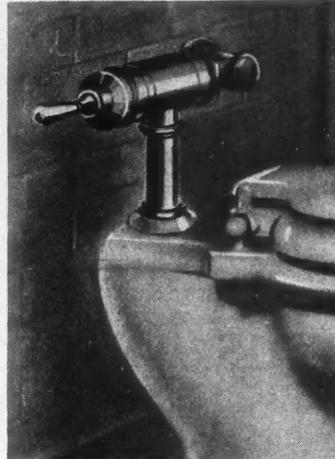
## To Open New Plant

**T**HE Asbestos Shingle, Slate & Sheathing Company, of Ambler, Pa., has announced the appointment of D. W. Widmayer as western sales manager and manager of its new St. Louis factory. Mr. Widmayer has been assistant sales manager of the company for the last six years. With the completion of the new St. Louis factory, which is to start production in a few weeks, all business in the terri-

tory west of Columbus, Ohio, will be handled from St. Louis. In connection with the completion of this factory the company has reported that a trainload of asbestos houses for employes of the new plant has been shipped from Ambler, Pa., to St. Louis.

## Correcting Our Buyers Guide

**T**HROUGH an unfortunate error the Bridgeport Brass Company, Bridgeport, Conn., was omitted from the Classified Directory and Buyers' Guide, in the April Annual Reference Number of AMERICAN BUILDER. The copy for these listings was lost and the omission was not discovered until too late to be corrected. The listings which should have been given for this company are as follows:



This Is the Flush Valve Made by the Bridgeport Brass Co., Classification of Which Was Omitted from the Buyers' Guide.

- Fittings, Pipe.
- Fittings, Toilet.
- Fixtures, Bathroom.
- Fixtures, Plumbing.
- Pipe, Plumbing (Brass).

The classification of flush valves was entirely omitted and the Bridgeport Brass Company should also have been listed under this head. The flush valve which it manufactures, shown in the accompanying illustration, is an example of the latest and most advanced step in the sanitary flushing of toilets, designed to save space and conserve water while giving the most efficient action.

# Unusual Service for the Contractor



Round and Square Deformed Bars



High Chair



Lower Slab Bar Spacer

Bar Chair



Lower Beam Bar Spacer



Joist Beam Spacer

Welded Solid Steel Sash



Portable Electric Hand Saw

## Ryerson combined service on all steel products saves time, money and trouble

The Special Contractors and Builders Division of Ryerson Steel-Service is without parallel in the building fields.

This department has its own warehouses and provides complete service on all reinforcing for concrete, Steel Joist, Metal Lath, Steel Sash, and all the various steel building products are also included.

In addition, structurals, bars, plates, sheets, rivets, bolts, wire, etc., are furnished from the general steel departments. Trench braces, jacks, electric drills, and hundreds of other tools needed on every job are supplied by the machinery and small tool departments.

Contractors use the Ryerson Warehouses as if they were their own. Reinforcing steel, lath, sash and other miscellaneous materials are kept under cover until they are ready to use each item. Delivery is according to their schedule.

Large fleets of trucks and private switch tracks help provide service unequalled by any other source of supply.

All types of jobs are figured and lump sum or pound price quotations prepared.

Write for Complete Information.

## JOSEPH T. RYERSON & SON INC.

CHICAGO  
CINCINNATI  
BUFFALO

MILWAUKEE  
DETROIT  
NEW YORK

ST. LOUIS  
CLEVELAND  
BOSTON



Triangle Wire Mesh Reinforcing

Continuous Stirrups



Step Reinforcement

Spirals



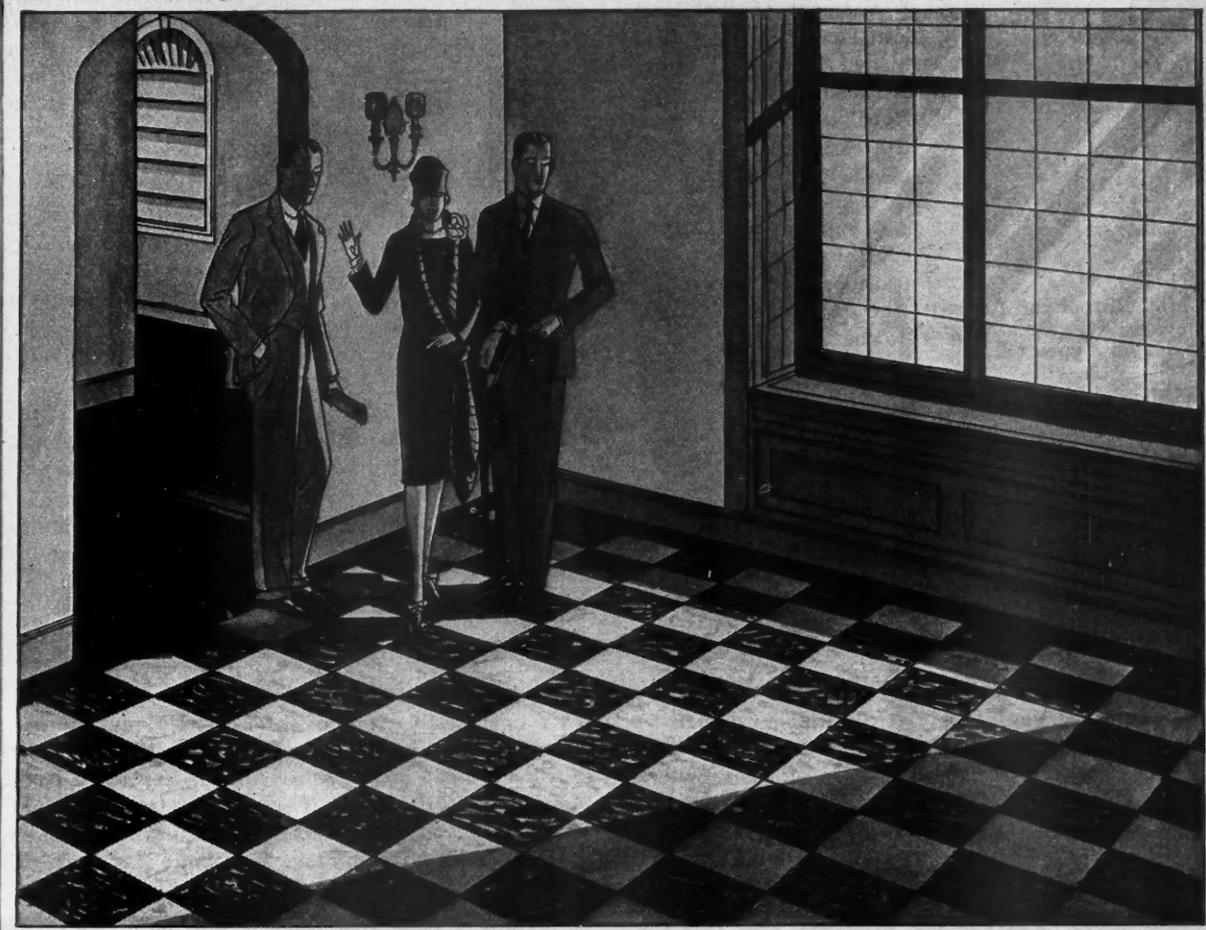
Expanded Metal Reinforcing

Expanded Metal Lath



# RYERSON REINFORCING-SERVICE

*The* LINOLEUM *of* QUALITY



*“This IS a Surprise –  
What a Lovely Linoleum Floor!”*

**T**ODAY it's the woman who decides in buying a house in nine cases out of ten.

Women are eye-minded; they react more readily to little refinements in appearance or convenience than to details of sound construction.

That's why successful investment builders now install permanent linoleum floors. Actual experience has shown them that these beautiful floors have an irresistible appeal to women; that they add "eye value."

There's nothing complicated for builders in linoleum floors. Dealers and linoleum contractors handling W. & J. Sloane Lino-

leum act as sub-contractors and attend to all details of laying in accordance with specifications.

W. & J. Sloane Linoleum is made in the world's most modern plant by new processes exclusive with Sloane. These give it extra pliability, density and uniformity—also its famous super-finish—without increasing cost. It has actually established a new standard of linoleum quality and value.

W. & J. Sloane, our selling agents, will gladly help you select appro-

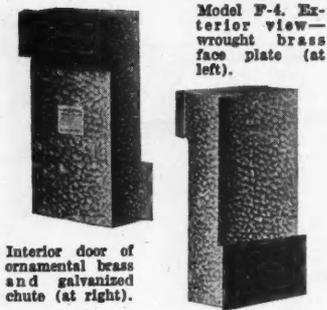
prate patterns and grades for different buildings or rooms. In fact, any information relating to your linoleum contract problems will be gladly sent upon request.

W. & J. Sloane Mfg. Co., Trenton, N. J.,  
*Sole Selling Agents,*  
W. & J. Sloane,  
577 Fifth Avenue,  
New York, N. Y.



**W. & J. SLOANE  
LINOLEUM**

**Correcting an Error**



Model F-4. Exterior view—wrought brass face plate (at left).

Interior door of ornamental brass and galvanized chute (at right).

The Mail Box of the American Device Mfg. Co., as it Should Have Appeared.

the accompanying illustration.

IN making up the advertisement of the American Device Mfg. Co., 4527 Shaw Avenue, St. Louis, Mo., on page 469 in the April issue of AMERICAN BUILDER, an error was made by which the two cuts showing the interior and exterior sides of this company's mail box were transposed and the exterior view was turned upside down. These cuts should have appeared as shown in

**Chain Belt Names Distributor**

THE Chain Belt Company, Milwaukee, Wis., announces the appointment of the Lone Star Road Machinery Company as its distributor in Texas. This company will handle a complete line. It is located at 2003 S. Akard Street, Dallas, Texas.

**Ambler Company Expands**

THE Asbestos Shingle, Slate & Sheathing Company, of Ambler, Pa., announces the incorporation, under Cuban laws, of the Ambler Asbestos Company of Cuba, with its home office in Havana. This company will handle the sale, in Cuba, of the corrugated asbestos roofing, asbestos shingles and tile and other asbestos building materials

manufactured by the Asbestos, Shingle, Slate & Sheathing Company.

R. V. Mattison, president of the Asbestos Shingle, Slate & Sheathing Company, is also president of the Cuban company, the organization of which is a part of the general expansion program which includes the construction of a new factory at St. Louis to handle the western business of the company.

**U. S. G. Occupies New Office**

ON April 11, the United States Gypsum Company moved from its old offices at 205 W. Monroe Street, Chicago, which it has occupied for the last twenty-four years, to new quarters at 300 W. Adams Street, Chicago. The new officers occupy three entire floors with total area of 62,000 square feet and accommodate more than 600 employees.

An interesting feature of the new offices is that the walls are finished with Textone and the ceilings with Sabinite acoustical plaster, both products of this company. The effect of the acoustical plaster is said to be striking the employees being subject to less nervous strain as a result of the control of acoustical conditions and this is particularly apparent in the stenographic department, where 60 typewriters are in constant operation.

**La Kel Should Be Listed**

BY mistake the name of the La Kel Manufacturing Company was omitted from the "Classified Directory and Buyers' Guide" in the April Annual Reference Number of AMERICAN BUILDER. This company's name should have appeared under the following classifications: Floor Polishing Machines; and Floor Surfacing Machines—Electric.

**Cuts 4 inch Lumber—Weighs only 24 lbs  
Stands Up Under Heavy Work**

The WODACK Electric Hand Saw weighs only 24 pounds—much lighter than any other saw which cuts 4-inch lumber. Stands up in the hardest service. The WODACK saves \$20.00 a day over hand sawing. Cuts heavy joists, rafters, stair stringers, etc., yet is light enough to be used handily for sawing siding or thin lumber. Any workman can operate a WODACK. It follows the line perfectly. Can be used wherever there is a light socket. G. E. universal motor—11" and 8" saw blades.

**Cushioned Operation**  
The exclusive Wodack Special Moulded Rubber Flexible Bushing forms a cushion between the bearings on which the saw revolves. Cuts down vibration and adds years to the life of the saw. Write for descriptive circular.

**F. L. ROGERS & CO.**  
440 S. Dearborn St. Chicago, Illinois

**Auclo Furnace Clock**  
*Automatic Heat Comfort*

The Auclo Furnace Clock is designed to automatically adjust the drafts of furnaces or heaters at a predetermined time. This feature in any house will prove a big selling factor to home buyers. Its value in comfort is immeasurable. Its cost is negligible. Simple in construction, easy to attach, this scientific invention works on any make heater. Guaranteed for one year, but will give many years of service.

Write today for folders and trade prices. Dealers protected.

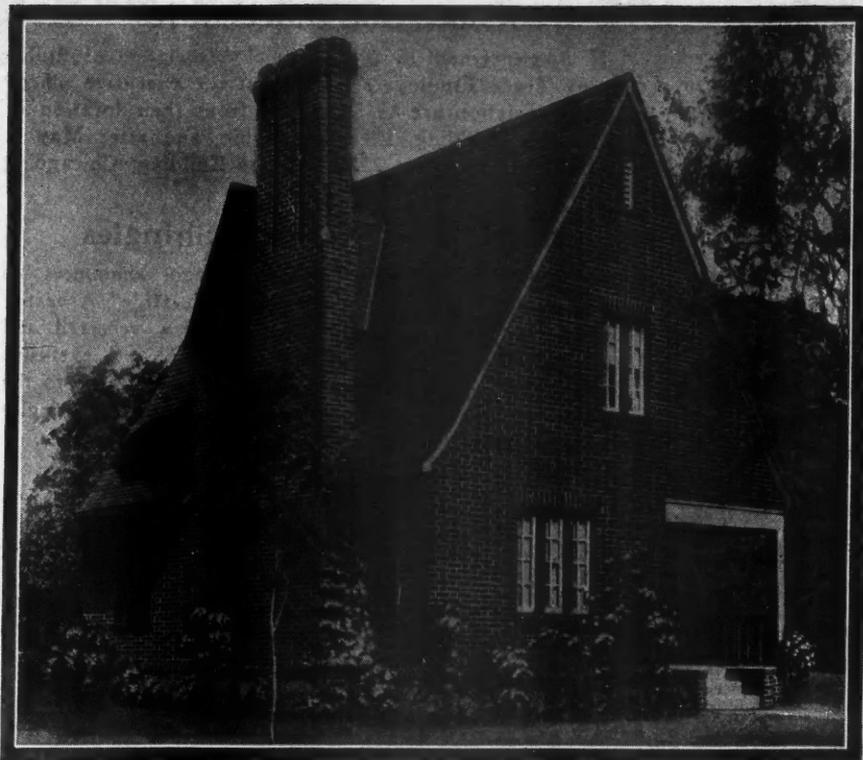
**The Auclo Company**  
972 Broad St., Newark, N. J.

**THE REDIN Adjustable Cutter Head**

For heavy production the Redin Adjustable Cutter Head will give good results. The adjustable knife feature allows re-sharpening without altering the shape of the cut. Made to cut any shape you wish. The Redin Cabinet Makers Clamp is made of finest materials, strong and durable and extremely light. Fully guaranteed as to workmanship and materials.

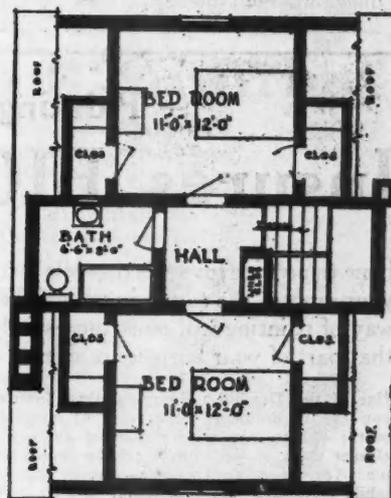
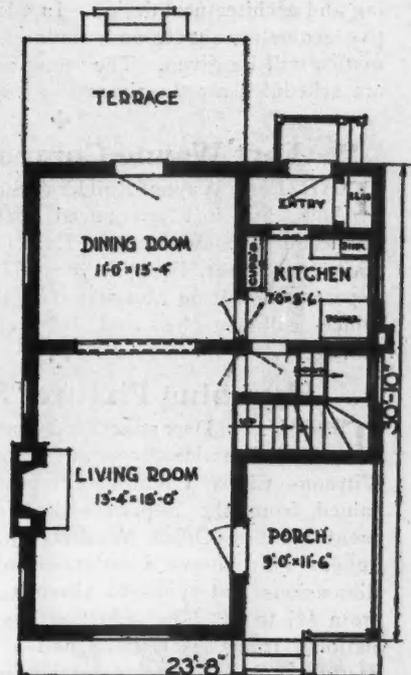
Write for full information.

**John E. Redin Co.**  
1026 Charles St., Rockford, Ill.  
Established 1893



### The "ATCO"

A COMMON Brick house that has been built, sold, and lived in—proved practical and profitable. It is one of those shown in the brick house plan book—"The Home You Can Afford"—listed below. We furnish at nominal cost, specifications, and complete original working blue prints for all these houses.



## The "FOR SALE" Sign Comes Down Quickly

**H**OUSES built of Brick—Walls of Brick all the way through and all the way 'round—sell rings around houses of less substantial construction. *America believes in Brick.*

There is a decided swing to Brick among long-experienced builders who build to sell because there is a decided swing to Brick among home-buyers. To the builder it's simply a case of quick sales, rapid turn-over of capital and bigger profit. To the buyer it's simply a case of wanting a better home.

Beauty recommends Brick. So does strength. So does the fact that Walls of Brick are fire-proof, gale-proof, flood-proof, time-proof. Build with Brick and you'll make more money and earn an unassailable reputation for sound, lasting construction. Send for the literature listed below.

Send for the Brick Books listed below NOW!

**AT YOUR SERVICE**  
These District Association Offices and Brick Manufacturers Everywhere

Boston, Mass.	11 Beacon Street
Chicago	614 Chamber of Commerce Bldg.
Denver	1735 Stout St.
Detroit	400 U.S. Mortgage Trust Bldg.
Hartford, Conn.	226 Pearl St.
Los Angeles	342 Douglas Bldg.
New York City	1710 Gr'd Cen. Term'l Bldg.
Norfolk, Va.	112 West Plume Street
Ohio	2124 Guarantee Title Bldg., Cleveland
Philadelphia	121 N. Broad Street
Portland, Ore.	906 Lewis Building
Salt Lake City	301 Atlas Bldg.
San Francisco	932 Monadnock Bldg.
Seattle, Wash.	913 Arctic Bldg.

The Common Brick Manufacturers' Association of America  
2131 Guarantee Title Building  
CLEVELAND, OHIO

**BRICK**  
*Forever*

- Common Brick Ass'n.  
2131 Guarantee Title Bldg., Cleveland, O.  
Send me the Books checked below, for which I enclose the price indicated.
- "Your Next Home"—(New Edition) Photos and Plans of 57 homes, 10c.
  - "The Home You Can Afford"—62 homes, 10c.
  - "Brick, How to Build and Estimate"—25c.
  - "Skintled Brickwork"—15c.
  - "Farm Homes of Brick"—5c.
  - "Brick Silos"—10c.
  - "Multiple Dwellings of Brick"—10c.
  - "The Big Question"—FREE.

Name \_\_\_\_\_  
Address \_\_\_\_\_

### Carnegie Tech Summer School

THE Carnegie Institute of Technology has announced that Dr. J. C. Morehead, associate professor and curator of the Department of Architecture, will be in charge of its summer courses in architecture this year and that Professor Camille E. Galpin, the distinguished French architect, who is a member of the regular staff of Carnegie, will remain for the summer session to give courses in outdoor sketching and architectural design. In addition courses in descriptive geometry, shades and shadows, perspective and mathematics will be given. The summer courses in architecture are scheduled for the six weeks from June 13 to July 23.

### Fort Wayne Company Expands

THE Fort Wayne Builders' Supply Co., Fort Wayne, Ind., has just announced that it has purchased the Rhinesmith, Simonson & Evans lumber yard at 1632 Lafayette Street, Fort Wayne. The sash, door and frame department will be transferred to the Lafayette street yard which will also be used, in part, for building material storage.

### Plumbing Fixtures Standardized

THE U. S. Department of Commerce has issued Simplified Practice Recommendation No. 52, for "Staple Vitreous China Plumbing Fixtures," which may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for five cents a copy. This shows a reduction of the varieties of sizes, dimensions and types of vitreous china plumbing fixtures from 441 to 58. The reduction has been accepted by eleven national trade associations and a large number of manufacturers for use in connection with the production and distribution of these fixtures.

### Association Office Moves

AN announcement by the National Association of Building Trade Employers states that the executive offices of the association are to be moved from their location in the Electric Building, Cleveland, Ohio, and after May 1, 1927, will be located at 2226 Builders Building, Chicago.

### "Mulehide" Asbestos Shingles

THE LEHON COMPANY, of Chicago, announces an addition to its line of roofings—"Mule-Hide" Asbestos Shingles, in pearl-gray, red veneered, green veneered and blue-black. Dealers who are protected with an exclusive "Mule-Hide" agency will appreciate this new addition to the line when making up carload orders. These asbestos shingles come in two sizes, 16 by 16 inches and 12 by 12 inches.

### Executive Offices Moved

THE American Flexible Shaft Manufacturing Corporation and the Pneumatic Corporation, formerly located at 120 Broadway, New York City, have announced the removal of their executive offices to 3311 Madison Avenue, New York City, on April 20, 1927.

### Will Manufacture Scrapper

THE E. C. Stearns Company, Syracuse, N. Y., announces that it has taken over the manufacture and sale of the "Little Giant" floor scrapper, formerly made by the Little Giant Company and the Hurley Machine Company of Chicago. This is a logical addition to the line of carpenters' and mechanics' tools manufactured and sold by this company.

Painting the modern, improved DeVilbiss way

## Insures BIGGER PROFITS For You

How to provide for a worth-while increase in your profits: the easier, improved DeVilbiss way of painting will most successfully solve that part of your business problem.

Use of the DeVilbiss Spray-painting System enables you (1) to do more work, without increasing labor costs; (2) to give your customers an improved and cleaner class of work, on a greatly speeded-up schedule; (3) to make the work easier for your men, while increasing the production of each; (4) to become recognized as the progressive, outstanding painting contractor in your community.

There is further assurance of bigger profits in using the DeVilbiss Spray-painting System. DeVilbiss equipment is correct and complete in every detail; is built of highest quality materials by skilled workmen; is simple and dependable in every operation; is warranted to give long and satisfactory service. Then there is available to you at all times the unequalled DeVilbiss engineering and service facilities, developed out of over 35 years' manufacturing experience.

Investigate now the increased profits to be made painting the DeVilbiss way. Complete facts will be promptly mailed to you. Address—

THE DEVILBISS COMPANY

238 Phillips Ave. TOLEDO, OHIO

New York—Philadelphia—Chicago—Detroit  
Indianapolis—San Francisco—Pittsburgh—Cleveland  
Cincinnati—Milwaukee—Minneapolis—St. Louis  
Windsor, Ontario



**DeVilbiss**  
**Spray-painting System**

# FREE How to Read Blue Prints



## New Easy Practical Way That Has Doubled Pay in 2 or 3 Months!

Thousands of Men in the Building Trades Have Discovered an Altogether New Way to Double and Triple Their Incomes! Surprising, Yes,—But True! Almost Overnight They Have Stepped Into Interesting, Big-pay Jobs—Become Foremen and Superintendents—Or Are Making Big Money in Business for Themselves. The Same Wonderful Opportunity Is Now Offered You. Don't Send One Penny. Just Mail the Coupon for Full Set of Valuable Blue-Print Plans, Big Free Book, and Complete Details.

**Y**OU men who work with your tools in the building trades make good money. But you don't get one penny more than you're entitled to. Every boss on the job—every foreman, every superintendent—is making plenty more than just your wage scale, to say nothing of the real money the contractor and the builder clean up. Why do these men get more money for their work than you do? Why do they clean up \$6,000 to \$15,000 a year or more? It's simply because they're trained in the "headwork" side of Building and Contracting work. They can read Blue Print Plans. They know how to lay out and run jobs.

### Get This Big-Money Training

Many men think the only way they can get practical "headwork" training is on the job. Perhaps that was true once. But thousands of Chicago Tech graduates have proved that the idea is all wrong now. You know yourself that a man can spend 5 or 10 years working with

his tools and never get a real chance to learn the things he must know, if he is ever to get into the big-pay class.

But it's all different the new Chicago Tech Builders' Course way—amazingly different! It's quick, easy, certain. Right at home, you get real Blue-Prints used on actual jobs to examine and keep for reference. In language you can understand, as plain as A-B-C, everything is told you and worked out for you. You are taken by experts right through every step of Plan Reading, Estimating, and Superintendence. You don't need even a grade school education to understand every word and absorb every fact.

### Make More Money

Woodside, in three months, rises from journeyman carpenter to foreman, then makes big money in contracting business for himself. In a few months McAvoy goes from bricklayer on the wall to foreman in charge at a big increase in pay. Marchand says, "Ten days after completing course my pay was raised 100%." Hundreds—yes, thousands of others say the same, Chicago Tech has helped them to bigger jobs or a business of their own.

### If You Live In or Near Chicago

Visit our day or evening classes which over 1,000 Builders attend. You can get the same training by mail—same Plans, Lessons and instructors. Mail the coupon for details.

**READ!**  
"Since starting the Builders' Course I have been raised to Superintendent and my pay raised 100%."  
F. F. Blair, Okla.  
"I owe a lot of credit to your course. Am now listed as a Brick Contractor and made about \$3,800 clear money this summer."  
E. F. Baker, Ohio.

### BLUE PRINT PLANS FREE!

We want you to see for yourself how easily you can learn to read Blue Prints and do Estimating this new, quick way—how easily you can double and triple your income. Don't send one penny. Just mail the coupon. We will send you absolutely FREE a full set of practical, working Blue Prints, also the valuable book, "How to Read Blue Prints." Act at once.



Chicago Technical School for Builders,  
Dept. E-120, Chicago Tech. Bldg.,  
118 E. 26th St., Chicago, Ill.

Please send your Free Books and Blue Prints which I understand are mine to keep without obligation. It is understood no salesman will call on me.

Name .....

Address .....

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

Occupation .....

**Chicago Technical School for Builders**  
Dept. E-120 118 East 26th Street CHICAGO, ILL.

### Harbor Near Completion

**S**HIPMENTS of cement throughout the entire Great Lakes region will be expedited, by the Universal Portland Cement Company, by supplementing the present rail transportation with boat deliveries to all ports on the Great Lakes. This will be made possible by the completion, in the near future, of the new \$2,000,000 harbor improvement which this company is making at its Chicago (Bluffington, Indiana) plant.

This is described as the deepest harbor on the Great Lakes and its equipment will include the heaviest boat unloading bridges in the Chicago district, a 55-acre harbor basin, a 30-acre storage yard, an electrically operated belt conveyor nearly a mile long and a lighthouse with one of the brightest beacons on the southern end of Lake Michigan.

The new storage yard with its capacity of a million tons of limestone will insure adequate supplies of raw material necessary to for uninterrupted production. The harbor basin affords ample anchor space for several boats. The concrete dock, over 1,800 feet long and 600 feet wide, can accommodate a number of vessels and thus provides at the same time facilities for unloading limestone from Michigan quarries and loading cement for shipment throughout the Great Lakes region.



### Celotex Report Expansion

**A**N announcement from the Celotex Company, 645 N. Michigan Avenue, Chicago, states that since doubling its plant capacity at New Orleans, it has shown a remarkable progress in sales. The New Orleans mill is now producing more than 1,000,000 feet a day and an additional plant is under construction in Porto Rico.



### To Manufacture Inso Board

**A**N announcement states that the Stewart Inso Board Company, with headquarters at St. Joseph, Mo., which was recently incorporated for the purpose of manufacturing insulating board, will begin operations about the first of July. This company was organized as a result of experiments conducted for years on the insulating properties of straw and the insulating board product of the company will be made from straw.

The company numbers many stockholders of wealth and prominence. A. D. Stewart, who will serve as president and general manager of the company, has had long years of practical experience in the paper manufacturing business and will have associated with him E. S. Sheperd, who has spent more than 40 years in the straw pulp business, and Dr. Sidney D. Wells, who was for years in charge in the Forest Products Laboratory at Madison, Wis., and in that capacity was closely associated with the development of several nationally known insulating materials.



### Present Lectures on Concrete

**C**OLONEL H. C. BOYDEN has joined the staff of the Celite Products Company, 1320 S. Hope Street, Los Angeles, Calif., as a lecturer on cement and concrete. Colonel Boyden's lectures are based on his own practical experience of over 25 years in concrete work during which time he has designed and built structures requiring nearly 500,000 cubic yards of concrete. This practical experience is supplemented by a thorough understanding of the theory and design of concrete mixtures.

The Celite Products Company is, at the present time, arranging a series of lectures to be given by Colonel Boyden in cities throughout the United States and Canada. These talks will be presented principally to engineering societies

and associations, engineering colleges and to general clubs and other organizations.



### Announcement of Fairbanks Morse

**F**AIRBANKS, MORSE & CO., of Chicago, has taken over the scale business of The Fairbanks Co., of New York, according to a recent official announcement. This transaction now gives Fairbanks, Morse complete control of the manufacturing and distribution of Fairbanks scales.

This company also announces that at a recent annual meeting of the directors, W. S. Hovey was elected president, the former president, C. H. Morse, becoming chairman of the board. This is the first time this position has been held by a man not of the original Morse family.



### Novo Appoints Distributors

**T**HE following new distributors have recently been appointed by the Novo Engine Company, Lansing, Mich.: Construction Equipment Co., Columbia, S. C., serving the state of South Carolina; San Antonio Machine & Supply Co., San Antonio, Texas, with branches at Corpus Christi and Waco, Texas, serving the south central part of Texas; H. E. Erickson Company, Inc., 114 S. Third Street, Minneapolis, Minn., serving the north central territory.



### Add to Buyers' Guide

**I**N the "Classified Directory and Buyers' Guide," in the April Annual Reference Number of **AMERICAN BUILDER**, the classification "Lightning Rods" was by mistake omitted. This classification should have been given and under it the Electra Manufacturing Company, 12 Pine Street, Albany, N. Y., manufacturers of all copper systems of lightning protection, should have been listed.



### Offers Arc Welding Prizes

**T**HE American Society of Mechanical Engineers, 29 W. 39th Street, New York City, has accepted the custody of a fund of \$17,500 given by the Lincoln Electric Company of Cleveland, Ohio, for prizes to be awarded in a competition to improve the art of arc welding and indicate the advantages and economies of its use. A booklet prepared by the society contains the rules of the competition. A committee of judges appointed by the society will pass upon the relative merits of the three best papers presented under the rules and will award a first prize of \$10,000, a second prize of \$5,000 and a third prize of \$2,500.



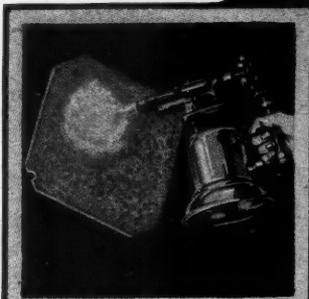
### Filling Station Design

(Continued from page 139)

pump island. This can be taken care of with a container which can be filled with water from a sill cock on the outside of the building, or a hose cock on the island itself.

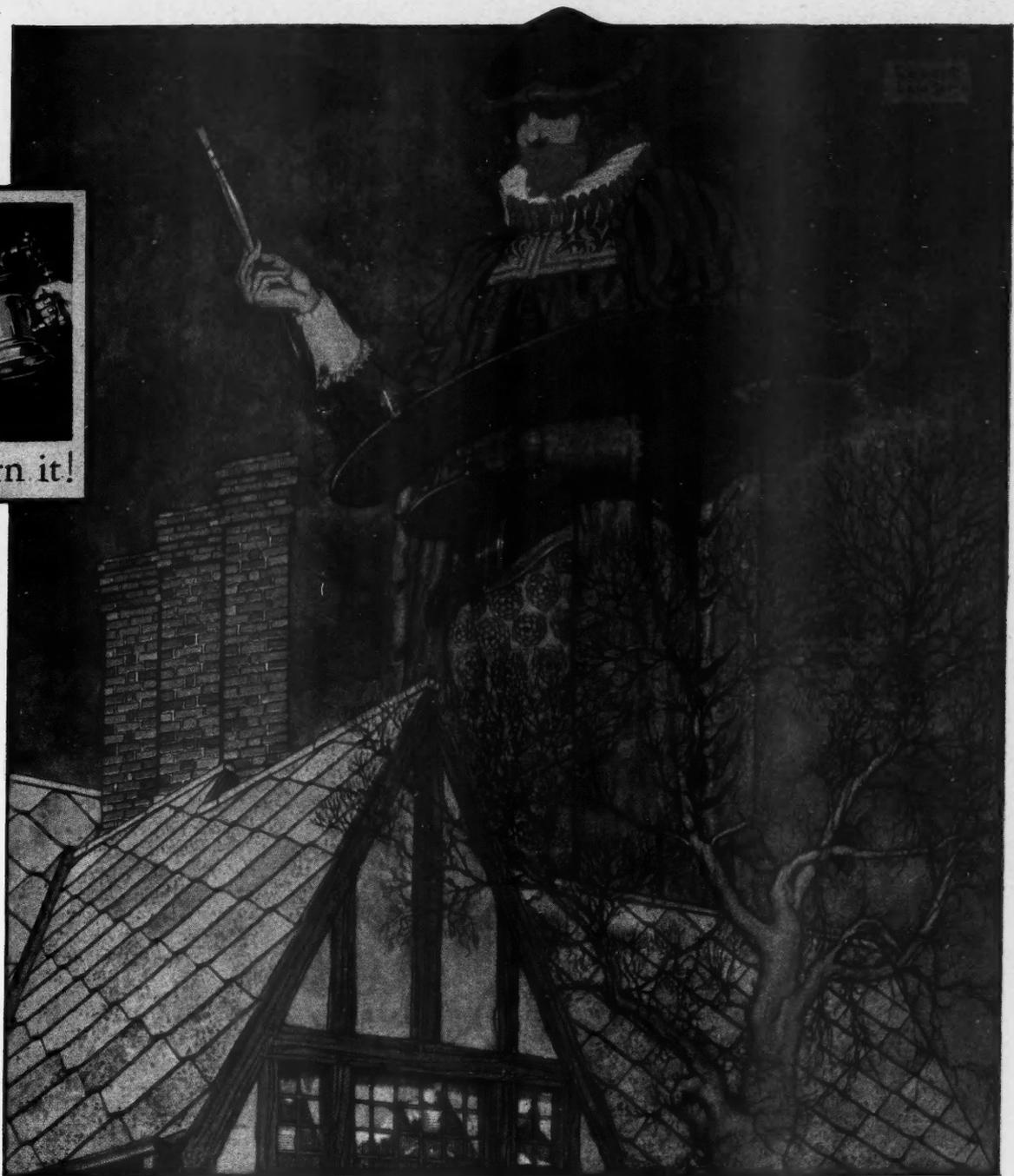
When a station is located on a busy thoroughfare where the direction of the main traffic changes at stated times, such as a street leading from the suburbs and the residential district to the business district in which the traffic is toward the city in the morning and toward the suburbs in the evening, it is well to have three or more drives, reserving one drive for the minimum traffic and all the other drives for the main traffic. Thus the station is enabled to handle a large number of cars quickly, and time is an important factor to the business man driving to work, or returning home.

[The next article of this series will be presented in an early issue of **American Builder**.]



Try an' Burn it!

The blow torch knows why some shingles are called "fire-safe" and others "fire-proof." It quickly shows the difference between Johns-Manville Asbestos Shingles and the "fire-safe" variety.

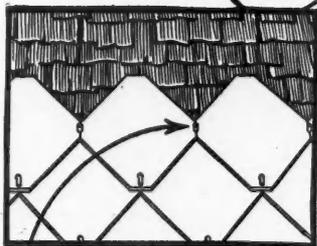


A final touch of beauty on each everlasting shingle

Nature, the supreme artist, has embellished these shingles with everlasting and exquisite color

harmonies. Low in first cost, economical in their permanence, and freedom from upkeep cost, easy to lay, and absolutely fire-proof—never before has a shingle embodying all these practical advantages been so beautiful!

Any carpenter can learn how to lay Johns-Manville Asbestos Shingles in fifteen minutes



The anchor nails act as guides

JOHNS-MANVILLE CORPORATION, 292 MADISON AVENUE AT 41st STREET, NEW YORK CITY  
BRANCHES IN ALL LARGE CITIES For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., TORONTO



**BLU-BAG**  
*means Quality  
from Stone  
to Finish*



## The Blue Bag Means Everything

If you want the highest grade hydrated lime it is possible to obtain for finishing or other building purposes—insist on the Blue Bag.

If you want the whitest, purest, most plastic and uniform hydrated lime on the market—insist on the Blue Bag.

The Blue Bag means everything you could desire in hydrated lime.

Choose any Blue Bag brand—White Enamel, Gold Medal or White Lily—and you will have lime that comes from the very center of the world's greatest lime stone deposit, and from one of the most modern plants in the country.

There is a building supply dealer in your territory who handles a Blue Bag brand.

*The Woodville Lime Products Co. Toledo, Ohio.*

## Books, Bulletins and Catalogs for You

**T**HE 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 Spanish House for America—Its Design, Furnishing and Garden" by Rexford Newcomb, published by the J. B. Lippincott Company, Philadelphia, Pa., sets forth in short space and easy terms the salient features of this style of architecture which has been in such favor of recent years and carries a multitude of well selected illustrations. Price \$3.50.

"Evans Vanishing Door" is the title of catalog J, published by W. L. Evans, Washington, Ind., illustrating, in colors, and describing the vanishing door wardrobes which he manufactures for installation in schools, including recent improvements and new models.

"The Donley Book of Successful Fireplaces," fifth edition, has just been published by Donley Brothers Company, 13910 Miles Ave., Cleveland, Ohio, and will be found very helpful by the architect, contractor and home builder who wishes to avoid the faults commonly found in fireplaces.

"The Building Estimator's Handbook," sixth edition, by Frank R. Walker, has just been published by the Frank R. Walker Company, 536 Lake Shore Drive, Chicago. This is a completely revised and rewritten edition containing much additional information not previously included. A new "Vest Pocket Estimator" has also been published which will be found handy for contractors and is furnished free with each copy for the Building Estimator's Handbook which sells at \$10.

"Architecture of the Renaissance" is the title of a new book by Dagobert Frey, published by G. Naef, The Hague, Holland. It covers the period from Brunelleschi to Michael Angelo and contains 160 reproductions, with text and catalog. The price of this book is not stated.

Samuel Cabot, Inc., 141 Milk St., Boston, Mass., has published a booklet on the subject of "Cabot's Creosote Stained Shingles," illustrating in colors the blended roofs possible with its shingles, and carrying a standard shingle roof specification.

"The Work of Dwight James Baum" with a foreword by Harvey Wiley Corbett, F. A. I. A., and an introduction and commentary text by Matlack Price, has been published by William Helburn, Inc., 15 E. 55th St., New York City. Price \$20.

"Bridge Architecture" by Wilbur J. Watson, published by William Helburn, Inc., 15 E. 55th St., New York City, is a new book containing 200 illustrations of the notable bridges of the world, ancient and modern, with descriptive, historical and legendary text. Price \$17.50.

The Graver Corporation, East Chicago, Ind., has just published an interesting and attractive booklet under the title "How Los Angeles Protects Her Bathers," dealing with the subject of water purification.

The Lennox Furnace Company, Marshalltown, Iowa, offers its catalog R of "Torrid Zone" steel furnaces which is very fully illustrated and full of useful information on furnaces for every type of fuel.

"Gas Fired Boilers and Water Heaters" is the title of the Catalog Unit No. 1 of Mears-Kane-Ofeldt, Inc., 19003-15 E. Hagert St., Philadelphia, Pa., whose wholesale distributor is the Monarch Sales & Engineering Co., 363 W. Erie St., Chicago.

The Sykes Metal Lath Co., Niles, Ohio, has recently published a new 1927 catalog containing very complete information on its metal lath, including specifications.

The W. E. Lamneck Company, Columbus, Ohio, offers a pamphlet describing the Lamneck, thermostatically controlled, gas burning clothes drier for the home laundry.

"Beauty in Brick" is the title of a booklet published by The Finzer Bros. Clay Co., Sugar Creek, Ohio, illustrating 25 brick home designs for houses of five and six rooms.

The American Concrete Institute, 2970 W. Grand Blvd., Detroit, Mich., states that the printed papers presented at its 1927 convention, listed in these pages last month, are sent free to members and are furnished to the general public at a nominal charge of about 25 cents each.

"The New Capital Radiator" is the title of a booklet published by the United States Radiator Corporation, Detroit, Mich., describing a new design of radiator which it describes as an artistic achievement and an engineering triumph.

"Big Trees" is the name of a new monthly paper published by the West Coast Lumber Trade Extension Bureau, 5560 T. Stuart Bldg., Seattle, Wash., in the interest of the bureau members and the users of West Coast lumber products. The first issue was dated January, 1927.

The Crouse-Hinds Company, Syracuse, N. Y., offers its catalog No. 2100, entitled "The New Obround Conduits." It is very fully and attractively illustrated.

The Bureau of Standards, U. S. Department of Commerce, has issued a number of simplified practice recommendations which are of interest to the building industry. These are: Steel Spiral Rods, Metal Lath, Paving Bricks, Sand-Lime Brick, Face Brick and Common Brick, Black-board Slate, Forged Tools, Roofing Slate, Files and Rasps and Builders' Hardware. These may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 5 cents each, except the last named, which is 10 cents.

The Ren Manufacturing Co., Lyceum Bldg., Winchester, Mass., offers a pamphlet illustrating and describing the Ren-Lock which prevents the removal of electric light lamps by unauthorized persons.

The Durabilt Steel Locker Co., Aurora, Ill., has just issued several new pages for insertion in its loose leaf catalog, which bring this catalog up to date on locker information.

The Zahner Manufacturing Co., Kansas City, Mo., has published a booklet "For Better Homes," which covers the subject of its metal sinks and shower doors in an interesting style and with complete illustrations.



### Appoint District Engineer

**T**HE Portland Cement Association, 33 W. Grand Ave., Chicago, has announced the appointment of H. R. Albion as district engineer, in charge of the Jacksonville, Florida, office of the association. Mr. Albion has been connected with the association as field representative in Florida during the past year and prior to that time had a wide practical experience in engineering practice.



### Knickerbocker Slate Corp. Moves

**A**N announcement from the Knickerbocker Slate Corporation states that on April 12 it moved from its old address at 153 E. 38th Street, and is now located at 355 W. 26th Street, New York, where it has leased a four-story building a portion of which it will, in the future, occupy.



### A Correction—

Design by Dubin and Eisenberg

**O**N page 223 of the April number, the apartment house design shown was credited erroneously to Dubin and Eisenberger. This was a typographical error and the design should have been credited to Dubin and Eisenberg, the well-known architects, 14 West Washington Street, Chicago.

(Continued from page 176)

The illustration, Fig. 2, shows a common but erroneous method of making the connection. It will be noted that it is horizontal, although emerging from the furnace below its center. In some makes of heater, that is, wherein the smoke pipe connection is near the top, it is necessary to run the pipe horizontally, yet when its position is below the center a better method of extending it is brought out in Fig. 3.

There is thus afforded an opportunity for a cleanout door in the chimney below the entrance of the elevated smoke pipe and soot and creosote may be scraped out whenever required. This may be done at intervals of three months during the heating season with beneficial results and cleaning should always be done at the close of the season while the carbonaceous material is fairly loose. Elevation of the piping increases the draft, carries the dust from combustion with it and permits the heavier soot to settle instead of clogging the passageway.

When certain coals and woods are used as fuels difficulty from creosote accumulation is by no means rare. Often the material flows backward down the chimney flue as a thick, gummy liquid, solidifies and causes much difficulty. Some installers recommend burning a little zinc in the fire when creosoting is noted. The chemical action resulting will clear the flue and prevent obstruction by the tarry formations.

#### Cellar Air Supply Not Good

In many localities it is common to take the air supply from the basement. In view of the dirt which is liable to be picked up from this source it will be found more satisfactory to run a connection to the floor of the front

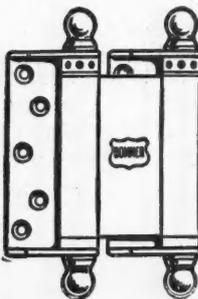
hall, an exposed living or dining room, or the foot of a staircase.

The average home owner is prone to resent the suggestion that his basement is dirty and hence unfit to be used as air supply. Yet, the inconvenience of carrying ashes outdoors on all days, coupled with odors of stored vegetables, dust from the coal bin and the miscellaneous nature of the contents of many cellars makes this a general rule rather than one which must be adhered to strictly.

To assign a common source of dust and explain its going to upper floors is difficult as any looseness in the system may be responsible. Hence, only general suggestions may be made to cover average cases. A few of the most likely spots of failure might be mentioned and include: 1, base rings; 2, front of casing connections; 3, cold-air boot connections; 4, joints between sections of cold air pipe and elbows; 5, casing collar connections; 6, boxing joints of cold-air conductors.

Responsibility for dust leakage in a warm-air heating layout is divided between the manufacturer of the furnace and the installer. Much the same situation exists in the construction of a building, the tightness of which or the reverse depends on the care exercised in putting the sections together. The contractor provides his workmen with materials. If the workmen are careless in cutting and shaping the materials and joining the pieces which make the finished building, loose construction is the natural result.

If the furnace installer is not careful in forming and joining his materials a loose fitting, poor heating job is the logical outcome. Reversely, if a careful installation has been made there should be no cause for complaint.



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HARDWARE  
For Hard-wear**

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

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

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## SPRING HINGES

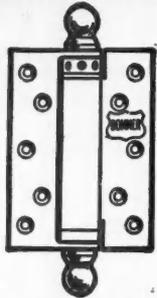
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They are in universal demand—easiest to apply and the most satisfactory spring hinges made.

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BROOKLYN, N. Y.





House near Chicago, showing its "underclothing" of Cabot's Quilt, with jarring strips over the Quilt, on which the outside finish is laid. Roof also insulated. Leon E. Stanhope, Architect, Chicago.

## Underwear for Houses

Underclothing makes people warm because it prevents the heat of their bodies from escaping. You can make your houses warm in the same way.

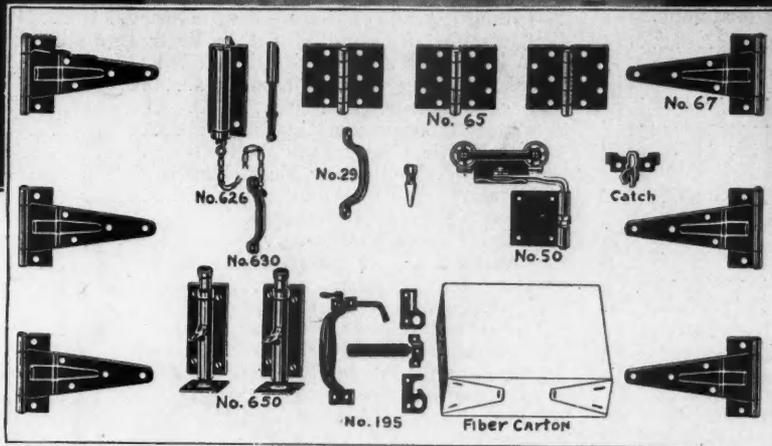
### Cabot's Insulating Quilt

prevents the house heat from escaping. It insulates the whole house and saves the heat from the heater—that costly heat. It keeps the house warm on the smallest amount of coal; saves one-quarter to one-half of the coal bill. Makes the house comfortable for all the time. Preserves health and saves doctor's bills. Makes the house cooler in summer. Quilt is not a mere felt, or paper, but a scientific insulator that makes the house like a thermos bottle.

Sample of Quilt with full details and references to dozens of users, sent FREE on application.

**SAMUEL CABOT, Inc.**  
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101 Park Avenue, New York  
5000 Bloomingdale Ave., Chicago  
Los Angeles — Portland

*Cabot's Creosote Stains, Water proof Collogates, Old Virginia White, Double-White, etc.*



The above photograph of a typical installation of Frantz No. 50 "E-Z" Garage Door Fixtures shows how the doors fold neatly and easily out of the way. To the left are the items that make up this popular set.

## The Garage Door Set <sup>That</sup> Is the Easiest to Put Up and Operate

**N**O experience is required to put No. 50 "E-Z" Garage Fixtures on the doors and make them work perfectly. You will find it a simple and easy task to fasten all the hardware in place after the doors have been fitted properly into the opening. "Run-wel" Track fastens flat on the header over the opening and does not require blocking out, brackets or extra fittings so often found necessary with ordinary sets.

When the Fixtures are up you find the doors open easily, clear of the opening and close

tightly without effort. The satisfaction of a No. 50 "E-Z" set is lasting for Frantz Guaranteed Builders' Hardware is built to work with the same, even smoothness year in and year out.

No. 50 "E-Z" Garage Door Fixtures are made for two, three, four, five and six-door openings. Each size is packed complete in a strong fibre carton, ready to put up. Identify these sets, as well as all other items in the Frantz line of Guaranteed Builders' Hardware by the bright red label and the Frantz trade mark.



### Send for FREE Booklet

Gives specifications, arrangements and practical suggestions for efficient operation of doors on any size garage opening. Helps determine the best way to solve every garage door problem.

**Frantz Manufacturing Company**  
Sterling, Illinois

FRANTZ MFG. CO.,  
Dept. A-6, Sterling, Ill.

Kindly send me your FREE booklet that fully describes and illustrates No. 50 "E-Z" Sets and other "E-Z" Garage Door Fixtures.

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**"No Hardware Is Genuine FRANTZ QUALITY Without the Red Label"**