

AMERICAN BUILDER

Including "BUILDING DEVELOPER" and "HOME BUILDING"

A SIMMONS-BOARDMAN PUBLICATION

Vol. 49.

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No. 2

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Including "Building Developer" and "Home Building"

BERNARD L. JOHNSON AND CHARLES G. PEKER, Editors



GO AHEAD! *Now is the time*

BUILDING is coming back to its own. It will be a little slow at first, but as the months go by it will gain momentum until a normal volume of building is again the order of the day.

The inability to secure mortgage money at a reasonable price was the cause of the 1929 building slump. At that time every large or small financier seemed anxious to gamble in Wall street securities. The stock crash came. It is now a thing of the past.

A strange thing in finance has happened during the past six weeks—banks today have a surplus of money!

It is bad business for a bank to have too much money on hand,—it should be out earning a profit. Funds are now available at reasonable rates for projects in industrial and building lines.

Tell the Public!

Now, therefore, is the time to go after building business. Don't wait for it to come to you. Be a merchandiser, urge the merchants and manufacturers to go ahead with improvements in their plants, adding the buildings so badly needed for future use. They can now get the money to carry them through to completion.

The prospective home owner, too, should be called upon and the situation made plain to him. Money is anxious for business through the regular channels, and at the old rates of interest.

Our financial institutions generally may soon be advertising to the public that they now have money to loan on very favorable terms. Some few institutions are already doing so. There has never been a better time for the builders to go after business. Go to your local Chamber of Commerce, get the different members to talk about the easy financial situation, and see if some of the business members will go ahead with their long delayed building programs.

Business is going to be good. More help will be needed in the industries of our cities and towns, and

more and much better housing will be required.

Building loans for small residential work, of course, will still have to stick to their safe margin. Sixty per cent of the value is usually the most that can be obtained on a first mortgage. Some building loan associations will go as high as 75 per cent, but they are few and far between.

The high cost of securing a second mortgage is pro-

hibitive for the prospective house owner. Here is where some co-operation can be used. Show the little fellow ways and means to finance himself so that he can get the necessary money and start a new house. Many hundreds of thousands of families are living in slum districts in obsolete housing. They will get out if a helping hand is given them. Show them how to do it.

Pull Together!

Building contractors, architects, building material dealers, and real estate men must co-operate. Quite often the building contractor will find that the dealer

will be willing to take notes from the owner for a good portion of his bill for materials—this at the regular 6 per cent interest without any extra charge for financing, investigating, etc.—a big saving for the little fellow. Local loans by friends may also help out.

The time has come when the builder must be a merchandiser. Have the home builder come to you because you can advise and help in a practical way. If you don't secure his order the chances are that some smarter merchandising mail order house will do so. They have the sound sense and financial ability to extend 15 year credit to the intending home owner.

There is no reason why local men cannot produce a house at as low a cost, if not lower, than anyone else, giving full value for every dollar expended.

A little co-operative advertising in the local papers will probably be necessary to call the attention of the public to the fact that the dealer and builder can and will

**BANKS TODAY
HAVE PLENTY
of
MONEY
AVAILABLE
for
BUILDING**

help them on with their new home building problem.

Co-operation is the key to more building. The financial problem has finally solved itself, money is now waiting for customers. Now is the time to go ahead.

Financing Remodeling

THESE are many thousands of homes that were built five or six years ago which, in the light of present day standards, are in line for some modernizing. The owners have made their payments regularly to the building and loan association; they have kept the house in good condition; they have passed the period of hard scraping that every new home entails on its owners. Now, they have their second wind and are thinking of some improvements to the house, but they cannot afford to pay for these improvements in cash and they don't know how to go about securing a second mortgage, even though it could be secured at a reasonable charge.

These owners probably have in mind to make these improvements when their building loan is fully paid; for instance, an oil burner would be a very desirable improvement, and perhaps an additional bed and bathroom on account of an increase in the size of the family.

Home owners so situated can get these improvements without increasing their expenses by having their building loan extended for the time of this loan to cover the increase in the mortgage for the desired improvements.

Usually builders do not know of this service that building loan associations are ready to render to their customers.

There are many good improvement jobs not being done on account of the inability to finance them at the present time. Here is where Mr. Builder should show Mr. Home Owner just what he can do and cause satisfaction all around.

AN AMERICAN BUILDER representative asked Mr. G. A. Martin, President of the Railroad Cooperative Building and Loan Association, New York City, what the cost would be of an additional \$2,000, and he said they would charge about \$95 to \$100 for drawing the necessary papers, examiner's fee, building inspection, etc. No one in the second mortgage business would offer such advantageous terms.

This means only that the home owner continues to make his payments for several years longer; but the monthly payments become a habit and are no longer a burden. The contractor gets a job and the home owner gets a better house!

It seems worth while for our readers to pass this word along to home owners at this time.

Building Trend Upward

THAT building construction throughout the United States has definitely taken a turn for the better was indicated in official reports received by S. W. Straus & Co. showing a 46% gain in March over February. Building permits issued in 583 representative cities and towns in every part of the country totaled \$187,270,891 compared with \$128,043,217 in February.

Building permits for March, 1929, amounted to \$408,931,092, which at first glance would appear to indicate a drastic decline in building activity this year amounting to 54%. Had March, 1929, been a normal month in the building industry, this decline would preclude any possibility of an encouraging interpretation of the figures. However, it should be remembered that during March of last year an abnormal volume of building plans, more than \$170,000,000, was rushed through and filed in New York City because of the pending multiple dwellings legislation at Albany.

The significance of the 46% increase in March over February lies in the fact that the normal expected increase from February to March is only about 37%. The March increase further compares favorably with a loss of 2% from January to February; 17% from December to January; 19% from November to December, and 23% from October to November. The reports constitute the most reassuring indication so far received that the building trend has turned the corner and is headed upward.

Public Works Make Record

CONTRACTS awarded during the first quarter of 1930 for public works and utilities construction have broken all records covering the same period for the previous five years, Secretary of Commerce R. P. Lamont has announced.

These figures as regards public construction show concretely the results of the stabilization program initiated as a result of President Hoover's conference with business leaders, and his suggestions to governors of the states and public works officials generally in all branches of the federal, state and local government, for the "energetic, yet prudent, pursuit" of public construction.

Information received by the Public Construction Division of the Commerce Department shows that during the first three months of this year the contracts awarded for public works and utilities construction represent a combined valuation of well over \$303,000,000—an increase of 55 per cent over the first quarter of last year and well ahead of the corresponding periods of 1925, 1926, 1927 and 1928 which were, respectively, \$159,-

660,000, \$220,236,000, \$217,964,000 and \$242,357,000.

According to Secretary Lamont the awards for public buildings alone during the first quarter of this year valued at \$32,337,000, an increase of 33 per cent over the same period of 1929, likewise established a record for the corresponding quarters of the last five years.

Lien Law Progress

THE unanimous agreement on the draft of the proposed uniform lien act which has been reached by the Standard State Mechanics' Lien Act Committee of the Department of Commerce is greeted with satisfaction by the building industry.

The lien act committee, appointed in 1924 by Herbert Hoover as Secretary of Commerce, faced a task which many in the construction industry deemed impossible of accomplishment. The representatives of the various groups involved in the industry were asked, with their conflicting views and economic interests, to develop a draft of a lien law which would be equitable, practical and beneficial alike to the workman, owner, material man, direct contractor, sub-contractor, and financial firm.

That five years were required to arrive at unanimous agreement is not surprising. That such agreement was reached at all is an encouraging indication that the construction industry is developing in its thinking to that stage where a genuine industrial consciousness can direct it.

The divergence of lien law statutes now existing and the inequity of many of the provisions in such laws has long been a sore spot in construction. Owners have been inequitably held to dual payment in many states under existing statutes, unsound credit conditions have been fostered, and many unethical practices have developed because of the patchwork legislation concerning lien rights. It was due to representations of this situation that Secretary of Commerce Hoover originally appointed the committee to draft an act which would better serve the purposes of such legislation.

It is stated that in the completion of the new law the material interests and sub-contractors will lose nothing. The only thing they are asked to do is to give the owner a fair chance so he will not be subject to dual payments without his knowledge or consent.

The material men and sub-contractors must give the owner notice within 30 days or before the project is completed that they propose to lien the building. This will give the owner an opportunity to protect himself and also protect the lienor. These provisions prevent the material men and sub-contractors from making the owner the collecting agency without his consent and it is believed will also do away with the

free and easy credit which has prevailed in the industry for so many years.

Mr. G. F. Meyne, of Chicago, who represented the Associated General Contractors of America on the Uniform Lien Law Drafting Committee, commenting upon the measure states he believes the material men will find it worth while to use their credit bureaus rather than be content with the mere street address of the project.

The proposed draft must be approved by the Uniform Law Commissioners which meet in Chicago with the Bar Association on August next. In the meantime Mr. Meyne advises all to become familiar with the law and when it is presented to the various legislatures to get behind it. It is now in draft form and has had the unanimous vote of every member of the committee. It will make for easy trading and shipping of material from coast to coast as manufacturers will know the law and can arrange their credit terms accordingly.

Build Better Churches

EVERY church building should be an ornament and an inspiration to its community. All too often church buildings fall far short of this mark. Even the smallest, most unpretentious might measure up to it, if it were not for a situation which reflects directly upon the active members of the building industry. This situation involves the use of cheap stock plans which are entirely unsuited to the purpose.

It is too common a practice for contractors or dealers, in communities where churches are to be built, to secure stock plans and furnish them to the building committee, which in turn buys the services or materials of the contractor or dealer. The result is, frequently, a church building which not only does not satisfactorily meet the need but which is actually a disgrace to the community.

If every contractor and dealer would recognize the fact that by procuring suitable architectural services for church building projects they would not only render a service to their community but would, in the long run, advance their own interests, it would not be many years till there would be a conspicuous improvement in church buildings as a whole. Such civic consciousness would raise the esteem in which the industry is held. It would be good business.

THE AMERICAN BUILDER receives many calls for church building plans; and, while not in position to furnish such stock plans, it does, in all cases, co-operate with its readers by putting them in touch with competent church planning organizations.

Through these organizations it is possible for the contractor or dealer to secure architectural service to whatever extent he may require.

To Attend London Congress

Strong Delegation to Represent U. S. at Fifth International Congress of Building and Public Works

IN response to an invitation extended by the British Ambassador, President Hoover has appointed a delegation of men prominent in building circles to represent this nation officially at the Fifth International Congress of Building and Public Works, which is to be held in London, May 26 to 30, 1930.

This Congress has been organized by the National Federation of Building Trades Employers and the Federation of Civil Engineering Contractors of Great Britain under the patronage of the British Government, and the proposed agenda will include the following subjects:

1. **CONDITIONS OF CONTRACT**—Unification of the principal conditions of contract imposed upon the contractor by public authorities or other proprietors.
2. **RATIONALIZATION** as applicable to building and constructional work.
3. **SCIENTIFIC RESEARCH**:
Its utility and application to the industry.
4. **EDUCATION AND TRAINING** required for those intending to become employers in the building or contracting business.
5. **FINANCING AND CREDIT FACILITIES**—The provision of financial and credit facilities for:
Middle-class Houses, and other building and contracting works.
6. **WORKMEN'S HOUSES**—The housing



John M. Gries, Chairman of the Delegation; Chief of the Division of Public Construction, Department of Commerce, Washington, D. C.; Formerly of Faculty Harvard Graduate School of Business.

question: Present state of the problem, what remains to be done, and means for remedying it.

7. **APPRENTICESHIP**—Training for youths.
8. **RECORD OF RESOLUTIONS** passed by previous Conferences and Congresses upon the question of the limitation of the hours of work in the industry of building and public works.
9. **OTHER COMMUNICATIONS**:
 - (a) Measures calculated to diminish the seasonal character of the Industries of Building and Civil Engineering Construction.
 - (b) Employers and social matters.
 - (c) Practical efficient methods of building construction in America—with the object of becoming acquainted with notable and beautiful achievements of other nations about which American enterprise desires information. Safety measures. The development of co-operative spirit between all the elements of the industry as represented in the building movement itself.

Following the sessions of the Congress, an eight-day tour has been arranged for the delegates, who will inspect the important industrial and public works at Birkenhead and Liverpool, Glasgow, Edinburgh, Newcastle, Leeds, and other cities.

This International Federation of Build-



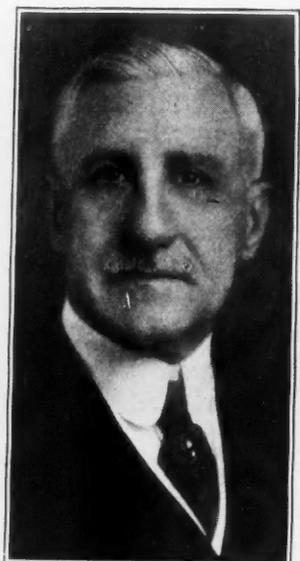
Louis K. Comstock, Chairman, L. K. Comstock & Co., New York; Chairman Council on Industrial Relations Electrical Construction.



William J. Doyle, Jr., Doyle & Co., Contractors and Builders, Philadelphia; Delegate to Fourth International Building Congress, Paris, France.



Noble F. Hoggson, President, Hoggson Brothers, New York City, Contractors and Builders Specializing in Construction of Large City Bank Bldgs.



Edward G. Lang, Director, Department of Public Works, Pittsburgh, Since 1926, Supervising Construction of Streets, Bridges, Sewers, Etc.

ing and Public Works, which has been under way in Europe for the past ten years, promises much in the way of a world-wide discussion and the possible solution of some of the difficulties confronting the industry. A similar congress convened in Paris in 1925 and was participated in by representatives from 43 nations. It is understood that it is desired to hold the next International Congress in America some time in 1933.

Of particular interest to town and city planners and to building developers will be the inspection by the American Delegation of England's famous pioneer "garden city," Port Sunlight. This is located near Liverpool.

Port Sunlight is a model town created by Messrs. Lever Brothers, manufacturers of Sunlight Soap. It represents the realization of a great ideal. In 1888 the founder of the firm (the late Lord Leverhulme) decided to acquire the land for Port Sunlight, to remove his works thither from the crowded town of Warrington and to create a model village to house his employes. The village has grown to be a town with all the amenities of a modern garden city, including staff training college, art gallery, co-partners' club, hospital, girls' social club, open-air swimming ponds, recreation grounds, and so forth. The Delegation will motor through Port Sunlight and obtain a general impression of this home building and community building experiment. Interest will probably center chiefly in the layout of the town and the architecture of its buildings.

One of the engineering projects of greatest interest to be visited by the Delegation is the new Mersey Tunnel. There has been in existence for many years a railway tunnel under the Mersey served by electrically-driven trains. The new Mersey Tunnel, for vehicular traffic, connects Liverpool and Birkenhead and

forms a link, not only between these two boroughs, but also with the general highway systems which are severed at present by the natural barrier of the River Mersey. Plans for improving the communications between the two boroughs and counties have been under consideration for more than three-quarters of a century, and at various times bridges as well as tunnels have been proposed.

The under-river portion of the tunnel, 46 feet 3 inches external diameter and 44 feet internal diameter, will be the largest subaqueous tunnel yet built. The total length of tunnel will be 2.9 miles. The tunnel lies in the sandstone. The quantity of excavation will amount to more than one million tons of rock. The tunnel will be lined with cast-iron plates bolted together, so as to support the ground and afford a lining which will be watertight. The total weight of iron thus to be used will be over 75,000 tons.

Ten of the fourteen official delegates to the London Congress are presented herewith. Other members of the official United States Delegation, whose portraits could not be secured in time for this publication are:

A. P. Greensfelder, civil engineer and constructor in charge of public works and industrial plant construction; associated with the Fruin-Colnon Contracting Co., St. Louis, Mo.

John W. Harris, treasurer of the Hegeman-Harris Co., New York City, which has constructed some of the largest buildings in New York and Chicago.

Michael J. McDonough, president, Building Trades Dept., American Federation of Labor, Washington, D. C., and member of the California State Legislature.

Lieutenant-Colonel George B. Walbridge, president, Walbridge-Aldinger Company, Detroit; former president of the Associated General Contractors of America.



Colonel Edward A. Simmons, Chairman of the United States Delegation to the International Railway Congress, Madrid, Spain; President, American Builder Publishing Corp., New York City.



Gerhardt F. Meyne, Contractor, Chicago, Member Governing Board Associated General Contractors of America and U. S. Chamber of Commerce.



Truman S. Morgan, American Vice-President, International Federation of Building & Public Works; President, F. W. Dodge Corp., New York.



David T. Riffle, General Contractor and Builder, Pittsburgh, Pa.; President, National Association of Building Trades Employers.



Colonel William A. Starrett, Architect and Engineer, Vice-President Starrett Brothers, Inc., General Contractors and Builders, New York City.



Home Town Service Best

Experience Shows That Communities Where Dealers and Contractor-Builders Co-operate, Have Little to Fear from Out-of-Town Competition

NCESSITY is the mother of invention and a kick in the pants is often just what is needed to put a man—or an industry—into fighting trim to go out and do a bigger and a better business.

Take the home building industry, for instance. For years, convention orators and business writers have been trying to prod the lumber dealers and the contractor-builders into a more aggressive and business-like frame of mind so that they would get out and really *sell* home improvements, instead of being content to sit at home, in the office or warehouse and wait for the home-seekers to come and find them.

Of course, this prodding has done some good. In spots it has had its effect. Here and there we find firms that are really merchandisers, promoting and selling homes in the modern business way. But, for the majority of the builders and dealers, the old way of conducting a business—waiting for the demand and then filling it—still seems good enough.

But now in this threat from the mail-order folks, we have *the jolt* to shake the home building industry out of its complacency. The giant out-of-town firms are invading the local home building field and, with their chain store methods, their force and their ruthless efficiency, they threaten to crowd the local building fraternity to one side.

Perhaps this is that psychological kick in the region just below the tail of the coat that this industry has been needing!

Undoubtedly, the threat of the Sears-Roebuck invasion is the best thing that has happened in years to arouse the men of the home building industry and make them bestir themselves. What convention orators in the past have failed to do, necessity and Sears this season will most certainly accomplish! They will make the

local home building interests get together as seldom before, and really perfect an attractive home building and modernizing service—complete with financing and architecture—that will merit the full confidence of the home-seeking and home-owning public.

In order to crystallize this movement, the AMERICAN BUILDER proposes the organization of a "Home Town Improvement Club" in every community. Or, as Secretary Bryan of the Illinois Lumber Merchants' Association phrases it, "Organize at Home for Business Purposes."

The experience of the past few years in organizing various communities and cities for home modernizing should be useful now in organizing for the more efficient planning, financing and building of new homes. Where successful modernizing campaigns have been arranged and carried through to completion, the central bureau or headquarters for information and service has invariably been a prominent feature, and has proved to be a very potent sales help.

The general public evidently likes and responds to the idea of an authoritative source of information it can turn to freely without obligation. Confidence is encouraged when a firm or, better still, a group of firms in the building business announce to the public that they have established an information and service bureau to assist the public in solving its modernizing or new home building problems.

Especially good results have been secured where lumber and building supply dealers have gotten together with their circle of skillful local contractors and builders, and have invited in to co-operate the local home financing agencies, the real estate men and the various specialty dealers and sub-contractors who have an interest in home building improvements. Such a group can offer

a complete service, and commands respect and confidence because of the broad foundation of experience on which it rests.

There is little to fear from out-of-town competition where the local firms interested in building get together in such a co-operative way to serve the home-seeking public.

Many building contractors, dealers and realtors are apprehensive as to the results of the invasion of the local home building field by the huge out-of-town mail-order houses. They fear that the smaller firms will be thrust aside in this competition, in spite of the advantages which the local firms enjoy. The success which the home modernizing bureaus have had in many communities points the way to a successful meeting of this problem. The "Home Town Improvement Club" with every interest represented can render a better and more economical service to the home seeking public; also such an organization can easily become the center for a genuine home town patriotic campaign.

Start the movement and the local newspapers will help, the public schools will gladly co-operate, and the ministers from their pulpits will very probably build sermons on the theme of home ownership and wholesome family life. Bankers, realtors, building and loan organizations, organized labor and building craftsmen generally, the architects, and all retail merchants of the community should be enlisted in this "Home Town Improvement Club" movement.

Everyone is interested this year in home building and favors a strong building revival. President Hoover, Secretary of Commerce Lamont and the other business leaders of the nation have emphasized again and again the pivotal place of building—more particularly home building—in their broad plans for restoring business activity in all lines.

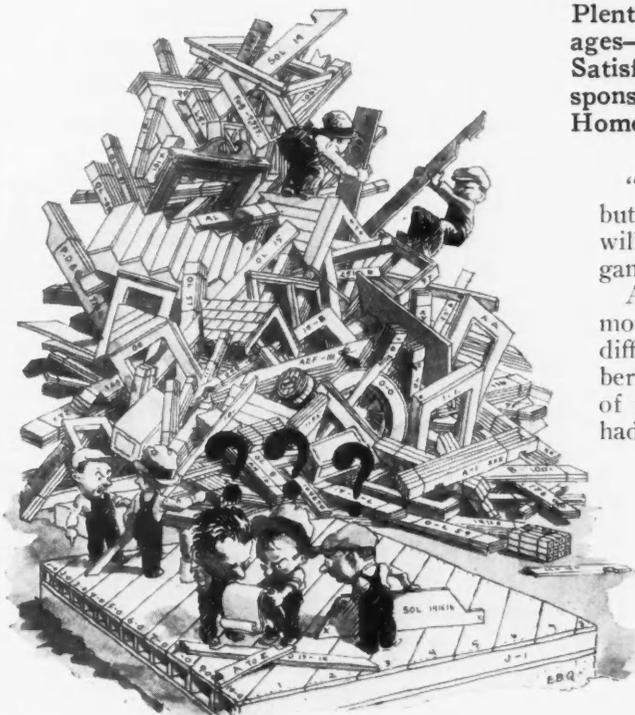
All of these factors are very encouraging and they call for action now on the part of all building interests.

Home town service in home building, repairing and remodeling is most satisfactory. The argument for lumber ready-cut and shipped in from out of town was thoroughly exploded several years ago. Experience has proved that "cut-to-fit in the factory" does not work out so well "on the job"; but that a local supply of materials delivered as needed, and erected by skilled local craftsmen properly equipped with power tools, produces the best and most economical house.

The local building supply dealers, co-operating with their circle of reliable builders, and with the bankers, realtors and architects assisting, can and will offer a complete building service that cannot be equaled anywhere. Get together and launch now the Home Town Improvement Club or Central Service Bureau idea.



Plenty of Materials—no Shortages—no Delays—Quality and Satisfaction Guaranteed by Responsible Local Folks—That's Home Building at Its Best.



"Cut-To-Fit at the Factory' Does Not Work Out so Well "On the Job". A local supply of materials delivered as needed and erected by skilled local craftsmen properly equipped with power tools produces the best and most economical house.

"Yes," you say, "very good; but who is to start this?—who will call the meeting and organize it?"

A very proper question and most important, though not a difficult one. Your local lumber dealers who are members of their state association have had experience serving on committees and know how meetings are called and conducted. Many of your builders are prominent in political and civic affairs and are very familiar with public hearings and methods of leadership. In every community, you will find men of ability and energy who are willing to help shoulder the burden of organizing and conducting a genuine home community improvement campaign.

The first step is to talk this over informally among all your friends of the home building industry; then set a time and place and call a meeting. Make sure that the representative men attend. Action will follow, in each case suited to the local needs. Your home town public will respond with cordial interest and enthusiasm. Better homes are needed and the offering of a real home improvement service by the local building fraternity will create confidence and business.

Nixon Agent for Sears

Real Estate Firm Acknowledges Mail Order Connection After First Announcements Had Suggested Insull Backing

A NEW home building organization, to be known as Nixon Associates, Incorporated, was announced on April 4, at a banquet given by George F. Nixon, of George F. Nixon & Co., Realtors, former president of the Chicago Real Estate Board, to about 400 realtors of the Chicago area. The new organization is backed by a \$60,000,000 fund, to be made available through all realtors of the Chicago area for the financing of new home construction, it is stated.

When first announced, it was understood that the Nixon Associates project was backed, financially, by the same public utilities interests which had, on the previous day, launched a publicity campaign in the interest of increased building under the slogan, "Build for Progress." It developed later, however, that the two are in no way related.

Nixon Associates, Incorporated, is backed by Sears, Roebuck & Company, the big Chicago mail order company which has recently attempted to enter the home building field on an extensive scale. The Nixon organization merely took advantage of widespread interest created by the Chicago Rapid Transit Company's "Build for Progress" campaign to aid it in the launching of its own project.

The plan under which the Nixon Associates organization operates is the Sears, Roebuck plan, now offered through the agency of this new organization. It is intended to bring together the various phases of the home building operation, lot appraisal, financing, architectural service, supplying of materials and equipment, and actual construction of the house, under the control of a single organization and offer them to the prospective owner as a unit.

The financing plan offers first mortgage loans, up to 75 per cent of the value of the lot and building, for 15 years, at six per cent.

The Nixon Associates, Incorporated, have established their headquarters at 67 West Monroe Street, Chicago, where they will operate as the authorized agents for the Sears, Roebuck & Company home building activities, in the Chicago area. A permanent exhibit of building materials and equipment used by this company has been installed at the headquarters as well as a file of designs from which the prospect may select.

When interviewed on the plans for extending the Nixon Associates idea to other parts of the country, Mr. Nixon stated positively that the plan would be extended to the entire region north of the Mason and

Dixon line and east of the Mississippi River. He was not prepared, however, to say definitely whether this would be done by means of similar local organizations in other areas or by an extension of the Nixon Associates activities. He referred the question to Harvey L. Harris, of Sears, Roebuck & Company.

When asked where the local general contractors come into the picture, Mr. Nixon said, in effect:

"We will be willing to let the general contractors do the building of our houses if they will accept our materials and methods of construction and work under our direction; otherwise they are out of it."

A news release, from the National Association of Real Estate Boards, dated April 15, carries an article endorsing the Nixon Associates, Incorporated. This

article does not state, however, that the Nixon Associates project is merely the Sears, Roebuck plan and money presented under a new name. This point is evaded in the following words:

"These homes financing resources do not come from the usual banking and building and loan channels, but directly from large business interests concerned in the organization of the new firm."

It would seem that the members of the National Association of Real Estate Boards and their local newspapers, to whom this news release was addressed, as well as the building interests and the public at large, are entitled to know what these "large business interests" are. They should be informed that, if they support the Nixon Associates project

they will be supporting Sears, Roebuck & Company in competition with their local business firms.

It is quite probable that many realtors would prefer not to support interests that are in direct competition with local contractors, dealers and general business interests, if they were informed as to what these interests really are.

Certainly there is no question as to the feeling of contractors and building material dealers on this subject. In the same way, there is a responsibility on the part of realtors to their communities. Not only that, but it is to their own interest, figured on a long time basis, to support local business rather than to send business, and money, out of the community. Farsighted realtors recognize this fact and that there is danger to themselves in supporting a project which takes a large portion of the home building money out of the community and undermines the established business activities of the community on which their own business depends.

AN official of the Chicago Rapid Transit Company stated to the American Builder that the "Build for Prosperity" campaign is an entirely independent movement on the part of the Chicago Rapid Transit Company, with the local business associations of the Chicago area co-operating. It is not in any way connected with the Nixon Associates project, backed by Sears, Roebuck & Company. The Nixon-Sears project was announced the day following the launching of their campaign—an opportune time to take advantage of the interest resulting from the "Build for Prosperity" campaign.

BUILD FOR PROSPERITY

He PROFITS most
who builds NOW!

It's a home builders market

RAPID TRANSIT LINES

ON April 3 the Chicago Rapid Transit Company launched an important publicity campaign to restore building, in the Chicago Metropolitan Area, to its normal activity. On the following day 1,800 "Build for Prosperity" car cards like the one reproduced at the top of this page, made their appearance in the cars of the company's elevated roads, and about 3,500 posters on the elevated station platforms and at the foot of each station stairway.

Forty-three hundred similar posters, signed by the Chicago Surface Lines, were displayed in that company's cars; and banners, signed by the local business association of the districts in which they were hung, were placed on the elevated stations in the outlying business districts. No previous announcement had been made of the campaign and, coming as a surprise, it instantly attracted widespread attention.

This publicity campaign was initiated and sponsored solely by the Chicago Rapid Transit Company, which operates the elevated lines in Chicago and its suburbs and with which are associated the three important electric interurban lines running out of Chicago. It is an entirely non-commercial enterprise and is not connected in any way with any individual project or other commercial promotion.

Building Activity the Key

Something of the origin and organization of this unusual "Build for Prosperity" campaign should be of interest to other communities where the need for stimulating building is equally great. The story was outlined by John J. Moran, Commercial Manager of the Chicago Rapid Transit Company, as follows:

About six months ago, this company undertook a study to determine what might be done to stimulate business and employment. For some time, there had been a marked decrease in building in the Chicago area, as in the entire country. The break in the stock market, with its consequent tightening up on financing credit, was followed by a general slowing up of business, and there was an increase in unemployment.

The Rapid Transit Lines were among the first to become aware of the situation. Workers in various trades and occupations use this company's transportation at certain definite hours of the day. Any falling off of revenue at any period of the day is a sure indication of reduced employment in the occupation groups which go to and return from work at that period. The

company's charts are an immediate and accurate barometer of employment in each line of business.

It was decided that the building industry was the key to the employment situation and the Chicago Rapid Transit Company proposed to launch a publicity campaign to stimulate building by showing people that the present is an opportune time to build.

Neighborhood Associations Help

The City of Chicago is reinforced with dozens of local or neighborhood business associations. Most of these, in turn, are allied with three important, larger groups, the Greater South Side Chamber of Commerce, the West Town Chamber of Commerce, and the Central Uptown Chicago Association. These organizations are well directed and exert a strong influence in each district.

Before taking action on the proposed campaign, the leaders of the three association groups were advised of the project and asked for their opinions. All agreed as to its practical value, but expressed the opinion that it was too big a project to be undertaken by any one organization.

The next step was to determine the attitude of the banks on the question of financing new construction. It soon developed that the bankers were now ready to finance building operations, but only on condition that the building would not be speculative. Life insurance companies investing in building loans were adopting the same policy.

With this change in the financing situation, it seemed that the time might be ripe for launching the campaign if proper co-operation could be secured. The proposition was then put up to the various local and neighborhood business associations. These immediately recognized the benefit which it would be to them individually, and agreed to co-operate. With the program completely worked out, the campaign was launched.

The cards are furnished by the individual organizations. They were prepared by the Chicago Rapid Transit Company and the printing was arranged for on a quantity basis. The co-operating organizations order from the printer, have their names run onto the cards, and the job billed to them direct. This gives these organizations their printed matter at minimum cost.

The next move was a comprehensive campaign of newspaper advertising which was started about a week later. One series of advertisements was authorized to

be run in the local papers of Milwaukee, Racine, Kenosha and Waukegan, which are served by the North Shore Line, and was signed with the name of this system. A second series was authorized for the local papers in the various outlying Chicago communities, such as the Austinite, West Town News, Hyde Park Herald, Calumet Record, Daily Calumet, Northwest News, South Town Economist, Howard News, Chicago Comet and Suburban Star, and was signed by the Chicago Rapid Transit Lines which serve these communities.

All of the advertising material being used features the campaign slogan, "Build for Prosperity," and also such lines as "He Profits Most Who Builds Now"—"Never a Better Time Than Now"—"It's a Home Builder's Market." The average person, unfamiliar with the building industry, does not realize that the cost of building is now lower than it has been for some time or is likely to be again. He needs to be told that the slump of the past few months has created a situa-

BUILD FOR PROSPERITY



*Never a better time
than Now!*

**It's a
Home Builder's
Market**

Get in touch with your local architect, contractor and building materials men and take advantage of the present situation.

**NORTH SHORE
LINE**

BUILD FOR PROSPERITY

*He Profits Most
Who Builds Now!*

Get in touch with your local architect, contractor and building materials men and take advantage of the present situation.

RAPID TRANSIT LINES
Always at Your Service

These Newspaper Advertisements, Published in Suburban and Outlying Community Papers Are a Part of the Big "Build for Prosperity" Publicity Campaign.

tion in which he can profit by building now.

The newspaper advertising also carries the advice, "Get in touch with your local architect, contractor and building materials men and take advantage of the present situation."

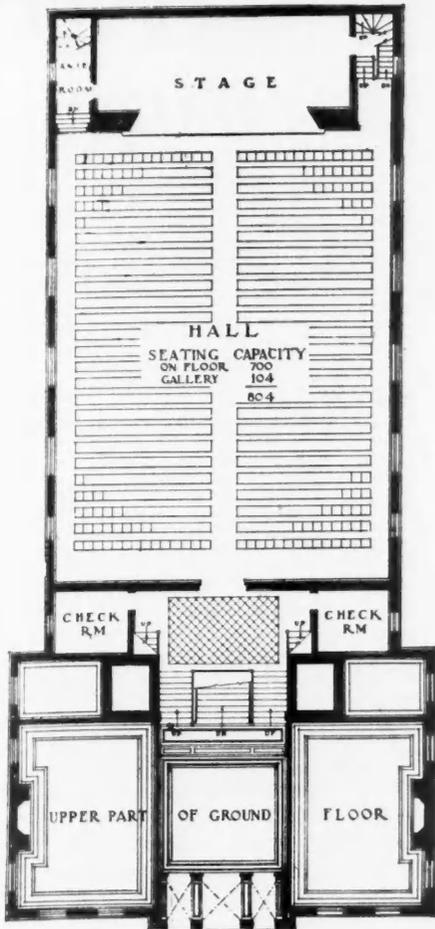
"We are interested in the local contractor, dealer and architect," said Mr. Moran. "We want to help him to build up his business for it is only in that way that we can be of real service to the community."

This whole campaign is a far-sighted and public spirited piece of work such as can be undertaken to the best advantage by large public utilities organizations with the co-operation of local business associations. While, with the success of the campaign, the revenue of the Rapid Transit Lines will increase, it will be a long time before the extra nickels and dimes will equal the money being spent by the company

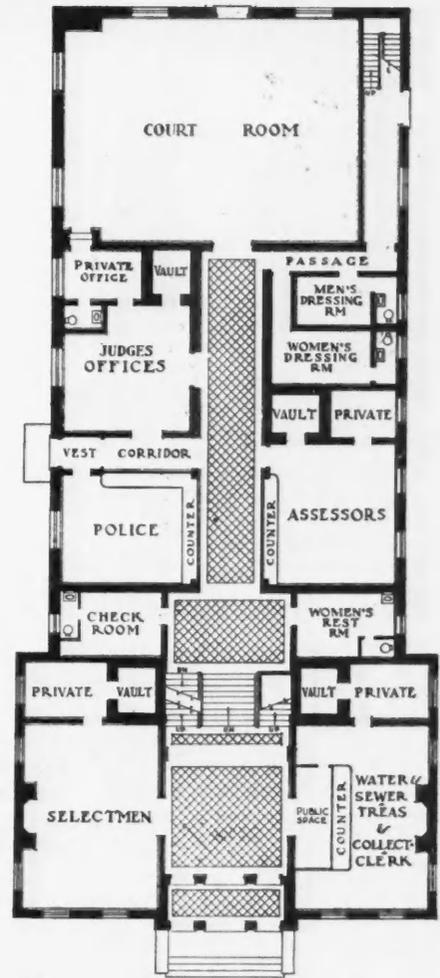
This company realizes, however, that anything which will build up and add to the prosperity of the community which it serves will, in the long run, be to its benefit. Any utility can prosper only as its community prospers. It is a big program but a simple one and could be followed to good purpose in other communities.

A TOWN HALL
of
DISTINCTION
at
Westborough, Mass.

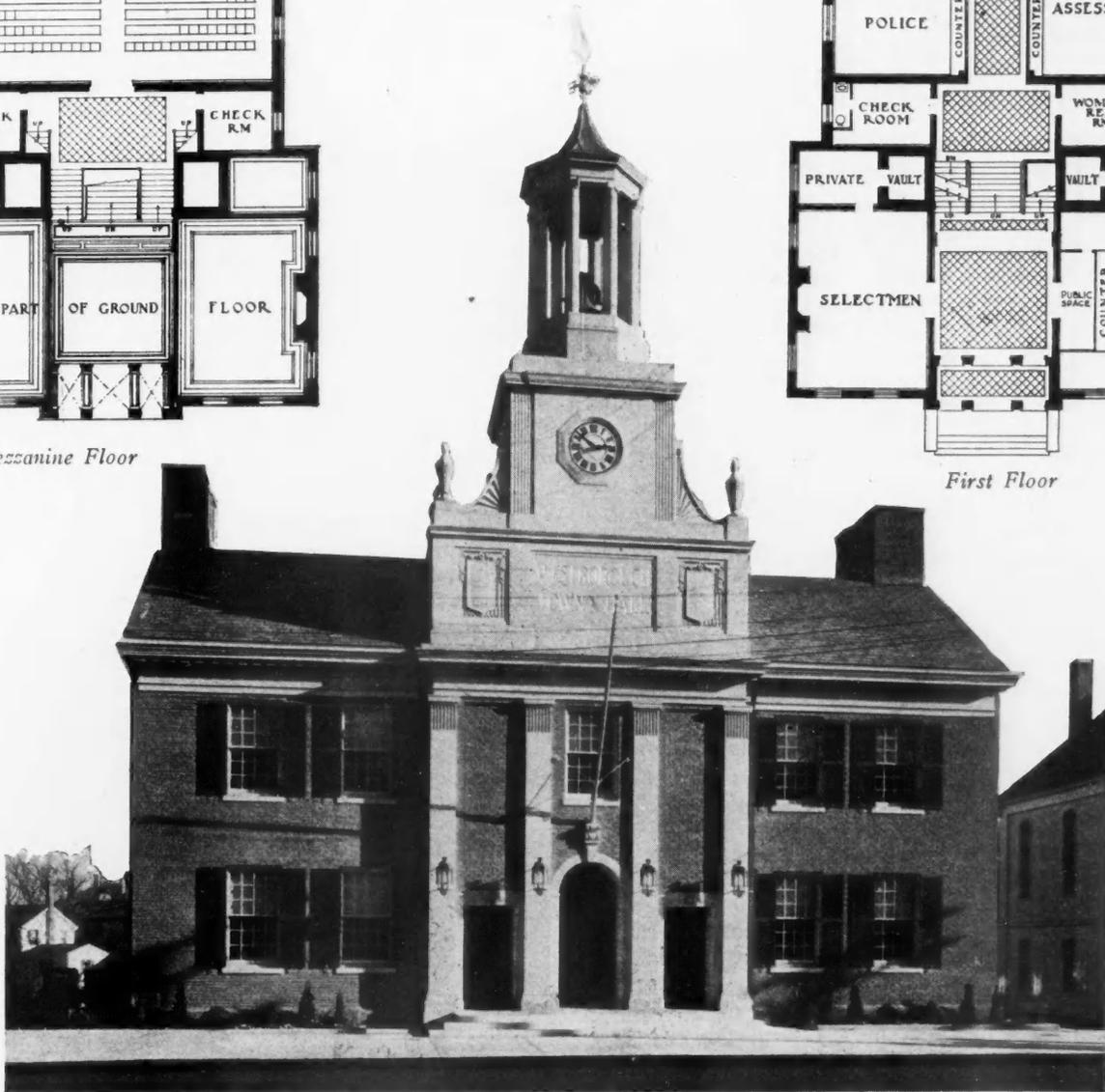
Kilham, Hopkins and Greely,
Architects
Boston



Mezzanine Floor



First Floor



HERE is a building that provides for the civic needs of this New England town in a most satisfactory manner.

The oft-times unpleasant work of the police department is carried on through a separate entrance without annoyance to the law abiding citizens transacting business in the Town Hall.

The Selectmen's room, tax collecting departments, and main entrance hall are on the street level; a half-story below the other offices are located, a half-story above is the large meeting hall. The second

floor front is devoted to a patriotic hall for American Legion, etc. A number of ante-rooms, toilets, and a kitchenette are provided on this floor.

In its general lines the building follows the traditional Colonial architecture; it is red brick with stone and wood trim, the cupola being of wood.

It has been the aim of the architects, while preserving Colonial traditions, to mark the progress of time by their treatment of the details in a more modernistic manner. In this new interpretation of a traditional style lies the building's claim to distinction.



GEORGE W. MILLER
President

All Speculation



MILLER-STORM
of Detroit perfect
the safer way

WHEN an old way of doing business fails, red blood will speedily accept the challenge to find a new way to do business. Building houses and then offering them for sale is not an alluring business today. The path to success through speculative building is just about closed. The bankers have let some big trees blow down squarely across it in the shape of "hard to get" and "not much to get" mortgage money. It is full of the mud of despond from the general business situation. It is full of thorns and thistles which unprincipled speculative builders themselves have sown in the shape of shady dealings of every kind.

Put up a house to sell and you have a sweet job on your hands in most cities today. Therefore, we of the red blood must scan closely other methods if we would continue in business.

How about the alternative of selling houses before you build them? Is it possible to fix up the proper stage effect for your business so you can do this? The answer must of course come out of your own estimation of your own possible set-up.

The working of Miller-Storm's method furnishes an interesting and instructive example, and after all, concrete examples of what is being done are the best pointers to help us in any contemplated revamping of our own business methods.

Miller-Storm, of Detroit, Michigan, have steered clear of the speculative field and sell houses before they start to build them. During the year 1929 they built two hundred fifty homes for clients who were made clients by business methods which merit closest scrutiny.

The way this is done—the "stage setting" which has resulted in this volume of business can be foreworded by saying simply that from the beginning of the Miller-Storm Company's business in a typical frontier construction frame office at the corner of Calvert and Twelfth streets, Detroit, in 1921 to the present day in their "Home Builders' Bureau" which stands at the corner of Elmhurst and Linwood, a beacon of intriguing interest to anyone interested in having a home, their objective has been *to open up to view of the client all the points of mystery in house building.*

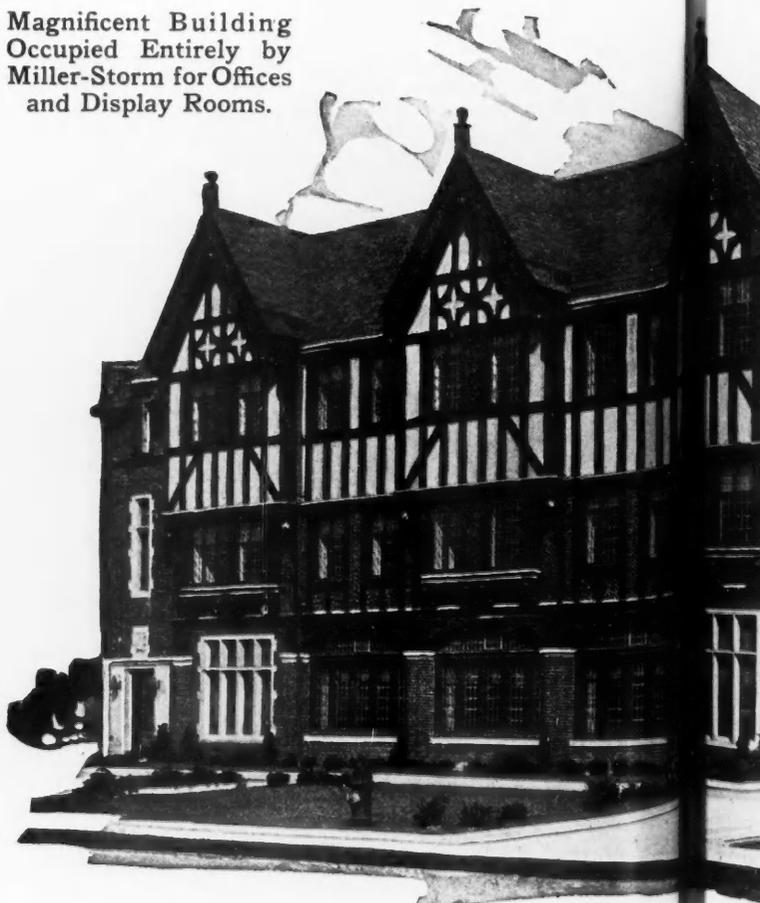
Following the Progress of a Prospect Into a Client

To get the best picture of the Miller-Storm method let us put ourselves into the picture as a prospective client. There are several ways in which we may become

attached to the big files of prospects in their offices. We may read their advertising in the press and become interested in them through the assertion that one can come to their "Home Builders' Bureau" and see the presentation of materials and types of construction, the equipment, and a library of plans, photographs relating to homes, and last, but not least, be given an insight into ways and means of financing to suit the pocketbook, capacity and tastes of the client. Quite naturally a "Home Builders' Bureau" furnishes a remarkably good idea to write any sort of advertising around.

Or one might learn of this service through observation of one of the many homes being built, or through

Magnificent Building
Occupied Entirely by
Miller-Storm for Offices
and Display Rooms.



Removed from Speculative Building

**CUSTOM-BUILT
Homes sold before
they are started**



advice of a friend or through attendance at a building show where Miller-Storm would be sure to exhibit.

A clinching factor employed by Miller-Storm in making prospects and later converting them into clients who order homes built is a catalog which is exceedingly well done.

"Your New Home" is the title of Miller-Storm's newest two hundred page book repletely illustrated and with presentation of facts concerning the Miller-Storm methods. Enough to say, that anyone interested in this firm's procedure should obtain a copy if possible. It is convincingly done. It is the portable "stage setting" for selling homes before they are built.

But now still considering ourselves as a possible client, let us drive on Linwood until we approach the main "stage setting." It is a distinctive three story building containing 24,000 square feet floor area and finished with face-brick and half timbered stucco, with roof formation a series of gables and covered with varicolored slate. Suitable shrubbery surrounds the building, and before you have entered through the high entrance



Compare This "First Office" with the Building Now Occupied. Ideas and methods that accomplish so much must have considerable merit.

peaked to conform to the gables, you have really absorbed the first of the "desire to buy" atmosphere which Miller-Storm has sought to create.

The reception room is richly done and well appointed. It, as does the exterior, bears out the slogan, "Within This Home Your Home Awaits You." We shall stop for a minute right in this reception room with its full paneled walls, its very tasteful furnishings, its business-like switchboard equipment and smartly dressed operator and raise a question. "Does this stage setting so far as we have seen it possibly convey to the mind of a canny client the idea of heavy overhead?" Having raised this question, we shall observe one big display panel, "Miller-Storm 100-Point Construction," near the entrance which will intrigue anyone who has ambition to build a home. It





Miller-Storm 100-Point Construction

1. Extra heavy cement footings properly drained.
2. Footings covered with tar paper.
3. Interior basement walls and beam-fill of white brick.
4. Heavy steel I-beam and stanchions.
5. Steel bridging between joists.
6. Basement walls waterproofed with Medusa cement and tar.
7. Basement adequately drained by Boosey Floor Drains.
- 7A. A back water proof basement drainage system if specified.
8. Basement walls 7 ft. high.
9. Steel casement basement windows.
10. All cement work guaranteed.
11. Large fruit-room and coal bin sealed with matched lumber.
12. Guaranteed metal coal chute.

Lumber and Carpenter Construction

13. No. 2 or better yellow pine $\frac{7}{8}$ " matched shiplap.
14. First floor joists of brick veneer homes 2 x 10 or 2 x 12. Frame homes 2 x 8 or 2 x 10 depending on span.
15. Roof rafters spaced on 16" centers and exceptionally well braced.
16. Double 2 x 8, 2 x 10 or 2 x 12 headers over doors and windows depending on size of opening.
17. Bungalow homes have 2 x 8 second floor joists to provide for finishing upstairs.
18. 2 x 8 bond timber upon basement wall provides full bearing.
19. Extra number of nails add to rigidity.
20. Double plates used on top of all partitions.
21. Special double dipped shingles.
22. No. 2 or better roof boards.
23. Roof boards spaced not more than 2" apart.
24. Chimney equipped with sealed saddle and counter flashed to prevent leakage.
25. Chimney furred to prevent plaster cracks.
26. 2 x 6 or 2 x 8 studs are used in all partitions where plumbing is run.
27. Grade "A" cedar or white pine siding is used where shown.
28. "A" grade matched ceiling in all cornices.
29. Joists are doubled and spaced under all bearing partitions, insuring rigidity.
30. Studding placed in a straight line, on top of joists to carry weight properly.
31. Rafter ends sealed with crown moulding.
32. Corners built solid and firmly spiked to prevent cracking of plaster.
33. 1 x 4 nailing strip for baseboard.
34. Double studding at all openings.
35. Use of collar beams and breasting to prevent roof from sagging.
36. $\frac{7}{8}$ " Grouds used around all rooms for plaster gauge.
37. Sub floor on first floor laid diagonally and cut on the joists, well nailed to give strength and prevent squeaking.
38. Best grade select oak flooring throughout.
39. Matched shiplap sub floor on second floor laid straight.
40. Built-in bookcases, desks and other special details where shown, are exclusive Miller-Storm design.
41. Craftsmanship of highest type by workmen trained for many years in Miller-Storm methods.
42. One panel Miracle doors used throughout.
43. Detailed wood trim.
44. Stairways by our own experienced stair builders properly housed, glued and wedged.
45. More and better lumber used, giving better quality and greater strength and longer life.
46. Inspection of home by trained men co-operating fully with you.
47. Cripple studs used under windows to prevent sagging and cracking of frames.
48. Sash, shingles and siding all properly applied, each by especially trained craftsmen.
49. Finish trim construction by highly trained mechanics.

Insulation

50. Insulated with balsam wool under roof or ceiling of second floor and Celotex for sheeting.
51. Double slater's felt at windows and doors.
52. Heavy slater's felt under all first floors and deadening felt under second floor of all incomes and duplexes.
53. Outside walls covered with heavy slater's felt building paper.

Plastering

54. Grade "A" plastering and guaranteed stucco.
55. Cove ceilings in living and dining rooms.
56. Metal lath used in all coves.
57. To eliminate drafts, plaster is carried all the way to sub-floor throughout.
58. Metal corner beads on all exposed corners.
59. All inside corners have cornerites to prevent cracking of plaster.

Heating

60. Guaranteed furnaces supply warm air heat. Red Jacket boilers and American radiators for steam.
61. Heat stacks run to second floor in all bungalows to provide for future rooms.

Painting

62. Woodwork stained with three coats of stain and varnish and hand rubbed. Floors hand scraped, well sanded and finished with one coat of filler and two coats of high grade varnish.
63. Two coats of pure lead and oil outside.
64. All shingles double-dipped, color to suit owner.
65. Back of trim (gum) primed with lead and oil to prevent warping.
66. Method of decorating based on years of experience. Home owner has choice of color and kind of decoration.

Hardware

67. Rusawin or equal. Cylinder locks on all exterior doors. Distinctive interior locksets and other hardware.
68. Excellent grade of knobs, etc.
69. Hooks and rods in all closets.

Shingling

70. Clear 5 to 2 British Columbia red cedar shingles 100 per cent vertical grain. Guaranteed against leakage.
71. Heavy galvanized iron flashings, etc., to prevent leaks. All roofs guaranteed.

Bath Room Fixtures

72. Kohler of Kohler. Guaranteed enamel fixtures used throughout.
73. Double apron, built-in tub, fully equipped with shower and curtain.
74. Venetian medicine cabinet.

Specialties

75. Red Seal wiring.
76. Tile sink with double drain board and back. Soap dish and swivel faucet.
77. Tile floors in bathroom.
78. Electric or natural fireplace where shown.
79. Abundant well arranged closet space.
80. All outside doors and wood casement windows finished with high grade weatherstrips.
81. Window shades of special quality for all windows. Color and design chosen by owner.
82. Built-in cupboard space.
83. Plate glass in all steel sash. Libbey Owen Label glass in all wood sash.
84. Sodding and grading included.
85. Abundant and attractive cupboard space in kitchen.

Important General Features

86. Sound construction methods of Miller-Storm result in high re-sale value.
87. Greater value for your money because of our greater purchasing power through quantity buying.
88. Miller-Storm reputation and guarantee back of your home.
89. Financial stability of Miller-Storm enables them to render sound financial assistance.
90. Close personal attention by Mr. Miller and Mr. Storm to all details and to the wishes of the home purchaser.
91. Skilled architects to assist home builders in evolving plans according to their own ideas. More than two thousand well designed plans to choose from.
92. Assistance by the Miller-Storm Co. on contracts and first or second mortgages, enabling you to own your home.
93. Our own legal department exercises unusual care in the examination of abstracts and other legal phases so as to eliminate any chance of mistake or legal entanglements.
94. Display rooms under one roof, offering a wide variety of choice in decoration, brick, paper, paints, fixtures, etc., from which the home owner can choose.
95. Liberal allowance for fixtures, wallpaper, hardware, etc.
96. Total cost of guaranteed survey and all building permits paid by Miller-Storm.
97. Miller-Storm's reputation, ability, reliability and experience gained through building over 1500 homes in Metropolitan Detroit, and endorsed by hundreds of letters of satisfaction from owners.
98. Capable handling of construction details by skilled men under expert direction.
99. Continued service for one year after the home is completed and occupied.
100. Confidence inspired by a large and permanent institution offering a complete planning, financing and construction service co-ordinated under one roof at the "Home of Homes," Linwood and Elmhurst Aves., an achievement accomplished through years of honest effort by a firm completely dedicated to giving quality and satisfaction. Built upon Miller-Storm 100-point construction with the addition of the following:

Gold Seal Homes

101. Four coats of paint, hand rubbed inside and painted walls and ceilings.
102. Three coats of paint, pure lead and oil outside. Colors to suit owner.
103. Glass door knobs.
104. Natural fireplaces, guaranteed to draw.
105. Screens.
106. Steam heat. American Redflash boilers and Corto radiation.
107. Standard plasterings.
108. Pedestal washstand.
109. Aruco iron sheet metal (flashings, ridgerolls, valleys, aprons and gutters).
110. Tile walls in bath.
111. American Blower Electric Ventilator in kitchen.
112. Kerner Incinerator and numerous other features.

In addition to the above specification items, the Miller-Storm Company use and feature the following: Fenestra Casements, Diamond Metal Weatherstrips, Heatilator Fireplaces, Majestic Coal Chutes, Package Receivers, etc., Overhead Garage Doors, Parsons Pureaire Kitchens, Rolcreens, Schlage Locks, and Balsam Wool.

contains a full itemized list of details of a home. It is what might be termed a glorified list of specification items. To any prospect who has been talking with other would-be home builders who have, as is very common, not informed the client of all the details of construction, this list stands as an eye-opener. *It makes the client feel that this firm strips the mystery off of all detail. It specifies everything.* Anyone who has to wait a few minutes is sure to observe this big display.

This "Miller-Storm 100-point Construction" list by the way is one of four schedules the firm exhibits in printed form, the four being printed in full in the catalog under the captions: "Miller-Storm 100-Point Construction"; "Gold Seal Specifications"; "Standard Specifications"; and "Special Specifications." The 100-Point Construction, as shown in the catalog and identical to the big chart in the lobby, is reproduced on an accompanying page of this article. (See page 82, opposite.)

We are now taken to the various display rooms. The displays are laid out with the one purpose of guiding the home builder and buyer. In the first room you are introduced to some of Miller-Storm's construction standards. Built of the regular materials of construction, life size and appearing as actual work is a section showing an actual footing; basement side wall with its layers of brick facing, concrete block backing, outside concrete layer and its waterproofing; actual eye beam; joist construction and bridging, floor section, studding, clear up to rafters. It is as if one had sliced a piece of cake out of a completed house. This concrete example of construction is backed by other sections showing plastering, corner beading, insulation, the sort of framing used over windows and doors and there is an entire alcove off this room laid with different types of flooring and also a showing of the sub-floor.

By the time a client at all interested has seen this



Home Designs to Choose from—Prospects and Clients Select Their Homes from These Displays.

room, he has gained not only an insight into a few of the hidden details of construction, but a certain confidence in Miller-Storm's methods. This first display commands respect.

Other display rooms are devoted to specific purposes. One commodious room is devoted to the materials used on exteriors. The display of common brick exteriors in various treatments such as skintled work ranges alongside of several displays of face brick. Stucco treatments are shown exposed in part to show the backing. Roofings of different materials are shown and the science of flashing, etc., lies exposed to the customer's gaze.

In another large room, interior finish, doors, windows and stair details are in evidence. One has many ideas actually built for him to select from. In still another room are electric fixture displays. Bathrooms in white and in color are displayed without stint, and another room is a complete kitchen. It goes without saying that this kitchen is a "dear." If the little lady doesn't actu-



A Typical Street of Miller-Storm Homes—All Different.



The Architectural Service Department Is an Important Part of the Miller-Storm Method of Selling Before the Home Is Built.

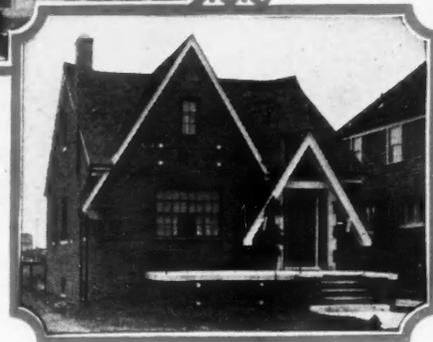
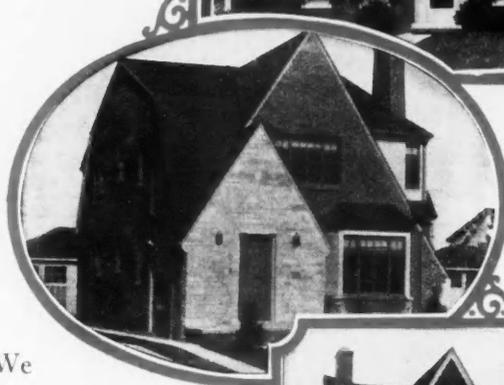
ally click after all on how a drain is laid under a cellar, she is sure to become excited over a cerise kitchen sink.

"Will the sink be exactly like that in my house?" can be answered, "Yes." It is there before you to gain the actual impression from. In the small room devoted to displays of builders' hardware, there are fine selections.

Heating equipment fills another entire room. As you are lead from one room to another there is a bit of the sensation of being lead through departments of specialists. But through it all, one can see a home unfolding in the actual construction.

The planning department contains a complete library of plans selected from architects through the country; also the Detroit News Plans and over six hundred plans originated by the Miller-Storm Company and hundreds of photographs of homes which can be inspected at leisure. The setting for all these aids in focusing customer interest is worked out with care. A salesman ushering a prospect has his whole pathway cleared and made alluring by systematic arrangement of all detail.

The architectural department is headed by experienced architects in the employ of Miller-Storm. "We will call in an architect to discuss this point," always has a definite appeal. The client is impressed, not by mere words alone, but by the setting for the words. He is sitting in a delightful conference room. The idea unfolds itself in his mind that from this firm he can obtain architectural services—and he can. He becomes impressed with the store of plans to draw upon, and he is informed that he can have any of them altered to suit his needs or that he can give an idea of just exactly what he wants and a plan and specifications will be worked out for him.



Miller - Storm
Homes Range
from \$4,000.00
to \$50,000.00.

The idea of "Custom Built Homes" is kept deftly in the foreground. Here is not a company building a house according to its own dictates and placing it on the market for you to buy. Rather the company takes your measurements and builds the home for you much as your tailor takes your measurements and lets you select the cloth and then cuts and fits to meet your desires. Here under one roof is all the proof of this.

The business is not speculative building and on the other hand it is not taking contracts from architects'

client as being concerted and upon long time relationships. Trained inspectors from the construction department leave the client who has become a customer with a satisfied feeling.

The financing department of Miller-Storm is under the immediate direction of Arthur S. Storm, who attended the Detroit College of Law and is thoroughly versed in real estate financing. Through cooperation with the Union Trust Company, a powerful financial institution in Detroit, and itself a part of a gigantic banking



All Building Materials and Home Equipment Are Attractively Displayed in the Miller-Storm Offices.

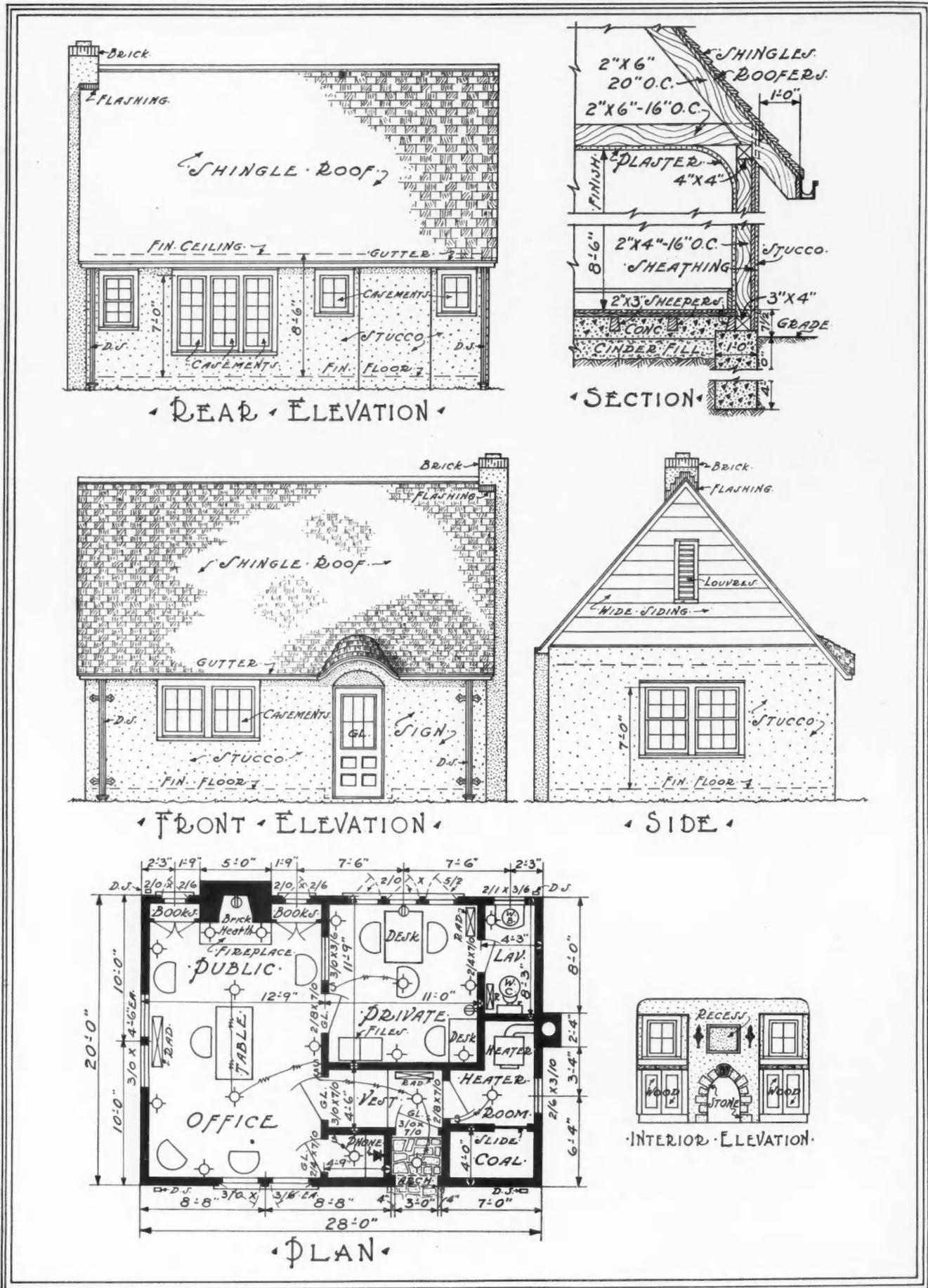
plans and it is not an architectural firm which sublets out the contracts. It is a complete home manufacturing firm which starts with the financing of your home and does every detailed step of its planning and building; of course the various trades are sub-contracted. But to this point also is a system in good working order.

With manufacturers of materials and with sub-contractors, Miller-Storm has worked out definite relationships which do not leave anything to haphazard buying or haphazard sub-contracting. The entire process of Miller-Storm building can be cited to the

merger, the Miller-Storm Company arranges most of its financing for clients. At the present time, five-year mortgages may be obtained at 6% with semi-annual payments upon the principal of 2½%. Fifteen-year mortgages may be obtained at 6% with payments of 3% semi-annually upon the principal.

An arrangement exists whereby the Union Trust Company may act as escrow holder. This means that all papers and funds from both parties to the transaction are deposited with them and held in trust until all the terms of the sale or purchase have been complied with.

(Continued to page 119)



Plan, Elevations and Details from Which the Developer Who Desires an Attractive Tract Office Can Reproduce the Building Illustrated on the Following Page.



Making the Tract Office Fit Into the Picture

THE tract office of a new development project is a more serious problem than is sometimes supposed. In a development where the better class of homes is to be featured, the common, box-like office is out of place. It may result in an actual loss of business because of the first impression it makes on the prospect. It certainly creates one more obstacle to overcome in selling the development.

Let us concede that the office should make an appearance suggesting the quality of the development it represents. On the other hand, the office is, at best, but a temporary structure and any developer hesitates to put into it the amount of money which the idea of a more impressive building suggests. No great outlay, however, is necessary in order to secure the sort of office required. Brains may be substituted for money, for good design is of greater importance than expensive materials and construction.

The tract office pictured on this page is representative of possibilities along the line of inexpensive but effective offices. In this instance location plays an important part in the results obtained. Placing this simple little building in a setting of beautiful trees has greatly enhanced its attractiveness.

The utter simplicity of the building itself is of pri-

mary importance. Any attempt to ornament so small a structure, in order to increase its impressiveness, is abortive. Cheapness, not impressiveness, is the result. Rather should the design depend upon good proportion, graceful lines and attractive finish.

Here a simple rectangular building is topped with a simple gable roof. There is no attempt whatever at ornamentation. The proportions, however, are exactly right, the pitch of the roof, the size of the windows and, in fact, every detail. The walls are finished in a neat stucco, tinted in a modest manner and in the gable ends stained shingles are laid wide to the weather.

The interior is partitioned to provide a public reception room where an open fireplace and furnishing including built-in bookcases, a table and chairs tastefully selected create a homelike appearance. There is also a private office and a vestibule which connects with a heater room to make the office a year round headquarters. The private office, of course, is provided with a lavatory and a telephone booth in the reception room adds convenience.

A plan showing the arrangement is reproduced on the preceding page, together with a number of details and elevation which should enable the developer to produce just such an office on his own development.

Fire Losses Rebuilt

Oakland Contractor Specializes in Reconstruction

By E. B. CONNITT



RECONSTRUCTION contracts are the greatest adventure in life that can be offered A. H. Rose, Oakland, California. The problems that a fire presents in a building have a fascination that challenges his skill as no other type of building work does. Nor is profit lacking. Mr. Rose started his reconstruction business years ago with a pocket capital of \$43. He is doing today an annual volume of business that totals \$137,000 and is rated in Bradstreet as a \$100,000 A-A-A risk. By working with insurance companies, Mr. Rose has opened up an extremely profitable field, one not peculiar only to California, but of interest to builders in every state.

The statistics given in the National Board of Fire Underwriters Report for May 23, 1929, their sixty-third annual meeting, substantiate Mr. Rose's vision and belief in the possibilities of the insurance field. Taking a survey of the state of Pennsylvania as an example, in Philadelphia, there were 6,754 fires during 1928. Of these the fire loss, insured and uninsured, amounted to \$5,355,374. Insurance on this loss represented \$2,066,933, this on buildings and contents. Here in one year was a potential building fund of approximately \$2,066,933 released in cash and open to builders and architects, depending on the importance of the building burnt.

The opportunity for a man specializing in this replacement type of work is greater than that for the man who does not have a background of having successfully overcome the difficulties of half-gutted buildings, missing rafters and dangerously weakened bridging or supports. Mr. Rose undertook to become a specialist.

At the time of this interview he was handling fifteen different reconstruction jobs throughout the state of California. He maintains throughout the year a crew

A. H. Rose, fire-loss reconstruction builder, maintains a regular business office through which passes a volume of work totaling \$137,000 annually. This volume is fed by friendships made through constant personal contact with insurance company personnel, which work is handled by William Rose, the son, known to the insurance field as "Bill Rose."

of sixteen men, each an expert in his line. From rough carpenter to the interior decorator, these men are all highly skilled. They are kept permanently on the payroll to insure this skill and because, also, fires bring business the year around. Transportation to the different towns where the insurance reconstruction jobs are located is found a profitable investment by Mr. Rose, even though addi-

tional men may have to be hired locally.

Under Mr. Rose's plan, the work of reconstruction is considered at the time of the adjustment of the loss. The insurance is in this way immediately put to work in replacing the damage, or even the entire building as in many cases is necessary. This prevents dissipation of the building funds. It also renders a service to the insurance company that is very much appreciated. The insurance adjustor having estimated the loss, Mr. Rose shows the insured, in a practical way, just how the value of the loss was arrived at and that it actually represents replacement value. If the insured consents, he rebuilds at the amount set by the insurance adjustor. So great has his reputation for correct judgment grown that he almost invariably gets the job of reconstruction.

His service to the insurance company and for his part in handling the appraisal is covered by a fee paid by the insurance company for saving altercation between the company and the insured. If the insured protests that the figure set as the value of the loss is too low, Rose can prove by practical demonstration of rebuilding that it is fair. He can reconstruct the damaged building within the figure named by the adjustor. The insured holds the check until the reconstruction job is completed. "If they are not satisfied, they are told they don't need to pay the money to me," states Mr. Rose. "But I've never been left unpaid yet."

It is said of Mr. Rose and his special crew that they can follow in the wake of an insurance adjustor and no contractor in the state can turn out such a perfect job of reconstruction in faster time or as cheaply.

"It is a profitable business," according to Mr. Rose. "No matter how slow building gets at different times of the year, the reconstruction business is always good, especially if you have taken the trouble to make friends with the insurance people."

Mr. Rose believes that much of the success of his undertaking rests on systematic development of friendships in the insurance field. There is no form of advertising that can be used. Every insurance representative's confidence and appreciation must be gained and this work requires a personal contact. In fact, Rose's story is one on the value of building up friendships. When he came to Oakland in 1906, he was unable to start on his insurance reconstruction idea owing to his

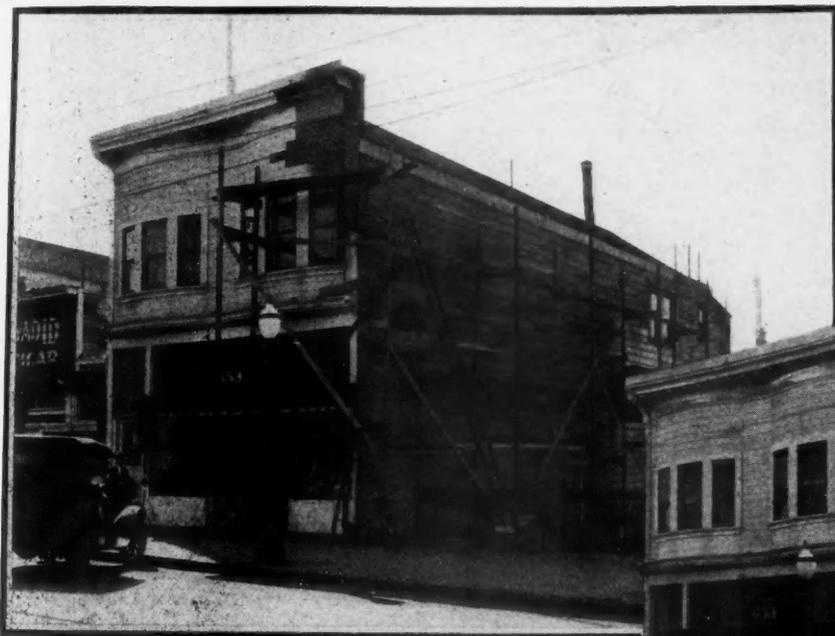
saying hello to the people we work with. And it isn't the higher-ups only, it's the clerks and the telephone operators. Any one of these by not being eager to give me a good word might lose me business."



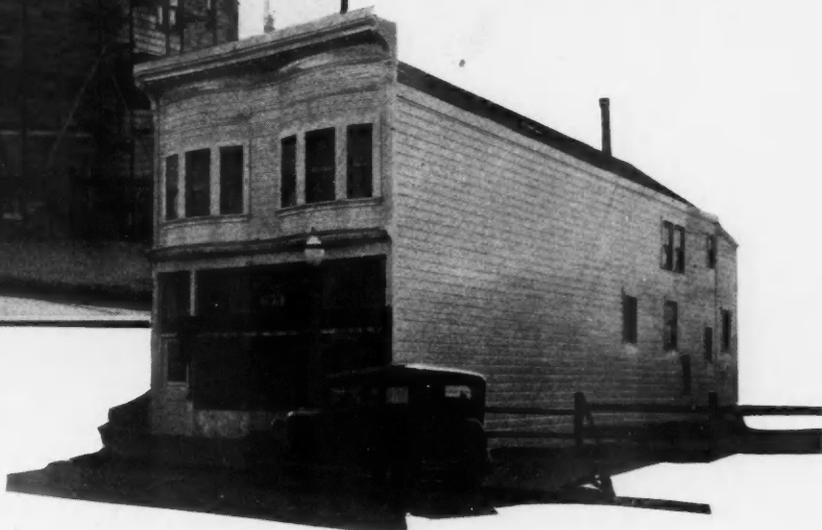
Modernizing Drive Succeeding

WASHINGTON, APRIL 17.—The following statement was issued to-day by Julius H. Barnes, chairman of the National Business Survey Conference:

"Reports from many sources indicate that the emphasis laid upon repairs and betterments as a contributing factor in the stabilization of business has been effective. Permits issued for this purpose show a substantial growth. Since the early part of the year the average daily permits for additions, alterations and repairs, have increased 30 per cent. The stimulus



Above: A "Fire Loss" job, three days after the fire, which Mr. Rose undertook to reinstate after calling on the insured with the adjustor of the company and aiding in the appraisal.



Below: The Same Building, Ten Days Later. Mr. Rose retains a permanent crew of men, each skilled in a special building line. He has built up a reputation for good building and speed of execution that is not excelled by any other builder in the state of California, where he has his business.

limited capital of \$43 and a wife and three children back in Detroit, Michigan, who had to be taken into consideration. He rented desk space, however, to give himself a definite background to which he could refer his prospects. His next step was to have cards printed, and then began the tramping from office to office with a determined idea of making friends and getting started. His first contract he secured after three weeks of footwork. How much shoe leather he wore out getting that first little contract, Mr. Rose says he cannot estimate, but he figures the money he spent in shoe leather, cigars and cards was the foundation of his present success and the wisest money he ever spent.

"Whether you are specializing in reconstruction or not, you need friends," adds Mr. Rose. "And the only way to safely build a business is to make them and to stay away from one-sided practices.

"Today, my son, who is with me in the business now, takes time off regularly to do nothing but make rounds,

given these activities has aided appreciably in relieving unemployment.

"The next logical step is the resumption of home building. For this, the Executive Committee of the National Building Survey Conference reports that conditions are now generally favorable. In most sections an ample supply of credit for this purpose is available at reasonable cost; and prices and terms for materials and equipment for such construction have become fairly well stabilized on a basis satisfactory to the purchaser.

"With favorable seasonal conditions also at hand it would appear that attention might now be directed with advantage to requirements for residential building. Industrial construction and replacement have been well sustained. Repairs and betterments have been accelerated. The resumption of prudent building activity in the residential field will aid materially in bringing employment back to normal."



The Space Under the Balcony is Cleverly Arranged to Demonstrate Movable Stairs, Kitchen Cabinets, and Other Specialties.

Home Building Headquarters

The Up Town Store of the Streeter Lumber Co., Keokuk, Iowa, Is a Popular Display Center for Home Seekers and Contractors



A STORE on the main street has proved good business for the Streeter Lumber Co., Keokuk, Iowa, and for the circle of friendly contractors and builders who have made use of it. Mr. Streeter's idea in establishing this Up Town Store was to show as many different displays of building material as possible, so that the prospective home owner could come in or a contractor could bring his prospects in; and they can see the building material in the finished form just like it would look in their home.

A very interesting layout greets the eye of the visitor. To the right as he enters, the customer sees a sand box filled with white sand for the kiddies to play in while dad and mother are looking over plan books or tending to other home building details. Next is a model stairway with different kinds of wood and finishes. Then there is a dummy fireplace built against the wall with an electric log in it. Close by are different panels of the face brick which are available.

Next is a cabinet built against the wall to display doors. There are four compartments in this cabinet, the

first showing a mirror door with a cedar lined closet behind it. The other three compartments show four different doors, each one being a different kind of wood and finish, and with a different kind of lock and hinges.

At the rear they have built a balcony with a disappearing stairway leading to this balcony and on the walls around the balcony are panels of wall board; each one of these panels is painted a different color so the prospective paint customer can get a little better idea of the color on the large panel than on a paint chip or a paint color card.

Under this balcony are four rooms, one of which shows two different kitchen layouts, three types of ironing boards, corner china cabinet and telephone niches. Another room is a breakfast nook completely outfitted. Another room shows different types of medicine cabinets, and then there is a bath room completely outfitted. While the Streeter Lumber Co. does not sell plumbing fixtures, Mr. Streeter wanted to show the house as complete as possible and this couldn't be done in this day and age without plumbing fixtures.

Resale Builders Install

Automatic Refrigeration

And Find It a Modern, Attractive Feature Which Has Great Value in the Sale of Homes and Apartments

By E. A. MAGURN

TRENDS are like the floating leaves and branches of trees which told Columbus and his men that land was near. Here is a trend which is an indication of the popular psychology—the trend toward apartment house life.

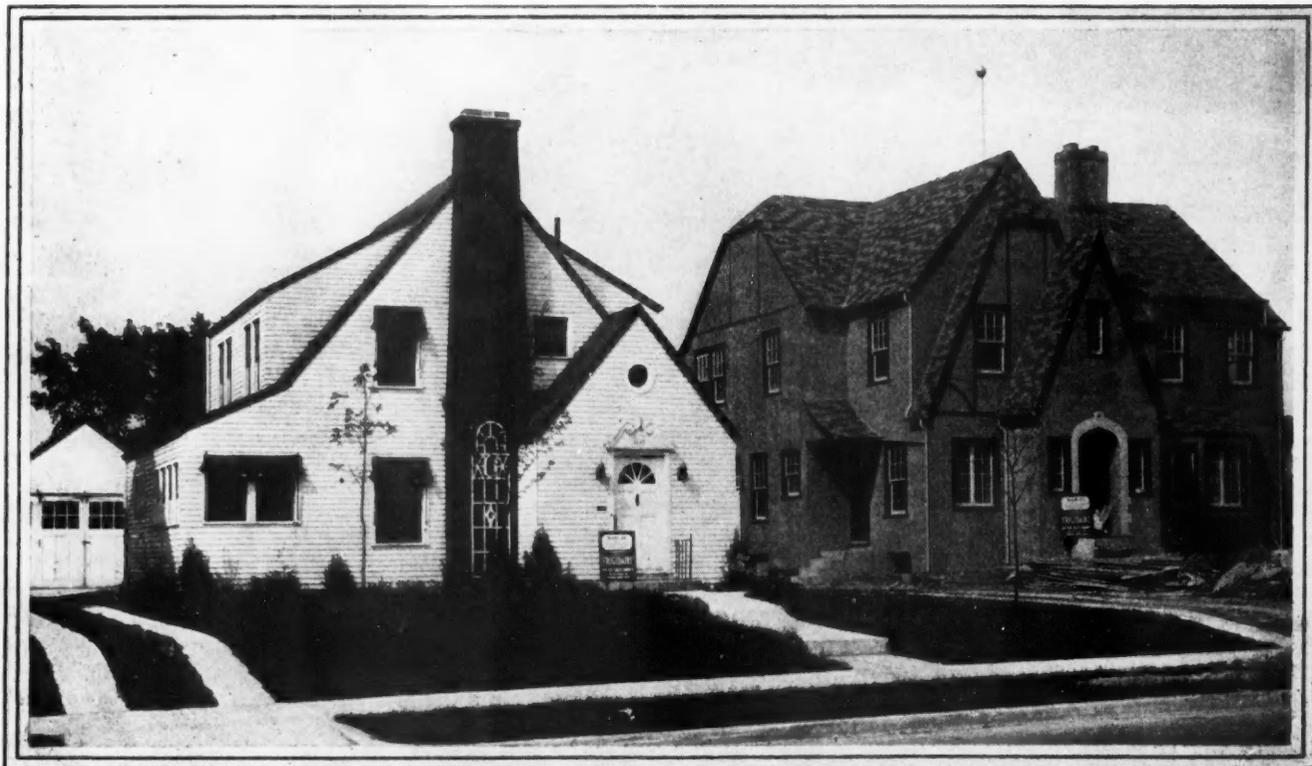
In 65 identical cities of the United States, the figures of the Labor Department show that the number of families provided for in new apartment buildings and hotels increased from 34.6% in 1922 to 62.3% in 1929 and the number for which provision was made in one and two-family dwellings decreased from 65.4%, in 1922, to 37.6% in 1929. While these figures do not hold true in all localities, they are overwhelming proof of this trend.

Well informed writers attribute this marked preference for apartment building life to the extra comfort and convenience equipment to be found in the modern apartment buildings. Many of these tenants grow tired, in time, of the somewhat circumscribed life of the apartment house dweller and move out to new homes in the suburbs. But they want the apartment house convenience in these new homes. And progressive builders are giving it to them.

When I was in Buffalo, last fall, I had the pleasure

of inspecting a group development by Ebert and Ebert, builders, in Kenmore, a Buffalo suburb. This firm has been building approximately 50 houses a year, selling within the price range from \$9,000 to \$10,000. They were amazingly well built and equipped for this price—hot water heat, fine wood trim and paneling, modern wiring outlets and lighting fixtures, the best linoleum on the kitchen floors, two-car garages, concrete drives, etc. But what impressed me the most was the fine electric refrigerator standing in each kitchen. Did it pay them? Well, here is their own testimony:

"As you well know, we have installed——(name of a well known make of electric refrigerator) in all the homes we have built this year and, without reservation, think it is the one feature that has enabled us to close sales so quickly. Practically everyone who inspects our homes likes —— (refrigerator brand) and the manner in which we have built it in. We have carefully planned our kitchens and think that the proper preservation of food in a home is too important to leave the placing of the refrigerator to the haphazard judgment of someone who is inexperienced. We believe the kitchen is the best location for your refrigerator because it eliminates many unnecessary steps in the preparation



The "For Sale" Signs Feature a Popular Make of Electric Refrigerator.

of meals and permits full efficiency.

"We cannot say too much for the excellent service you have rendered us and suffice it to say we will not build a home without incorporating your refrigerator, as we have done in this year's operation."

I hasten to add that it is quite common to find modern automatic refrigeration in homes built to sell at the higher price range. This is a growing practice among resale builders and one which should result in ready—and let us hope—profitable sales. Certainly, the builder should not assume any part of the refrigerator cost when disposing of his building. It should go into the value of the building, along with the cost of all the other equipment, and be covered by the appraisal and building loan.

I have just come from the office of one of the largest investment banking houses in the United States—a company famous for its extensive bond issues and building loans. An executive in the building loan department assured me, that, in making their appraisals for loans on new apartment buildings, they always include the cost of the refrigerators, whether of the multiple or single unit type. In fact, he stated that they look at these buildings from the standpoint of the builder—estimating the cost of the building just as he would estimate it. At this point, he opened his desk and pulled out a "Summary of Estimate" form, published by Frank R. Walker Company and familiar to many builders. Item number 36 on this form calls for the estimated cost of all—

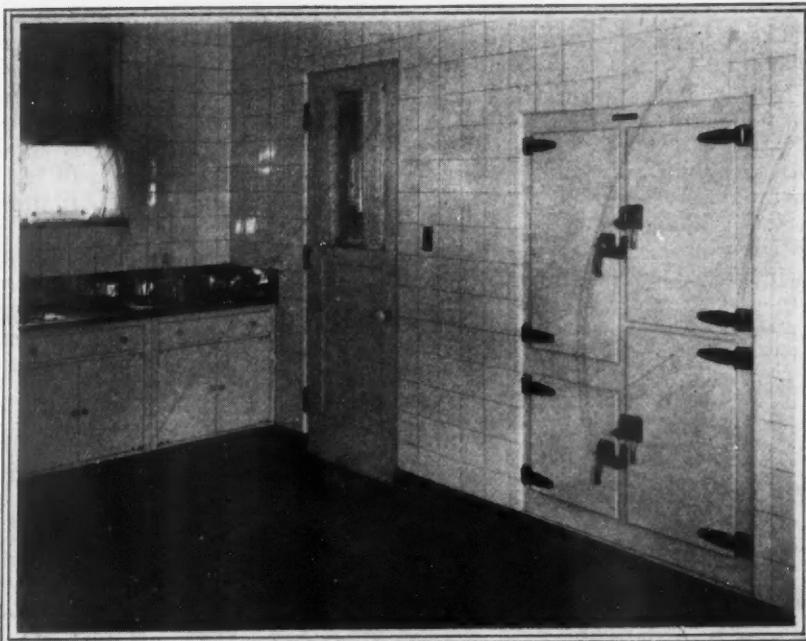
"Refrigerators, dryers, shades, ranges, wall safes, carpets and miscellaneous items."

This form is for any type of building, the cost of which is to be estimated.

In commenting on the item of refrigeration, he said it was a necessary item. If not installed, the apartments will not rent. The refrigerators, therefore, are vital to the success of the enterprise and add directly to the value of the security. There should be little difference, in this regard, with single dwellings built for resale. They will sell better with modern refrigeration. If they are to be rented, they will rent better; therefore, refrigerators add to the value of the loan security. Banks making building loans should encourage builders to install complete and attractive equipment; it makes the loan security that much better.

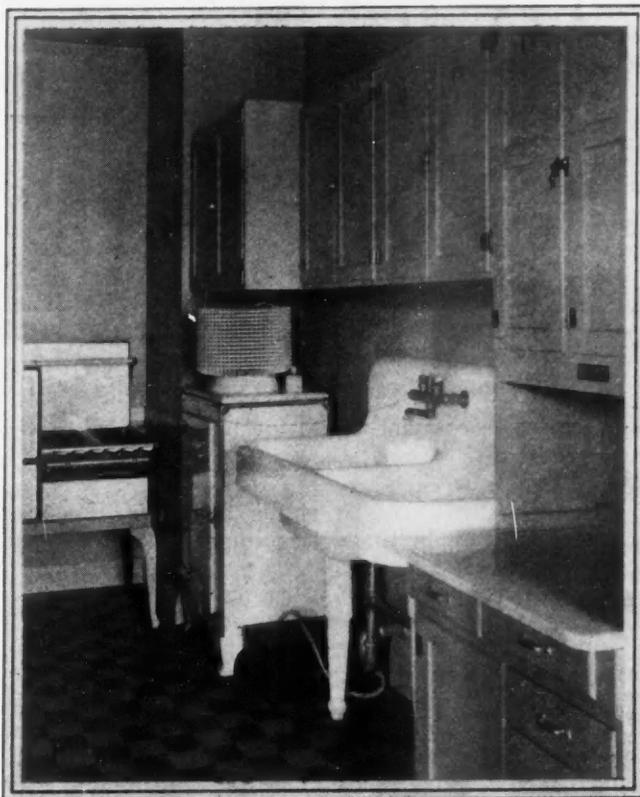
A strong argument in favor of automatic refrigeration is the fact that, in a good refrigerator of this type, temperatures can be controlled and maintained at the most efficient point for food preservation. In the old style refrigerators or ice boxes, the temperature is rarely maintained below 50 degrees, except for a short period after it has been iced. And 50 degrees, it has been proven, is the danger line. Above this temperature, moulds and other bacteria multiply with great rapidity—are active and threatening. Even though the foods in such an ice box may have no bad odor and may look all right, the bacteria on them are increasing at a dangerous rate. Without knowing the cause, the family health is affected thereby.

A national campaign on this subject, last fall, by the National Food Conservation Council, did much to educate the public along these lines. Valuable prizes were offered for the best essays on "Why 50 degrees is the



Built-in Box Gives a Smooth Finish Kitchen.

danger line." Thousands of people, in every section of the United States, competed for these prizes, first studying the subject and learning the facts. This awaking public consciousness as to the health value of automatic refrigeration adds even greater sales value to this equipment, from the builder's standpoint. That the public is sold on the value of modern, automatic refrigeration is shown by the rapid increase in sales. The estimated sales figures for 1929 are available on electric refrigerators—domestic units only. The total number of these



There Are Refrigerator Sizes Adapted to Small Apartments.

sold during 1929 amounted to 630,000, valued at \$181,175,000, compared with 468,000 sold during 1928, having a total retail value of \$128,700,000.

On January 1st, 1930, of the 19,721,486 wired homes in the United States, 1,850,000, or 9.4%, had electric refrigerators. Sales for 1930 are expected to total close to a million refrigerators and the manufacturers are arranging their output on this basis. The building industry will absorb an important and increasing percentage of this output. One reason for this is the greater ease with which purchasers can finance payment for all the important items of household equipment when included in the appraisal and building loan. Whatever down payment is required on the purchase of the home covers all

Both owe their effectiveness to the simple law of physics that compression raises the temperature of a gas and expansion lowers it. This is demonstrated by the heating, so generally observed, in the lower part of a pump which is being used to pump air into a tire. When this air is allowed to escape rapidly through the tire valve, it will feel cool against the hand; it is expanding.

An important factor in refrigeration is the boiling point of the liquid refrigerant used. Sulphur dioxide boils at 14 degrees above zero, Fahrenheit. Below this temperature, it requires just one heat unit to raise the temperature of a pound of sulphur dioxide one degree, Fahrenheit. But, at the instant of changing from liquid at 14 degrees, to a gas, it absorbs 168 heat units.



Refrigeration All Over the House Is the Newest Idea.

the expensive equipment and the balance due is spread over the entire term of the mortgage, renewable when that is renewed.

Another strong reason is the factor of timeliness. Owners want the best modern equipment when they purchase homes. In fact, as already pointed out, the newer, more modern homes are often purchased so that the owner may secure all of the efficient, modern equipment. Thus, in one step, the owner reached the new standards of living and keeps up with the progress of the age.

The very large output reported shows that the manufacture of modern automatic refrigeration has become one of the large industries of the United States, giving employment to thousands of workers in a number of immense plants situated in widely separated cities.

Generally speaking, automatic refrigeration is of two types—the absorption type and the compression type.

In electrically operated refrigerators, the compressor, operated by a motor, squeezes and concentrates the heat which has a tendency to escape from the liquid as it changes into a gas. In order to secure the necessary heat units to accomplish this action, heat is drawn from the food compartment through the cooling unit. By taking the heat out and allowing it to escape outside, the temperature in the food compartment is lowered.

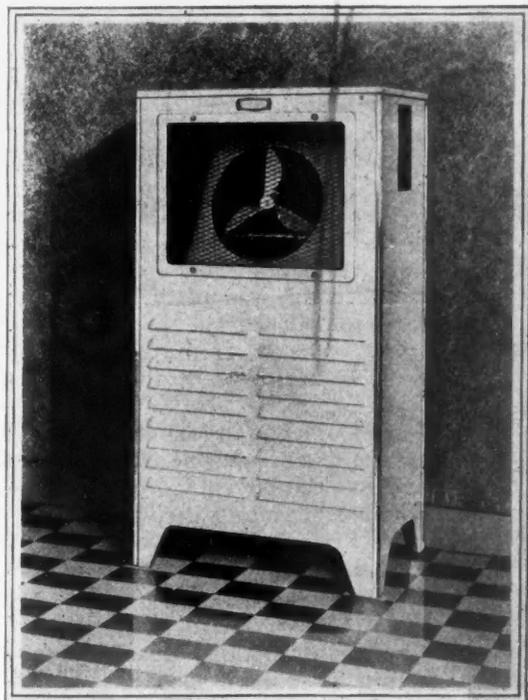
Another type of automatic refrigerator accomplishes compression by means of a gas flame which boils the gas, usually ammonia, out of the water for which it has an affinity. As the bubbles of gas rise from the refrigerant, their tendency to expand creates compression. The gas is, afterwards, reabsorbed into water, circulating as it cools and falls. Thus, a continuing cycle is created, without the necessity for mechanical, moving parts. Refrigerators of this latter type require a con-

stant supply of cool water and are available only in the smaller sizes, seven cubic feet being the largest available size.

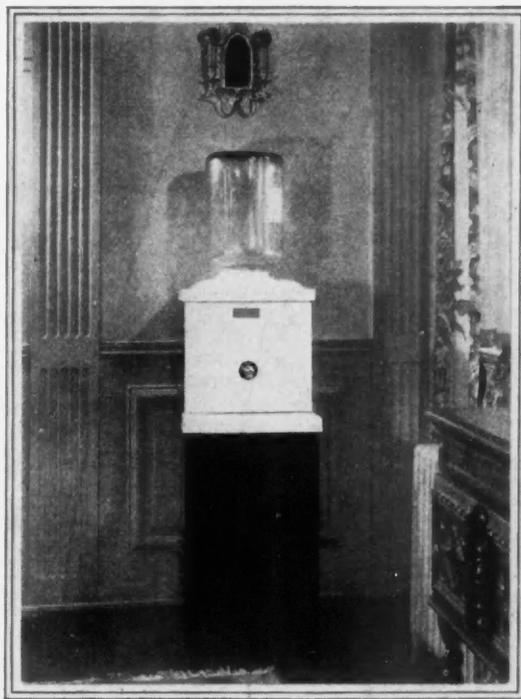
Sulphur dioxide is the refrigerant most commonly used in the compressor type of refrigerators. It has a perceptible odor and would be immediately detected should any gas leak develop. Leaks can easily be detected by a "smoke test," using aqua ammonia, applied with a brush. Other refrigerants, used to a lesser degree, are methyl chloride, ethyl chloride, butane, isobutane, ammonia, propane, carbon dioxide and ether.

Methyl chloride is the refrigerant blamed for more than a dozen deaths in Chicago apartment buildings and similar unfortunate occurrences in other parts of the country. However, well posted men in the industry state that the real reason for these regrettable accidents was the faulty installations of cheap refrigerating contractors, who furnished poor apparatus, failed to use copper pipe and fittings throughout and whose workmanship on pipe lines failed to provide tight joints. However, sulphur dioxide—a safe refrigerant—is used in 90% of the automatic refrigerators sold. As to the cheap refrigerating contractors and the accidents resulting from their work, this is only another instance of the fact that those who buy only from the price standpoint get just what they pay for—usually grief.

Another cheapening practice with some of these price-cutters is to hook too many cabinets on to one compressor, or, to put it inversely, to use a compressor which has not sufficient capacity for the number of cabinets to be cooled. The result, of course, is that tenants do not get a safe degree of refrigeration for food preservation in the summer months. The worst result, from the manufacturers' standpoint, is that automatic refrigeration gets an undeserved "black eye" with the public—certainly manufacturers of the central unit type do. Perhaps that is the reason why quite a number of apartment buildings have been equipped with individual electric refrigerators, each having its own compressor built in. This is being done in the magnificent new Chicago apartment building known as 2000 Lincoln



This Unit Cools the Home or Office.



Automatically Cooled Drinks.

Park West, containing 211 suites of two, three, four and five rooms each.

The public scare as to supposed danger of asphyxiation from refrigerant gases has died out, although it did slow down sales for a while. The objection—if it is one—cannot apply to the individual units, since there is not enough gas in the individual unit to cause asphyxiation in the average apartment, even if there were a leak. And this type requires no connecting pipe lines for the electrically operated machines.

There is said to be an advantage in the central unit installations as to first cost, cost of power and in the conservation of apartment space. It also has the advantage of placing the operating mechanism in the basement, along with the rest of the machinery, where it can receive regular mechanical supervision. It has the disadvantage that any mechanical failure will affect every tenant simultaneously.

There is much to be said on both sides of the case, and, as to the choice, a good deal will depend on the type and plan of the building itself. For instance, in the Marshall Field Model Apartments, the building covers a large area and is only a few stories high. Therefore, it is easy to understand why the individual units were considered more suitable for this building.

So far as apartment buildings and hotels are concerned, automatic refrigeration of one type or another is now considered essential. Practically all new buildings of this type will be so equipped. The biggest field for expansion of automatic refrigeration, therefore, is in the equipment of single dwellings. Progressive designers and builders, realizing the value of good automatic refrigeration from a sales standpoint, will see to it that all the homes they build—where the price range will at all allow it—are equipped with the best automatic refrigeration they can secure.

There is another development in sight which promises greatly to extend the market for automatic refrigeration and that is the possibility of cooling houses for greater comfort in the summer time. It might be premature to mention this except that one of the largest manufacturers of electric refrigerators has already placed a room

(Continued to page 121)

Pipe Trades Perfect Service



CERTIFIED Heating is one of the most interesting developments that has taken place in the heating industry in recent years. Originating in Chicago thirteen years ago, the idea was adopted by the Heating and Piping Contractors National Association, and at the present time contractors in 31 cities, including New York and Chicago, are licensed to do certified heating. The standards for certified heating have been accepted as the last word in correct heating practice, and are included in several architects' hand books.

Thirteen years ago there were no accepted standards in any city for the figuring of heat losses from buildings and for the sizing of a boiler or piping for a heating system. Every contractor used his own methods. The result was that there was no uniformity of opinion as to what constituted a good heating job—there was no brand name for good heating systems properly installed. Irresponsible contractors installing inadequate heating plants made such inroads on the work of established firms that the Chicago Master Steamfitters Association appointed a committee to draw up standards for heating installations.

After working for a year, the committee produced standards which were accepted by the association and an organization was set up to enforce them. An engineering department was established to which all plans were to be submitted before installation was started. Inspectors were employed to see that the work was installed according to approved plans.

After the plan had been in effect in Chicago for a few years, one of the large companies manufacturing boilers and radiators which had maintained a staff of

twelve trouble shooters to investigate complaints from owners that came direct to the company because its name was on the boiler, was able to discontinue this department entirely because there were practically no complaints.

The Chicago plan attracted the attention of the National Association of Heating and Piping Contractors and was taken over by this association under the name of Certified Heating. The National Association took up the question of standards and after five years' study, published the Heating and Piping Contractors National Association Engineering Standards—a definite system of figuring heat losses by the B. T. U. method applicable to all parts of the country.

These standards have been in use six years and hundreds of thousands of installations have tested their adequacy. Heating contractors from the Atlantic to the Pacific, from the Great Lakes to the Mexican Border have used the standards under a wide variety of conditions and found them adequate to weather conditions in these different sections of the country.

It is these standards underlying certified heating that constitute the very heart of the idea. The National Association has spent more than \$50,000 in the development and improvement of these standards. Much of the fundamental research work for the development of the standards was done by the American Society of Heating and Ventilating Engineers. The standards are based on the latest scientific data available and call for the figuring of the quantities for a heating system on a strictly B. T. U. Basis (a B. T. U. or British Thermal Unit is the unit for figuring heating quantities). As one of the difficulties encountered by the engineer in

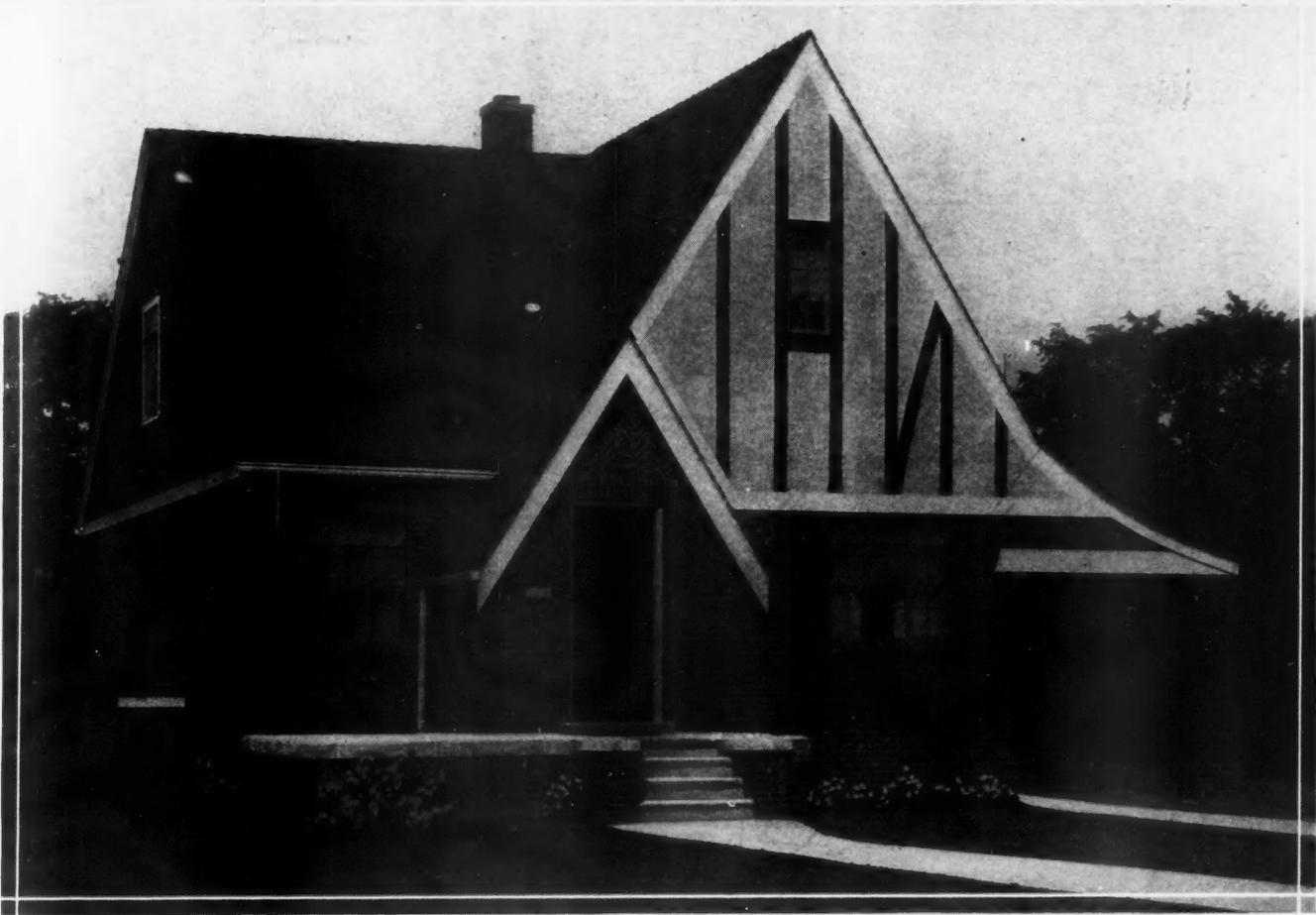
popularizing the B. T. U. method was the amount of time necessary to figure plans by this method, the Heating and Piping Contractors National Association devised and produced Standard Radiation Estimating Tables from which one can read the amount of radiation necessary to balance the heat loss through cracks directly from the areas of the walls or windows or the lineal feet of crack.

This method is as rapid of application as any of the rule of thumb methods and has the advantage of being a truly scientific means of arriving at the quantities of radiation needed.

It is necessary to have a different
(Continued to page 128)



Sample of the Bill Board Advertising Displayed in Many Cities to Back Up and Localize the Direct Mail Advertising Put Out by National Headquarters.



MILLER-STORM CO., Inc., Architects and Builders, Detroit, Mich.

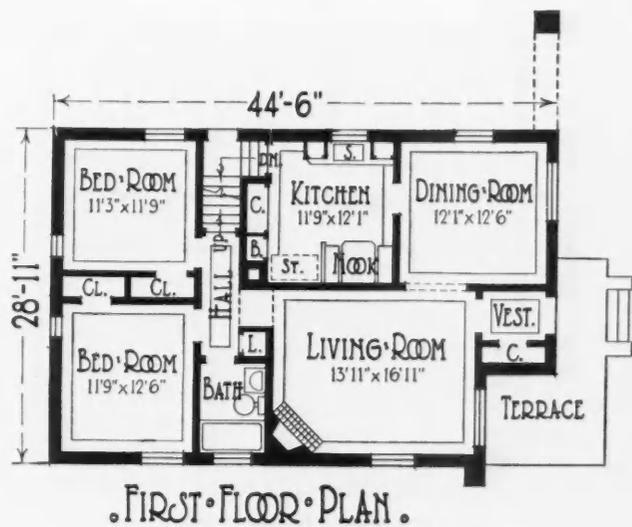
FIVE ROOM ENGLISH COTTAGE

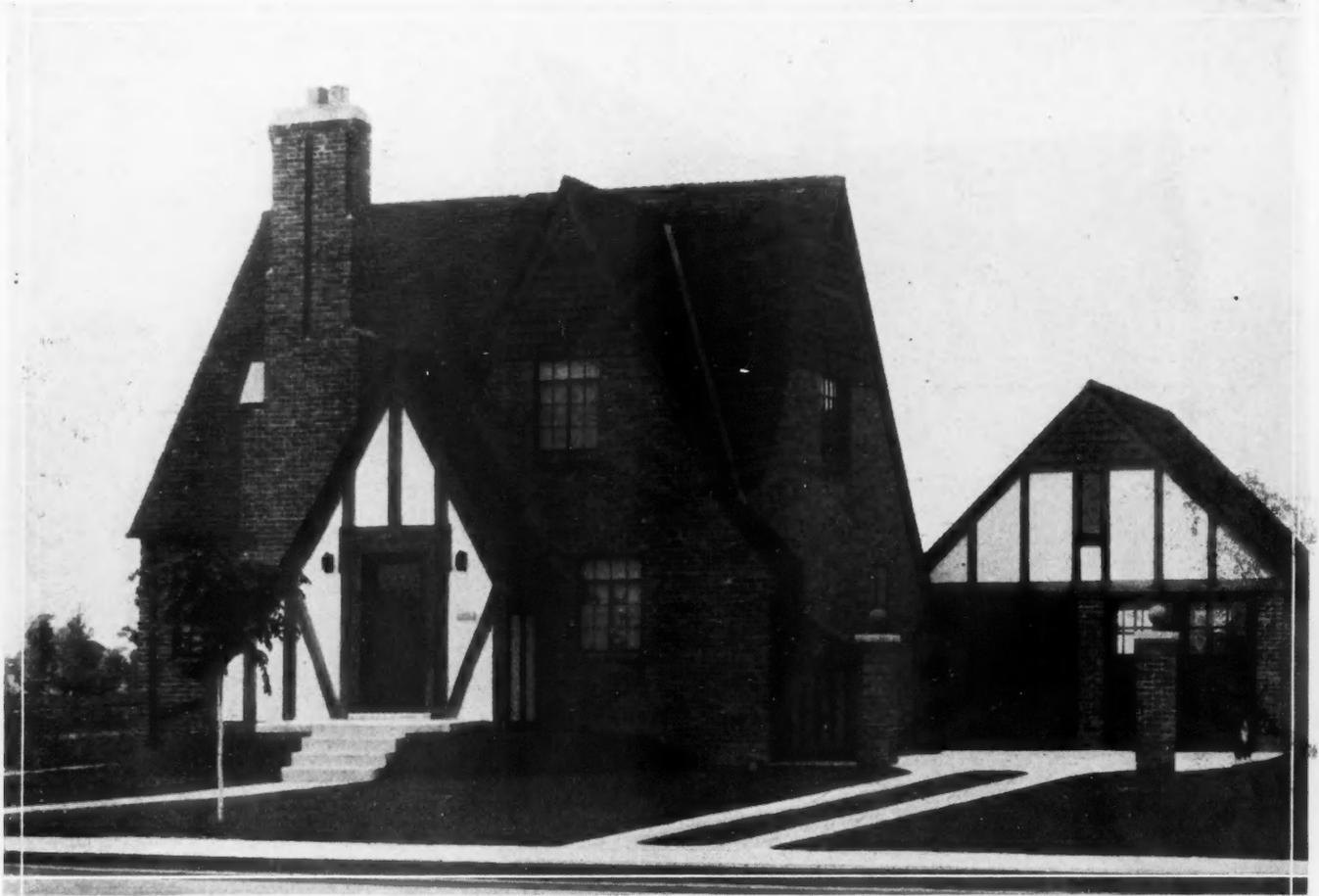
*A Design for the Prospective Small Home Owner
in a Style at Once Popular and of Enduring Value*

SERVICE TO HOME BUILDERS

Throughout this magazine we present many building designs. A variety of home plans are included, selected from many parts of the United States and designed by various architects of standing.

The "American Builder" will gladly serve its readers by bringing them together with these architects if any further information or plans are desired for any of these designs. Address the American Builder Home Planning Service, 105 West Adams Street, Chicago, or 30 Church Street, New York City.

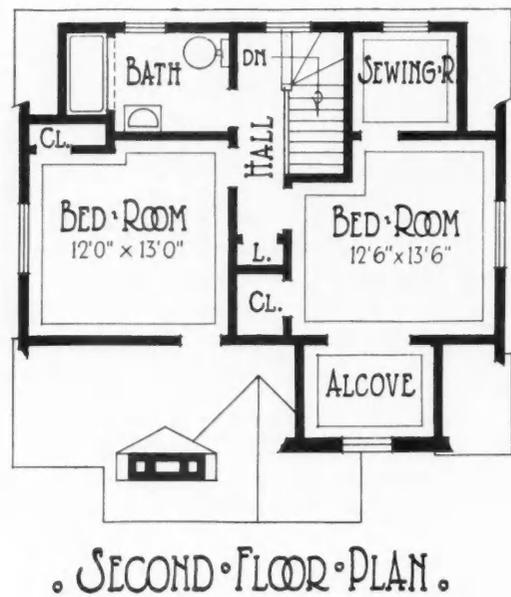
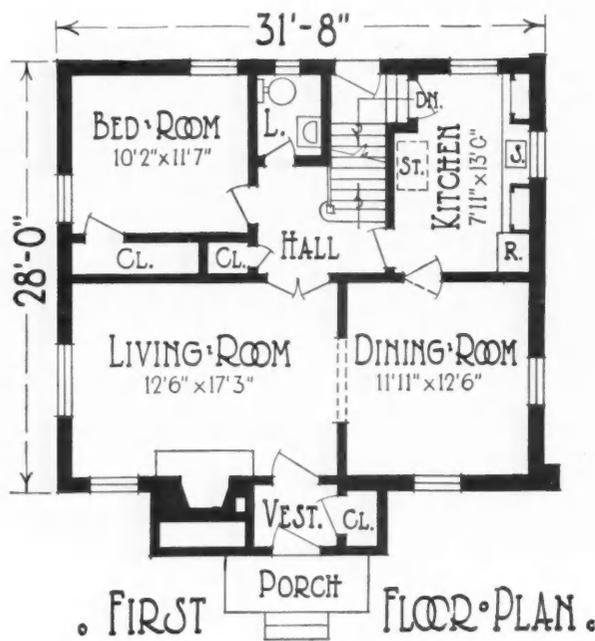




MILLER-STORM CO., Inc., Architects and Builders, Detroit, Mich

THE POPULAR ENGLISH TYPE

A Home for the Family of Average Size with a Convenient First Floor Bedroom that Might Be Converted Into a Study or Nursery

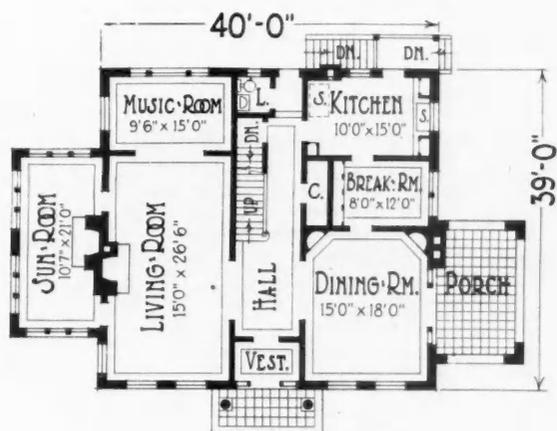




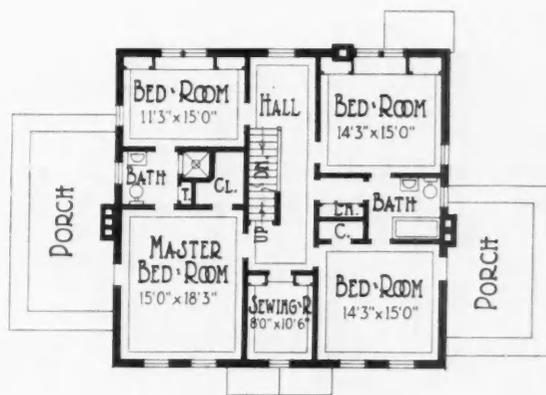
MILLER-STORM CO., Inc., Architects and Builders, Detroit, Mich.

ECONOMICAL BUT GOOD LOOKING

The Square Plan of This House Assures a Minimum Building Cost in Proportion to the Space Provided and the Design Is One of Simple Dignity and Permanence



FIRST FLOOR PLAN.



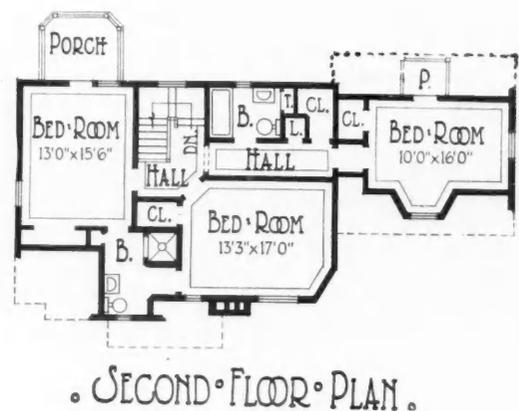
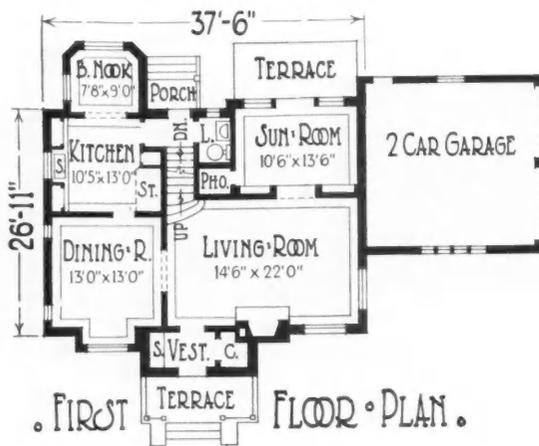
SECOND FLOOR PLAN.



MILLER-STORM CO., Inc., Architects and Builders, Detroit, Mich.

SEVEN ROOMS & 2-CAR GARAGE

There Is an Old-World Charm About this Home Which Should Appeal to Those Who Particularly Admire the Quaint in Architecture



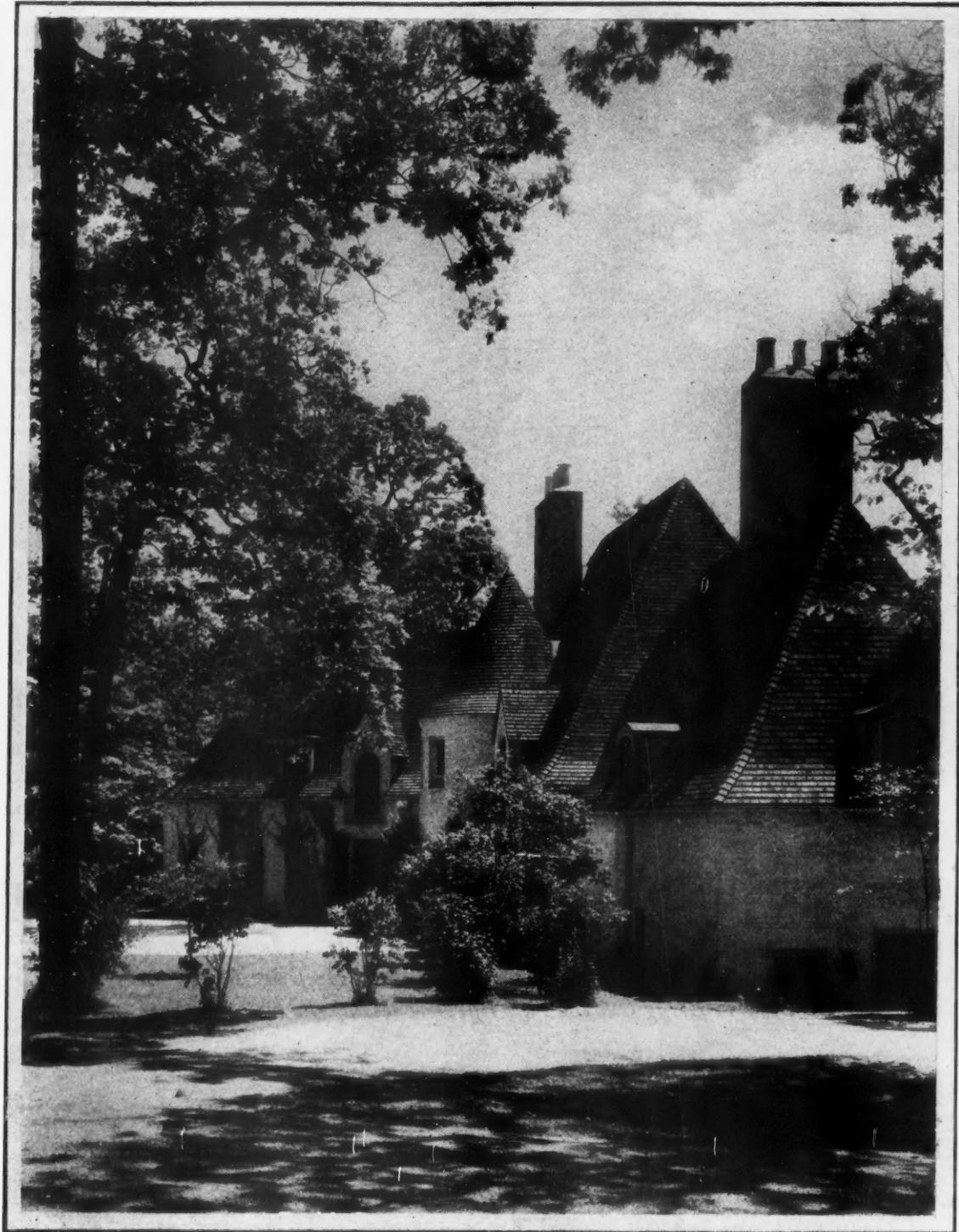


MILLER-STORM CO., Inc., Architects and Builders, Detroit, Mich.

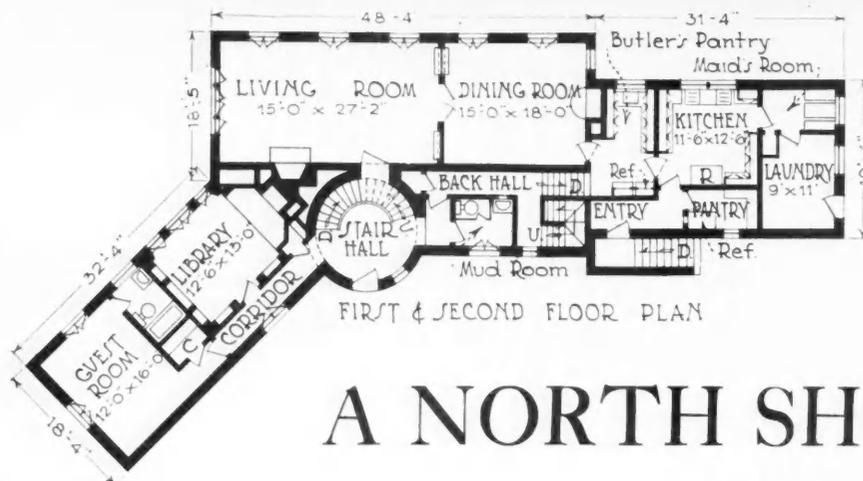
IN THE NORMAN STYLE

Appropriate for a Suburban Estate Where a Deep Set Back Can Be Used to Bring Out the Full Effectiveness of the Norman Type

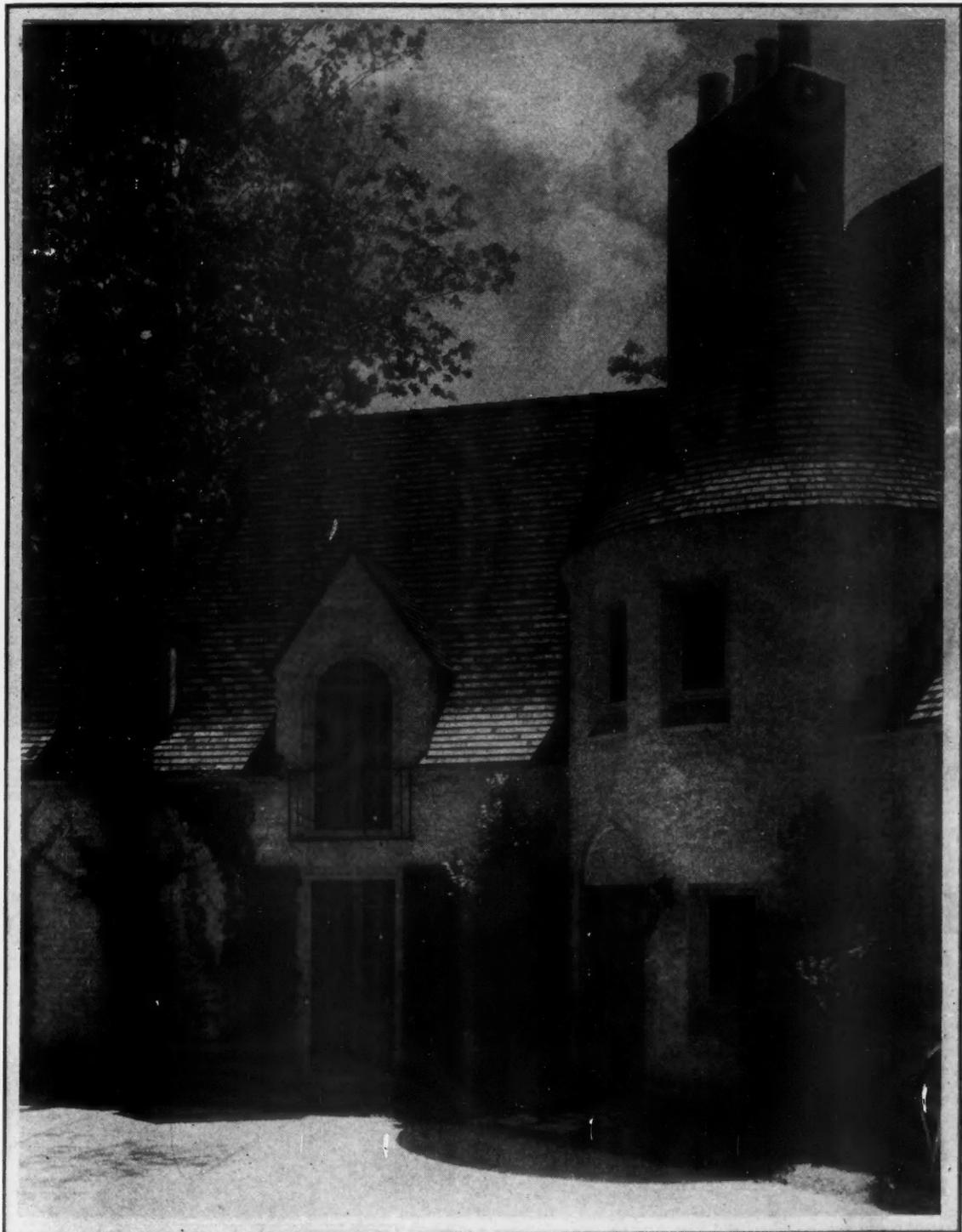




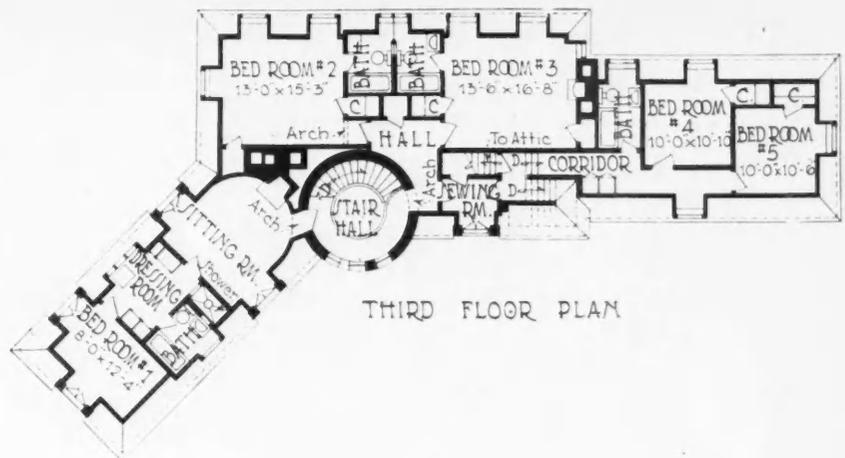
Russell S. Walcott,
Architect, Chicago



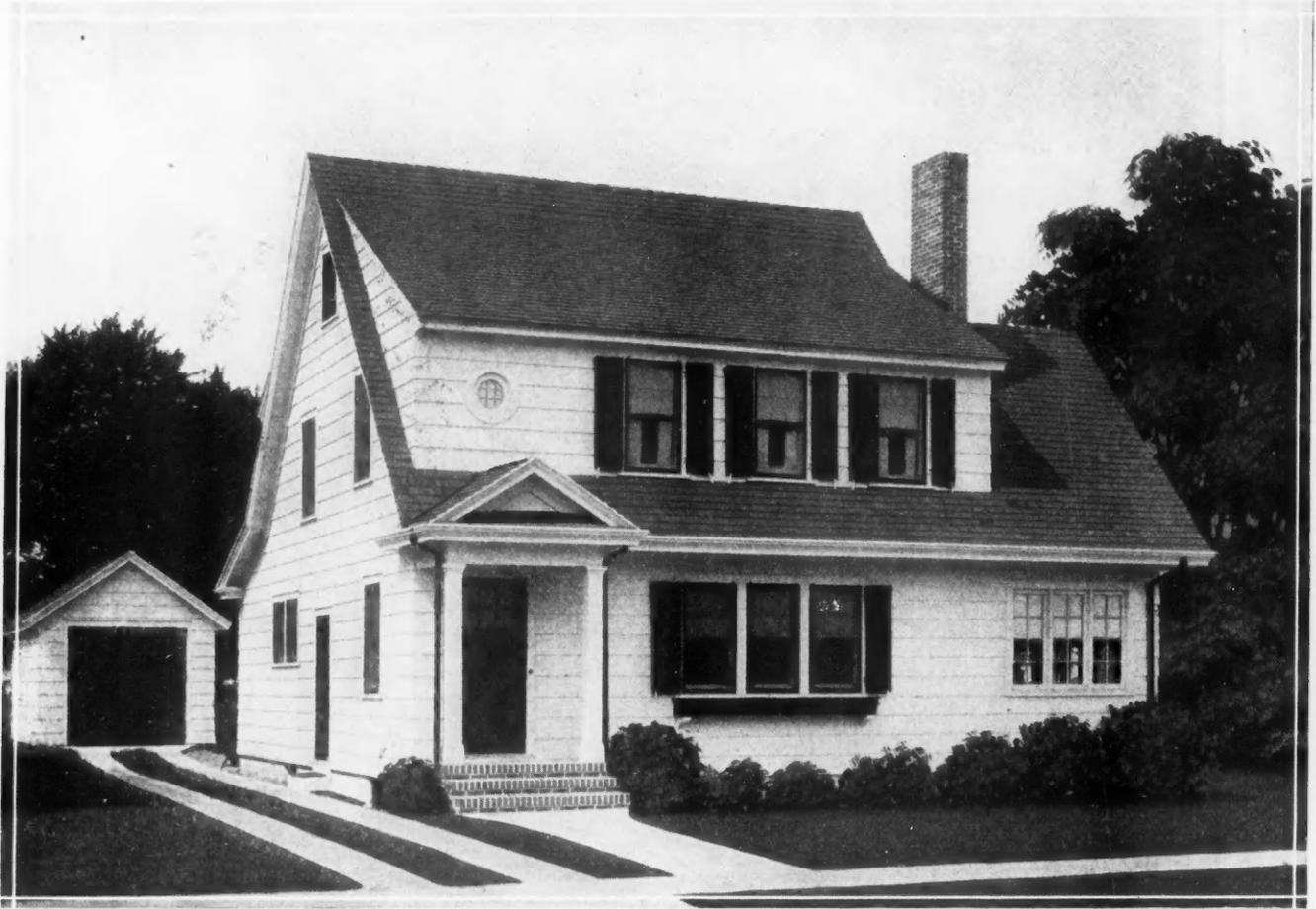
A NORTH SHORE HOME



The Residence of A. F. Millet, One of the Beautiful Homes To Be Seen in Lake Forest, Ill., the Famous Suburb on the Lake North of Chicago.

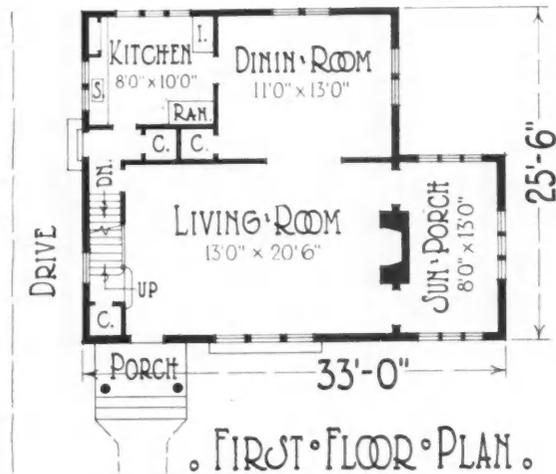


THIRD FLOOR PLAN



ATTRACTIVE FIVE ROOM COTTAGE

A Fine Example of Good Architecture as Applied to the Truly Small Home, Suited to the Needs of the Family of Quite Moderate Means.

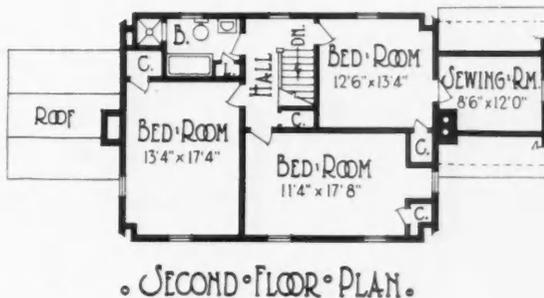
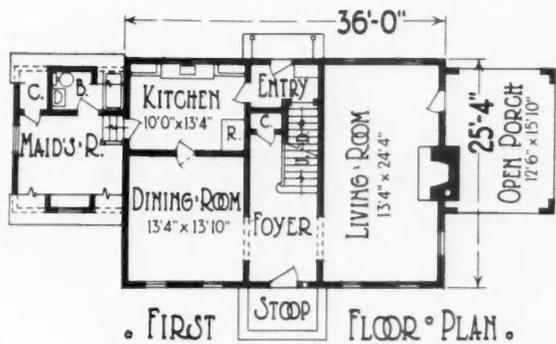




J. W. REPPENHAGEN, Architect, Hempstead, N. Y

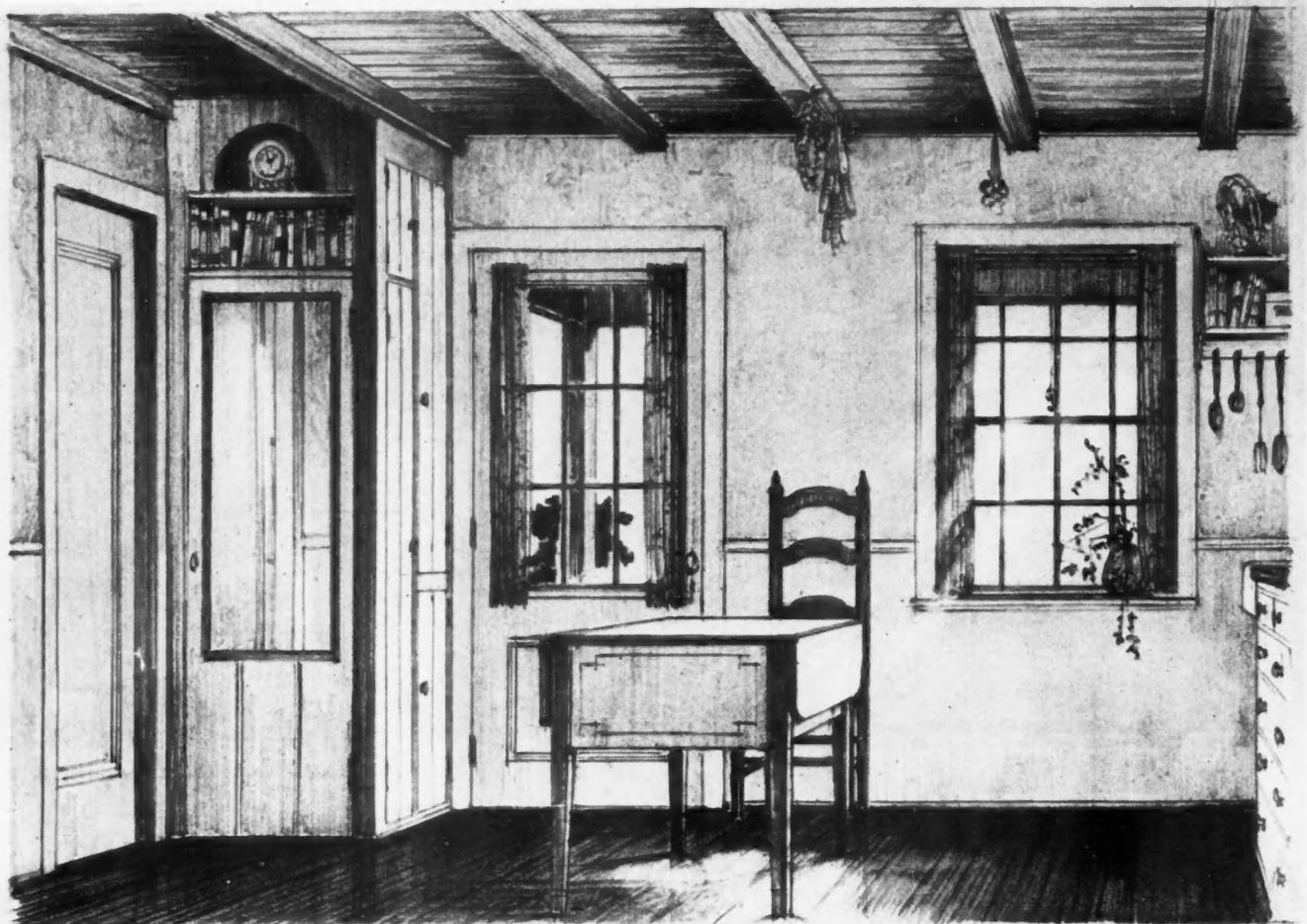
AN EIGHT ROOM DUTCH COLONIAL

A More Elaborate Home But One in Which Comfort Is the Distinctive Quality of Both the Plan and the Appearance.

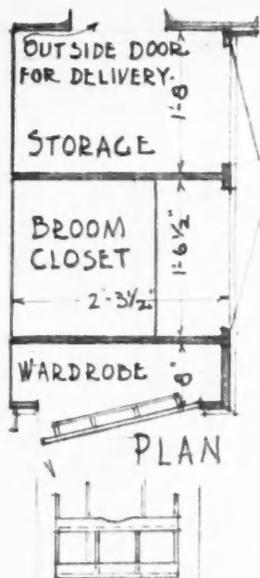


Modern Home Interiors

Some Clever Suggestions for Improvements



A UTILITY CLOSET AND A UTILITY TABLE



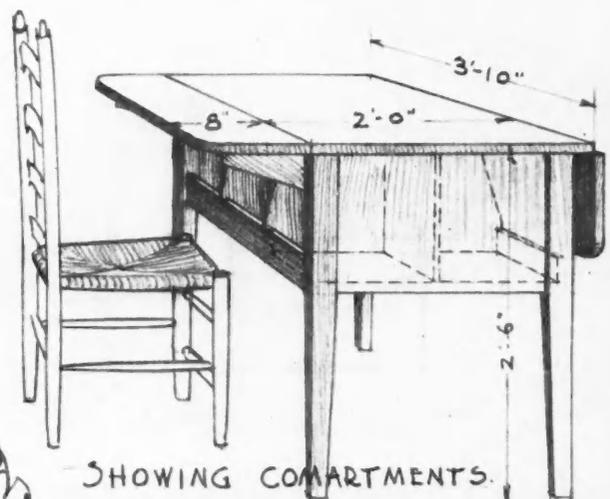
POCKETS ON BACK
OF DOOR FOR
TOILET ARTICLES

A SHALLOW CLOSET FOR THE KITCHEN WARDROBE IS IN LINE WITH THE MODERN TENDENCY TOWARD GAY AND COLORFUL HOUSE FROCKS AND SMOCKS. THERE IS A FULL LENGTH MIRROR ON THE DOOR AND VANITY CASE ON BACK. A COMPARTMENT FOR DELIVERY OF MILK AND PACKAGES IS AN EASILY ARRANGED CONVENIENCE.

THE TABLE HAS SIX COMPARTMENTS FOR THE CONVENIENT DISPOSING OF VEGETABLES, ETC., CONCEALED BY A DROP LEAF.

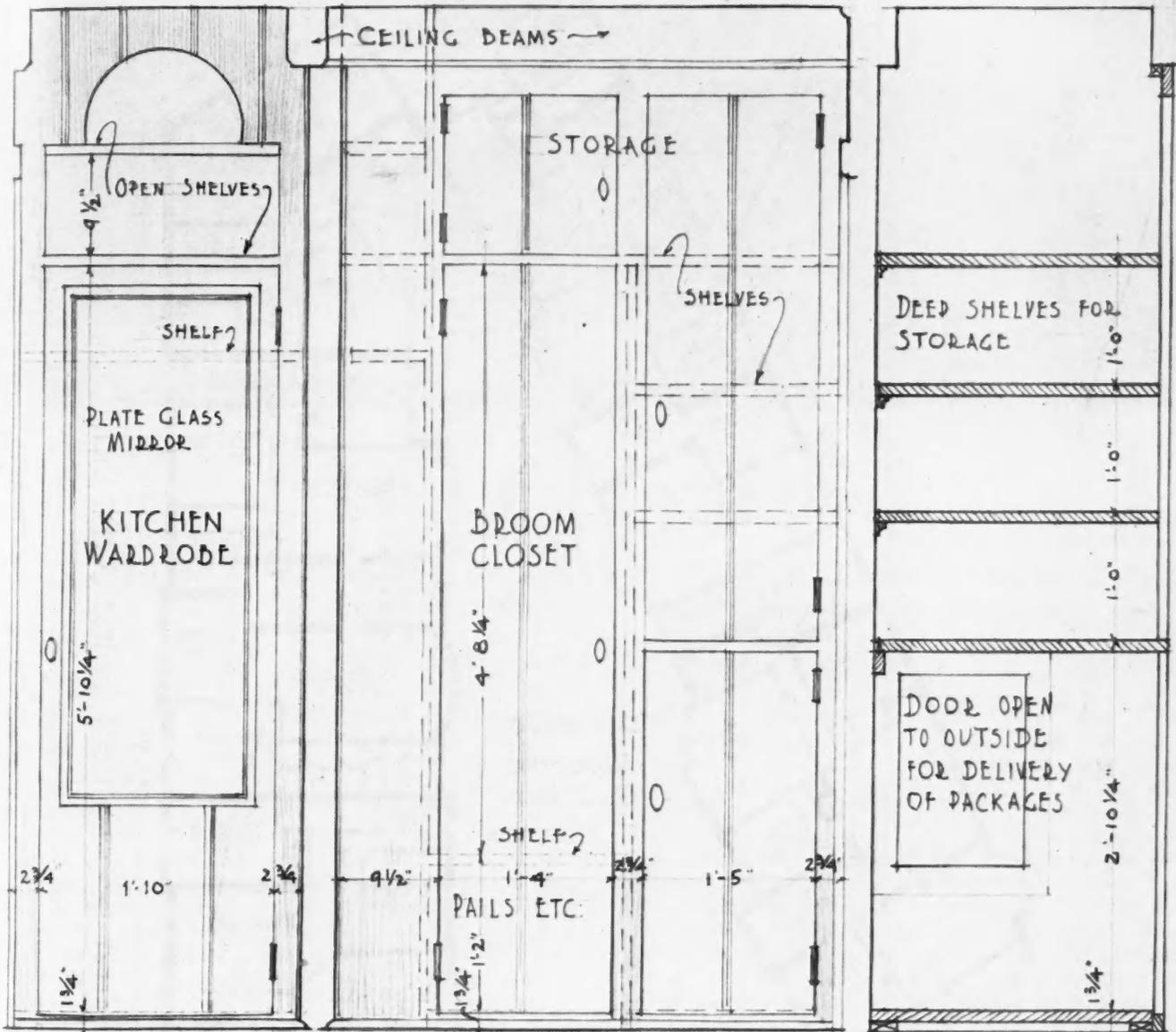
IT MAY ALSO BE USED AS A BREAKFAST TABLE.

A WAINSCOT OF PLY-WOOD GIVES AN EXCELLENT SURFACE FOR PAINTING, NOT EASILY MARRED.



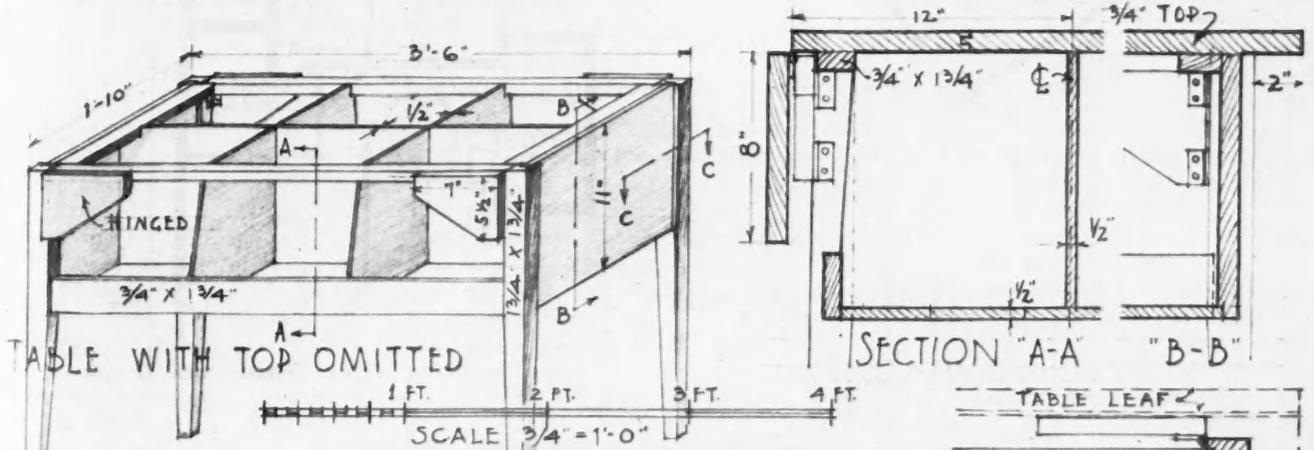
—Details of Closet and Table

Prepared by Eldred Mowery and Richard G. Kimbell
of The National Lumber Manufacturers' Association

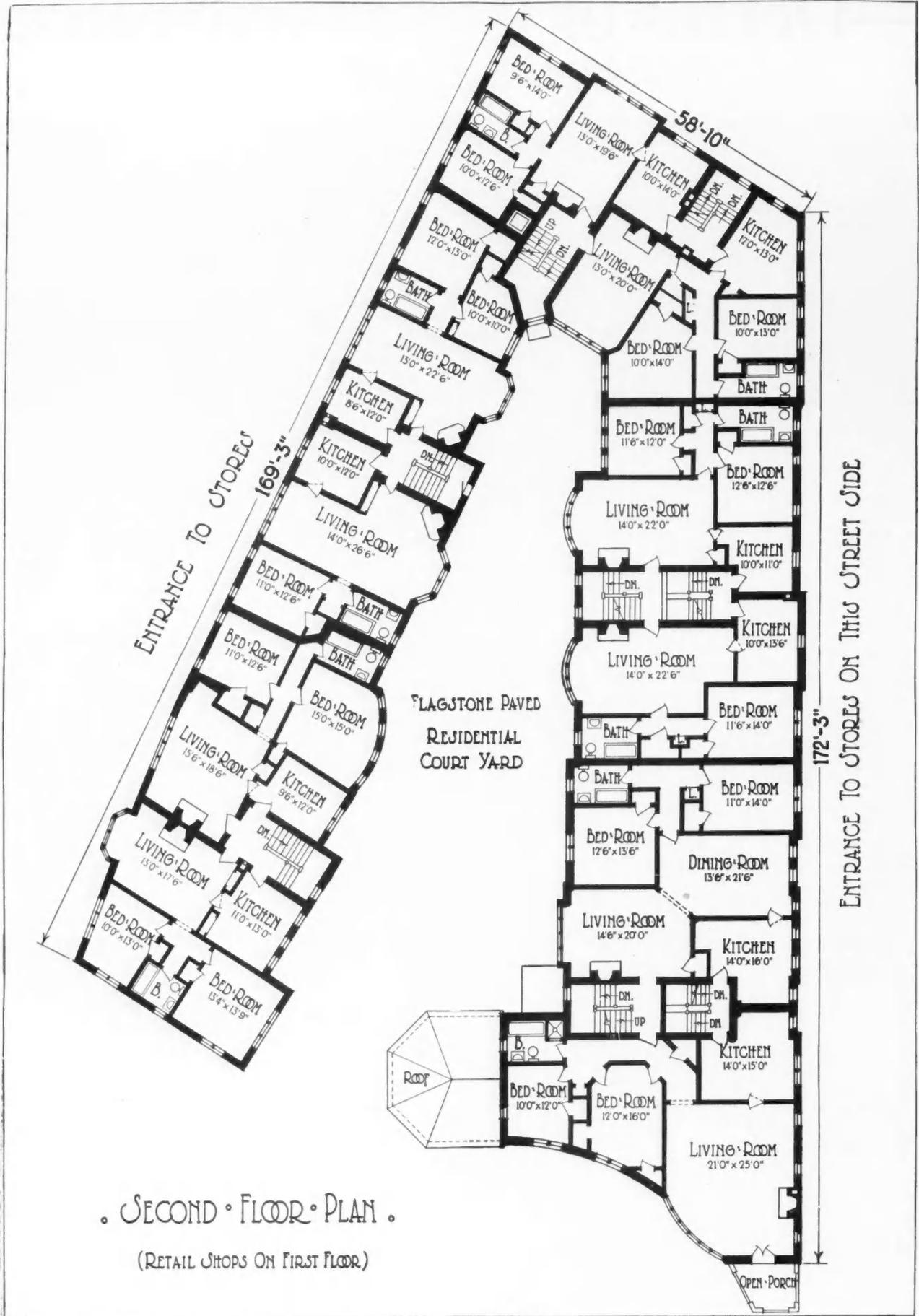


ELEVATIONS OF CUPBOARDS

SECTION



CONSTRUCTION DETAILS & SECTION "C-C" OF KITCHEN TABLE & CUPBOARDS ON PRECEDING PAGE SCALE 1 1/2" = 1'-0"



"THE CHIMNEYS," Winnetka, Illinois. Second floor plan of this distinctive apartment building, built in Tudor architecture around a triangular shaped court.



H. J. PETERSON, Artist

“The Chimneys”

Tudor Architecture and Chimney Pots of the 15th Century Provide Interesting Atmosphere for this Unusual Apartment Building

HOWARD BOWEN, *Architect*

HERE is a style of architecture that is rich in tradition. During the reign of Elizabeth, in the period when Shakespeare flourished, buildings with half timbered gables, prominent chimney pots and projecting bays dotted the English countryside. Looking at this building, one almost expects to see a coach-and-four drive into the tavern yard for a change of horses while the travelers find refreshments in the inn. In the evening, a band of strolling players might give classic drama in the court yard.

In this modern adaptation, however, the court yard, which is paved with flags of blue limestone, is dedicated to dignified quiet, and provides access and serves as light court for high class apartment tenants. The first floor shops do not front upon this court; but five entrances lead up to 17 suites of three, four and five room apartments on the two floors above.

This building, designed by the late Howard Bowen, architect, of Wilmette, is located in the Indian Hill section of Winnetka, within a half-hour, by train, from Chicago's Loop. Its owner, Mr. Rowland D. Whitman, a partner in the Chicago law firm of Helmer, Moulton, Whitman and Holton, has his home in Winnetka and owns considerable property there.

In a high class suburb, like Winnetka, apartment buildings are restricted to a small area near the business section. The owner has been successful in providing a building which has enhanced surrounding property values by its architectural at-

tractiveness. Passengers on passing trains crane their necks to get a good view of this unique group of buildings; for it resembles a group, rather than a single building, due to the great variety of bays, projections and gables.

A glance at the apartment floor plans reveals a notable feature of the design. Each suite of apartments extends through the wing of the building in which it is located, without corridors, thus securing full-cross-ventilation with windows on both court and street. The walls, to the top floor, are faced with textured brick in harmonious shades. The walls of the top floor are of concrete masonry units made with light weight aggregate which has an insulating value. These light weight units constitute an excellent base for the stucco.

The windows of the first floor and basement are steel sash and the balance of the building is provided with outward opening wood casements. The first and second floors are of reinforced concrete, with clay tile fillers. The apartment floors are finished in red oak and the first floor has linoleum floor coverings.

A notable feature is the fine weathered appearance of the outer woodwork and half-timbering, gained by the use of cypress which has been sand-blastfinished and protected with a creosote treatment. An important element of the design is the roof of staggered slates, being black slates, varying in thickness from $\frac{3}{16}$ th to $\frac{5}{16}$ ths of an inch. This gives the appearance of the old fashioned slates.

This Building was Erected on a Cost Plus Basis, by the Following Contractors:

Masonry: Edward A. Anderson Co., Kenilworth.

Carpentry: Robert Mitchell, Winnetka.

Plumbing: Alex. A. Allardyce, Chicago.

Painting and Decorating: Ingstrup-Buhrke, Inc., Chicago.

Steam Fitting: C. W. Johnson, Inc., Chicago.

Roofing and Sheet Metal Work: Wm. L. Wentz Co., Winnetka.

Electric Wiring: Kordick Electrical Co., Winnetka.

Metal Stairways: Butler Street Foundry & Iron Co., Chicago.

NUMBER ONE GRACIE SQUARE

*Anthony A. Paterno,
Builder*

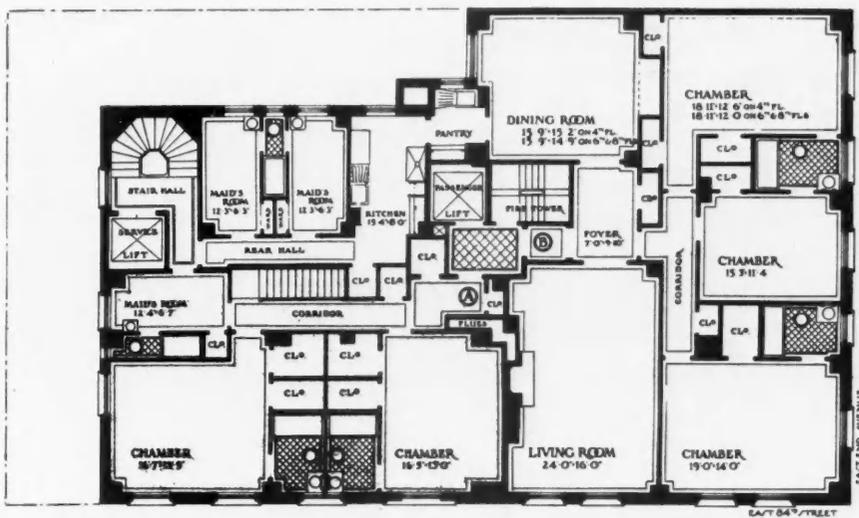
*Wm. Lawrence Bottomley } Architects
Rosario Candela*



Plans for Number One Gracie Square, One of the More Distinctive Co-operative Apartment Buildings of New York City, Designed By William Lawrence Bottomley and Rosario Candela, Architects, New York, N. Y.



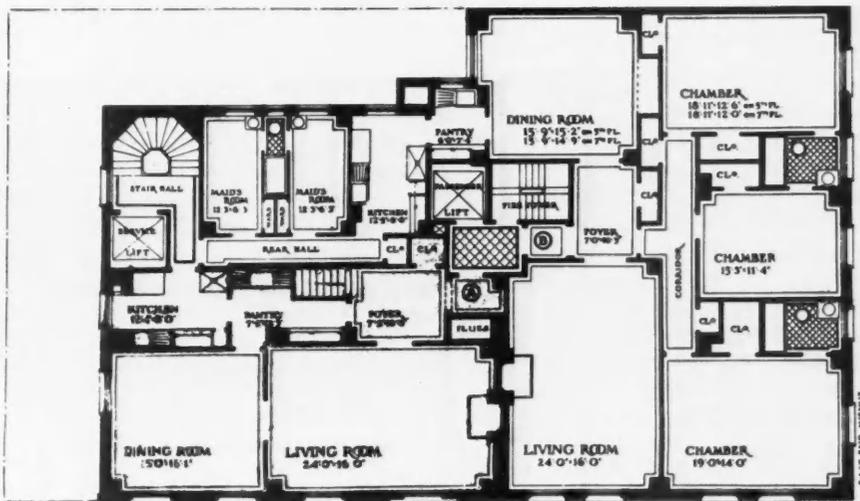
All Dimensions are Approximate Entire Floor Apartments, 11 Rooms 5 Baths
PLAN OF 9TH-10TH AND 11TH FLOORS



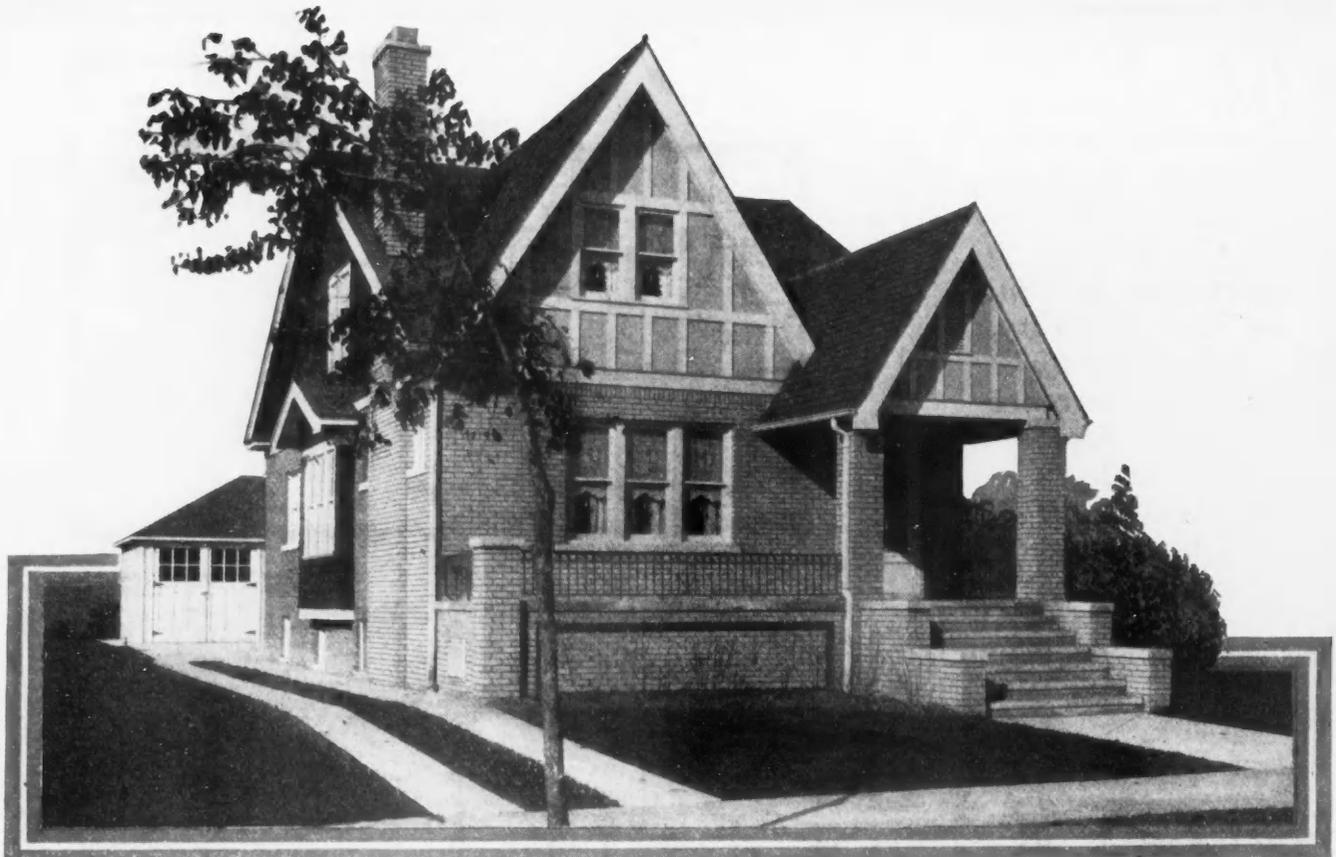
Upper Floors of Duplex Apartments—6 Rooms—3 Baths
 PLAN OF 4TH-5TH AND 8TH FLOORS
 Simplex Apartments—8 Rooms—3 Baths

An Unusual Feature of This Building Is the Combination of Entire Floor Apartments, as on the 9th and 10th Floor Plan Above, and Duplex and Simplex Apartments, as on the 4th, 5th, 6th and 7th Floor Plans, Below and at the Left.

A Duplex Apartment Is Located on a Portion of the 5th and 6th Floors, While the Balance of the Space on These Floors Is Occupied by Simplex Apartments, Giving Owner-Tenants a Wide Range of Selection in Apartment Homes.



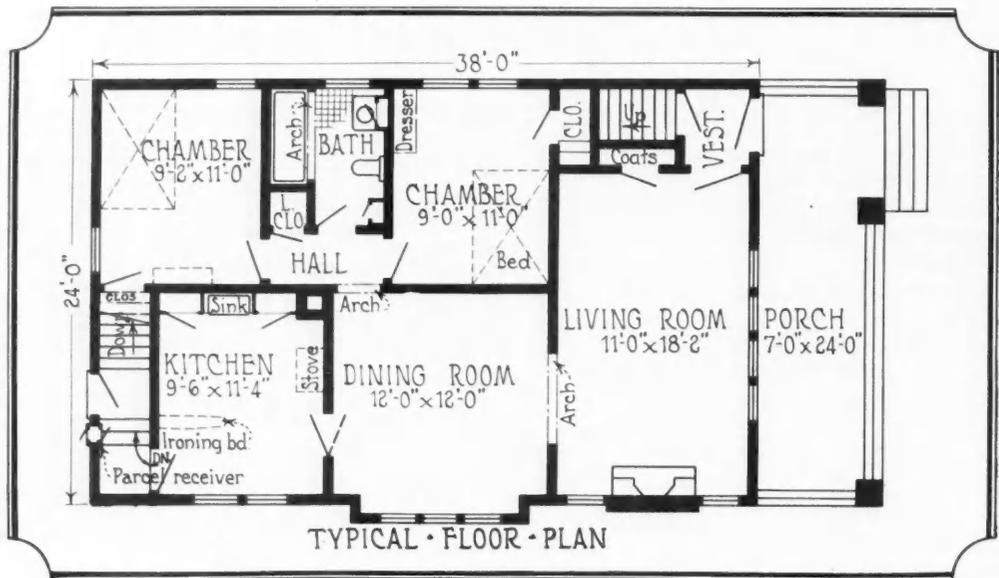
Lower Floor of Duplex Apartments—6 Rooms—3 Baths
 PLAN OF 5TH AND 7TH FLOORS
 Simplex Apartments—8 Rooms—3 Baths

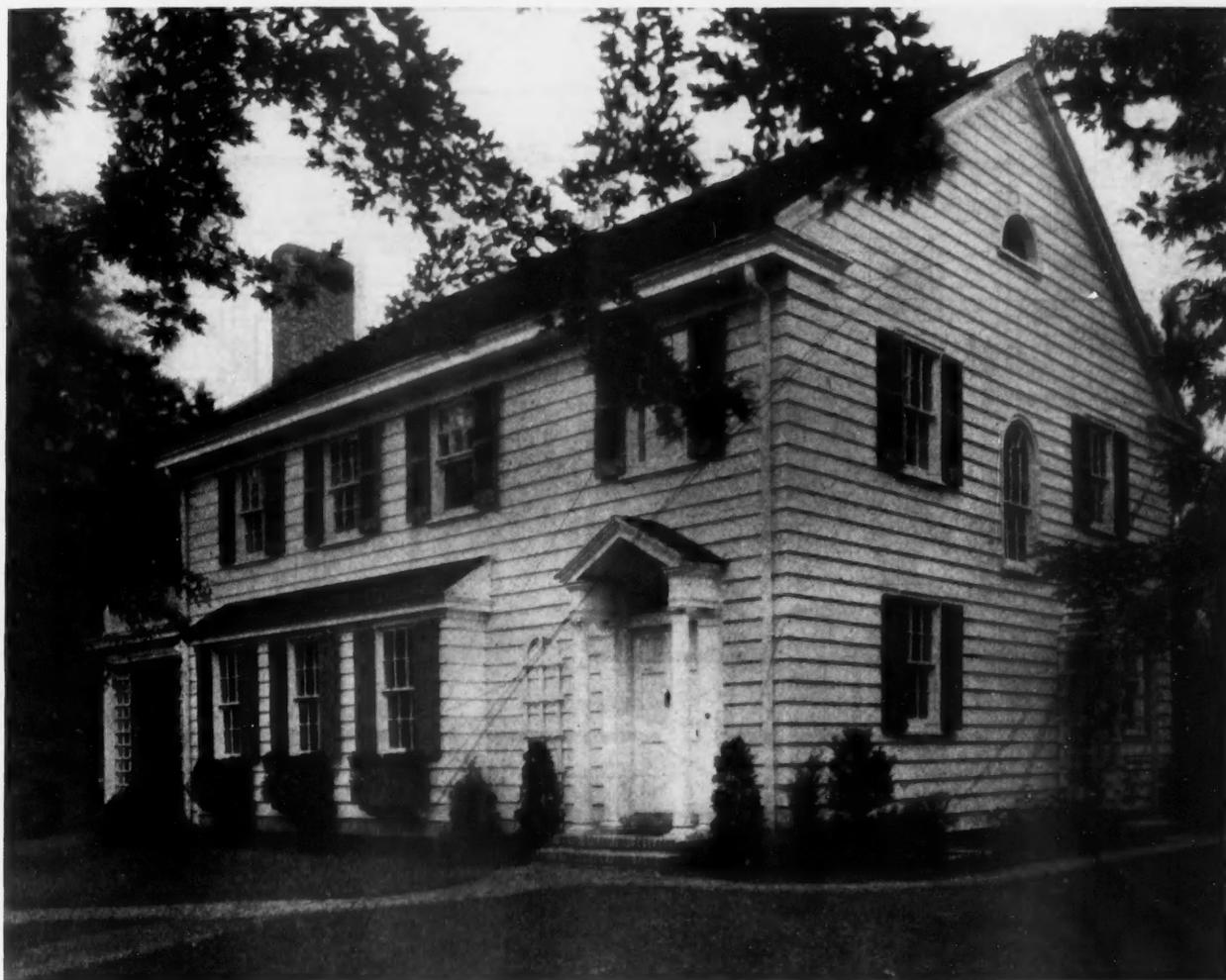


A Detroit Duplex or Income Home

Designed by J. Campbell Morrison, Architect, Detroit, Mich.

Five Rooms Are Provided, Both Upstairs and Down, All Well Lighted and Conveniently Arranged. Where Building Codes Require a Back Stair, Not Shown on Plan, Would Be Built to the Second Floor Apartment.





THE AMERICAN BUILDER ALL-FEATURE HOME

Complete Working Plans

*An Eight Room Colonial Design Presented in
One-Eighth-Inch Scale Drawings*

THIS design differs from the typical Colonial in one particular. In the typical Colonial design, the entrance is in the center of the front elevation and opens into a central hall with rooms at both sides. In this design, the entrance is placed close to one end of the front elevation and there is a reception hall in the corner of the house.

This fact does not, however, detract from either the practical or artistic value of the design. Placing the entrance as it is makes possible a long living room across the front of the house with the dining room, kitchen and servants quarters at the rear.

As would be expected in such a design, there is a first floor lavatory placed conveniently between the maid's room and the kitchen, and a breakfast nook built into the kitchen. There is a rear

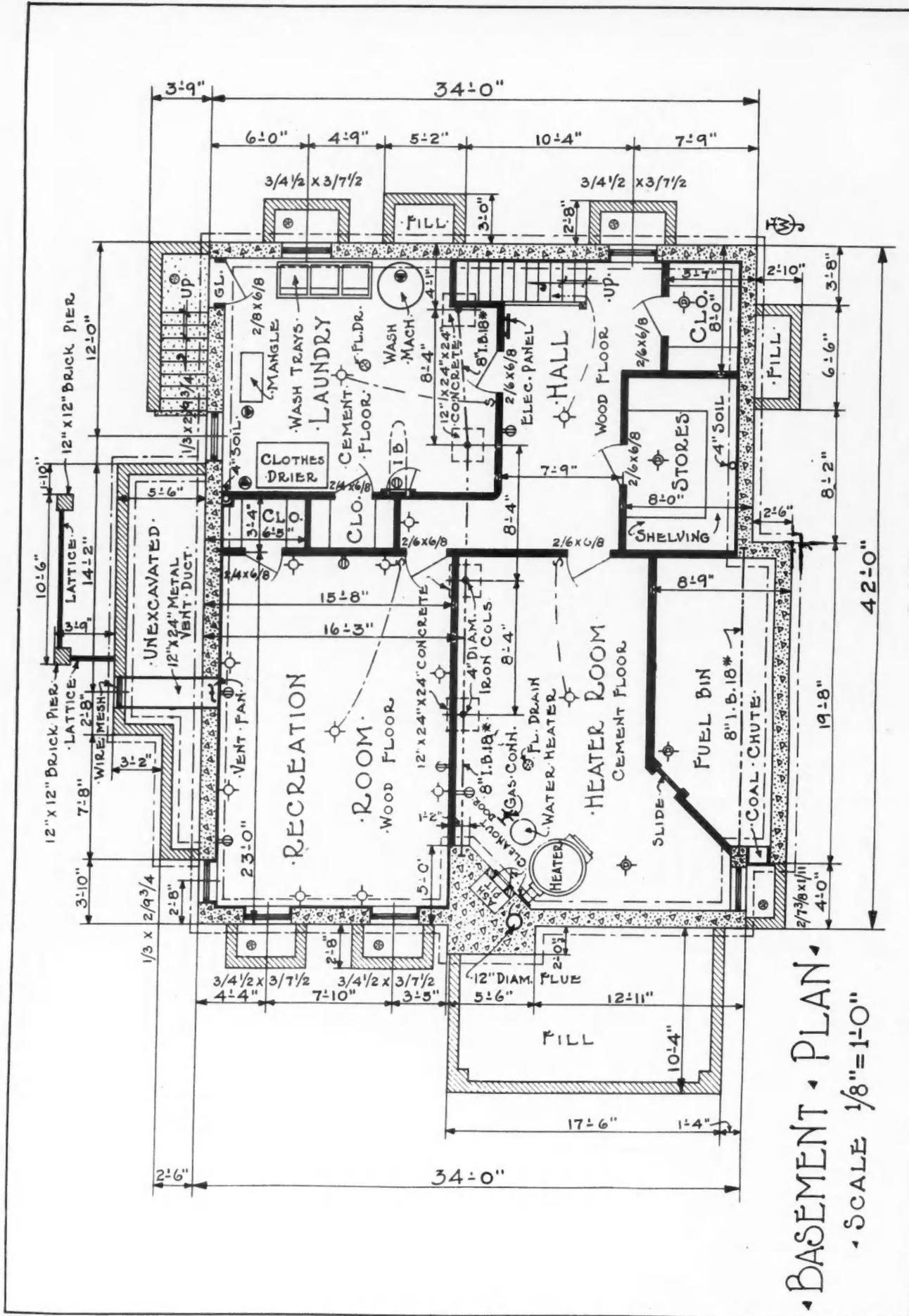
hall between the reception hall and the rear rooms. A most interesting corner fireplace is provided in the living room. The entrance vestibule contains a coat closet, and there are many other refinements which mark the really up-to-date home.

Two bathrooms and extra large closets are the conspicuous feature of the second floor plan. One of the bathrooms connects with the master bedroom while the other opens into the hallway. There are showers in both bathrooms. The closet doors are fitted with mirrors. Closets in bathroom and hallway provide ample storage space for linens and towels.

One notable feature is the disappearing stairway which makes the attic space available without taking up the floor space required for an ordinary stair.

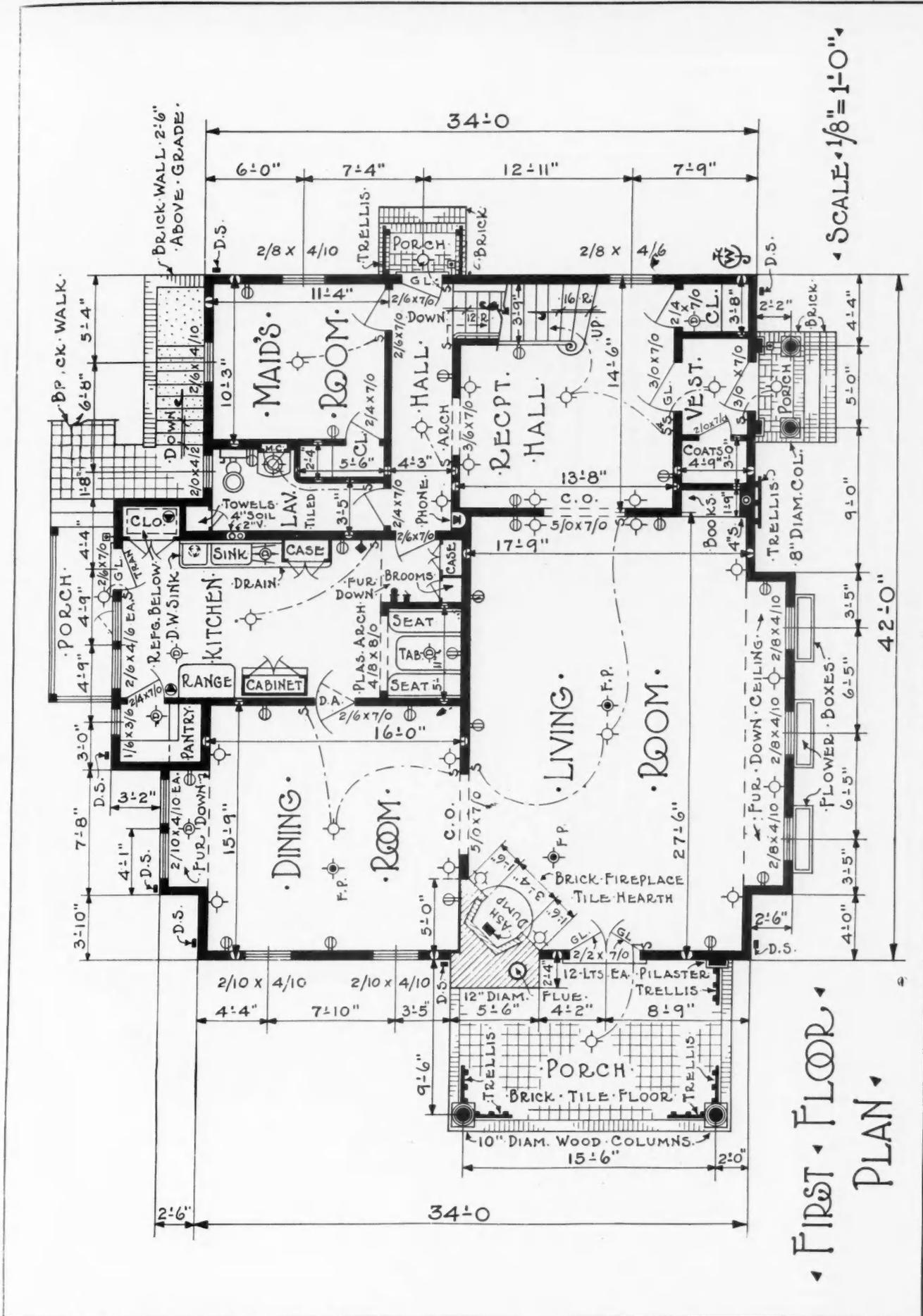
NEXT MONTH

Complete Working Plans of
an English Field Stone
and Stucco Home.

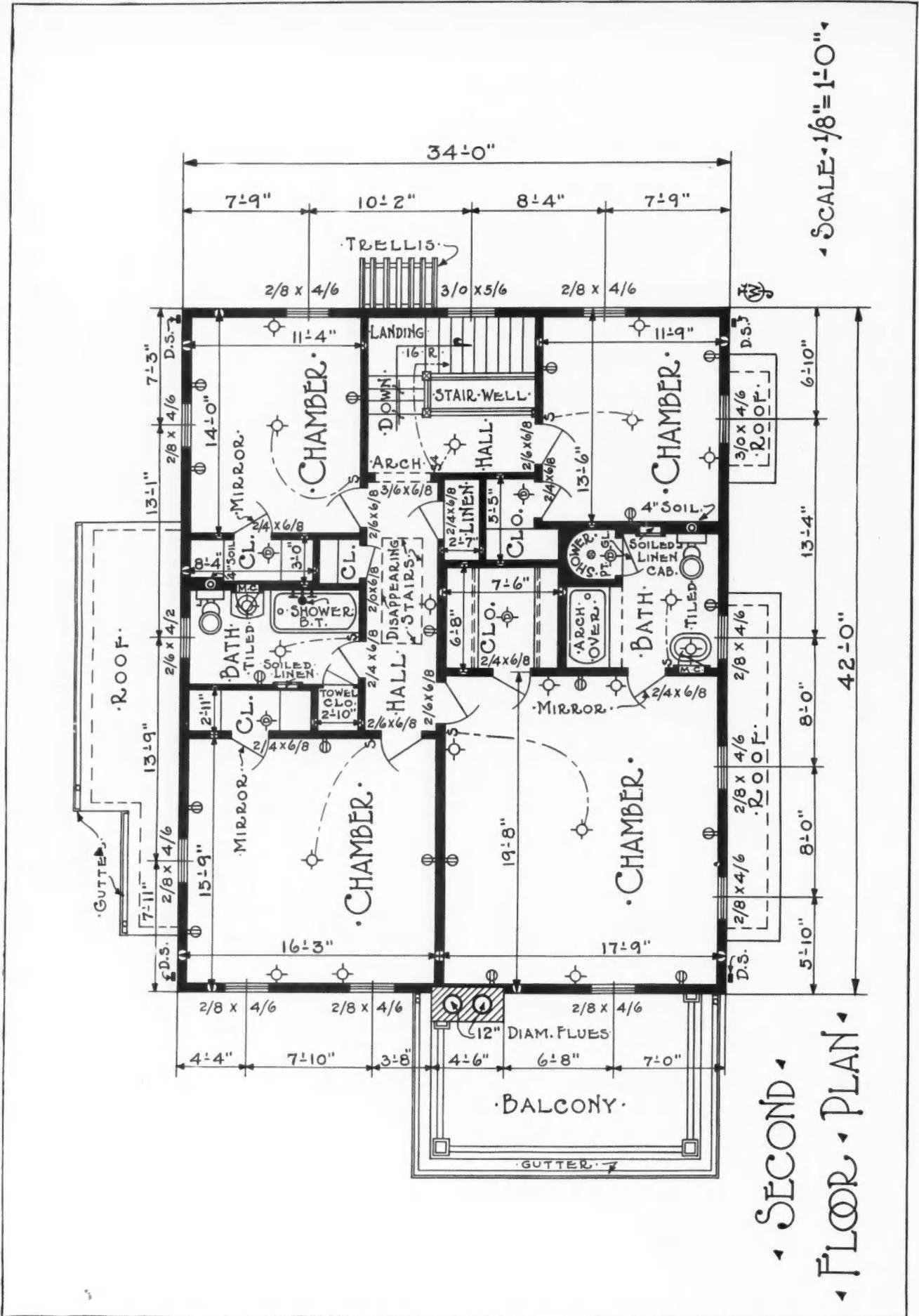


BASEMENT PLAN
SCALE 1/8" = 1'-0"

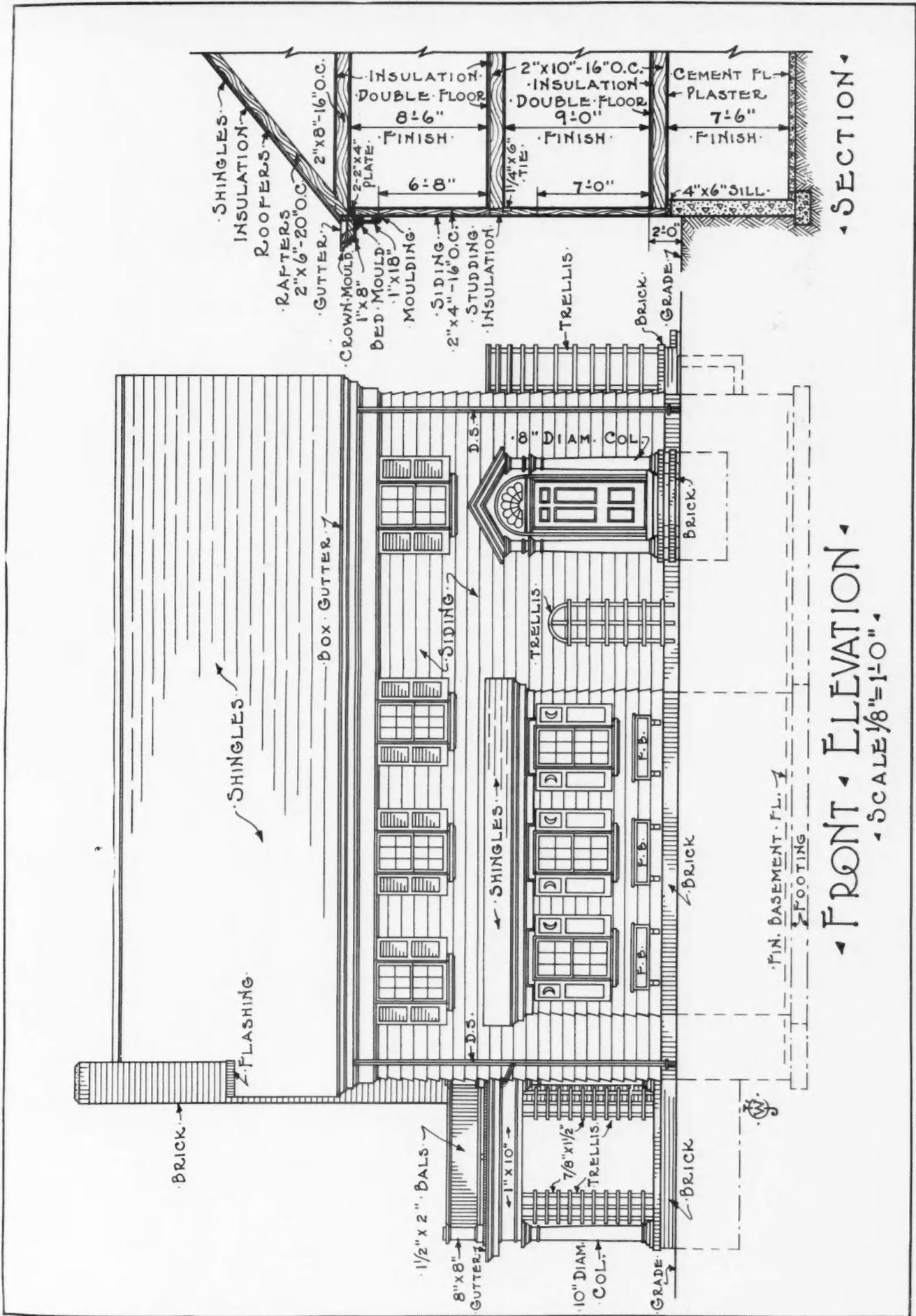
The Basement Plan is Typical of the Modern Trend of House Design, with Every Inch of Space Utilized and Every Room Fully Equipped.



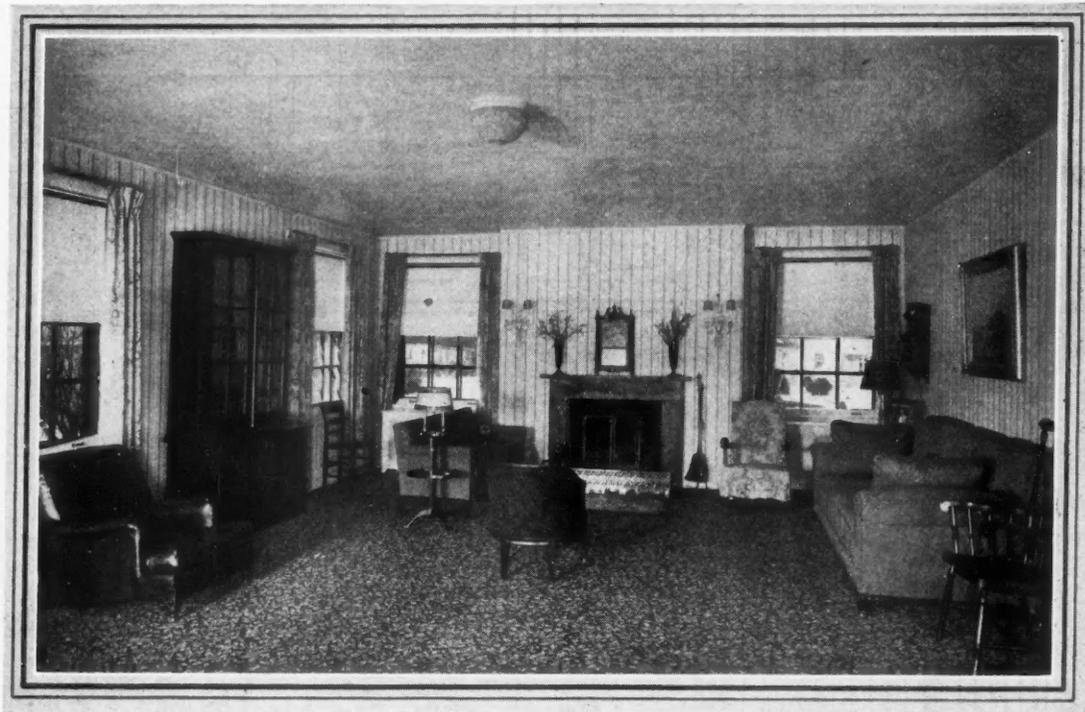
The First Floor Plan of the All-Feature Home Shows a House That Is First of All Home-like and Comfortable.



Four Large, Light, Well Ventilated Bedrooms Are Found on the Second Floor. The closet space is really remarkable.



A Front Elevation and Sectional Drawing of the All-Feature Home, the Latter Showing the Well Insulated Wall and Roof Construction.



Colonial Interiors

Photographs Illustrate the Work of Miss Gheen, Inc., Interior Decorators, Chicago and New York

By KATHRYN E. RITCHIE

THE simple unpretentious quality which characterized the lives of the early colonists in this country found expression in their style of architecture and manner of furnishing their homes. This style we now call the Colonial or Early American. It is a style which has been adopted in practically all parts of the United States today as being especially suitable for small or medium-sized houses, and is also favored as the only proper background for certain old and highly prized pieces of furniture such as Connecticut or Hadley chests, highboys, four-post beds and other pieces which have been handed down from previous generations.

In a typical house of this period, the rooms are low and have small-paned double-hung windows. Ceilings are usually of plain plaster; fireplaces are wide and high with a brick lining and hearth and a carved wood mantel, although marble is sometimes employed for the latter also. Floors are of wide boards and may be partially covered with hooked rugs, rag rugs, and braided rugs in bright colors, or with all-over carpeting.

Decorative features which characterize the Colonial house consist of light walls preferably covered with wall-paper, showing stripes, a small flower pattern, dot and dash, or diamond design; woodwork painted white, ivory, light buff or gray to harmonize with the color scheme of the room; simple wood panelling above the fire-place painted to match the other woodwork. The windows are hung with ruffled curtains of scrim or net. Over-curtains of gaily flowered chintz or cotton prints are also used in the simpler type of room, dam-

ask or heavy silk being more appropriate for interiors of a formal character.

Typical furniture for a house of this period is either of maple or mahogany and includes such pieces as the above mentioned Connecticut and Hadley chests; highboys and lowboys; gateleg, butterfly, tilt-top, Pembroke and Sheraton tables; Windsor, bow-back, slat-back, ladder-back and wing chairs; corner cupboards; candle-stands, four-post beds, pewter lamps, brass fire-dogs and fenders; porcelains and banjo clocks.

Such a house need not be furnished absolutely "true to type" in every particular. Certain concessions may be made to comfort and convenience, as well as to the individuality of the owner or decorator. However, in combining early American pieces of furniture with others, care must be taken that the latter are of the same general design and character. Otherwise a feeling of incongruity is produced.

The living-room in the accompanying illustration, for instance, contains several modern pieces. It is nevertheless distinctly early American or Colonial in feeling, due to such features as the double-hung paned glass windows, the striped wall-paper, the fine old bookcase, side chairs, clock and fireside fittings which are all of the earlier period. The wall-paper in this room is yellow and gray; the carpet, black with gray roses, and the couches are covered in a red and gray checked material. The flowered window hangings add a further note of color to the room.

The same spirit also prevails in the dining-room illustrated. Here simple wood panelling is used for the walls. The side-board

Suggestions for Furnish-
ing the All-Feature
Home

with the hunting scene hung above it and the corner cupboard are especially interesting pieces of furniture for a room of this type. All-over carpeting in a neutral shade gives a quiet foundation to the room, and a beautiful crystal chandelier and silver side-lights add a note of elegance and charm.

The bed-room illustrated is typically Colonial in all details—the rag-rug carpeting, the wall-paper showing a pattern of moss roses and lilacs; the light wood-work; the bed with its quilted covering, dresser and mirror, side chairs, bedside table, comb-back Windsor rocker and dainty ruffled scrim curtains at the windows, all being true to type. It is an altogether charming room in its daintiness and simplicity, and offers excellent opportunity for the use of any highly prized antiques which the owner may have in her possession.

The walls for a house of the early American period are usually treated by one of several methods. Downstairs rooms, such as living-rooms and dining-rooms, may be paneled with pine, or have a wainscot of wood to chair-rail height with plaster or a highly figured wall-paper used above. The latter treatment is usually the most attractive, and accords best with the modern demand for color and life in interiors. There are many excellent reproductions of Colonial paper on the market today, including striped papers as well as figured for use in rooms of this type. A small-patterned paper would, of course, be more appropriate for bedrooms.

The proper treatment of the woodwork is also an important feature in Colonial houses. Where walls are plastered or papered and there is no wainscot, a base-board is used, and oftentimes a cornice of wood, in which case both are painted ivory, cream, or soft gray. Doors are often of mahogany as are the handrails and treads of stairs. The risers and balusters of the stairs, however, are always painted the same color as the rest of the woodwork, as are also corner cupboards. The latter with their interiors painted in a color which contrasts strongly with the walls, form one of the highly decorative spots in a room of the Colonial type.

A home built and furnished along the lines here suggested will always be in excellent taste, and is representative of the fine old substantial qualities of early American life. It is one of the best-loved types of homes in this country today.



Miller-Storm Methods

(Continued from page 85)

When a client enters into contract for a home the preliminary payment is deposited with the trust company. This way of doing business engenders confidence and makes the selling of a home before it is built much more easy. It is part of the "stage setting" for selling homes before they are built.

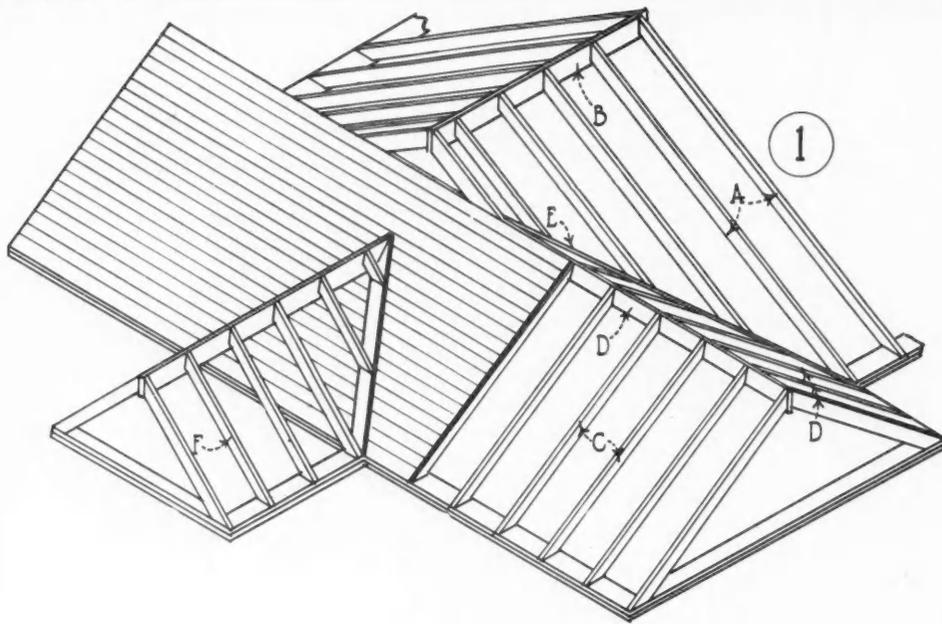
If a prospect owns a vacant lot it is generally possible to build a house upon it without cash outlay. The manner in which this company does it is as follows:

Miller-Storm accepts the lot as the down payment taking a deed and then turning the property over to the client on a land contract basis. Such a land contract generally provides for monthly payments ranging somewhere around one per cent of the building cost.

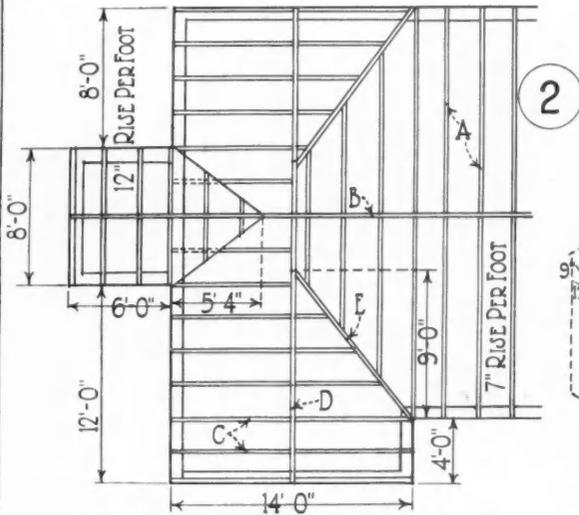
The financial advising department of Miller-Storm is adequately equipped to go into conference with clients in adequately arranged quarters and with evidences of various kinds all systematized.



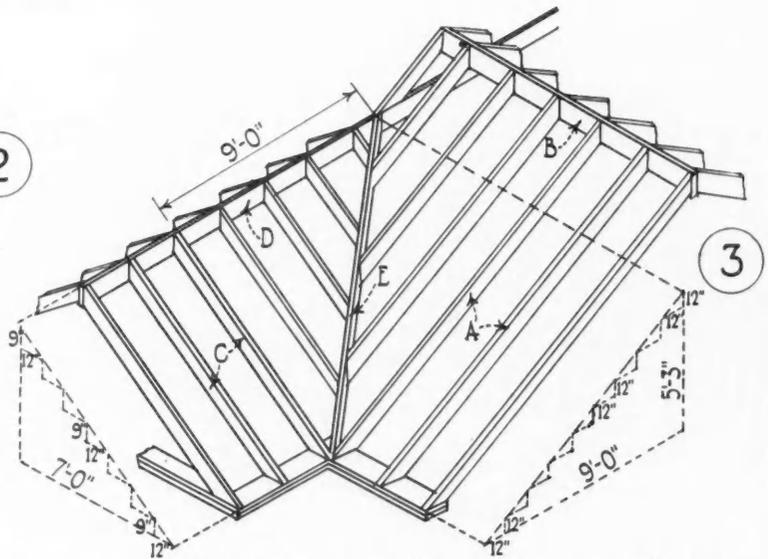
Dining Room and Bed Room in Home of Miss Helen Baker, Indian Hill, Ill. Miss Gheen, Inc., Interior Decorators.



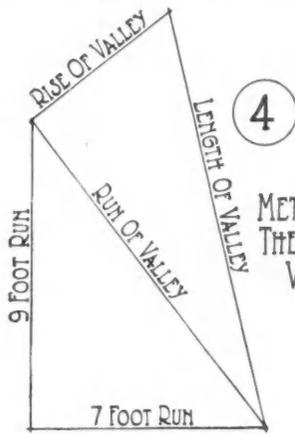
ISOMETRIC VIEW OF ROOF OF TWO DIFFERENT PITCHES WHICH IS USED AS A PROBLEM IN FRAMING.



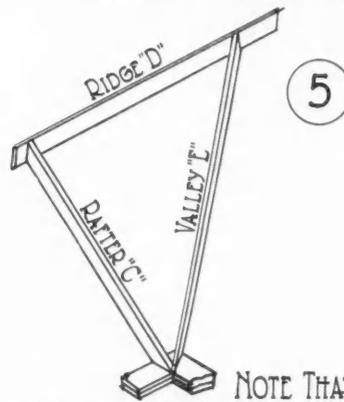
PLAN VIEW OF ROOF SHOWN ABOVE



DETERMINING THE POINT AT WHICH THE VALLEY RAFTER MEETS THE RIDGE.



METHOD OF SCALING THE LENGTH OF THE VALLEY RAFTER



NOTE THAT A RIGHT TRIANGLE IS FORMED BY THE RAFTER "C", RIDGE "D" AND VALLEY "E"

Diagrams Showing How to Handle a Roof of Two Different Pitches.

Roof of Different Pitches

*How to Lay Out the Framing of the Unusual Roof
Illustrated on the Opposite Page*

By JOHN T. NEUFELD

RIGHT in line with our last month's problem is another problem sent in by a reader some time ago. In this problem we have three different pitches. The main roof has a pitch of 7-inch rise per foot run; the transverse roof has a 9-inch rise per foot run; while the little porch roof has a 12-inch rise per foot run. Where the two large roofs meet the rafters are framed to a valley; where the porch roof frames to the other roof the rafters rest on the sheathing.

In framing a roof of this kind one would first frame the main rafters "A" and the ridge "B".

Rafter "A" has a 7-inch rise per foot run. Length per foot run is 13.89 inches. (See any roof framing table.)

Length is $13.89 \times 12 = 166.68$ inches or 13 feet $10\frac{1}{8}$ inches.

For top and bottom cut use 7 inches and 12 inches on the square.

Next the common rafter "C" should be framed.

The length per foot run for this is 15 inches.

The run is 7 feet.

Length is $15 \times 7 = 105$ inches or 8 feet 9 inches. Deduct for ridge.

Mark for top and bottom cuts by using 9 and 12 on square.

The next problem will be to frame rafter "E". The height of ridge "D" is 9 inches for every foot of run of rafter "C" or $9 \text{ inches} \times 7 = 63$ inches. If the rafters were of equal pitch then the upper end of rafter "E" would be 7 feet both ways (horizontally) from the corner "X". The rafter "A" however does not have as great a rise, therefore the point at which the two roofs meet is farther over to this side. The rafter "A" rises 7 inches per foot. To reach the height of ridge "D" the run of rafter "A" must be $63 \div 7 = 9$ feet (because it rises 7 inches per foot). Rafter "E" therefore has a 7-foot run in one direction and a 9-foot run in the other.

One way to find the length of rafter "E" would be to draw a number of triangles to some convenient scale as shown in figure 4 and scale the length. One side of the triangle represents the 7-foot run and the other side represents the 9-foot run. The diagonal thus found represents the actual run of rafter "E". The rise of this rafter is now represented by a line at right angles to the run. The diagonal then of this triangle represents the length of rafter "E". If the drawing is made to a fairly large scale such as 1 inch to a foot then the length thus found will be accurate enough for all purposes.

In figure 5 we have drawn another right triangle. Here one side represents the length of rafter "C". The other side represents the length of the ridge from the upper end of rafter "C" to the upper end of rafter "E". The diagonal of this triangle represents the length of rafter "E". This is just another way of scaling the length of this rafter.

The lover of mathematics may obtain these same

results and perhaps a little more accurately by using square root.

Watch for the explanation of the side cut of this rafter in next month's lesson.

Problems

1. If rafter "C" had a 10-inch rise per foot, how high would the ridge "D" be?
2. What would be the length of rafter "C"?
3. At what point along the ridge would rafter "E" come if rafter "C" had a 10-inch rise per foot run and rafter "A" had a 7-inch rise per foot run?
4. What would be the length of rafter "E"?
5. What is the length of rafter "F"?

Answers

1. The ridge "D" would be $7 \times 10 = 70$ inches high.
2. Rafter "C" would have a length per foot run of 15.62 inches. The total length is $15.62 \text{ inches} \times 7 = 109.34$ inches or 9 feet $1\frac{5}{8}$ inches.
3. The total height of the ridge is 70 inches. Rafter "A" rises 7 inches per foot.
 $70 \div 7 = 10$.
Therefore the valley "E" meets the ridge at a point 10 feet from the corner measured horizontally and parallel to the ridge "D".
4. The length of rafter "E" is the square root of $(109.32 \text{ squared} + 120 \text{ squared}) = 162.34$ inches or 13 feet $6\frac{5}{8}$ inches.
5. Rafter "F" has a 12-inch rise per foot run. The length per foot run is 16.97 inches. The total length is $16.97 \text{ inches} \times 4 = 67.88$ inches or 5 feet $7\frac{7}{8}$ inches.



Automatic Refrigeration

(Continued from page 95)

cooler on the market and some sales have been made—principally to restaurants and barber shops. In the present stage of its development, the machine costs too much—both as to first cost and operation—to come into general use except in the homes of the wealthy.

It is not generally known that one of the largest electrical manufacturing companies in the United States is now conducting experiments in its laboratories along these lines and it seems certain, that, at no distant date, American homes will find a new source of living comfort from the developments of the electrical industry. Certainly, it seems just as logical to cool our houses in the hot weather as to heat them in the cold. Thus, a new standard of housing comfort will be set and builders should be prepared for this new development. Those who live in the south will certainly welcome this development, and, even in the north, its advent will be hailed by those who appreciate ideal home conditions. Already, audiences in our principal cities have become familiar with the delightful relief of artificially cooled theaters in hot weather.



Questions and Answers

This Department Conducted by
V. L. SHERMAN

Have You a Question You Would Like to Have Someone Answer?

Have You An Answer to Any of the Questions Listed Below?

QUESTIONS TO BE ANSWERED IN THE JULY ISSUE

Give Us Your Answer—Those Published Will Be Paid For.

1. *What would you consider good mixtures for painting shingles on walls after five years' exposure and ten years' exposure?*
2. *How is it best to remove smoke and soot from tapestry brick?*
3. *Should the flue tile of different flues be separated?*
4. *The stucco on some houses built just ten years ago is leaking or shaling. They have shown no previous signs of failing. Why is this? Can I prevent further trouble?*
5. *Can furnaces and boilers be used as incinerators during cold weather without harm to the grates or to combustion?*
6. *Can the noises from a soil-stack be muffled without ripping open the partition and rebuilding?*
7. *Does it make any difference if the basement floor is below the top of the footings?*
8. *Is it considered better to mitre the siding at the corners of the house or use corner boards?*

SEE JUNE FOR ANSWERS TO APRIL QUESTIONS

Following are the questions asked in the March issue, and their answers

Question: I have a wide, battened, veneered door with an oval bevel-glass. The door has warped badly. Is there any remedy, and how could I have prevented the present condition?

ANSWER: The battened door is heavier than the average. This door is wide, or wider than the average. It should have been made stronger. An oval opening in a battened door cuts through considerable of the joining in proportion to the opening. Any sagging will be more apparent with this shape of opening and with battens than in ordinary lighting. This may make the "warping" more apparent.

The door should be taken down and the glass removed. When thoroughly dried out (place in the attic or hang below the basement ceiling), the door should be brought back as nearly as possible to its shape with clamps and patience. The edges as well as the surfaces should then be well filled and then either painted or varnished. Replace the glass carefully. Long-strap hinges which have the strength to hold as well as the looks should then be used.

The reasons for its present condition are hard to tell from a distance. The door may have been poorly built, poorly designed, or poorly hung. Or it may be that sufficient protection was not provided against moisture absorption. But it is clear that many doors are not given proper consideration after they arrive from the mill.

Question: I want a table top and possibly a sink-board that is nearly proof against acids. Can some chemist, or other with experience, give me a little help?

ANSWER: "For a table top and sink-board Nature has provided us with a stone that is the best material suited

for this purpose. This stone is a variety of talc known as soapstone. Chemically it is classified as a magnesium silicate. It may be obtained on the market in slabs of most any size or thickness. In our laboratories I use both 1 inch and 1¼-inch. The fact that this natural material is a soft and tough stone makes it an excellent substance to use for the above mentioned purpose. Glassware is not easily broken under ordinary use when placed on the soapstone. Due to its toughness it will not crack when subjected to heat. This is the same material that our grandparents used on the kitchen stove as a pancake griddle, and also the same stone that was heated up on the kitchen stove in the winter time and put in the sleigh to keep the feet warm when going for a long ride.

"To make the soapstone acid-proof the surface should be treated with a mineral oil (used crank-case oil from the automobile would answer well). The oil soaks right into the stone and protects the surface when acids are spilled on it. If the top or drain-board is used very much it should be treated every couple of weeks by rubbing an oily cloth over it. I think I installed the first soapstone laboratory desk tops and sinks in the city of Chicago, which was about 26 years ago, and they are still in first class condition."

D. Hector Trowbridge,
Professor of Analytical Chemistry,
Lewis Institute, Chicago, Ill.

Question: How can I lay out an elliptical arched opening with a string?

ANSWER: The following description, which goes with Figure 1, is submitted by Mr. Eugene Rutter, of Dayton, Ohio, and Mr. N. W. Davis, of Gretna, Kansas.



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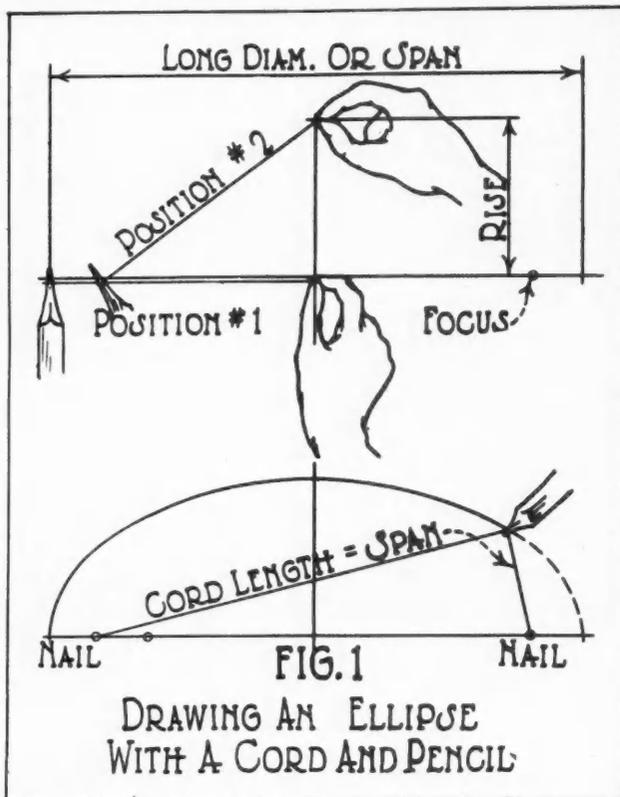
many use the Goodyear Super Heavy Duty Cushion—and trucks that want to make extra speed on the open road are now adopting the new Goodyear Truck Balloons.

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The lines are drawn for the long and the short axes, or the span and the rise as they are generally called. They must be perpendicular. The span and the rise are marked. Then taking a radius of one-half the span and using the tip of the rise as a center, the arc is marked off to give the two points called foci. At these points nails are located. Then taking a length of cord equal to the span and between the nails, a pencil is looped in, and the cord stretched taut. While held taut the pencil is moved as far as the ends of the span and as high as the rise marking. When carefully done this method will produce a perfect ellipse.

Question: Are moderately long drain-runs to soil-stacks of any disadvantage?

ANSWER: A "moderately long drain-run" might be taken to mean the least possible length in ordinary bathroom fitting. In such a case there could not be any disadvantage. There are many cases, however, where runs are made for convenience in making connections and cases which would be considered an economy, where the "moderately long" drain runs are ever likely to get the household well acquainted with the plumber.

One of the chief troubles is from the collection of lint and grease from emptying scrubbing water into sinks and laundry trays. These emptyings usually pass the trap in the rush of water, but will gradually form a blockade in the run. This is out of reach and not easily removable except with a strong spring coil. Burred fittings and numerous fittings do not make for a clean flow and these are generally to be found where the run is "moderately long."

Question: In building a hearth is the best level below the floor, at the floor level, or above the floor?

ANSWER: There seems to be a difference of opinion in the matter of hearth levels. The first letter proclaimed for a hearth level with the finished floor. The framing of a header will readily bring the brick to this level. If the fireplace and hearth are large the floor level hearth does not tend to

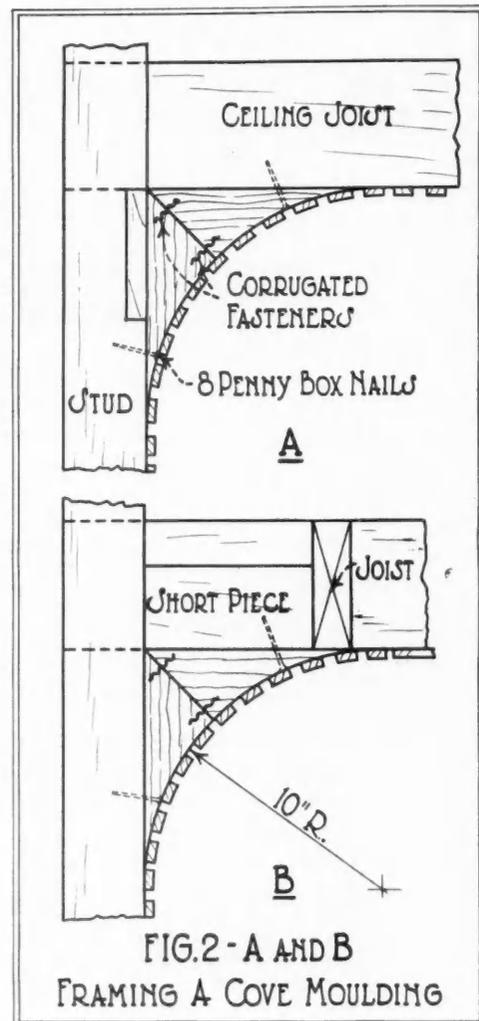
decrease the room size. The dust-mop can be run onto the hearth without interference, and the sweeper, if a man can sweep the sweepings into the fireplace. This level is the most popular.

There is no advantage, so far as I can learn, in the below-floor level for the hearth. There is the disadvantage of risky steps around the hearth. There are corners to get at when cleaning the hearth. And there are, I believe, stronger floor drafts.

The hearth built above the floor level does seem to check the floor drafts which are more than likely to be strong if the fireplace is large in proportion to the room. From my experience I should say that most fireplaces are twice as large as they should be, doubtless from required appearances. The quantity of air to keep the chimney drawing properly is therefore more than is necessary. Any means to check this draft, whether by raising the hearth or adjusting the damper in the throat, is of advantage. One hearth for a smaller type grate that I know of not only has a raised hearth but a sort of parapet along the front. It works well, and the parapet has saved the floor many times from hot coals. But as a general rule the floor-level hearth seems to be best liked.

Question: How are covered ceilings framed?

ANSWER: Mr. J. Oliver, of Ocean Beach, California, writes: "Coves can be bought at the mill or can be cut out of odd pieces of 2 by 4 in. Referring to Figure 2, A and B, a 10-inch radius is the most popular for an 8 ft. 6 in. ceiling. At the inside corners let the lath run through on one side, and cut the lath to fit the cove coming into it. This elimi-





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nates special corners. On outside corners a special cove must be made to form a mitre. By cutting coves as shown in the sketch you have the long grain of the wood at the extreme points. Also you can cut from smaller material. And it will give you a much stronger job. Be sure to put a strip of metal lath at each corner."

Question: Can I mitre spring-mouldings so that the horizontal sections and the raking sections of the gable will conform?

ANSWER: The following is from Mr. Ralph Cox, of Fort Payne, Ala., and refers to Figure 3: "To my mind the only way to do this is by the use of a mitre-box made so that the plumb-cut of both rake and horizontal mouldings will be an average of the two true plumb-cuts. And the mitre will be an average of the two true mitre cuts.

"For example, I will use a 9-inch rise to one foot of run on the common rafter. The true plumb-cut for the horizontal part will be a square cut, or a cut making a 90-degree angle with the edge of the mould. This is shown by the angle **B-A-G** on the side view of the mitre box. The true plumb-cut of the rake would be the run by the rise of the common

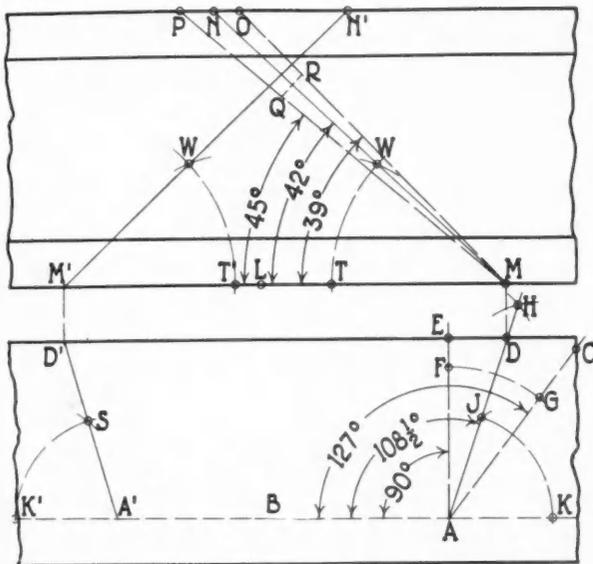


FIG. 3 MITRE BOX FOR SPRING MOULDINGS

rafter which is 12 by 9 inches, marking on the 9 or the rise side of the square. Taking **A** as the point this angle is shown by the letters **B-A-C** and in this particular case is 127 degrees. The average of the two true plumb-cuts is 90 degrees plus 127 degrees divided by 2 or 108½ degrees. This is the plumb-cut to use in making the box, or the angle **B-A-D**.

With the true plumb-cuts laid off as shown by **A-E** and **A-C**, bisect the angle **E-A-C** and get the line **A-D** which is the plumb-cut of the mitre box. To bisect this latter angle take any radius such as **A-G** and describe the arc **F-G**, cutting **A-E** at **F** and **A-C** at **G**. Now with any radius greater than one-half of **F-G**, and using **F** and **G** as centers, draw the arcs intersecting at **H**. With **H** and **A** as points draw the line **A-D**. This is the line to saw when cutting the box. This makes the right hand plumb-cut. For the left hand cut make the angle **B-A'-D'** equal to the angle **B-A-D** but reversed.

"Looking at the plan view of the box, the true mitre cut of the horizontal mould is 45 degrees as shown by the angle **L-M-O**, using 12 by 12 inches on the steel square and **M** as the point. The true mitre cut for the rake mould is the same as the backing-cut for a jack rafter against a valley rafter (the side-cut on a cripple). In this case 15 by 12 inches, marking along the 15-inch side. The 15 inches represent

the actual length of the common rafter per foot of run. This is shown by the angle **L-M-P** and is equal to 39 degrees. The difference between the two true mitres is the angle **P-M-O**. Bisecting the angle **P-M-O** gives the mitre cut to use in making the box. Forty-five degrees plus 39 degrees divided by 2 is 42 degrees, or the average between the two mitre cuts.

"To make the left hand mitre use the same mitre cut, but reverse. This is shown at the other end of the box at **M'-N'**. These mitres should be laid off on a plane surface and then transferred to the box, but the plumb-cuts may be drawn directly on the side of the box."



Books, Bulletins and Catalogs for You

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

The Ransome Concrete Machinery Company, Dunellen, N. J., offers a new bulletin No. 122, on "Ransome 56 and 84 S Mixers," which are the large mixers in this company's line.

"**Radia Electric Heaters**" is a new catalog of the F. W. Shepler Stove Co., 1300 Sheffield St., N. S., Pittsburgh, Pa., the wall type electric heaters made by this company.

The Celotex Co., 919 N. Michigan Ave., Chicago, is publishing two monthly periodicals, "Home Improvement News," devoted to modernization, and "Farm Improvement News" devoted to farm improvements.

"**Workmen's Safety Committees**" is report number five in the Industrial Safety Series published by the Policyholder's Service Bureau of the Metropolitan Life Insurance Company, One Madison Ave., New York City. It presents methods of organizing and conducting safety committees.

The Structural Slate Company, 1030 Robinson Ave., Pen Argyl, Pa., has published a new booklet "Structo Slate and Its Application with Modern Architecture," which is handsomely illustrated in colors.

The Union Metal Manufacturing Co., Canton, Ohio, offers catalog No. 59, on Union Metal exterior lighting fixtures and design book No. 101, "Ornamental Street Lighting," a beautifully illustrated book on street lighting fixtures.

"**The 10th Reason Why**" is number ten in a series of pamphlets on the use of Cornell boards made by the Cornell Wood Products Co., 307 N. Michigan Ave., Chicago, and covers the use of Cornell boards in convention booths and displays.

"**Modern Aviation Engines**" by Major Victor W. Page, published by the Norman W. Henley Publishing Co., 2 W. 45th St., New York City, is a new, two volume work on this subject to be used as an instruction manual for home or school use, and is complete and authentic being prepared with the co-operation of the Army and Navy authorities and leading commercial airplane and engine constructors. Price, \$9.00.

"**The Gluing of Wood**," is the title of the new Department Bulletin No. 1500, of the U. S. Department of Agriculture, which was prepared by T. R. Truax, senior wood technologist of the Forest Products Laboratory. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. Price, 25 cents.

"**The Superiority of the Steel Bridge**" is a new booklet published by the American Institute of Steel Construction, Inc., 200 Madison Ave., New York City, presenting the advantages of steel bridge construction for beauty, strength, flexibility, movability and economy. It is elaborately illustrated with photographs of steel bridges.

The Thurston Manual Training Supply Co., Anoka, Minn., offers a new 1929-1930 catalog covering a wide variety of supplies for school manual training departments which it manufactures or handles as jobber.

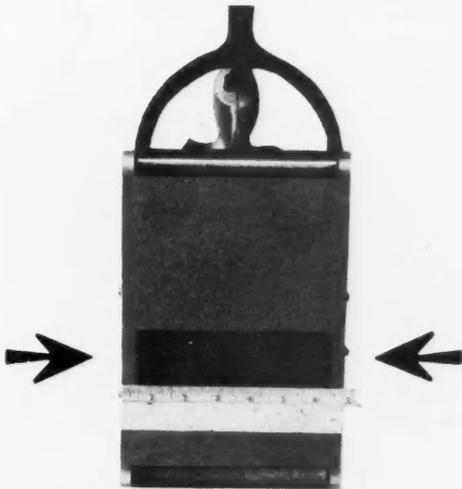
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(Continued from page 96)

table for each of the cities studied because of the difference in exposure factors and in the base temperatures. All necessary data for climatic variations was obtained from the United States Weather Bureau which also supplied data on wind conditions. Thus, the "Weather Man" was enlisted in the aid of the heating contractor.

The Committee on Standardization of the Heating and Piping Contractors National Association has prepared tables for thirty-three cities which are representative of the United States. Thus, a contractor figuring on a certified heating installation has at his service data which enable him to make a technically correct installation in which all possible factors affecting room temperatures are given due consideration.

In addition to the methods of figuring radiation, the Engineering Standard also give the methods for the selection of boilers for any radiation load. All of the leading manufacturers of boilers have co-operated with the National Association in solving this problem, furnishing test data and data on physical dimensions which made the publication of this boiler selection data possible.

Methods of sizing pipes for any steam system, that is, a one-pipe steam job, two-pipe steam, vapor or vacuum system are also given in the standards.

And to check on the contractor, the local association in every one of the 31 cities in which certified heating is in effect, maintains from one to half a dozen engineers to go over all plans, and inspectors check the work of the contractor.

When a heating contractor is asked to design a heating system for a building, he is required first of all to find out just what type of construction is to be used in that building. Then he must design his system accordingly.

If it is found that the system does not maintain the proper temperature, the association engineers will not only check on the design and installation of the heating system, but they will also check the building construction as well. It is found that the building construction is faulty, the responsibility lies with the building contractor and not the heating contractor. If the fault is found in the plant, the association sees that it is remedied by the contractor without any additional cost to the owner.

What does certified heating mean to the architect, the general contractor, the owner of the building and the heating contractor?

To the architect it means the satisfaction of knowing that his plans and work will please his clients because proper heating will contribute its share to this end. Nearly all architects are too busy to devote their time to the details of heating theory and practice. If certified heating is specified, they are assured that the installation will be in accordance with the carefully worked out engineering standards of the Heating and Piping Contractors National Association. The architect is then relieved of all worry and much detail for the careful checking of the job before, during and after installation will safeguard his professional standing and reputation.

To the builder, certified heating means that the gambling element has been taken out of the heating industry. Certified heating standards have been used in more than 250,000 installations in all types of buildings and they have been proved correct.

To the owner, certified heating means a properly

designed system—a balance between boiler, piping, radiation, and the building's heat loss requirements which assures a comfortable temperature for every room in the building, even during the most severe cold spells. This means satisfied tenants and a low percentage of vacancies.

Furthermore, the metal plate which is placed on all certified heating boilers is the identification mark of certified heating. It adds to the resale value of the building because it satisfies the prospective purchaser as to the efficiency and economy of the heating system.

To the tenant, certified heating answers the question, "What about the heating?" because it means not only proper temperature, but lessened fuel bills and lightened labors.

Certified heating is in effect in the following cities: Albany, N. Y.; Baltimore, Md.; Binghamton, N. Y.; Boston, Mass.; Chicago, Ill.; Cincinnati, Ohio; Cleveland, Ohio; Detroit, Mich.; District of Columbia; Fox River Valley, Wisconsin; Greensboro, N. C.; Houston, Texas; Kansas City, Mo.; La Crosse, Wis.; Louisville, Ky.; Madison, Wis.; Memphis, Tenn.; Milwaukee, Wis.; Minneapolis, Minn.; Newark, N. J.; New York, N. Y.; Norfolk, Va.; Northern California (Oakland and San Francisco); Philadelphia, Pa.; Portland, Ore.; Richmond, Va.; Saint Louis, Mo.; Seattle, Wash.; Sheboygan, Wis.; Utica, N. Y.; Wichita, Kan.



"Standard Practice in Sheet Metal Work" prepared by the Trade Development Committee of the National Association of Sheet Metal Contractors, 336 Fourth Ave., Pittsburgh, Pa., and published by the association, is a most complete treatment of the best methods known to the sheet metal trade and is fully illustrated with scale drawings. Price, \$10.00.



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

OF AMERICAN BUILDER published monthly at Chicago, Ill., for April 1, 1930.
State of New York }
County of New York } ss.

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

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

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

Editors—Bernard L. Johnson, 105 W. Adams St., Chicago, Ill., and Charles G. Piker, 30 Church St., New York, N. Y.

Business Manager—Robert H. Morris, 105 W. Adams St., Chicago, Ill.

2. That the owners are: American Builder Publishing Corporation and Simmons-Boardman Publishing Corporation, both of 30 Church St., New York, N. Y.

Stockholders of 1 per cent or more of the total amount of stock are: E. A. Simmons, 30 Church St., New York, N. Y.; I. R. Simmons, 1625 Ditmas Ave., Brooklyn, N. Y.; P. A. Lee, Hopatcong, N. J.; H. Anderson, 246 Rugby Road, Brooklyn, N. Y.; E. G. Wright, 398 N. Walnut St., E. Orange, N. J.; S. O. Dunn, 105 West Adams St., Chicago, Ill.; C. E. Dunn, 3500 Sheridan Boul., Chicago, Ill.; B. L. Johnson, 105 W. Adams St., Chicago, Ill.; W. A. Radford, 407 So. Dearborn St., Chicago, Ill.; L. B. Sherman, 375 Sheridan Road, Winnetka, Ill.; Mae E. Howson, 105 West Adams St., Chicago, Ill.; Spencer Trask & Company, 25 Broad St., N. Y. Partners of Spencer Trask & Company are: E. M. Bulkley, Acosta Nichols, Cecil Barret, J. Graham Parsons, C. Everett Bacon, William R. Basset, F. Malbone Blodget, Percival Gilbert, Harry S. Allen, Harry A. Minton, William Beckers, W. V. C. Ruxton, all of 25 Broad St., New York, N. Y.; Arthur H. Gilbert, 308 La Salle St., Chicago, Ill.; S. Wallace Roe, 253 State St., Albany, N. Y.; William E. Stanwood, 50 Congress St., Boston, Mass.; John Nightingale, 50 Congress St., Boston, Mass.

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

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

E. A. SIMMONS.

Sworn to and subscribed before me this 31st day of March, 1930.

H. D. NELSON.

(My commission expires March 31, 1931.)



Mortar clinch grooves (1) on all surfaces making contact with masonry make the frame practically self-caulking; Andersen patented noiseless sash pulleys (2) now have machine-turned wheels.

The Andersen MASTER FRAME for Masonry

—the White Pine frame with locked sill-joint

BUILDERS throughout America already are welcoming the new Andersen Master Frame with the patented features which make it so easy to secure a weathertight installation.

Men who build houses for sale appreciate the many new Andersen features—the locked sill-joint, the wide blind stop, the 3" per foot sill slope for perfect drainage.

By using only *genuine* white pine Andersen perfects a frame for life long service.

Thirty five hundred Andersen dealers are available to serve builders in every section of the country. There is one near you.

ANDERSEN FRAME CORPORATION
BAYPORT, MINNESOTA

Andersen MASTER FRAMES

SUPERIORITY
GUARANTEED
by this trade mark



White Pine for **PERMANENCE**
Weathertight for **HOME COMFORT**

die-stamped on the sill as your guarantee that all parts are of *genuine* White Pine.

As on all Andersen Frames, the new Andersen Master Frame for Masonry has the trade mark

FOR WEATHERTIGHT CONSTRUCTION USE *Andersen* SPECIFICATIONS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

How Dan Does It

A Department for Passing "Life Savers"
Along to Other Builders

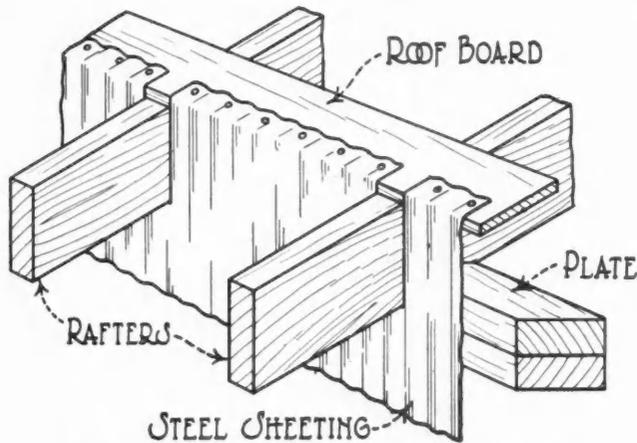
\$2 for an Idea

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

Address Dan-Do-It, care of American Builder, 105 W. Adams St., Chicago, Ill.

Applying Sheet Steel

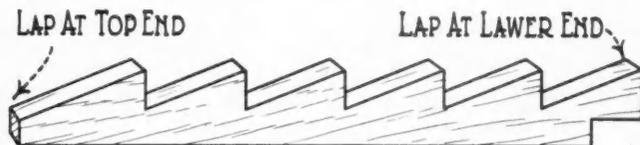
THE method I use in applying steel sheeting to the walls of buildings makes a perfectly tight job under the eaves and between the rafters. It is shown in the sketch. I get the steel long enough to extend above the rafters several inches. I cut out notches in the steel for the rafters to fit into. Nail on one roof board that comes flush up against the steel then bend the steel over this board and nail in place. Place the roofing over this and the job is finished with no holes or leaks anywhere.—EDWARD W. STARZ, Zumbro, Falls, Minn.



A Tight Job at the Eaves Is Obtained by Running the Sheet Metal Up in This Way.

Siding Between Windows

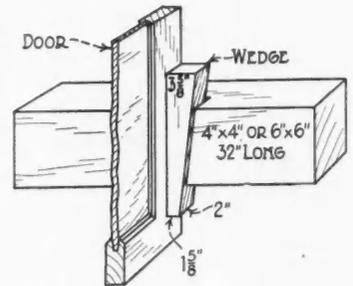
I OFTEN find in the construction of frame houses that windows and doors have to be set so close to each other that it is very difficult to cut siding and place it between them. I have overcome this difficulty by using a piece of 3/4-inch finish. I cut this piece of finish as shown in the sketch to look like siding. This can be slipped between the windows and nailed without splitting. It will not weather check and drop out and can be lapped at the top and along with the regular siding.—V. A. DAVIS, Onawa, Iowa.



Three-Quarter-Inch Finish Cut Like This Looks Like Siding When Placed in a Narrow Space and Will Not Split.

Here's Another Door Clamp

I AM offering another door jack or clamp which is very simple but quite satisfactory, I find. This jack will take any door from 1 1/8 inch thick up to 2 1/4 inch or more. It is simply a piece of four by four or six by six 32 inches long with a slot cut into it about half way. The door is set into this slot with a wedge driven along side of it as shown in the sketch. This device is easily and quickly made and holds the door firmly while working, and without marring it.



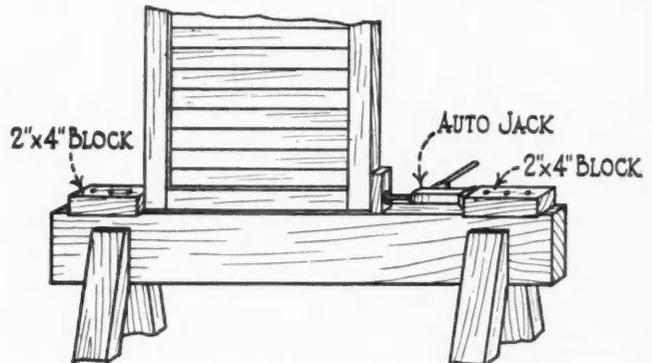
A Very Simple Device for Holding a Door While Working on It.

GEORGE PITMAN,
515 Andrews Ave.,
Kirkwood, Mo.

To Tighten Loose Blinds

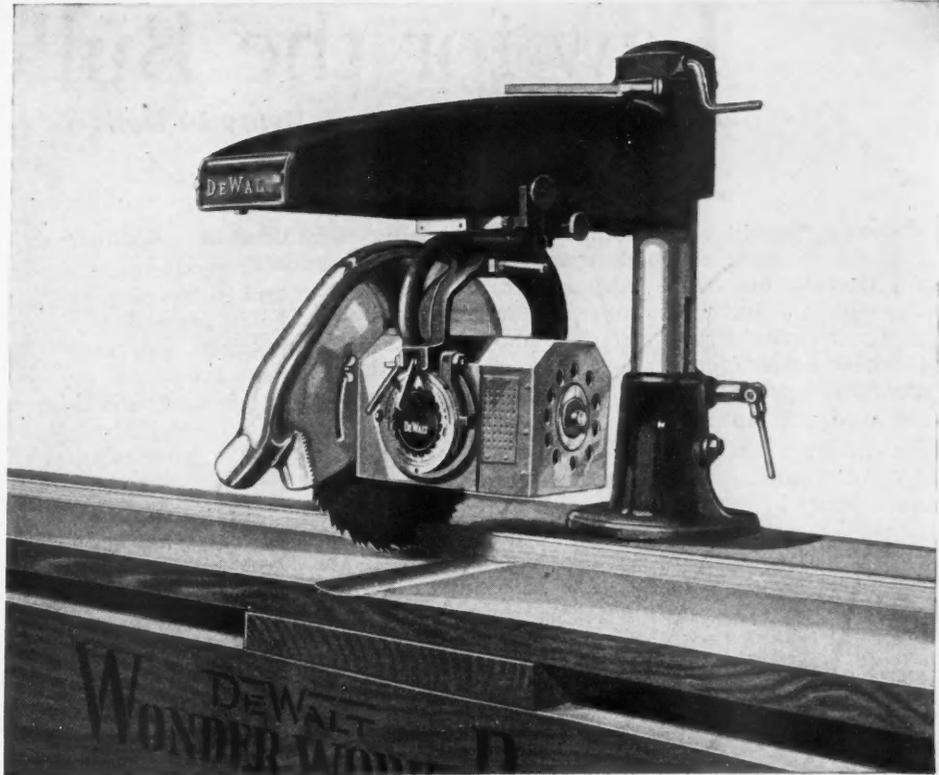
I FIND in my work as a painter and carpenter that a window blind that has not been kept properly painted is soon out of square and the joints open. I use the method illustrated by the sketch for tightening up such frames before repainting and it works very well for me. It closes the joints just as tight as they were when new.

Nail two pieces of two by four on trestle bench made of two by fours. Space these pieces wide enough apart to allow the blind to be placed between them and also a small automobile jack, using a small block of wood between the blind and jack to prevent marring. I first square the blind and then place it in this clamp and close up the joints and repeg it. I then paint it and have a perfectly square, new looking blind.—BERNARD PARSONS, McAfee, Mercer County, Kentucky.



With Three Blocks of Wood and a Small Automobile Jack Wooden Blinds Can Be Tightened as Good as New.

MODEL ES



The latest development in wood cutting

GREATER power, greater speed than ever developed before in a machine of this type are combined in this sturdy DeWalt. It is the only 4 h. p., single phase, direct driven unit built—having ample power to cross-cut and rip 4½" lumber. This surplus of power allows for exceptionally fast cutting of 2" stock.

Motor built by General Electric especially for DeWalt.

A user writes—"Has been in continuous operation 8 hours per day, seven days a week since July 15th (letter dated December 31st) without one minute lost time. We have cut over 1,000,000 feet of lumber with this machine."

Whatever your type of job may be, if there's wood to be cut, the DeWalt will effect real savings. We can prove it by actual facts and figures—and by a demonstration right on your own job.

Mail the coupon today!

DEWALT PRODUCTS CORPORATION

156 Fountain St., Lancaster, Penna.

Sales and Service in All Principal Cities in U. S. A.
and Foreign Countries

Made for Canada by DeWalt Products Corp. of Canada, Calgary, Alberta.



There are other models of the DeWalt Wonder Worker and the DeWalt-Wodack Electric Hand Saw. Full particulars on request.

DEWALT

Wonder Worker

The Economy Wood Worker

DeWalt Products Corporation,
156 Fountain St., Lancaster, Penna.

Please send me full particulars of the

- DeWalt Wonder Worker, Model ES.
- Other DeWalt Wonder Worker Models.
- DeWalt-Wodack Electric Hand Saws.

Your name

Firm name

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Law for the Builder

Liability of Materialman for Delay in Delivery of Materials

By LESLIE CHILDS

IT goes without saying that any unreasonable and unlooked-for delay on the part of a materialman in making deliveries may result in substantial damage to a contractor, who is depending upon prompt deliveries. And in particular may this be true, where a contractor times work upon a building in accordance with his orders for the delivery of different kinds of materials.

The question then of the right of a contractor to hold a materialman liable for loss caused by unreasonable delay in making deliveries may become one of great importance. While the point cannot be covered by any hard and fast rule, generally speaking, a materialman will be liable for damage caused by delay in deliveries, if such delay is unreasonable, in the light of the provisions of the contract of sale. The application of this rule of law is illustrated in an interesting manner in the following case.

Contract for Materials Entered Into

In *Steininger Construction Company v. Bates*, an Arkansas case reported in 252 S. W. 618, the defendant entered into a contract to erect a large bank and hotel building. The contract required the use of a large quantity of tiling of different sizes, and the defendant contracted with the plaintiffs for this tiling. This contract was signed, and in it there was a stipulation for deliveries to be started 60 days later, or about February 20th. In addition, the contract contained the following provision pertaining to the duty of the plaintiffs to make deliveries as agreed upon.

"All promises of delivery are as closely estimated as possible, but seller (plaintiff) does not guarantee deliveries, the same being contingent upon strikes, fires, accidents, acts of Providence and general conditions beyond seller's reasonable control, and seller shall not be subject to any damages or penalties for delays caused thereby."

After the closing of this contract, the defendant went ahead with the work upon the building, depending upon the plaintiffs to make delivery of the tiling as it would be required. At the expiration of 60 days defendant reached a point in the work where some of the tiling was required, but it had not arrived, and defendant was compelled to use brick at an increase in cost instead of the tile in this work.

Defendant took the matter of deliveries up with plaintiffs, and the latter protested they were doing the best they could under the circumstances. Further delay followed, and finally plaintiffs made a shipment nearly six months after the time stated in the contract. This shipment, it appears, was of a wrong size of tiling and should not have been shipped until a different size had been used in the building. This then caused defendant additional delay in the work.

After the contract had been completed, plaintiffs presented a bill for \$1,718.98 as the balance due for the tiling. The defendant then came forward with a counterclaim in the sum of \$1,592.82. The difference of \$126.16 was tendered to plaintiffs, and they

of course declined to accept it as settlement in full.

Defendant's counterclaim was carefully computed and included items for additional cost for the use of brick instead of tile; for tiling left over, caused by delay in delivery; for expense for keeping construction crews on the ground awaiting delivery of the tiling, and other items for freight and tiling which arrived too late. In fact the whole counterclaim was based upon damages the defendant had suffered because of the plaintiff's delay in making deliveries.

The dispute culminated in plaintiffs filing suit to collect what they claimed to be due. And, in reply to the defendant's counterclaim, plaintiffs pointed to the provisions of the contract quoted heretofore which exempted them from liability for damage caused by delay under certain conditions. However, the trouble with plaintiff's contention was that they were unable to show that the delay was caused by any reason named in the contract.

In fact the evidence tended to show that the plaintiffs had consulted their own convenience in making the shipments, and there was no showing that shipments had been delayed by strikes, fires, or acts of Providence. From judgment rendered in the lower court, an appeal was taken to the higher court, and here in passing upon the right of the defendant to recover its damages for the delay in receiving the tiling the court reasoned as follows:

The Language of the Court

"The contract specified that deliveries were to be made about February 20, which was two months after the date of the contract. According to the undisputed evidence, there was not a single shipment of tiling until July 9, and the shipment did not reach destination until some time in August. * * *

"It is obvious from the testimony that there was an unreasonable delay in the shipment of material. Appellees (plaintiffs) reserved in the contract a period of 60 days within which to deliver the material; but there was no shipment until nearly six months after the stipulated time, and then it was a shipment of 8-inch tiling, which could not be used until after the 6-inch tiling had been used.* * *

The court then turned to the contention of appellees (plaintiffs) that the delay resulted from causes which exempted them from liability by the terms of the contract. In passing upon this, the court used the following language:

"The testimony does not support appellees' contention that the unreasonable delay resulted from any such causes. All that is fairly inferable from the testimony is that it was not reasonably convenient for appellees to get the tiling ready for shipment at an earlier date. The language does not justify the interpretation that appellees should be allowed to await their own convenience to furnish the material. The words 'general conditions beyond sellers' reasonable control' refers to the class of obstacles described in the preceding language, such as strikes, fires, accidents, and acts of Providence.

* * *

(Continued to page 150)

How many
homes in
your town
could be
**MADE
OVER
LIKE
THIS**



ABOVE—The home of Mr. W. W. Faulkner, North Tonawanda, N. Y., before rebeautifying with Creo-Dipts.

BELOW—The same house, after Creo-Dipts had been laid over the old roof and sidewalls. Dozens of homes in your community could easily be made new this same way.



DOZENS OF HOUSES in your neighborhood should be rebeautified with Creo-Dipt Stained Shingles. It's quick, easy work, too.

You simply lay the Creo-Dipts right over the old shabby side-walls, and if necessary, right over the old roof. Then what a change. The pictures on this page show just one actual example of how a small, run-down house was given new life with Creo-Dipts.

Rebeautifying with Creo-Dipts saves money for the owner, too. The job in the first place costs little more than two thorough re-paintings. Creo-Dipts over the siding reduce fuel bills 15% to 25%—require enough less upkeep to

save their entire cost in five to seven years.

The Creo-Dipt Company can help you get this profitable remodeling business. We have spent seven years in finding the one right way to sell rebeautifying. This information is available to your Creo-Dipt dealer now. He is ready to co-operate with you. Call him up today. And meanwhile, write for photographs showing typical houses before and after using Creo-Dipts.

\$500 PRIZE CONTEST ON HANDI-WOOD

Have you heard about the \$500 prize contest for the best use of Creo-Dipt's new product, Handi-Wood—a paste that handles like putty, hardens into strong wood? Hundreds of every-day building uses, from filling nail holes to patching woodwork. Win a cash prize for the best suggestion. Ask your lumber dealer or write today for booklet giving complete contest rules.

Made by CREO-DIPT COMPANY, INC.

General Offices: 1596 Oliver Street, North Tonawanda, New York.

Factories, warehouses or sales offices in all principal cities.

in Canada: Creo-Dipt Co., Ltd., 1610 Royal Bank Bldg., Toronto, Ont.

OTHER CREO-DIPT PRODUCTS

HANDI-IRONING CABINET

All metal board turns to right or left. No supports or braces.

HANDI-WOOD

for patching and repairing. Ask about \$500 prize contest.

CREO-DIPT
Stained Shingles
STAINED UNDER PRESSURE

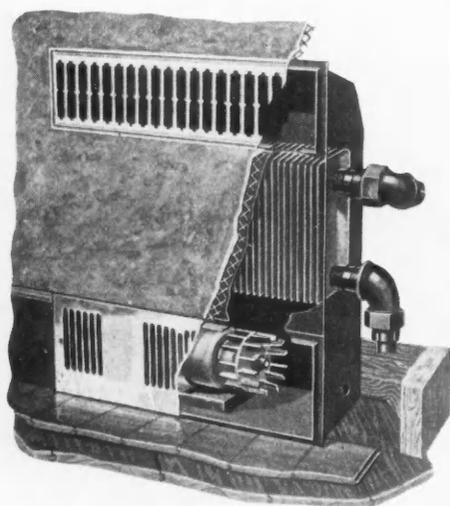
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

What's New in Equipment for Buildings

For further information in regard to any item described in the "What's New" Departments address, American Builder Information Exchange, 105 W. Adams St., Chicago

Concealed Radiation Improved

CONCEALED radiation has recently come to the front as the modern method of heating. Now an improved type of concealed radiation has been perfected which gives a



This Concealed Heating Unit with a Small Integral Fan Gives Positive Heat Control.

positive heat control and circulation of warmed air from any steam or hot water system. It consists of a concealed radiator of the fin type set into the wall between the studs with a small, silent, electric fan which takes the cold air from the floor level, blows it over the heating element and out into the room.

This unit is easily and economically installed. It is completely covered by the regular wall finish except for the inlet and outlet grilles. The outlet grille on which the fan unit is mounted, can be removed by unscrewing two screws, so that the fan may be serviced when required. Little service is required, however, as it is only necessary to fill the oil reservoirs at the beginning of each heating season to insure quiet and satisfactory operation for the entire year.

A simple electric thermostat controls the temperature of each room in which these units are installed, within one degree of the temperature desired, it is stated, so in this way a wide variation of room temperatures can be maintained regardless of the direction or velocity of wind. When the fan is not in operation the unit is inactive and no valve control is necessary. This decreases the possibility of leaks developing.

These units can be installed at windows and doors in such a way that the usual drafts can be made to serve instead of interfere with the heating. The cold air entering around the window or under the door is drawn in by the fan, heated in passing over the heating element and passes into the room as warm air.

Similar units, especially designed for bathroom installation, are made with an electric heating element and can be installed in any house regardless of the type of heating system used or whether these units are used for general heating.

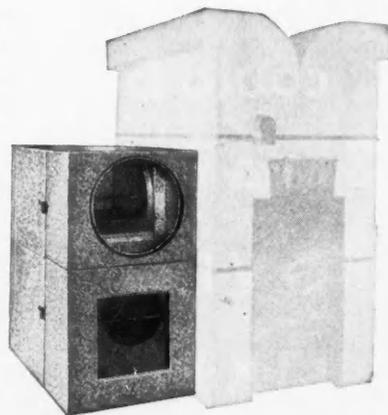


Heating and Cooling Unit

PEOPLE who in hot weather have experienced the cool invigorating atmosphere of modern theaters often wonder

why the oppressive atmosphere in their homes can not be improved in the same way. Also, in the winter season the air in most homes becomes too dry for health and a really effective system of humidifying is badly needed.

To meet this need a leading manufacturer of heating and ventilating equipment has designed and placed on the market a new unit for use with any warm air furnace. It will deliver, through the furnace, to the rooms, a constant volume of warm air, humidified, washed and cleaned. In the summer, using the same piping system, it delivers cooled, conditioned air.



A Single Unit Providing for Both Heating and Cooling the Homes as May Be Required.

This unit comes completely assembled ready for connection to the furnace and electric current. A rectangular metal housing with two large doors gives easy access to the parts and provides ample space for either top or side connection for the furnace air ducts. Inside the housing a wire mesh covered cylinder slowly revolves, dipping into a pan of water and picks up the water in the meshes. The blower placed below draws large volumes of air through two thicknesses of the wire mesh, breaking down the water films and passing the air for distribution through the furnace and pipes.

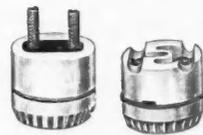
Dirt and dust in the air are deposited in the pan, settling to the bottom where they may be easily cleaned out at intervals. An automatic check valve furnishes fresh, clean water as the water is evaporated into the air. Thus the air, in addition to being water washed, absorbs moisture for ample humidity and creates an atmosphere of health and comfort.

In hot summer weather the operation is the same except that the air is not heated, of course, and the water may be kept cool by keeping a small stream of water always flowing. The water cools the air to a point approaching the hydrant temperature and this air, constantly circulating through the rooms adds greatly to the comfort of the home.



Four New Electric Receptacles

ONE of the well known manufacturers of electric wiring devices has recently announced a new line of removable ring, porcelain receptacles. Four receptacles of two different types are included in this line. The illustration shows the two types. One receptacle is made with screw terminals, another with concealed terminals, another with No. 14 wire leads, and the last with No. 18 wire leads.

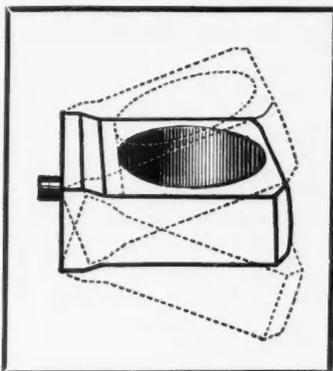


Two New Types of Electric Receptacles.



SHRINKAGE . . . WARPAGE . . . SAGGING . . . BURGLARY

CROSS them off your worry list . . . with this NEW type of LOCK



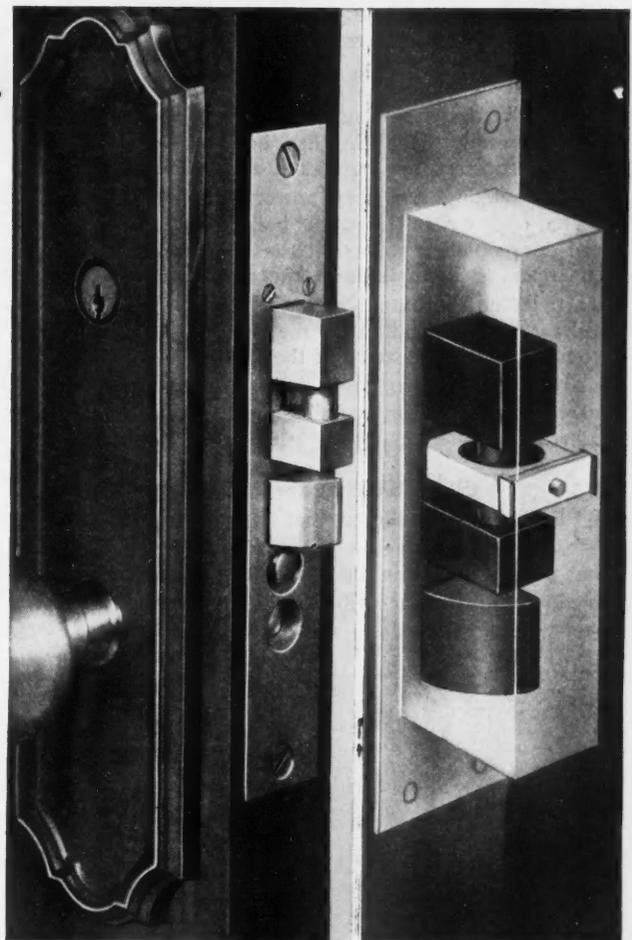
THIS is the exclusive NORWALK Self-Adjustable Strike that engages bolt from any angle, locks the door regardless of shrinkage, warp or sag.

The day is past when door shrinkage, warp or sag can be used to alibi a lock that does *not* lock. This new NORWALK lock has two features no other lock can duplicate. The burglar-proof, jimmy-proof vertical bolt that joins door and casing in an inseparable metal grip. The entirely new, self-adjustable strike that insures an *always* locked door—eliminates annoyance, saves time and money in building maintenance.

A turn of the key makes this NORWALK lock a quick, easy operating latch . . . another turn an impenetrable lock. Ingenious and patented construction features make it the most outstanding example of lock craftsmanship today. NORWALK door hardware complements this interior quality with exterior beauty of design.

Builders, Architects and Contractors interested in this new type lock will be sent further facts upon request.

NORWALK LOCK CO., 12 Warren St., New York



This new NORWALK lock embodies by special arrangement the patented jimmy-proof features of the famous Segalocks.

NORWALK

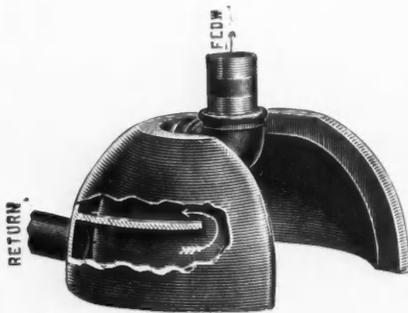
HARDWARE OF QUALITY SINCE 1856

LOCKS

AND BUILDER'S HARDWARE

Cozy Warmth in Every Room

EXPERIENCE has demonstrated that some rooms, due to their location, exposure to the weather or direction of the wind, are hard to heat. While the furnace may be of sufficient capacity and ample fuel is used, the heated air cannot be forced through pipes leading any extraordinary distances.



Such a Coil Increases the Heating Capacity of Any Warm Air Furnace.

By placing an auxiliary boiler just over, not in, the fire of the warm air furnace, distant rooms or any room for that matter can be heated by hot water radiation. These auxiliary boilers will add materially to the heating power of present equipment assuring added capacity in the case of additional rooms or extensions to the home.

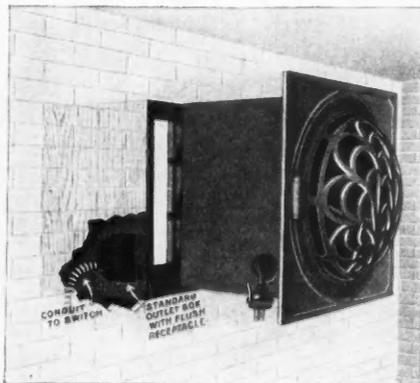
They are made in both base and ring style. The base section is constructed so that it can be placed directly over the fire in which position its large heating surfaces are subjected to the strongest effects of the fire making it a very powerful boiler.

The opening in front of boiler is placed opposite the feed door opening to permit the addition of fuel to the fire. The opening in top allows the flame and reflection of the fire to come in contact with the surfaces of the furnace as without the application of the boiler, thus detracting little from the hot air capacity of the furnace.

These boilers are made in styles and sizes to fit any furnace in capacities ranging from 40 to 700 square feet radiation.

Ventilator Has New Features

HERE is a ventilator that is unusual mechanically and also is attractive in appearance. The ornamental grill that serves to screen the fan blades adds a note of beauty to the product that will appeal to any home owner, and being dome shaped it allows for an unusually large air passage. This device will move 600 cubic feet of air per minute and can be installed in a wall of any thickness in any brick, frame or stucco building.



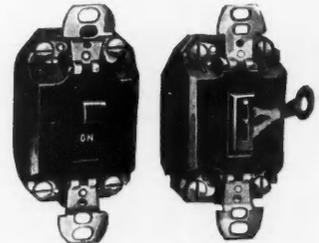
Mechanically Improved, Attractive in Appearance and Easily Installed.

The motor used is the induction type which does not interfere with radio reception and the absence of brushes eliminates fire hazard. No unsightly strings or chains are necessary, for the control is automatic from any standard wall switch. The louvers, or outside shutters, open automatically when the motor is started and close tightly when the switch is off. These louvers assure perfect protection from the elements and also provide for a very neat appearance of the installation from the outside.

The only attention that this ventilator needs is an occasional oiling of the bearings which is easily done. Its simplicity reduces any possible service requirements to a minimum and it is so easily installed that it has a special appeal to the builder's viewpoint.

Improved Tumbler Switches

A NEW series of flush tumbler switches, wholly enclosed and having both cups and covers made of black bakelite, is being offered. Handles are of brown bakelite. Switches of this series are single pole, double pole, three point, four point, and single pole quadruple break, the last named being designed for heavy duty.



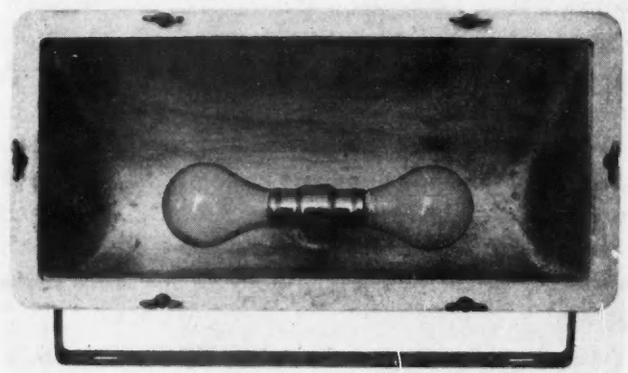
These Switches Offer Remarkable Durability.

The manufacturer reports that tests under actual service conditions, with lamp loads, show these switches to be of uniformly remarkable durability. The cups being especially shallow, 1 15/16 inches, ample wiring space is provided, and, due to construction and special bakelite stops, these switches are unusually quiet in operation. All switches of this series can be supplied with a luminous insert or lock type handles.

New Cornice Floodlight

A NEW type of floodlight, which has recently been introduced, is intended for cornice, relief and outdoor home lighting. It is suitable for mounting on top of a cornice to eliminate the shadow created from floodlights mounted below. It has a low mounting height so that it will not be conspicuous along the cornice.

This new floodlight has a wide light distribution, effective for short range floodlighting. The unit consists of an inex-



An Efficient Cornice Light Which Eliminates Shadows Created by Floodlights Below.

pensive hot-dip galvanized cast iron casing equipped with a twin socket for two 50, 60, 75 or 100-watt general service lamps. The inner surface of the casing, which is the reflecting medium, is sprayed with several coats of aluminum paint, providing a highly efficient reflecting surface and giving a wide distribution of light.

A trunnion bracket is provided for mounting. By loosening a wing nut at each end of the casing it may be adjusted to any position. The floodlight is provided with a clear glass door, but color plates are available if required.

CHOOSE THESE ROOFS SELECTED BY COLOR EXPERTS

Why guess about roof colors and color blends when you can choose roofs of asbestos or asphalt shingles selected for their beauty by color experts?

The soft, non-fading colors used have been scientifically blended by master blenders. As a result you have a wide choice of shingles in bright greens, blended browns, warm reds, rich purples and shaded grays. There are also mixed-tones blended on the modern principle of harmony and contrast.

You also have these colors on

both individual shingles and labor-saving strips, in various popular designs. Moreover, there is a choice of weights and thicknesses to meet your varying construction requirements.

Regardless of the style or price homes you build or the roof lines you remodel, you will want to see these colorful, durable, fire-resisting roofs chosen for their beauty by color experts.

See them at your dealer's showroom or write to the nearest office for color charts and descriptive literature.



The RUBEROID Co.

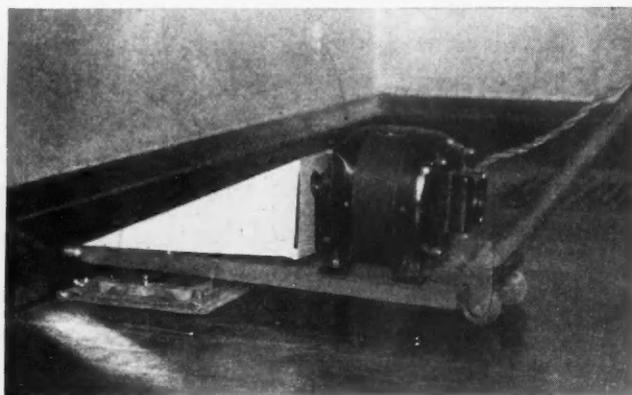
Offices: New York - Chicago - Boston (Millis) - Erie - Baltimore - Mobile



FLOOR MEN

Do You Know

How much money you are going to lose in the future by not buying this edging machine? Forget what you have lost in the past—that is gone. Get the machine now to increase your profits in the future.



THE HIGH SPEED POWER SANDING HAND MOTION M. and W. FLOOR EDGER

Two shoes 5x8 felt base working horizontally 850 strokes each, per minute.

Bevel gear drive pressure cup lubrication.

Flexible coupling to uniform load on motor.

Double action eccentric cam drive.

Bronze bearing sliding carriage.

Equipped with $\frac{1}{4}$ h. p. G. E. motor, of any frequency, 25 to 60 cycle, 110 volts. Weight over all about 65 pounds.

Quick interchanging shoes, felt base, using cloth back durundum paper held by clamp on each end.

Adjustable rubber tipped bumpers. Sands edges about nine inches out from base overlapping previous cuts.

Actual test has proven to be eight times faster than hand finishing with better work, as all sanding is done with the grain.

Can be used on stair treads, and small places by removing the handle, and getting in all the corners. Can put coarse paper on one shoe, fine on the other, by lifting up on the handle, all the weight of machine is thrown onto the shoes, with slight pressure to right or left machine shuttles right across the ends of the floor. Standing up to operate.

M-W Edgers are guaranteed for a period of one year against all defective parts or inferior workmanship.

*It will pay you to get the facts—priced to sell.
Mail coupon now.*

M. and W. Edging Machine Co.,
1749 Marine St., So. Bend, Ind.

Without obligations send me the facts pertaining to your floor edger.

Name.....

Address.....

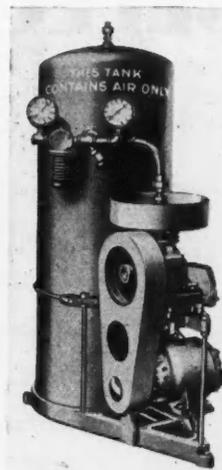
Air-Operated Fresh Water System

THIS type of fresh water system is designed for suburban and country homes, public buildings and schools where city water is not available. The outstanding feature is the delivery of water, fresh from the well, spring or other source of supply direct to the faucets without the use of water storage tanks.

The system consists of the power unit and the water pump. The power unit which is made up of an electric motor, air compressor, air tank and automatic control, all completely assembled, can be installed in the basement, garage, shed or barn, irrespective of the location of the source of water supply.

The water pump which is installed in the well, spring or other source of water supply is suitable for wells having a four inch diameter or more, the pump being operated by compressed air from the power unit.

This system is good for lifts up to 150 feet and is built in capacities from 600 to 1200 gallons per hour. Only one power unit is required to deliver water from various sources such as well, spring, cistern, lake or stream, requiring only the installation of an additional pump in each source of supply, the installation of the air pipe line from the air tank to the pump and the installation of the water pipe line from the pump to the faucets.



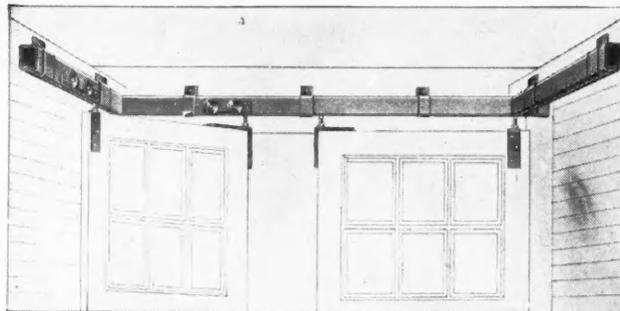
A System Which Supplies Fresh Water Direct from the Well.

Garage Door Hangers

NOTHING can detract more from the pleasure of owning a modern garage than to have it equipped with hangers which do not operate smoothly and satisfactorily over a long period of time. With this situation in mind, the hangers shown here are offered by a manufacturer of long standing in the trade to meet and stand up under the hardest kind of usage.

All wheels and swivel joints in these hangers are carried on the highest grade ball bearings running between carefully machined and hardened raceways which guarantees their smooth operation. Wheels are of fine grain cast iron but can be furnished in solid fibre at no additional charge for inside usage where extreme silence is required.

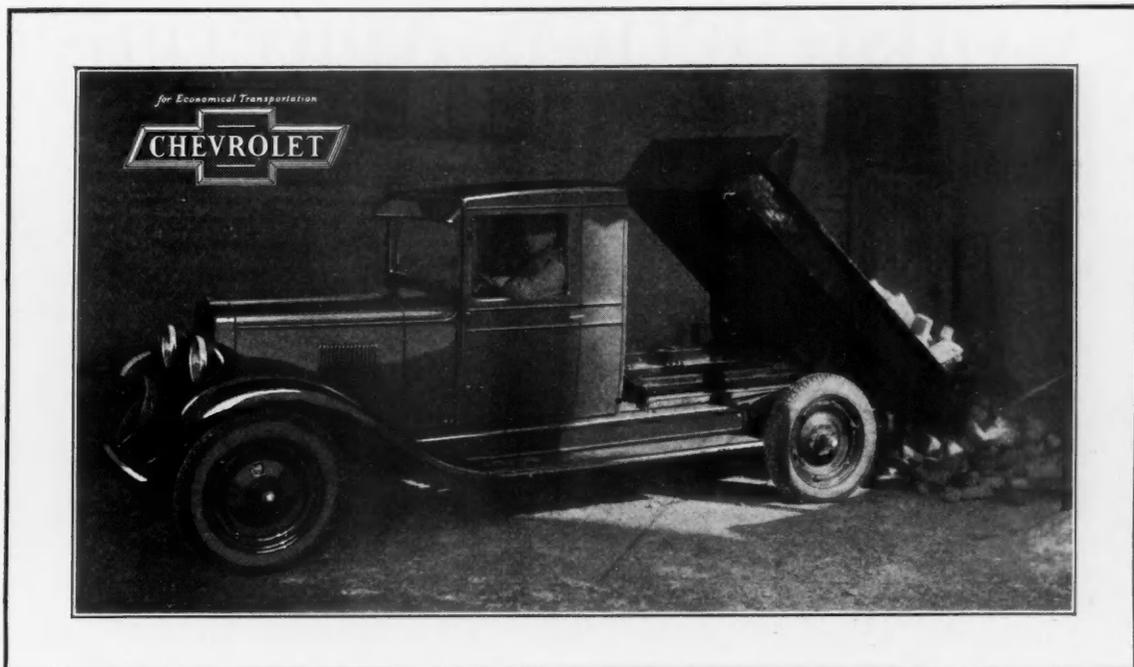
Both vertical and lateral adjustments provided for correcting any warpage of the doors are fitted with a locking device to insure against any tendency to loosen during rough



This Hardware Is Designed to Eliminate Trouble with Garage Doors.

usage. All exposed parts are smoothly finished with a double heavy coat of black enamel. Necessary screws and bolts for erecting are furnished and after erection of hangers and track, they require no further attention.

IT'S WISE TO CHOOSE A SIX



... and Chevrolet 1 1/2 ton trucks are priced as low as \$520

More and more firms in every line of business are learning it's wise to choose a six-cylinder truck! And here are the reasons why. Six-cylinder flexibility means quicker trips through city traffic. Six-cylinder speed means better time on long distance runs. And six-cylinder smoothness means greater freedom from destructive vibration.

The new Chevrolet 1 1/2 ton truck, powered by a 50-horsepower six-cylinder valve-in-head engine, offers all the advantages of six-cylinder performance—at prices as low as \$520, f.o.b. Flint factory. And it provides, in addition, every feature of advanced chassis design: a heavy 6-inch channel steel frame; four long semi-elliptic springs; a big, rugged, spiral bevel gear rear axle; a time-proved 4-speed transmission; big, powerful 4-wheel brakes; and a ball bearing steering mechanism.

And remember that the Chevrolet six-cylinder trucks are as economical as any haulage unit you can buy—in fuel consumption, in upkeep, and in maintenance! See your Chevrolet dealer.

CHEVROLET MOTOR COMPANY, DETROIT, MICH.
Division of General Motors Corporation

- 1 1/2 Ton Chassis \$520
- 1 1/2 Ton Chassis with Cab \$625
- Light Delivery Chassis \$365
- The Sedan Delivery \$595

All prices f. o. b. factory, Flint, Michigan



The New Chevrolet Roadster Delivery

The new Chevrolet Roadster Delivery, with its low price, smart appearance and large loading space, is an exceptionally desirable unit for light delivery service.

\$440

f. o. b. factory, Flint, Michigan
(Pick-up box extra)

CHEVROLET SIX-CYLINDER TRUCKS

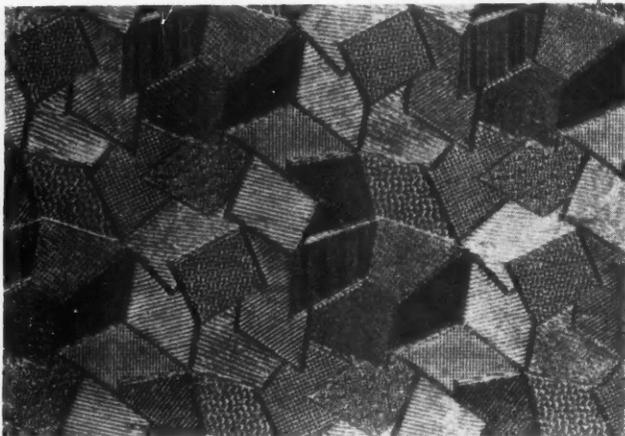
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

What's New in Construction Materials

For further information in regard to any item described in the "What's New" Departments address, American Builder Information Exchange, 105 W. Adams St., Chicago

Metal Coated Wallpaper

A METAL wallpaper has recently been placed on the market. This is not a bronze-powder coated paper but an actual, paper-thin sheet of aluminum backed with paper. It has a bright, non-tarnishing finish which retains its luster indefinitely and when dusty or soiled may be restored to its original appearance by merely rubbing with a damp cloth.



Paper Veneered with a Thin Sheet of Aluminum Offers Interesting Decorative Possibilities.

Rich embossed patterns add to the natural sparkle of the metal and result in a wall covering which is both novel and attractive. It does not glare or reflect light but diffuses the light into a soft restful glow, and brightens up the room in a remarkable way. In sun-rooms, bathrooms and hallways, it is particularly appropriate.

The silver finish of this new wall covering is a neutral tone that harmonizes with practically any decorative scheme and is especially suited for the modernistic vogue now so popular in decoration. Some unusual effects have been obtained by stippling or coloring the metal covering after applying it to the wall. A little oil paint is put on a cloth and rubbed over the metal to give a soft color one that is particularly pleasing to the eye.



A New Type of Window Frame

ONE of the oldest and best known manufacturers of window frames has recently brought out a new type of frame embodying eight distinct new features which, combined with exactness of machine work and fine quality of lumber, assure superior, weathertight construction. Production is under way on a quantity basis.

The eight new features on these frames are as follows:

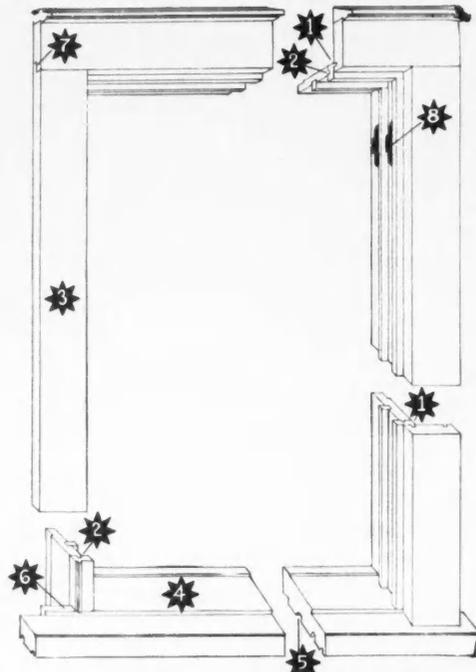
1. The blind stop is tongued into the outside casings which weather seals the joint exposed to the elements.
2. The jamb is tongued into a blind stop, another weather seal stopping all air leakage through the jamb section of the frames.
3. The outside casings are of $1\frac{1}{8}$ by $3\frac{3}{4}$ -inch material, making for improved appearance and symmetry of the narrower casings used.

4. There is a steep slope to the sill, three inches to a foot or half again as much as in the older type, which makes perfect drainage. The $\frac{1}{4}$ -inch storm shoulder makes the sash much more effective.

5. There is a caulking groove on the under side of the sill which breaks the smooth under surface of the sill and provides anchorage for oakum or mineral wool caulking.

6. There is an extension of the sill to the form shoulder behind the side casing which, with the $\frac{1}{4}$ -inch offset forms an effective weather seal at this point.

7. A closed joint between the side and head casing is a tongued joint which closes tightly, a joint that in many frames allows a direct cold air passage to the pocket.



Window Frames Which Incorporate Eight New and Improved Features.

8. The closed face noiseless pulley is the latest improvement in pulley design. The closed face makes the pulley jam-proof and closes another cold air inlet. The heavier steel and noiseless bushing provide a most substantial and silent pulley.



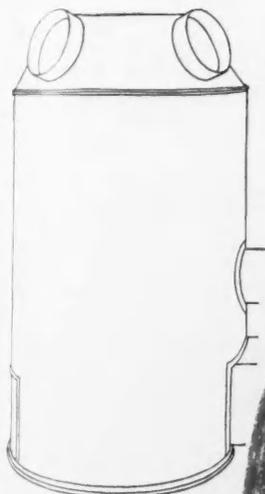
Announce Colored Code Wires

A COMPLETE line of colored code wires which permit positive identification of all circuits and insure convenience in testing, has been announced by one of the large manufacturers of electrical equipment. Eight colors are furnished: black, red, green, white, blue, yellow, brown and white, with tracer. Ease and speed in installation is insured by the smooth, clean finish of these wires.

Through the use of colored wires in new buildings, alterations and additions to the wiring can be made more readily as the necessity for tracing circuits and testing lines is entirely eliminated.

These colored code wires form an integral part of this manufacturer's electric wiring system and are available in No. 14 solid single braid, in code, intermediate and 30 per cent grades.

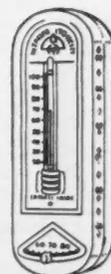
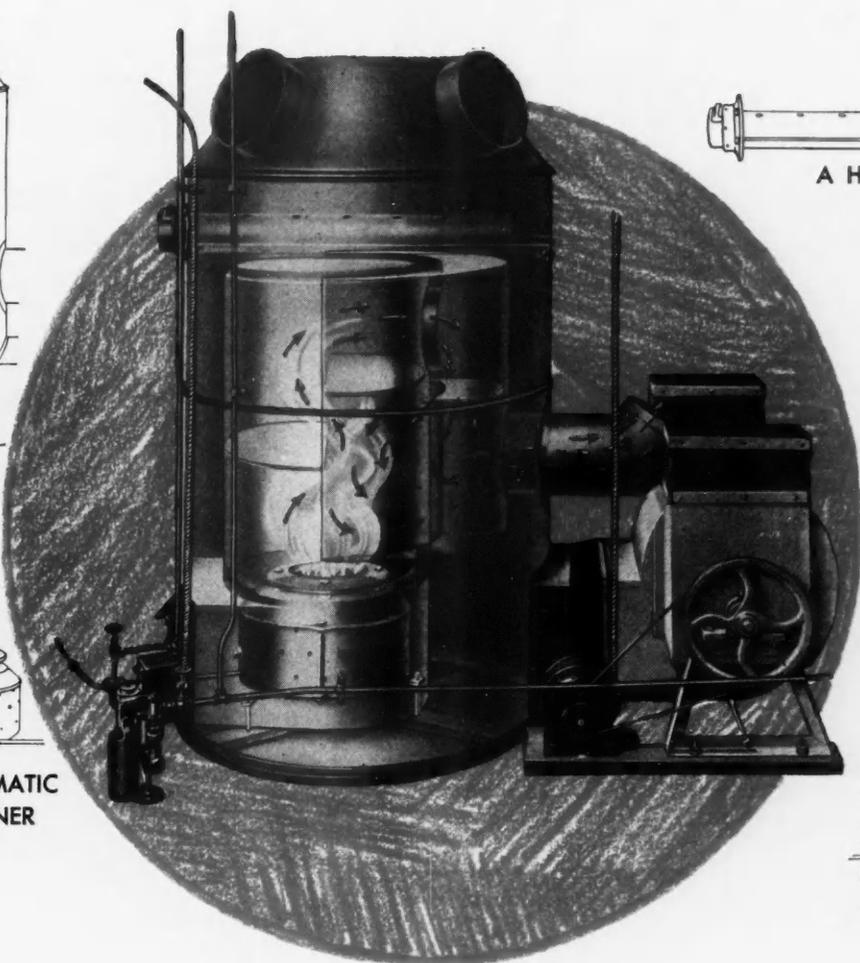
••••• **IN ONE UNIT** •••••



A WARM AIR FURNACE



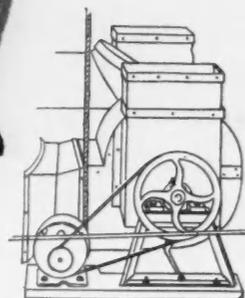
A HUMIDIFIER



A THERMOSTAT



AN AUTOMATIC OIL-BURNER



A FORCED AIR BLOWER

ALL
for the price of a good oil-burner alone

From architects, speculative builders, everyone, come inquiries on this latest marvel of the heating industry — The Piatt Automatic Oil-Burning Furnace. The heating element is the famous Piatt principle tested on battleships, in use in hundreds of homes, schools, apartment houses in other Piatt appliances. It is safe, certain and employs the simplest kind of construction.

The various parts are not in any sense attachments but the whole scientifically designed and built as a complete heating unit. Each part is calculated with precision to work per-

fectly in relation to the complete assembled plant. Smaller heat-conductor pipes may be used with a resulting gain in head room. The furnace need not occupy the middle of the cellar and additional space is made available.

The force air feed keeps a flow of warm, moist air circulating through all registers and all corners in the wintertime. It can be used to stir up cool breezes in the summer. The Piatt is considered the heating sensation of the century. Examine its construction closely, send for complete technical data which will be gladly furnished.

MOTOR WHEEL CORPORATION, Heater Division • LANSING, MICHIGAN

••••• **PIATT** •••••

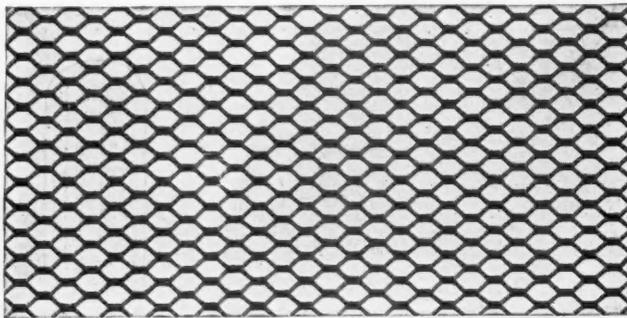
OIL-BURNING APPLIANCES

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

New Small Mesh Metal Lath

THE small mesh metal lath shown here was specially designed to reduce construction costs and to save in plaster materials and labor of application. Because of its low cost, and labor and plaster economies, it makes the fire safety of metal lath practical for every type of structure. Stocks are maintained at the manufacturer's warehouses in all parts of the country making it readily available to dealers and contractors everywhere.

This small mesh lath has 25 per cent more openings in a given area with a proportionate increase in the area of the



The Small Mesh Makes a More Rigid Lath and Saves Labor and Materials in Plastering.

steel. The increased proportion of steel gives the sheets great rigidity. They are easily handled and quickly erected. Less time is required for applying the scratch coat and truing up the wall than with previous types of lath, it is stated.

The small openings prevent excess penetration of plaster minimizing droppings. As much as 15 per cent less plaster is required for the scratch coat for this reason, with a proportionate saving in labor. The large number of openings permits the formation of more keys to give sufficient bonding of the plaster to the lath.

This lath is made in four weights, 2.2, 2.5, 3.0, and 3.4 pounds to the yard. It is available in either copper alloy or open hearth steel sheets and the 2.5 pound and 3.4 pound weights are available in galvanized stock. All material except the galvanized stock is painted.



Lumber Treated by New Process

AFTER extensive laboratory research and experimental introduction in its local markets, one of the large lumber manufacturing companies has placed on the market a treated lumber which offers complete protection against the attacks of termites and fungi at a moderate cost. The importance of this new treatment is indicated by the fact that termites are increasingly threatening homes in 42 states, doing much of the damage which is commonly thought to be merely rot.

The new process of treatment not only renders the wood unpalatable to termites, removing the food supply on which they thrive, but also kills them. When the treated lumber is used for joists, sills and subfloors, there is little chance for termites to reach untreated lumber. Since the treated lumber is odorless, there is no objection to its use in subfloors.

This treatment is not injurious to human beings, it does not make the lumber difficult to work and the mechanical strength of the wood is not impaired, in fact it may be somewhat increased. The treated wood is intended primarily for use in house and apartment construction and in similar cases where the wood is protected from the elements.

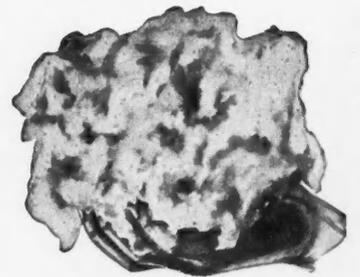
It should be used at least for the subfloor of the first story and all lower woodwork for adequate protection. As an additional safety measure, other woodwork such as sheathing may also be of treated lumber. If any of the foundation work is left untreated, the termites will readily gain entrance.

Because a pressure process is not necessary in this treatment, and because only a brief drying period is necessary, almost immediate delivery is possible. Plants for custom treating are being established rapidly throughout the country and the treated lumber will be sold through the regular lumber dealers. Because a pressure treating process is not necessary, the treated lumber can be marketed at a very reasonable increase in cost over the untreated lumber. The treated lumber has a clean, dark brown color.



All Mineral Insulation

ALTHOUGH mineral insulating wool is by no means new in the industrial world, it still has the interest of novelty to the average home owner. However, through its recent wide use in house boilers, gas and electric ovens and other household appliances, it is fast becoming well-known. The surprisingly high insulating qualities of this material are quickly advertising themselves wherever modern home equipment is being used.



Wool-Like Substance Made Entirely for Mineral Matter.

This material is manufactured from a particularly suitable silicate rock from the manufacturer's own quarries.

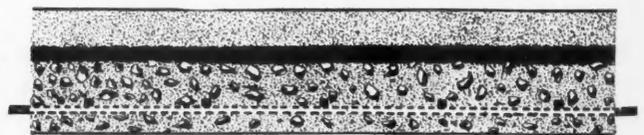
The rock is melted and converted into a fibrous state very similar in appearance to sheep wool, which confines millions of tiny insulating air spaces. Being made from rock, it naturally will not burn or deteriorate, but is as lasting as the rock from which it is made.



Bonds Old and New Concrete

IT IS well known that portland cement does not adhere perfectly to old concrete and even the stop for dinner hour may crystallize the concrete sufficiently that the afternoon's work is distinct and separate from the morning's work. There are two ways to make a perfect monolithic job, one is to continue the work without stopping, the other is the use of a bonding preparation to join the old and new work.

This bonding preparation is also valuable in laying the top finish on floors or other surfaces. There are many reasons why it is not advisable to lay the top finish immediately after the concrete is poured. If it is laid later the concrete can be tested for loads, imperfect work can be detected, the level becomes fixed, shrinkage cracks can be filled and when the top finish is laid no disfiguring patching need be done.

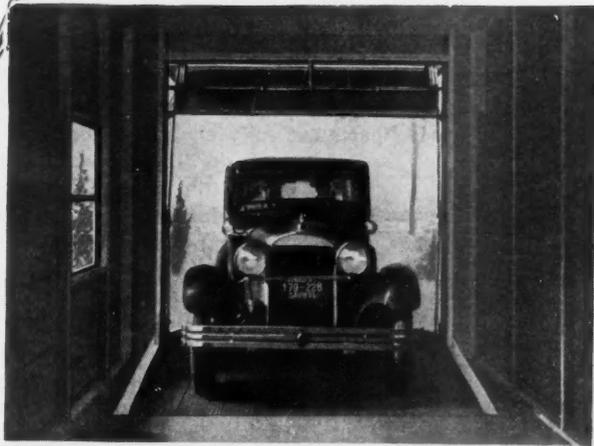
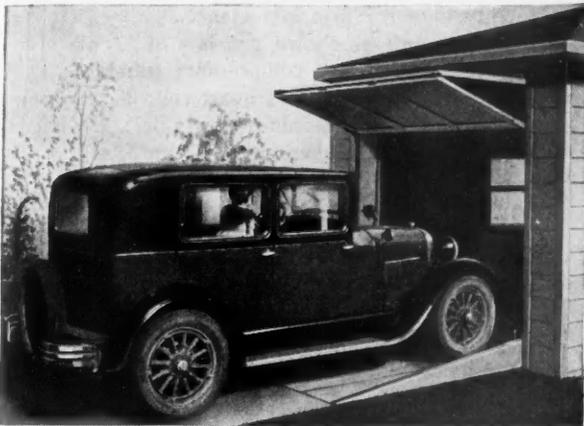


The Heavy Black Line Indicates the Bonding Material Used to Bond Top Finish to Concrete.

If this bonding compound is used to bond the top finish to the concrete a perfect bond is obtained. The result is a superior job all around. This compound contains no muriatic or sulphuric acid which are sometimes used to clean concrete. These acids act on the lime in the concrete and produce a spongy porous surface which prevents a good bond. They also are likely to penetrate the concrete and cause corrosion of the reinforcing steel. The use of this bonding material eliminates all such trouble.

Announcing~

The Automatic Garage Door



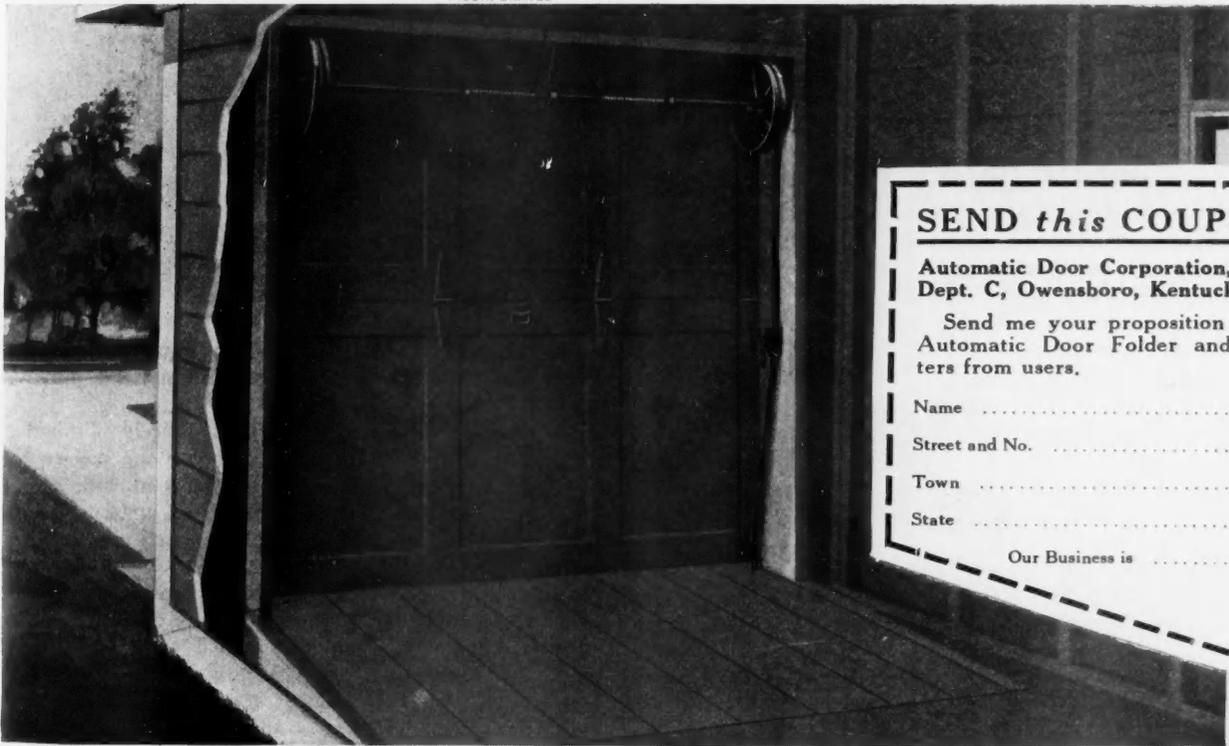
Opened by the Car Closed by the Car GOING IN OR OUT

HERE is the most popular, most profitable Garage Door yet offered. Just going on the market. Reception already exceeds all expectations. ENTIRELY MECHANICALLY OPERATED. Driver does not have to get out of car to open or close garage door. Weight of car approaching outside or inside, operates simple positive mechanism swiftly and smoothly raising door. When car has safely cleared, door glides down and is automatically latched. No electric motor. No switches. No expense for current. Five years' constant use in U. S. and Canada and no trouble in snow, sleet, ice

or rain. REASONABLY PRICED. Can be applied to old garages or new. Saves time, saves clothes, insures protection at night, conserves garage heat.

BUILDERS AND DEALERS: Territory is being allotted. Mechanism and door sold separately or as unit. You can use mechanism and build your own door, or we will supply doors complete. USE THE COUPON BELOW for detailed illustration, full description, and our liberal proposition.

AUTOMATIC DOOR CORPORATION INCORPORATED **OWENSBORO, KENTUCKY**



SEND this COUPON

Automatic Door Corporation,
Dept. C, Owensboro, Kentucky.

Send me your proposition with Automatic Door Folder and letters from users.

Name

Street and No.

Town

State

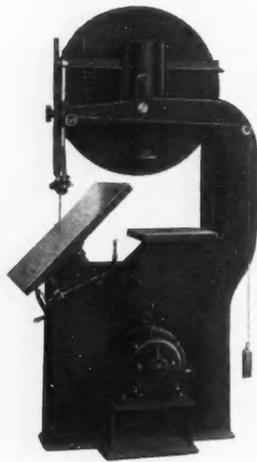
Our Business is

What's New in Contractors' Equipment

For further information in regard to any item described in the "What's New" Departments address American Builder Information Exchange, 105 W. Adams St., Chicago

New Ball Bearing Band Saw

A NEW, 30-inch, ball bearing band saw is shown in the illustration. This machine has the 2-h.p. electric motor built in and all moving parts are fully enclosed except that



All Moving Parts Are Fully Enclosed for Complete Safety.

portion of the saw between the table top and the saw guide. The guarding enclosure of the upper wheel moves up and down with the wheel and its front can be swung open on hinges to allow free access to the wheel for assembling the saw blade. The blade is tacked and tension adjusted by hand wheels so placed as not to interfere with the capacity height of the machine.

The frame is of iron cast in one piece. It is shaped for rigidity, appearance and non-interference with capacity stock. Cast iron, spoke wheels are used with rubber bands. The front of the lower guard consists of a door which may be swung open allowing free access to the wheel and lower guide. All of the guards are of sheet metal with angle frames. The upper wheel is ball bearing mounted and the lower wheel is mounted on the shaft of a ball bearing motor.

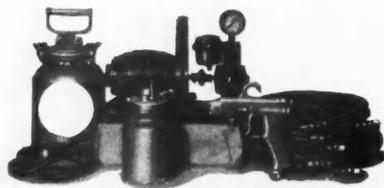
The table may be tilted in either direction and locked in any position by means of a hand wheel, the degree of tilt being indicated by a scale. The table measures 14½ by 14½ inches. The height of the machine is 64 inches and it occupies a floor space 28 by 53 inches. Regular equipment includes a ½-inch saw blade 16 feet 8 inches long.



Unit for Interior Painting

THAT low-pressure air painting equipment has proved both popular and practical is evidenced by the fact that a well known manufacturer of a wide line of low-pressure air-painting units has now brought out a new model of the same type.

It is a very compact, light weight unit in which every cubic inch of bulk and every ounce of weight has been made to give a strict account of itself. The weight of the unit with pressure feed tank is only 42 pounds. It plugs into any light socket.



New Low Pressure Spray Paint Unit Designed for Interior Decorating of All Kinds.

This unit has been developed for interior painting work on walls, panels, trim, radiators, etc., where work must be done accurately, and when done by hand, consumes a large amount of time. It uses but 15 pounds of air pressure—hence the operator can stand near the work and not be

bothered with fog, mist, or rebound, as these occasional drawbacks to spray painting are practically eliminated. It is also used for glazing, stippling and blending colors—work where quality is of the first importance.

The complete unit as shown consists of ¼ h.p. universal motor, direct drive; rotary compressor; standard "D" gun; 1-gallon aluminum paint tank; 1 quart cup; 28 feet paint and air hose; pressure gauge; air filter; oiler; electric cord; switch; cast base with rubber feet.



Improved Universal Woodworker

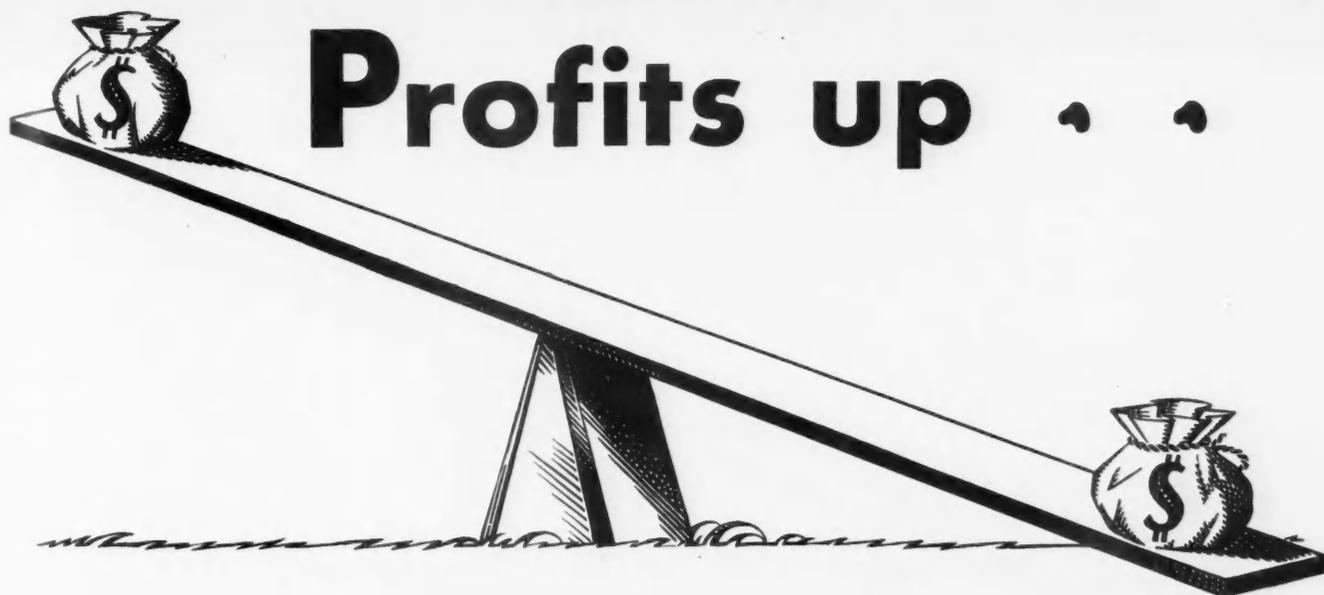
THE universal woodworking machine shown in the illustration is manufactured by one of the leading makers of machine tools. It consists of a band saw; tilting top, raising and lowering saw table; jointer; single spindle, reversible shaper; and horizontal boring or mortising attachment. Each of these units is equipped with a separate motor, as may be seen in the illustration.



A Universal Woodworking Machine Which Eliminates the Use of Clutches for Starting and Stopping.

The construction of this machine entirely eliminates the use of clutches for starting or stopping the different units and each motor on the machine is equipped with a separate starting and stopping switch so that one unit may be operated separately, or the entire machine may be run at one time if desired.

This machine is also furnished with a master switch by which all motors may be stopped at one time if the operator wished to do so. It can be supplied with either a 27-inch or 32-inch band saw and with either a 12-inch or 16-inch jointer. It is of ball bearing construction, is substantially built and offers a number of advantages in the direct transmission of power to the various spindles to which the motors are applied.



Profits up

costs down

There is a threefold way to prove that Dodge Trucks lower hauling costs and increase profits for builders. Simply ask owners, inspect and compare these workers and test one—with you behind the wheel.

By such thorough investigation you will know that Dodge Trucks have the power to pull, the speed to save time, the dependability to maintain schedules, the economy to save money, the long life to lower depreciation costs, the good looks to attract patronage—all qualities that keep costs down and profits up.

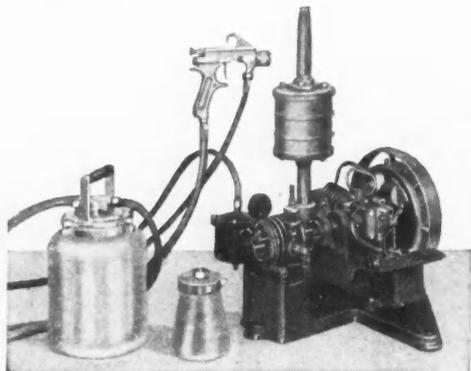
There are 124 standard Dodge Trucks to select from. They are built in capacities ranging from $\frac{1}{2}$ -ton to 3-ton, in various wheelbases, with optional gear ratios, tire sizes and body types. Your Dodge Brothers dealer can show you the one that fits your needs.

DODGE TRUCKS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Light Weight Painting Outfit

A NEW gasoline engine driven paint sprayer has recently been placed on the market. This unit weighs only 70 pounds, which is a distinct advance in the field of self-powered portable spraying equipment. The compressor has an air displacement of over five cubic feet per minute, which assures the user of commercial capacity. The two-gallon pressure tank holds enough material for covering 800 square feet of surface with one filling. A high-grade commercial gun completes the equipment.



Self-powered Painting Outfit That Weighs Only 70 Pounds.

The gasoline engine is of the air-cooled type. It is said to be very economical and will operate six hours on a gallon of gasoline. The unit was designed primarily for the contractor who works on buildings before electric current is available, or where current characteristics differ from locality to locality.



New Disc Grinder

A NEW, seven-inch disc grinder has just been announced as an addition to a line which already includes a nine-inch grinder which has proved to be a time saver over the hand method of smoothing welded and soldered joints and seams, cleaning dies, smoothing metal surfaces before painting and any other work requiring filing, sanding and emerying.

This new grinder has ample power and with the use of a felt backed abrasive disc it will handle these operations



This Disc Grinder Is a Flexible Unit Applicable to a Wide Variety of Work.

quickly and satisfactorily. The improvements made on this seven-inch grinder have been included on the nine-inch grinder. These include refined design, a removable pipe handle and right and left hand bosses, making it possible

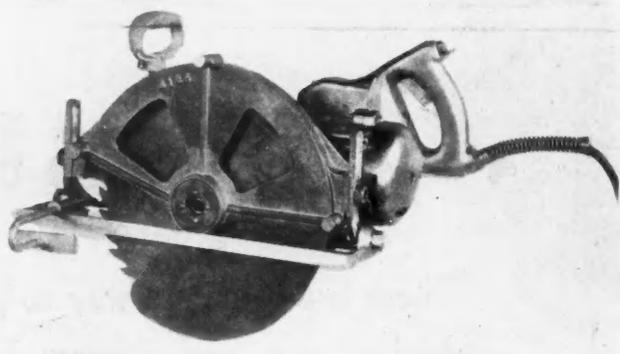
to quickly and easily change the grinders for right and left hand operations.



Two New Power Hand Saws

A WELL known manufacturer of portable electric tools has just placed on the market two new electric hand saws which are similar except for the size of blade and motor used. One model carries a 10-inch blade and is powered with a $\frac{3}{4}$ h.p. motor of standard make. The other carries a 12-inch blade and is powered with a one h.p. motor of the same make. These give cuts of $3\frac{3}{8}$ inches and $4\frac{1}{8}$ inches, respectively.

In both models the slipper plate base can be raised or lowered for adjusting the depth of cut. A swinging saw guard automatically pushes back out of the way when cutting pressure is applied and returns to the guarding position the moment the pressure is released.



These Saws Are Designed to Give Continuous Service with Freedom from Upkeep.

The upper portion of the blade is covered with a saw guard of cast aluminum the side cover of which can be quickly removed for changing saw blades by loosening three knurled nuts. The entire guard is designed so that it can not collect saw dust. A ripping guide is mounted in front of the clipper plate to facilitate long cuts.

The machine is fitted with ball bearings. All gears and shafts are made from heat treated chrome nickel steel, insuring long life and minimum wear. All gears are packed in grease and require attention only once or twice a year.



Two Improved Aerial Grinders

A WELL-KNOWN manufacturer announces two new aerial grinders, with five and six-inch wheels. On these new grinders, as on all this company's electric tools, the smooth design is maintained, having a minimum of humps and hollows to collect dirt and grease. The fine balance and comfortable handle, with convenient switch, make these grinders exceptionally easy to use.



One of Two New Aerial Grinders Designed for Ease of Use.

The new seal type of construction is grit proof. They have ball bearings throughout. Universal motors with plenty of reserve power will take care of any production job.

News of the Field

Convention and Show Dates

May 21-23, 1930—American Institute of Architects, Mayflower Hotel, Washington, D. C.
 July 9-11, 1930—National Association of Real Estate Boards, Annual Convention, Royal York Hotel, Toronto, Canada.
 Oct. 13-17, 1930—American Gas Association, Annual Convention, Municipal Auditorium, Atlantic City, N. J.



White Buys Wissler Instrument

THE David White Company of Milwaukee, Wisconsin, has been compelled to move to larger quarters on three different occasions owing to its rapidly expanding business, from a small loft space at 419 East Water Street less than thirty years ago to its present location at 315 Court Street. The most recent and largest expansion was the purchase of the Wissler Instrument Company of St. Louis. The Wissler company has been manufacturing a high grade line of engineering instruments for the past 60 years. This consolidation brings together two of the leading instrument manufacturers of the middle west, making the David White Company a dominant figure in the engineering instrument business.

The White Company also has augmented its line of drawing materials, only the finest grade of carefully selected lines having been added.

National Equipment Adds C. H. & E.

THE National Equipment Corporation, Milwaukee, Wisconsin, announces the addition to its group of the C. H. & E. Manufacturing Company, 254 Mineral Street, Milwaukee, manufacturers of saw rigs, pumps, hoisting machinery, material elevators and mortar mixers.

Mr. Frank F. Hase, who was one of the founders of the C. H. & E. Manufacturing Company in Milwaukee in 1909, and its president, now becomes vice-president and director of the National Equipment Corporation.

The National Equipment Corporation, which became an operating company on January 1, 1930, includes the Koehring Company, the Inslay Manufacturing Company of Indianapolis, the Parsons Company of Newton, Iowa, the T. L. Smith Company of Milwaukee, the C. H. & E. Manufacturing Company, and the Kwik-Mix Company of Port Washington, Wisconsin.

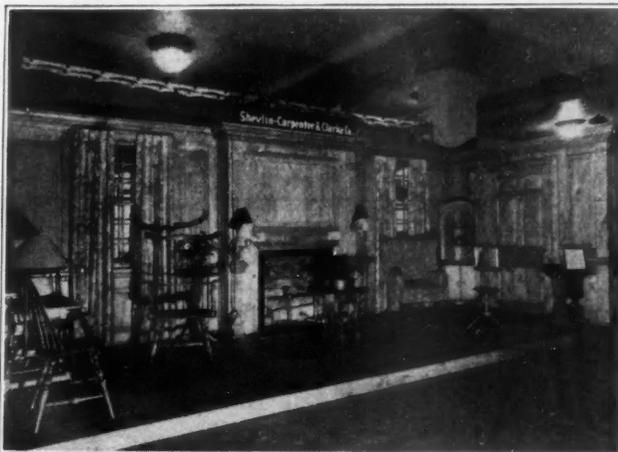
Goodwill Airway Tour



Henry Klopp, President of the White Pine Sash Co., of Spokane, Wash., (Third from Left) Was a Member of the Goodwill Party Which Toured the Proposed Spokane to St. Paul Airway.

Shevlin Exhibit Wins Prize

THE Shevlin, Carpenter & Clarke Company exhibit, displayed at the Fortieth Annual Northwestern Lumbermen's Convention held in the Minneapolis Auditorium, was awarded the blue ribbon as the most unusual and worthwhile exhibit at the convention.



Shevlin, Carpenter & Clarke Exhibit Which Won First Prize at the 1930 Annual Northwestern Lumbermen's Convention, in Minneapolis.

This exhibit, which was designed by Mr. Louis Boynton Bersback, an architect of Minneapolis who has made a study of Colonial design, consisted of a modern living room paneled in Shevlin knotty pine. The design of the room was based on the architecture of the early Federal era.



Company Name Changed

A CHANGE in name from the Columbus-Union Oil Cloth Company, Columbus, Ohio, to the Columbus Coated Fabrics Corporation, is announced by R. H. Willcox, president of the concern. The change does not affect ownership, policy or personnel, and is due, Mr. Willcox explains, to the conviction that the new name is more appropriate to the quality and variety of the products manufactured by the company.



G. E. Buys Walker Dishwasher

ON March 7, 1930, the General Electric Company purchased the controlling interest in the Walker Dishwasher Corporation, of Syracuse, N. Y. The officers and management of the Walker company will remain the same as in the past. The president is Carl M. Snyder; sales manager, N. A. Denninger; advertising manager, G. T. Henderson. The Walker Dishwasher Corporation was a pioneer in its field and has maintained a position as one of the leading manufacturers of electric dishwashers.



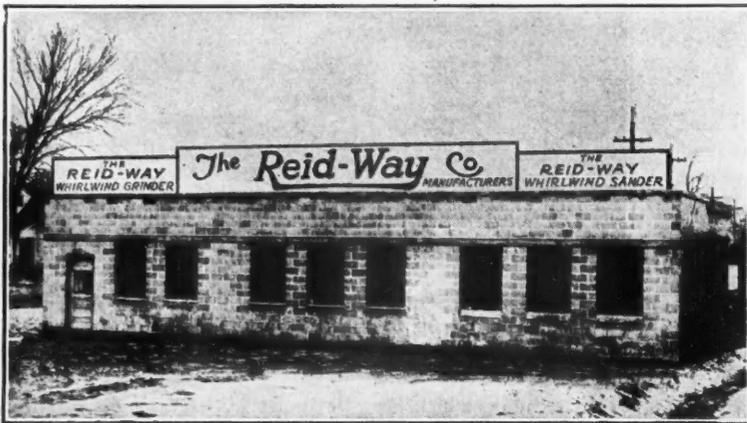
Representative Appointed

THE American Floor Surfacing Machine Company, Toledo, Ohio, has announced the appointment of Hendrie & Bolthoff Manufacturing and Supply Company, Denver, as exclusive distributors of "American" floor machines for Denver and vicinity.

Reid-Way Moves Into New Home

THE Reid-Way Company was started by Mr. Raymond A. Reid early in 1926. Mr. Reid had for many years worked as a carpenter and contractor. While engaged in these occupations he had encountered the usual troubles involving floor surfacing. He scraped floors by hand and later used the usual type of sander, operated by an ordinary motor with pulley. While thus engaged the thought came to him that if the motor could be attached to a shaft in such a way that the whole motor would revolve, 100% of the power could be put to work and the whole operation simplified.

He kept on thinking about his idea until one day he ran across an old washing machine motor. This he took apart with the object of ascertaining whether there was any way of changing the rotation so that the outside shell or frame would revolve. His efforts were rewarded with success and he proceeded to construct the first successful sanding machine operating on this new principle.



New Factory of the Reid-Way Co.

One day Mr. Reid noticed in the AMERICAN BUILDER a department headed "What's New." In this department the AMERICAN BUILDER tells of worthy inventions and developments of interest to the building field. The purpose is not advertising and the presentation therefore must be anonymous. However, the names of the manufacturers are given to anybody who is interested enough to write the AMERICAN BUILDER.

Mr. Reid having no money to spend for business development frankly admits that he saw in this an opportunity to get some free advertising. He wrote the editor describing his invention and sending photographs, asked that it be mentioned. His letter was acknowledged but he heard nothing more about the matter until, a few weeks later, a representative of the AMERICAN BUILDER called at his shop—where, it being necessary for him to eat regularly, he was again working as a carpenter. The man explained that the AMERICAN BUILDER did not include a new invention in the "What's New" department until both it and its maker had been thoroughly investigated and found worthy. The outcome was apparently favorable, as the next issue of AMERICAN BUILDER contained an illustration and brief description of the machine. Within a short time inquiries, which were relayed to Mr. Reid through the AMERICAN BUILDER, brought in ten cash orders.

After these ten machines were delivered, Mr. Reid paid up his debts as far as he could, but found that he still owed more than \$1,000, and had apparently no prospect of making further sales.

Along came the AMERICAN BUILDER man for the second time, with the proposition that Mr. Reid should buy a page of advertising. He was broke. Moreover he knew nothing about advertising, but his merchandising instinct told him

that this was the thing to do and he went ahead with the thought that the page might bring enough business to pay for it. From this advertisement sixteen cash orders and fifty inquiries were received, and this was the turning point of the business.

Since that time the machine has been greatly improved. The Reid-Way Company has continued its advertising on a large scale and now has international distribution. The increased production necessitated larger quarters and the company recently moved into its own building. The present output is many times the inventor's most sanguine expectations.

It can certainly be said that the Reid-Way Company has found success through the advertising pages of the AMERICAN BUILDER.



Personnel Announcements

MR. CHARLES A. HAYNES, who for the past five years has been connected in executive capacities with the Truscon Steel Company, has been appointed as manager of the Transmission Structures Division of this company.

THE Yale & Towne Manufacturing Company, Stamford, Conn., announces that Mr. E. C. Waldvogel, vice-president in charge of sales, will retire from active participation in the company's affairs on April 1st. He will, however, continue in an advisory capacity and will hold the office of vice-president and remain a director.

The company also announces that Mr. Walter B. Dodge, who has been assistant to the vice-president in charge of sales, has been appointed manager of all Stamford hardware sales, and that Mr. James C. Morgan will take complete charge of all materials handling equipment sales.

SARGENT & Company, at the regular meeting of the Board of Directors held on Friday, January 24th, elected Mr. Murray Sargent vice-president. He is now vice-president and secretary.

Mr. P. E. Barth was appointed General Sales Manager and by this position now succeeds Mr. Sargent.

THE American Radiator Company, at a meeting of the Board of Directors held on January 28th, received the resignation of Mr. Theodore Ahrens as president, and Mr. Rolland J. Hamilton, for many years vice-president and secretary of the company, was elected to fill this place. Mr. Clarence M. Woolley continues as chairman of the board of the Radiator company.



Law for the Builder

(Continued from page 132)

In conclusion, the court directed that judgment be entered for appellees (plaintiffs) in the sum of \$126.16 only, taking the position that they were clearly liable for the damages caused by their delay in delivery, amounting to \$1,592.82, as computed by the defendant, and that the latter was entitled to a credit for this amount on the bill.

So, while the foregoing case does not purport to announce any hard and fast rule, as to when a contractor will be allowed damages against a materialman for delay in deliveries, it does amount to a striking illustration of facts that were held to confer this right. In the light of which, the decision is one of force and value on the point involved from the standpoint of both contractors and materialmen.

A BIRTHDAY CELEBRATION

That Concerns You

Twenty years ago—back in June, 1910—“Glide” Hangers and Track came into existence as the *original* “watershed” equipment for rolling doors. Actual tests and installations were so satisfactory that the “doubters” soon were won over. The popularity of “Glide” swept the country, as one enthusiastic dealer expressed it, “in spite of 57 varieties of imitations.”

From that day to this—for 20 years—“Glide” has been the fastest selling Hanger and Track because it is the most outstanding value. “Glide” track is formed in one piece from special analysis steel famous for its strength and rust resisting qualities. No joint brackets, no blocking or bracing are required for installation. It fastens *flat* on the header over the opening. “Glide” Hangers

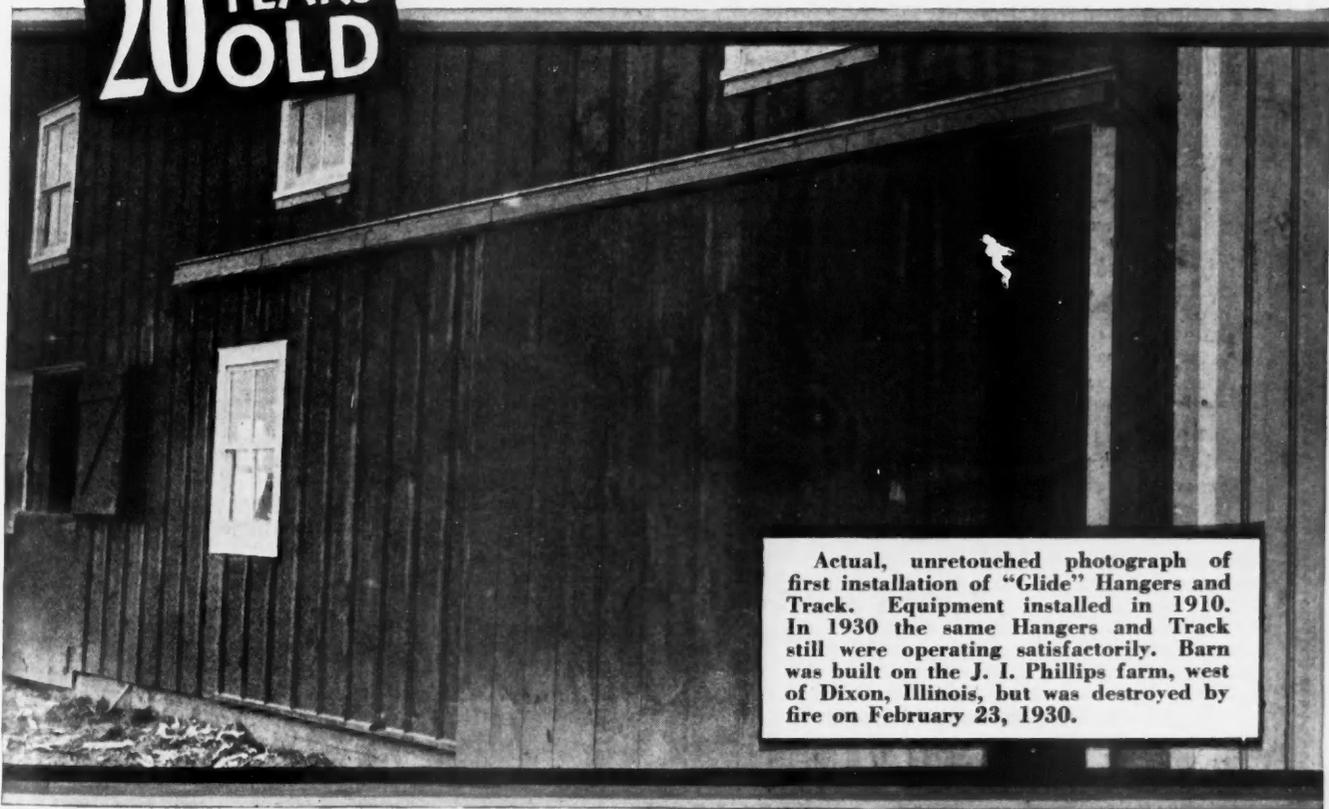
have steel roller bearings and axles to assure easy operation. The many convenience and long wear features account for the ever increasing popularity of “Glide” Hangers and Track.

“Glide” has cause to *celebrate* its twentieth birthday. The very first installation ever made (pictured below) was still in perfect running order in its 20th year of service. Just such concrete examples of “Glide” quality and superiority are being experienced by builders everywhere. They have found that specifying “Glide” to their customers builds valuable good

will — satisfied customers. Write for complete information on this unusual equipment. The coupon is for your convenience.



20 YEARS OLD



Actual, unretouched photograph of first installation of “Glide” Hangers and Track. Equipment installed in 1910. In 1930 the same Hangers and Track still were operating satisfactorily. Barn was built on the J. I. Phillips farm, west of Dixon, Illinois, but was destroyed by fire on February 23, 1930.

FRANTZ
TRADE MARK
Guaranteed Builders Hardware

FRANTZ MFG. CO., Dept. A6, Sterling, Illinois.

Kindly send me complete information about “Glide” Hangers and Track.

Name
(Print Plainly)

Address

City, State

My Hardware Dealer is