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AN INVITATION TO YOU

The AMERICAN BUILDER cordially invites and urges you to enjoy the privileges and benefits of its Correspondence Department. Any phase of any building question may be profitably and instructively discussed in this department. If your problem is a knotty or technical one submit it to the Correspondence Department and secure the benefits of the opinions of other experienced builders. It's a "give" as well as a "take" department and you are asked to relate your achievements and tell how you have conquered difficulties as well as to ask for information and advice. Rough drawings are desired, for they make clear involved points. We will gladly work over the rough drawings to meet publication requirements. The Correspondence Department is your department. Use it freely and frequently.

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FRIENDLY CHATS *with the* EDITOR



Seeks to Equalize the Nation's Building Program

COINCIDENT with the undoubted shortage of accommodations for various Government departments in many cities thruout the country there came the rumor that the Government proposed a vast building program. This, it was hoped, would relieve the situation, while giving employment to many, and forestalling anything like a business depression. It was one of the outstanding recommendations of President Harding's Conference on Unemployment.

But in the opinion of Representative Martin B. Madden, chairman of the House Committee on Appropriations, the United States Government should not enter upon a public construction program until the present building boom thruout the country has come to a close.

"The wisdom of this policy," states Mr. Madden, "must be apparent to anyone giving the matter serious consideration. It will prevent competition with the home builders which Government building at this time would entail." Pending the end of present highly accelerated home building activity, Representative Madden would have an exhaustive survey made, thruout the country, of Government building requirements. He would like to see a program drawn up which would see no Government building anywhere not justified by the requirements. "It will give the Government the buildings needed, at a more moderate cost," continues Mr. Madden, "and will find employment for those engaged in the building industry at a time when employment is most needed, creating a stabilizing influence in the labor market."

The present building boom is not just for the present. The country is at least three years behind in its building program.



Books for Leisure Reading

EVERY once in a while we receive a request for a suggestion as to books which a man might read in the time in which he has leisure from planning and building work. This shows a desire to escape that one-sidedness which is apt to come from too close application to the practical side of one's work. Well-chosen

general reading is valuable in that it enables the builder to cultivate his critical and analytical faculties and judge the arts with which building is associated.

A good start is any good book on ancient history. When we really learn the history of Greece, Rome and Byzantium we are better able to understand the theory behind the five classic orders. When we have read of the Middle Ages and the Renaissance we are in far better position to appraise and appreciate Gothic and Renaissance architecture.

There are a few books which are easily obtainable, either from your local public library or bookseller, and which are certainly not dry, or of a nature one might classify as "highbrow." Any reader of AMERICAN BUILDER could easily read Sir Joshua Reynold's book, "Fifteen Discourses," in fifteen hours and feel well repaid. "Ten O'Clock" by Whistler can really be finished between nine and ten o'clock of an evening, and means time well spent.

Ruskin's "Stones of Venice" ought to be on the same bookshelf. It offers material any builder will find as interesting, we wager, as any story: a famed city's structures, history and adventures, all in one. The "Memoirs of Benevenuto Cellini" are a record that will interest any two-fisted believer in the majesty of work, and could well be followed by the reading of Symond's "History of the Renaissance."

Another book which ought to stand alongside these on your shelf is Vasari's "Lives of the Most Eminent Painters, Sculptors and Architects."

One day an American wandered into France. His name was Henry Adams, and the result was "Mont St. Michel and Chartres"—a book that gives a better insight into that misunderstood period we call the Middle Ages. "Medieval Architecture" by A. Kingsley Porter, is a scholarly history of that same period.

Coming down to date, our own authority on Gothic—Ralph Adams Cram, the architect—is the author of "The Gothic Quest" and "The Substance of Gothic," easy reading, informative and stimulating.

Here in Chicago a group of business men have begun a "Book-a-Month" society. We pass it on merely as an excellent idea, and as an inexpensive way of acquiring a bookshelf that will prove profitable because it stimulates self-development.

Mahogany Completes the Home

A Handsome, Reasonably-Priced Wood for Interior Trim, the Rich Hue of Which Deepens with Time—Easily Worked and Cared For, Enduring, Economical and Wonderfully Beautiful

By FREDERICK TATE

IT is hard to account for impressions. Because it is a beautiful wood and we associate beauty with costliness, some people gain the impression that mahogany is an expensive wood. In order to decide how accurate this impression is, a representative of the AMERICAN BUILDER visited the "Bungalow Beautiful" at Atlantic City. In this bungalow mahogany was used for the doors, door trim, window trim, baseboards, mouldings, mantels and the built-in bookcases in the living room, dining room and den. Figures had also been asked on other woods, and assuming that the least expensive of the hardwoods had been used instead of mahogany, the difference in cost would have been but \$80.

In view of this it would seem that mahogany may be removed from the "Luxury Class" and take its place as an interior finish wood making a many-sided appeal to the architect, builder and intending home owner. Added to reasonable cost are the other advantages of a wood which cuts and works to good advantage, has splendid variety as to figure, and possesses a rich, pleasing, ruddy coloring which deepens and becomes more beautiful with age.

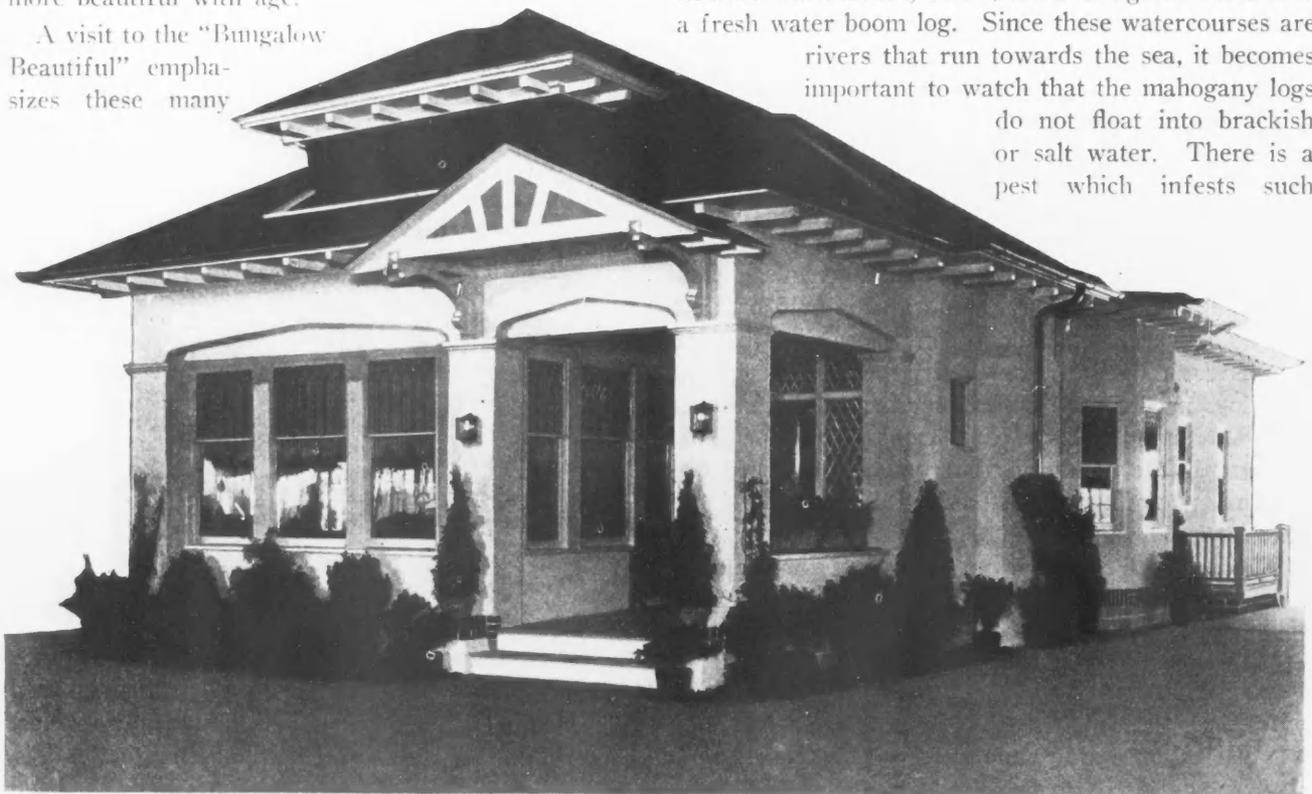
A visit to the "Bungalow Beautiful" emphasizes these many

advantages of mahogany. A figured pattern gives the entrance and other mahogany door surfaces the tone values of fine paintings. The finely finished mahogany trim used for windows, baseboards, built-in bookcases and mantels adds tone and character to the rooms. The furniture is likewise of mahogany, of a style and price favored by the average home owner.

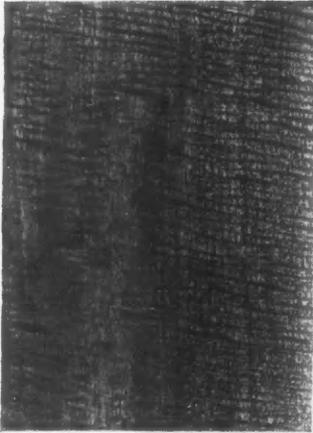
The combined result is a genuinely cheerful and pleasant impression of a home interior in which comfort and good taste have been attained without extraordinary outlay for furniture or interior finish.

A Giant of the Forest

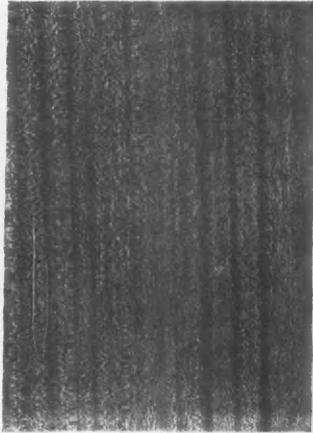
Towering above its fellows in the tropical forest, the mahogany tree has roots which rise from the ground in great buttresses, often 10 or more feet high. To fell the tree it becomes necessary to erect a platform, and working on this staging the laborers cut thru the trunk with axes just above the swell of the gigantic roots. In a fine specimen there is often a sheer length of 50 feet from this spot to the lowest branch. After being trimmed and cross cut the trunk is transported to the nearest watercourse, and carried along the stream to a fresh water boom log. Since these watercourses are rivers that run towards the sea, it becomes important to watch that the mahogany logs do not float into brackish or salt water. There is a pest which infests such



This is the "Bungalow Beautiful" Erected Recently at Atlantic City as a Show Place. In its construction Mr. Bertram Ireland, the architect, the builders, plumbers, furniture dealers—all the many trades and professions required to erect and put in running order the modern home were represented. Genuine Figured Mahogany has been used for the living room, dining room and den, in which was included window and door trim, doors, baseboards, mouldings, built-in bookcases and mantels.



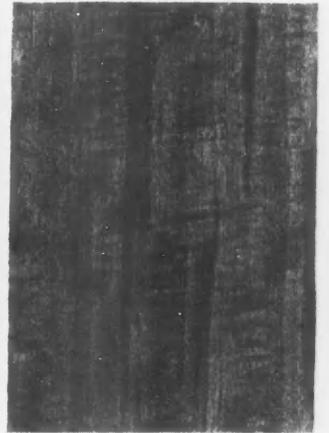
The Rarely Beautiful "Fiddleback" Figuring



The Well-Ordered Pattern of the "Stripy Figure."



The Prized "Feather" Figuring.



"Raindrop," Another Highly Valued Mahogany Figuring.

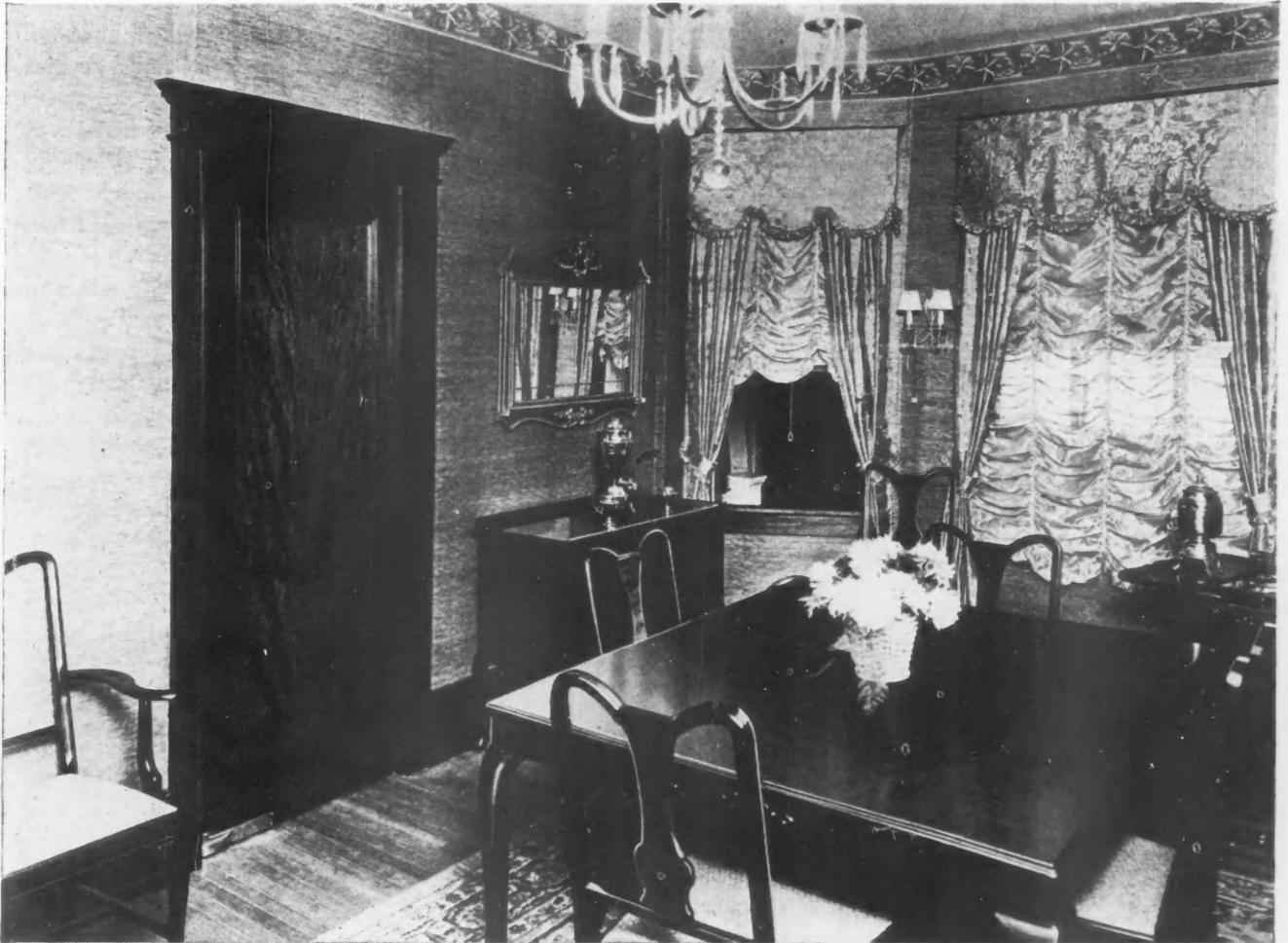
water in tropic countries, the teredo worm, which would make short shrift of the mahogany logs, perforating them so quickly and thoroly as to make them valueless.

Mahogany logs are usually loaded in a ship's hold or on its deck with bark and sap wood left on. Logs coming from Africa, due to larger dimensions, are usually adzed to a roughly square shape, which helps stowing and also, saves space. Arrived in this country the logs are unloaded directly and transhipped by

boat or rail to the mill where they are put into water. Mahogany keeps better wet than dry, and checking is eliminated.

Logs which show the greatest amount of figure usually are manufactured into veneer, to appear later as veneered panels and furniture that, if thoro workmanship has been performed, are as durable and lasting as their solid mahogany fellows.

Figured mahogany is varied and beautiful in the
(Continued on page 130)



This is the Dining Room in the "Bungalow Beautiful." Observe the wonderfully beautiful figuring of the door. Like the door- and window-trim, the moulding and the baseboard, it is of genuine figured mahogany. The furniture likewise is of mahogany, and in a style and price range favored by the home owner of moderate income.

Parables of Bildad the Builder

I. Triumph of the Good Builder

AT that Time it so Happened that a Certain Man known as the First Builder was at Work upon a Dwelling House far out by the City Gates. And around It were piled Scads of Lumber and Lime and the Wherewithal with which to Build, until the Place seemed girt round with Mountains. And his Fellow Citizens smiled in Pride and Said: "Verily our First Builder is a Progressive Fellow, for where outside of a Building Exposition can you find such a Display?"

And at that Time there was likewise a Second Builder building near the City Gate, of Whom it was Said that he could pinch a Nickel and extract therefrom a Howl that would shame a Wolf from the Far North.

And the Dwellers in the City said of this Second Builder: "How now? Surely he is no Builder, for Scanty is the Stuff with which he Builds. Such Parsimony! Surely he awaiteth a Great Slide in the Market Price, the Stingy sir."

But the Second Builder, busied with his New Building, chuckled Pleasantly over his Work.

And the Citizens murmured further among themselves, saying: "Surely he is a Crab and One Hard Guy. He lacketh Juice and Pep. For does not our First Builder arise with the Dawn? Verily, our Windows rattle with the Speed with which his Flivver pursueth the Chicken and its Early Worm. He stoppeth not for a Shave, and on the Sabbath the Barber choppeth the cement from his Beard with a Cold Chisel. But this crafty Second Builder sitteth brazenly in his front Pew, with a shaven Jowl and arrayed in Purple and Fine Linen, and there beameth an Appearance of Wisdom within his Eye like an Owl."

Now it came to pass that They Who were to Dwell Therein betook themselves to the Lots whereon were in building their future Dwellings. And lo, after climbing a High Mountain composed of divers Structural Materials and Rubbish, the First Dweller was enabled to take one Peek at the work of the First Builder. And the wail of the First Dweller carried far, even to the Town Square.

"Surely you are Off Your Feed," scolded his Fellow Citizens after they had come Running, "for Never

in Our Recollection were such Scads of Material gathered for Any Dwelling. Be thankful that your First Builder is so Provident and not like to the Second Builder. For then, indeed, would your Wail be Loud."

"Verily you are a Bunch of Blockheads," howled the First Dweller. "Behold, my Neighbor the Second Dweller has moved in, and Already sits on his Front Porch giving my Lemon Factory the Once Over. And even his Yard is Spick and Span; behold, even the Grass already sticketh up its Snout from his Lawn. Woe, woe!"

Then the Citizens took counsel among Themselves and saw that it was Too True. And they Looked at Each Other, for It was Beyond them.

But the Second Builder, disporting at the Game of Horsey with his Happy Family, chuckled Mightily, for his Work was Finished ahead of Schedule and he was Glad.

For he worked always Well, having Plans before Him, and he knew the Why and Whereof of Specifications and Bills of Material. And when he was Ready for

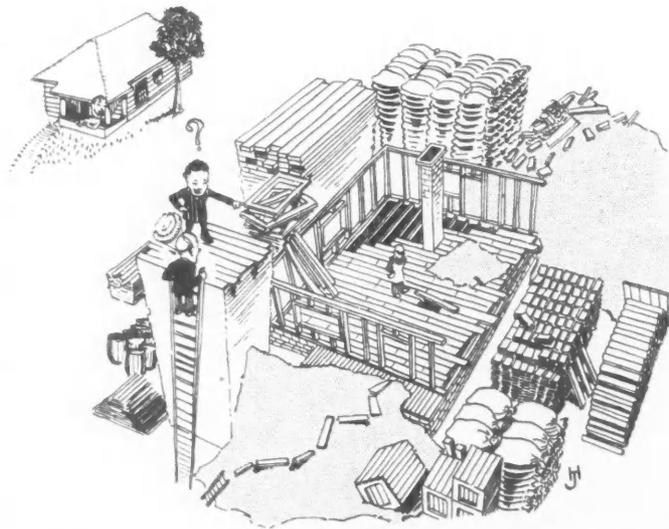
Certain Material he would say, "Come!" and It cometh; and to this and that Helper, "Do!" and He doeth; all in its Proper Order. And he never lacked Clients, even in the Lean Periods, and rose Mightily in the Esteem of his Banker.

Now when the First Builder saw all this he ceased Bewailing and Considered whether he might not Study the Situation closely and with Profit. And after a time he began to make Headway, for he discovered that He Who Plans Well maketh Speed, but where there is Much Clutter there is Little Progress.

The Man Who's Afraid

I've paid close heed to the ways of men,
I've observed what the world calls luck,
I have silently marveled, now and then,
At the potent power of pluck;
And this is a bit of truth I hail,
A sentence that's worth one's heed;
The man who is always afraid he'll fail
Doesn't stand much show to succeed!

—Roy Greene.



And Lo, After Climbing a High Mountain Composed of Divers Structural Materials and Rubbish, the First Dweller Was Enabled to Take One Peek at the Work of the First Builder. And his wail carried far, even to the Town Square.

Tiny Model Workmen in Miniature House

By JAMES W. HANBERY

MONTHS ago Mr. C. F. Webber, who spends most of his spare time making scores of mechanical electrical toys, began to plan what he could make for a special display at the Omaha Building show, and the result is what he has named "The Builders." which is the third creation of this nature he has made within a year and a half. When one observes the absolute accuracy of detail he is not surprised that it has taken all of Mr. Webber's evenings for nearly a year to complete this ingenious piece of workmanship.

"The Builders" consists of a two-story house just three feet long by two feet in height. It is built on the scale of one and one-half inches to the foot, and this is carried out with perfect accuracy from the tiny shingles on the roof and the bricks on the chimney, to the wheelbarrow which a workman is trundling and the saw-horses standing beside the house.

Busily engaged in their various occupations required to complete the house are six miniature workmen only six inches high. The extremely realistic effect is produced by the electro-mechanical devices cunningly concealed by Mr. Webber, and these enable the six workmen to move about their appointed tasks so naturally that they seem endowed with life. Hour after hour, week by week, month after month, Mr.

Webber worked away on the delicate adjustment of the wiring and the tiny sprocket chains which control the movements of the little figures. As one watches the natural way in which a workman trundles his wheelbarrow, another nails down the boards on the porch while a hodcarrier with his load of bricks pauses half way up the ladder and turns his head as if to talk to him, he feels that Mr. Webber's long hours of patient work have been rewarded, and he is surprised that it did not take more than the spare time of almost a year to complete a work of such delicate realism.

Mr. Webber is already at work on another creation which he calls "The Village Cobbler." This will consist of a bachelor workman with a shepherd dog for a companion. At present he has reached the stage where he is working on the head movements and the whiskers of the cobbler.

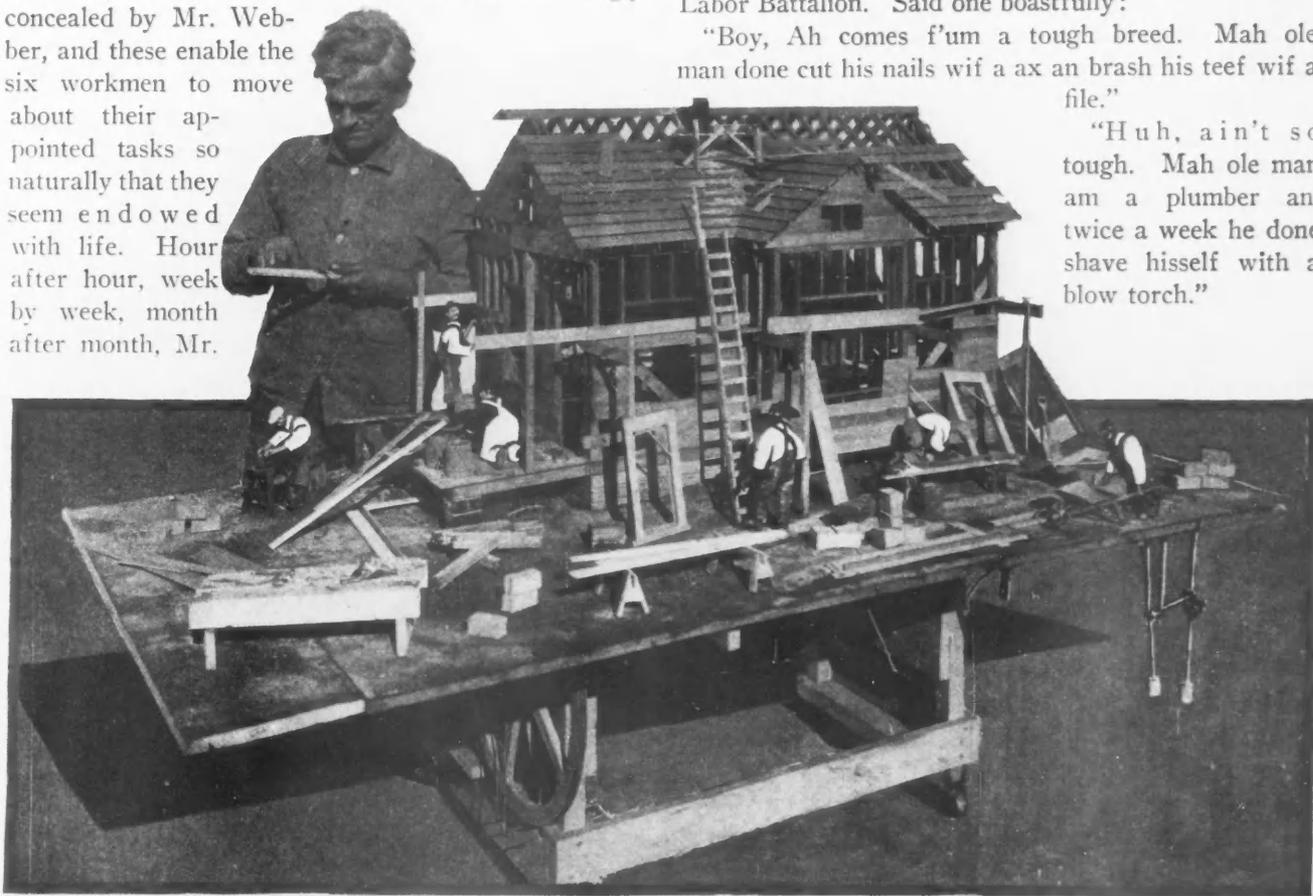


Hard-Boiled

Two negroes were lying behind a packing case on the docks at Brest taking the labor out of the alleged Labor Battalion. Said one boastfully:

"Boy, Ah comes f'um a tough breed. Mah ole man done cut his nails wif a ax an brash his teef wif a file."

"Huh, ain't so tough. Mah ole man am a plumber an' twice a week he done shave hisself with a blow torch."



This Miniature House Is Just Three Feet Long and Two Feet High. It is built on the scale of one and one-half inches to the foot and this is carried out with perfect accuracy, from the tiny shingles on the roof and the bricks on the chimney to the wheelbarrow which a workman is trundling. Busily engaged in their various occupations are six little workmen, and the way they go about their work, using the well-arranged material at hand would, we feel sure, bring joy to the heart of Bildad the Builder.

They Can't Resist Ruby

Success in Seven Figures Comes to Washington Girl When She Gives Up Teaching School and Sets Her Heart on Mastering the Real Estate Selling and Home Building Business

IT is a rather long leap from being an instructor in the Trenton, New Jersey, Normal School to the position of a real estate operator in Washington, D. C.

It is a leap of even greater magnitude—or longitude—from selling subdivision lots for a moderate commission to handling one's own two million dollar development.

When both these feats of business acrobatics have been achieved by a woman, it is perhaps even more worthy of note.

This is by way of introducing Mrs. Ruby Lee Minar of Washington, D. C. Just as Mrs. Minar is concluding this spring the sale of a subdivision in one of Washington's suburbs for another owner, she is launching a 400-acre project of her own which will probably involve eight or ten years of development and will represent a selling value of \$2,000,000 to \$3,000,000.

When Mrs. Minar was graduated from Kalamazoo College, Mich., in 1906, and later from the University of Chicago, nothing probably was more remote from her mind than the thought of entering in business of any sort. She taught public speaking in Trenton Normal School for six years and then the course of her life was changed, as it frequently happens, by marriage.

As the wife of a newspaper man she was subject to frequent changes of habitat. One of her moves happened to be to Washington. Here, one day, she was persuaded into a small investment by a real estate salesman. It occurred to her that this was an interesting way of making money.

This was the beginning four years ago from which Mrs. Minar by rapid steps developed from a sub-agent to a regular salesman, then to a broker with a suite of offices and fifteen to twenty salesmen, and finally to a developer of her own property.

During the last two years Mrs. Minar has had the

exclusive sale of Lyon Park, a modernly developed and moderately priced suburb about twenty minutes from Washington by trolley on the Virginia side of the historic Potomac. Her record in Lyon Park, which came primarily from her own exceptional sales ability, has made her, in this brief time, one of the best known subdivision operators in the National Capital. Her office has sold over one million dollars worth of land and houses in the last two years and she made a sizable percentage of these sales by herself.

One tract of land purchased by Mrs. Minar in Virginia for her forthcoming development formerly was owned by Dr. Presley M. Rixey, Rear Admiral Retired, Surgeon-General and White House physician in the administration of President Roosevelt. The land lies on a beautiful plateau 400 feet above the city of Washington. From here one can see the whole city spread before him.

Another tract of nearly 100 acres purchased by Mrs. Minar, was owned by the late Dr. Joseph Taber Johnson, one of the foremost surgeons in the East a quarter of a century ago. Dr. Rixey and Dr. Johnson had picked these two tracts of land for their estates because of the ruggedness and picturesque quality of the topography

and because of the nearness to the capital. Now, one of them has passed away and the other in his declining years desires to convert his beautiful estate into money. These circumstances offered Mrs. Minar an opportunity which she felt she should not hesitate to grasp.

Real Estate Salesman Must Know the Building Game as Well

Her success in real estate Mrs. Minar ascribes to her willingness to learn every essential feature of real estate technique.

"I once labored under the delusion," she says, "that selling lots was a simple proposition. I imagined that



In Four Years Mrs. Ruby Lee Minar of Washington, D. C., Has by Rapid Steps Become a Developer and a Real Estate Operator, Personally Handling Her Own Two Million Dollar Project.

once a lot was sold the matter was ended. I was not long in discovering my mistake. Lot purchasers began to ask me innumerable questions about building plans and building costs, so I made myself acquainted with these things. I wanted to be able instantly to give a person a rough figure as to what a five, six or seven-room house of a certain standard would cost.

"Then it was not long before I had to recommend contractors and builders to my clients. Then they came to me to get them the first mortgage loans and, finally, in some cases I found myself actually building and financing houses for my clients. This was work that I had not bargained for, but it was service and on service is built success.

"I think one is apt to start in business for the sole purpose of making money. Money, I admit, is an interesting concomitant of endeavor, but as one works along an enormous satisfaction comes from having clients who are pleased with the transactions they have had with your office and who are appreciative of the extra efforts you may have exerted to see them into a complete home, efforts which have been outside any commission or other monetary returns."

Lyon Park, when Mrs. Minar began the sale two years ago, was a little community of half a dozen houses clustered around the station of a suburban trolley line. Today it is one of the best known of the new suburbs. It has its streets, concrete sidewalks, gas, electricity, and its own sewerage system. On land from which crops were harvested two summers ago, there are now many modern homes built and others building. Mrs. Minar has had a part in the building of many of these homes, on some of them having selected the contractor and seen the work thru to its completion.

What the Home Seekers Want

Her experience has given Mrs. Minar certain definite ideas of the most desired features in a moderate priced home.

"Certain things appeal to the buyer of a home in the suburbs," she says. "Most important among these is a large number of closets. If one or two closets have windows, the woman's heart is won. A linen closet in the hall or in the bathroom is a necessary adjunct.

"It doesn't take a great deal of money to screen in an outside porch but it adds several hundred dollars to the sales price of the house and a sleeping porch will bring back to the builder double its cost.

"This, then, I find to be the ideal of the ordinary woman looking for a house in the suburbs: A brick

walk leading up to the house and brick steps in front; large living room with open fireplace and a long row of windows over a window seat; more than ordinary light again in the dining room and French doors leading either from the living room or the dining room, it doesn't matter which, onto a screened family porch; a kitchen in white enamel with a white enameled range.

"If a kitchen cabinet is added so much the better, but that is not necessary. Upstairs, light bedrooms, light closets, a tile bath and a screened sleeping porch. These are the essentials."

The 400-acre project on which Mrs. Minar is starting will represent approximately 2,000 home sites. For several months she has been working with landscape architects, surveyors, contractors and engineers in plotting and planning the first sections to be opened of this new subdivision, a colossal enterprise in itself. At the same time she has overseen her sales organization.

As soon as the first of the maps are finished, the real activity will start. Then, under the eye of Mrs. Minar, contractors will operate their gangs of workmen, tractors will be used for the bulk of the heavier work, great cuts and fills will be made, sewers will be installed and streets and sidewalks laid.

"It's some job," says Mrs. Minar, "but I enjoy it every day of my life."



Magic Windows

A PICTURE is only another window in the wall. If you look at it in this way you will form an entirely different idea of the value of pictures as wall decorations in a room.

Suppose you live in a flat, rolling prairie country, where there are flat streets stretching out to flat surrounding roads. You may have an actual hankering for a mountain or sea view. The proper kind of a picture will supply this.

We grow to like and appreciate our neighbors, but sometimes we feel we would like to know someone from some quaint country far away. Here again a good picture, by bringing some picturesque types from sunny Italy or Spain, satisfies. And if it is a painting by a good artist, or a good colored reproduction of his work, you will find that day by day you will grow to like the picture. There is always something new to be discovered in a good picture, and by the same token a good picture never gets old-fashioned, or tiresome.

With this view of pictures in mind, one can see how important it is to plan proper space relation between the wall and the prospective picture which will be hung against it.



The Latest Tract of Land Purchased by Ruby Lee Minar in Virginia for Her Forthcoming Development. The land lies on a beautiful plateau 400 feet above the city of Washington on the Virginia side of the Potomac.

HOME PLANNING TALKS

*By Our
Head Draftsman*



“One of the Most Important Considerations in Planning the Home is Adequate Electric Wiring, with Outlets Advantageously Placed”

WE who poise our pencil or drawing pen above the drafting table know how thoroly the luxury of a few years ago has become the necessity of today. Even the cottage today has in it features which the mansion arrogated strictly to itself a few years ago.

One of the most important considerations in the proper planning of a home for convenience and comfort is adequate electric wiring, with outlets advantageously placed. It is not alone that good light, and plenty of it, has come in the wake of electric development; the method of turning those lights on and off is important. Switches must be so placed that they can be reached almost subconsciously, after a time, by the house occupants, and without the annoyance and confusion of striking matches or reaching behind door jambs or furniture.

Naturally the electric-wired house suggests electric devices. The housewife will wish to use a vacuum cleaner in the rooms, and it ought to be made possible for her to do this without interfering with the lamp connection outlets. On wash days she may wish to iron in the dining room while the laundress is busy in the kitchen or washroom. In summer weather she may use the electric grill or toaster when daylight makes the electric light unnecessary, and yet it may not be possible to get current otherwise than by turning the light on and disconnecting. All these things suggest that in planning the house a number of extra outlets should be placed in the baseboards and at switch heights in the walls to permit these comfort-inducing and labor-saving appliances being used without any disturbance or disarrangement of the lighting fixtures.

There is one suggestion which we have found always produces an immediately favorable reaction from a client, and that is the mention of electrical conveniences in the home.

It has been the means of enabling us to interest clients who were not open to home-building suggestions along any other channel. So, if you are looking for one sure way to create and maintain a home building desire in a prospect, keep this suggestion in mind:

Talk Electrical Conveniences in the Home

It is logical for any architect, builder or contractor to make this suggestion and follow it up. One of the most important considerations in the planning of the modern home—or any building—is adequate electric wiring, with enough outlets conveniently placed.

Of course we like to feel that we are genuine students of electrical progress. We like to feel that we are up-to-date on all that concerns electricity, but this household helper is progressing so fast; it has so many applications for modern utility, comfort, necessity and luxury, that we must keep continually renewing our information on it and our

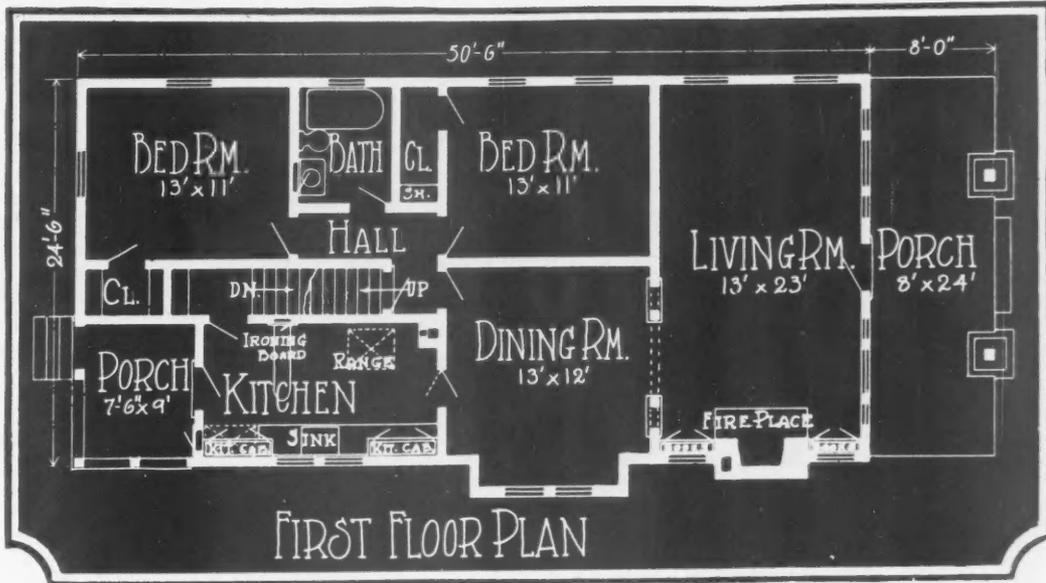
acquaintance with it in order to give our clients the benefit of the very latest developments on the subject. Wiring the home is a permanent improvement and one which every homemaker desires to enjoy. The necessities of today are the luxuries of tomorrow. We can do a great deal by anticipating these present and future needs thru adequate electric wiring and well-placed, plentiful outlets, for it is safe to say that while fairly general now, the real surface of electrical usefulness in the home has only been scratched.

“Do it electrically” is a great and growing thought.

All buildings illustrated in the American Builder are real buildings that have actually been constructed and found to be practical and popular. Anyone interested in obtaining working plans and other detailed information should consult the nearest architect, builder or dealer, or write the American Builder, 1827 Prairie Ave., Chicago.

BLUE RIBBON HOMES

PRACTICAL
&
ARTISTIC



A BUNGALOW WHICH RADIATES HOSPITALITY. From its front porch with wide-spreading roof to the extending ends, this bungalow breathes hospitality. It suggests itself as being ideal for localities where the sun is strong and hot over long intervals in summer, it should make an ideal small residence for the farm. We enter the living room from the front porch. We have a fireplace at the end of this room, flanked by bookcases. The room is 13 feet by 23 feet, with fine light from three sides, and its spacious effect is increased by the open colonnaded doorway which leads to the dining room. The

wall juts out a bit in the dining room, gaining a few extra feet of space for the double windows, and making the room seem larger than the 13 feet by 12 feet it really is. The kitchen has the sink right by the window, and has many comfort-making, built-in conveniences. There is a back porch, too, which will serve nicely for meals in hot weather. The two bedrooms are each 13 feet by 11 feet and connect with the bathroom thru the hall. It will be noted that there is provision made for a stairway to the second floor, which might be finished and extra bedroom space secured. Dimensions over all are 24 feet 6 inches by 58 feet 6 inches.

A House That Likes Trees

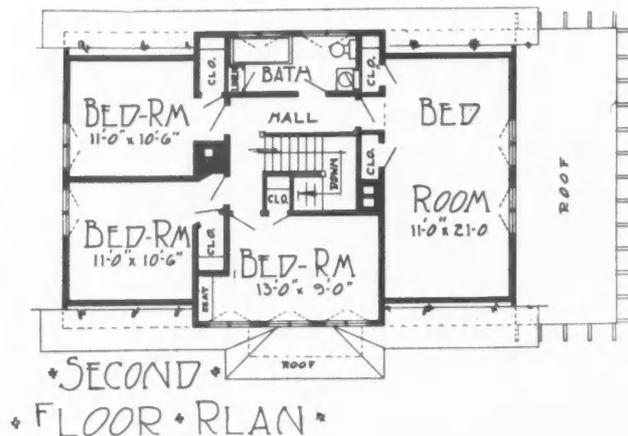
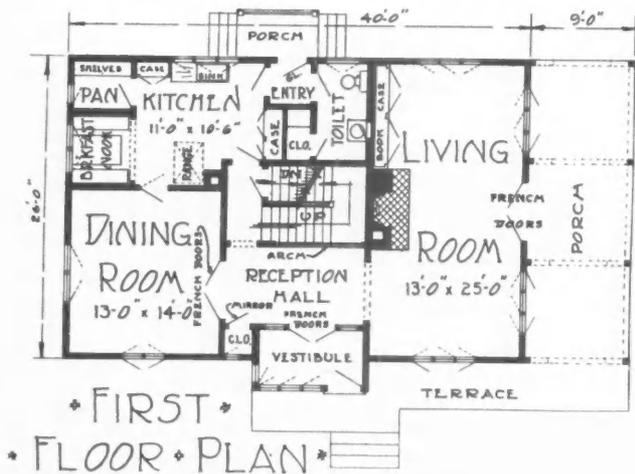
Design of Front Cover Home One That Is Particularly Adapted to a Wooded Building Site

OUR Front Cover Home for April owes something in its design to the overhanging roofs of the Swiss chalet. Here, however, the wide overhanging eaves have been moderated, and the gable ends snubbed off to give a more self-contained effect. There is a very pleasing appearance gained by having the quaint, white-painted window shutters, with their pine tree open-ornament. The siding can be the ordinary type of bevel siding, or shingles could be used instead. A stain finish on this house would be very attractive.

Within, the entrance vestibule leads into a reception hall, and turning from this at the right is the well-pro-

portioned living room with French doors opening on a porch and a bookcase-flanked fireplace. French doors open from the left of the reception hall into the dining room. Access is immediately from the kitchen; in addition, there is a breakfast nook immediately adjoining for the meals which require no great amount of planning or serving. The staircase is so placed as to lend itself to artistic handling and leads to four bedrooms on the second floor, a bathroom, and a sleeping porch off the right bedroom. The over-all dimensions of the house are 26 feet by 49 feet.

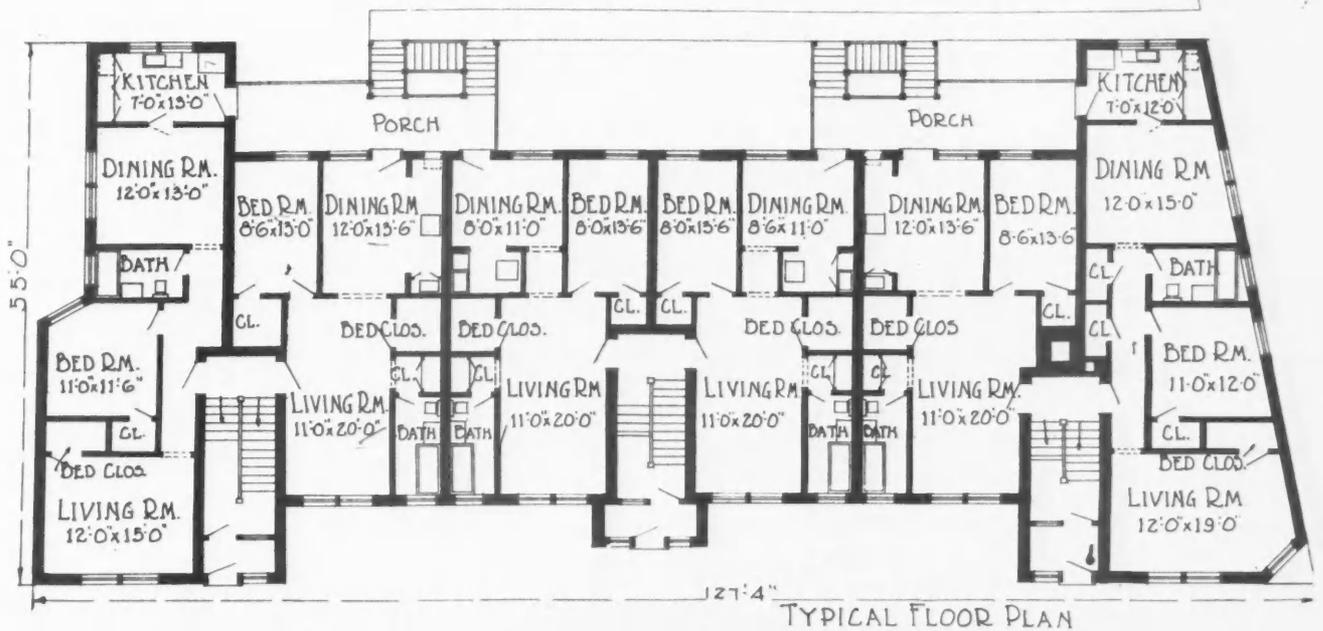
A detail worth noticing is how the square-paned case-ments improve the general pleasing effect of this house.



Our Front Cover Home for April is One That Lends Itself Particularly Well to the Wooded Site. The siding might be wide bevel siding, or shingles, painted or stained. A pleasing variation in the outer structure is gained by the timbered and plastered gable, partly shown at the left. The pierced pine-tree ornament shutters lend distinction to the house and give a quaintly neat effect.

A Modern Apartment Building

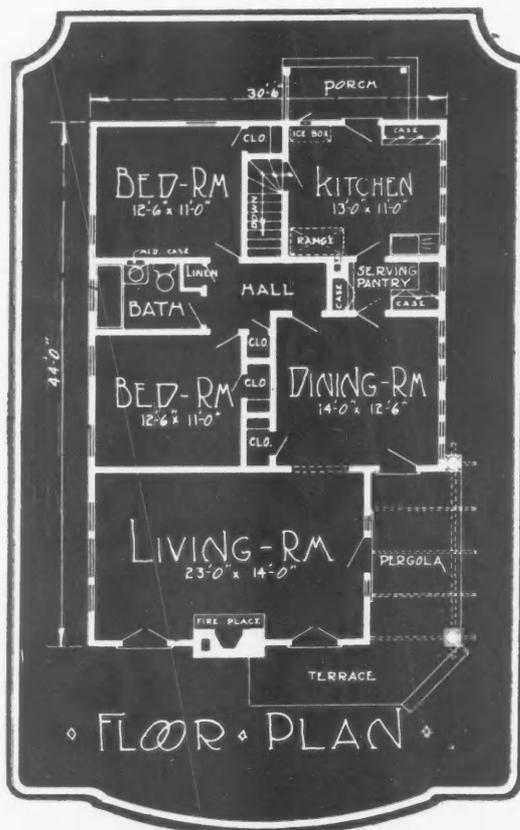
E. J. OHRENSTEIN & HILD, Architects



The Illustration with Floor Plan Shown Is That of the Columbia Apartments, Chicago, Ill., of Which E. J. Ohrenstein & Hild, Chicago, were the architects. The building is a three-story and basement brick and stone structure containing a total of twenty apartments. Seven of these are four-room-with-bath and thirteen three-rooms-with-bath. The street frontage is of pressed brick trimmed with cut stone. The interior finish is of cherry-stained birch and white enamel. Bathrooms and main entrances have mosaic floors. Each apartment is equipped with an in-a-door bed that gives the efficiency of an extra room. The building is heated by steam. The building fronts 127 feet on Columbia Avenue and has a depth of 66 feet. It is a typical apartment building characteristic of the type erected in substantial residential sections in Chicago.

BLUE RIBBON HOMES

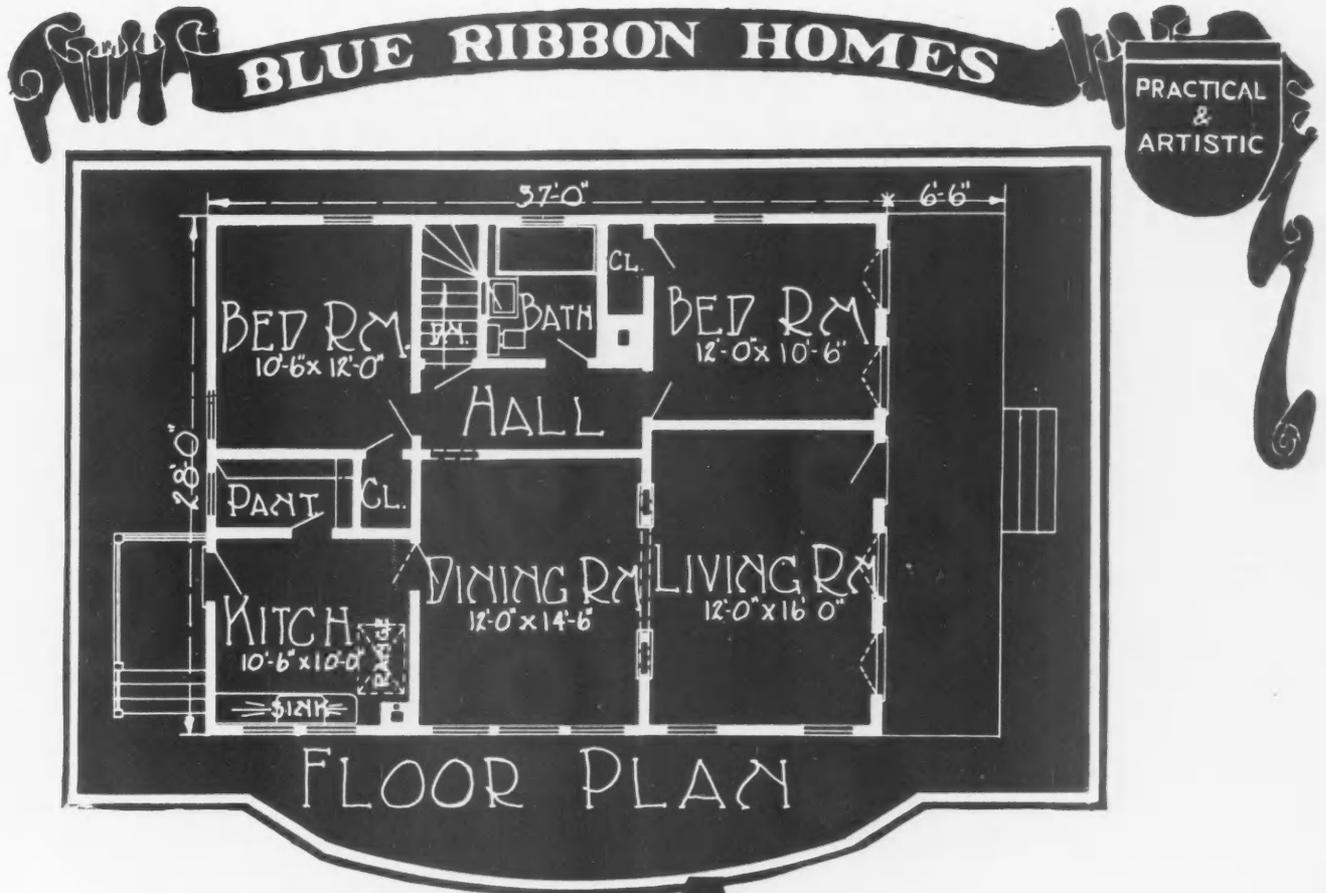
PRACTICAL
&
ARTISTIC



THE TRULY MODERN SMALL RESIDENCE.

Here we have a good example of artistic imagination applied to practical purpose. A few deft touches redeem this design from being commonplace, giving it distinction at no greater outlay on the part of the prospective owner. The chimney has been utilized to sound a decorative note, with its brick set in a pointed pattern in its concrete structure. The snubbed gable ends and the attractive dormers which, with the louvre, are useful as well as ornamental, relieve the roof lines from monotony. There

is an entrance terrace, which could be of concrete, brick or tile, and sheltered by a pergola which surely will have vines before summer is over. We go directly into the living room. The attractive French windows that give charm to the exterior help the interior also. Other French doors lead to the dining room, and a serving pantry separates the latter from the kitchen. There are two bedrooms and bath, ample closet space thruout, and a rear porch whence ice is placed thru the ice door into the refrigerator. Dimensions over all are 30 feet by 44 feet.



A SIMPLE, INEXPENSIVE STYLE OF BUNGALOW. The wonderful lighting arrangement possible by reason of the long French door and its flanking windows is the thing most noticeable about this attractive bungalow. There is no porch to detract ever so little from the light; a sheltering extension of the roof defines the front entrance—that is all. Inside, this light abundance makes very cheerful rooms. The living room is 12 feet by 16 feet and there is a colonnaded doorway leading from it to the dining room. On the living room side this doorway has bookcases at the side; on the dining room

side there are built-in china closets. The kitchen, which opens off the dining room, is well-lighted and compact. There are two bedrooms, each connected with the bathroom by the hall. Entrance to this hall is from the dining room, and full privacy assured. Attention is called to the raised terrace of masonry which acts as a pedestal, one might say, for the design. This type of dwelling is improved by such an arrangement, and by the intelligent use of flowers and potted shrubs. The dimensions over all are 28 feet by 44 feet.

Flooring with a Spring in It

Linoleum Cushions the Feet, Is Durable and Germicidal, and Offers Pleasing Patterns and Colors to the Eye

By JOHN A. COURT

TAKE linseed oil and powdered cork; tree gums and wood flour; coloring and drying pigments—and you have—?

Not the ingredients of a new kind of breakfast food, but the materials that, properly processed, make the linoleum flooring that is coming into ever wider and wider use.

As anyone knows who has forgetfully left a can of paint or linseed oil uncovered over a day or so, linseed oil develops a tough, rubber-like coating. "Oxidization," this is called, and it is this property of linseed oil that gave the idea of linoleum flooring.

The linseed oil, in great shallow vats, is exposed to air radiation until it is sufficiently oxidized. The rubbery oil mass is then thoroly mixed with the powdered cork, wood flour, various gums and the coloring and drying pigments. The exact combination and method of mixing naturally differ with the various thicknesses and patterns in which linoleum flooring is made. If the plastic mass is to be in one color, plain, marbled or organized, it requires one method; if the pattern is an "inlaid" one, and since the inlaying is done with separate units that extend all the way thru the thick-

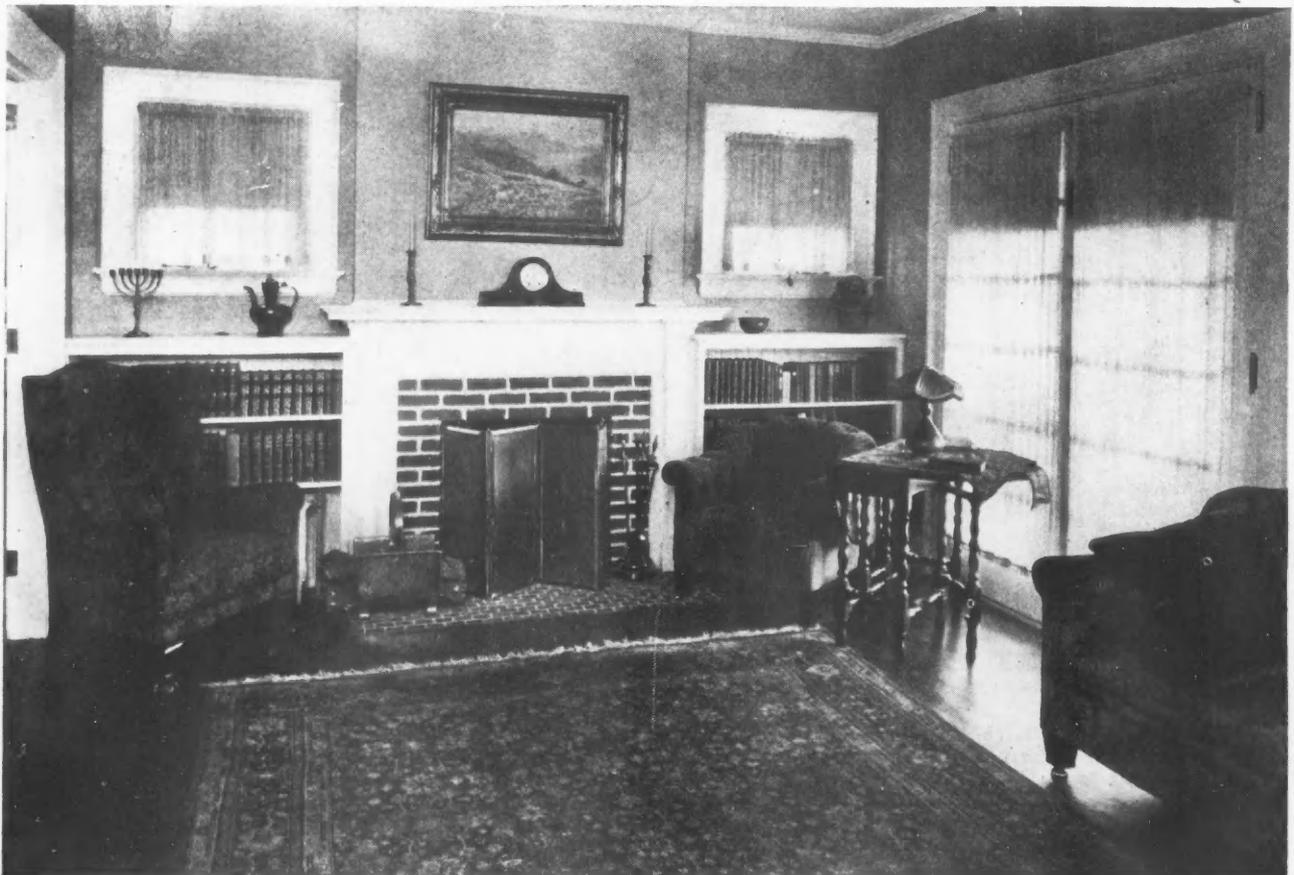
ness of the linoleum, another method of preparation is required. The prepared mass is pressed on a burlap base with heavy calendering machines, and the result now begins to look like the linoleum flooring we are familiar with.

However, it is what is termed "green" as yet. It needs drying out, and is therefore conveyed to drying kilns called stoves where for two to six weeks, depending upon its thickness, the linoleum is cured and seasoned.

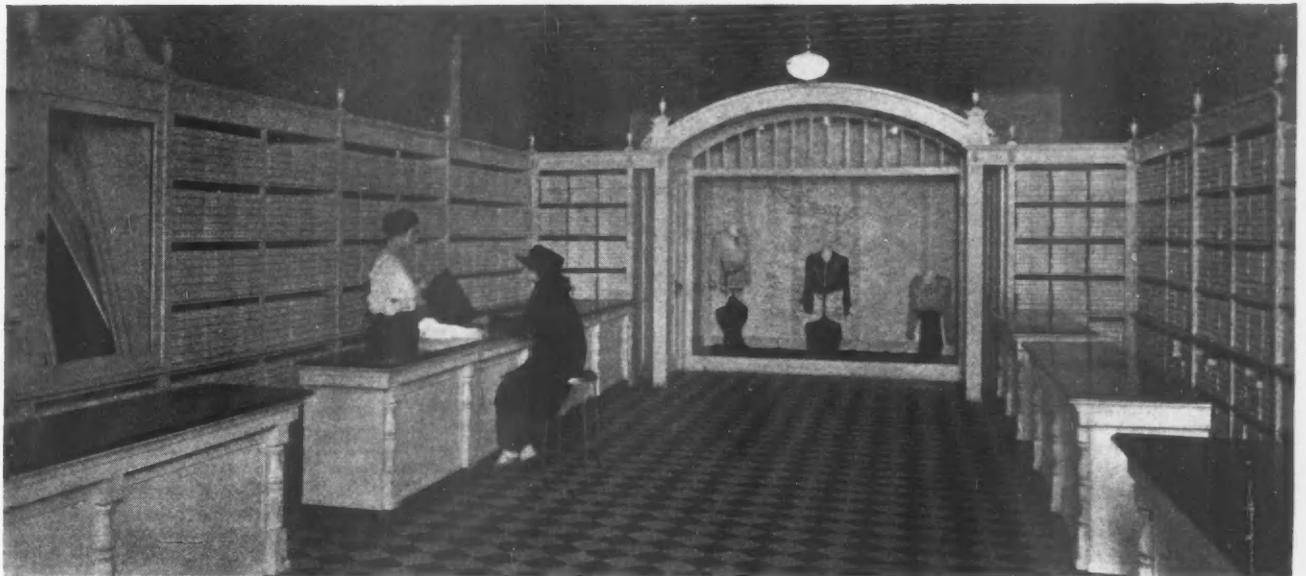
At the proper time it comes out and is made into rolls—a flooring material that is easy to install and will wear well-nigh indefinitely; that has the quietness of rubber, without the "drawing" qualities of the latter; with the warmth and resiliency of cork; sanitary, fadeless and odorless.

The installation of linoleum flooring properly comes after all carpenter and cabinet work and painting and decorating has been done. If it is to be laid over concrete the latter must be thoroly dry. If it is to be laid over wood, matched soft pine flooring, kiln dried and toe-nailed, and with a 4-inch face, is desirable.

Ordinary builders' felt is first pasted to the concrete



Properly Laid Linoleum Furnishes a Flooring Which Is Mildly Elastic and Very Comforting to the Feet. To the critical householder with a flair for good taste in interior decoration it offers many possibilities. It comes in tints and patterns which help to give variety and distinction to that important but often overlooked part of a room—the floor. To cap it all, it is most easily cleaned.



Here is a Linoleum Pattern Which Immediately Lifts the Shop Using It from a Commonplace Level to One Which Bespeaks Uptodateness and Attracts Business. It is durable, and easily kept clean. Salespeople find its elastic properties agreeable, for they are on their feet a great deal. Cheerfulness and quiet, efficient service results.

or wood; in the case of the latter, the felt being laid opposite to the direction of the boards. The linoleum flooring is then pasted and cemented to the felt base, the seams being made tight by allowing the linoleum edges to overlap and cutting thru them with a sharp knife. The linoleum flooring is then rolled with a roller weight, and face brick or sand bags set to weight down the seams. As linoleum flooring "grows" a trifle when laid, expansion room is arranged for by trimming short under the quarter round moulding about the baseboard. The usual surface coating for linoleum flooring is wax or varnish, and when laid and finished it is covered with building paper until the place is ready for occupancy.

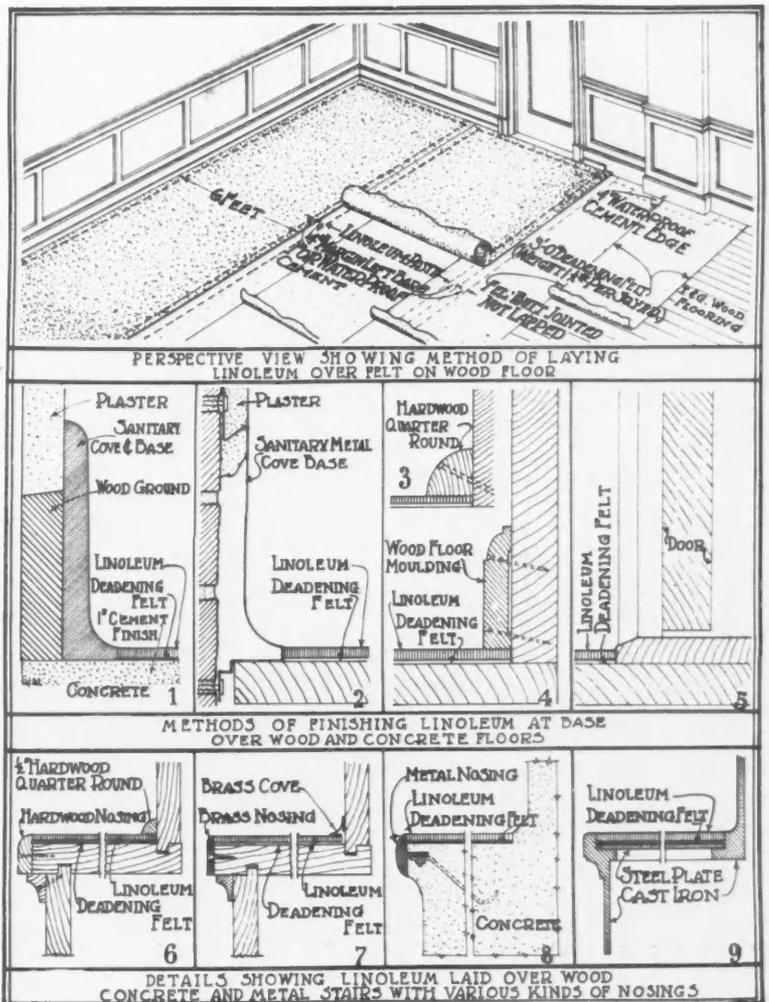
mild soap and warm water, and despite its content of seemingly combustible materials actually possesses fire-resistant qualities that adapt it for fireproof construc-

(Continued to page 146.)

Naturally the combining of the felt base with the linoleum flooring makes a surface which is elastic and pleasing to the person standing or walking upon it. Aside from that, linoleum flooring appeals to the architect, builder and building owner on account of the many possibilities it offers for giving variety and distinction to such a commonplace surface as the floor of a building.

Ordinary "battleship" linoleum — so termed because it was primarily used as a covering for the decks of battleships—is to be had in a wide range of plain and marbled and granitized colors, suitable for offices, lobbies, banks, halls, stores, schools, factories, churches and hospitals. The house owner is not confined to the more conservative patterns, but is now offered linoleum flooring in many pleasing carpet and tile patterns also, that hold endless possibilities from the decorative viewpoint.

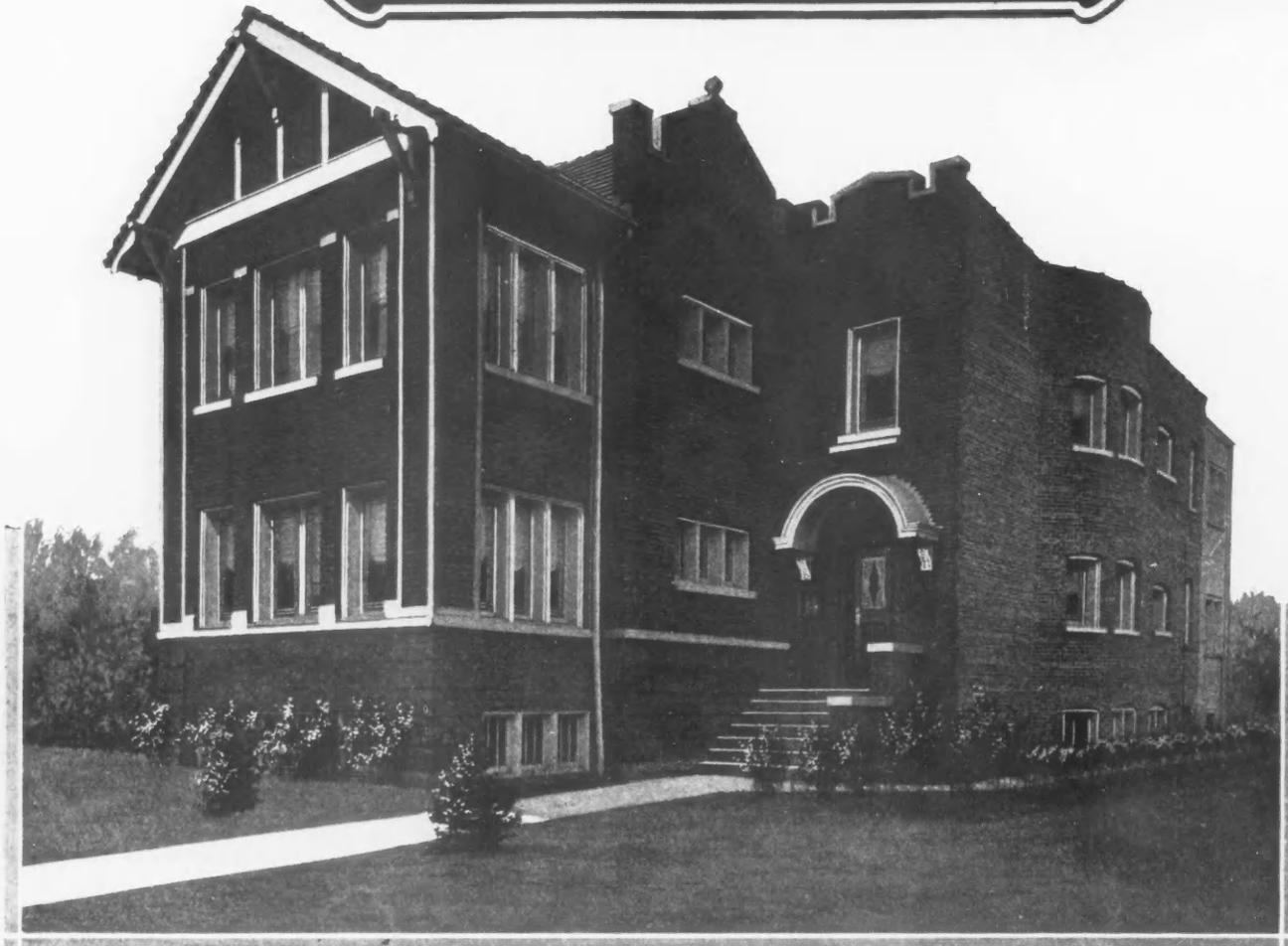
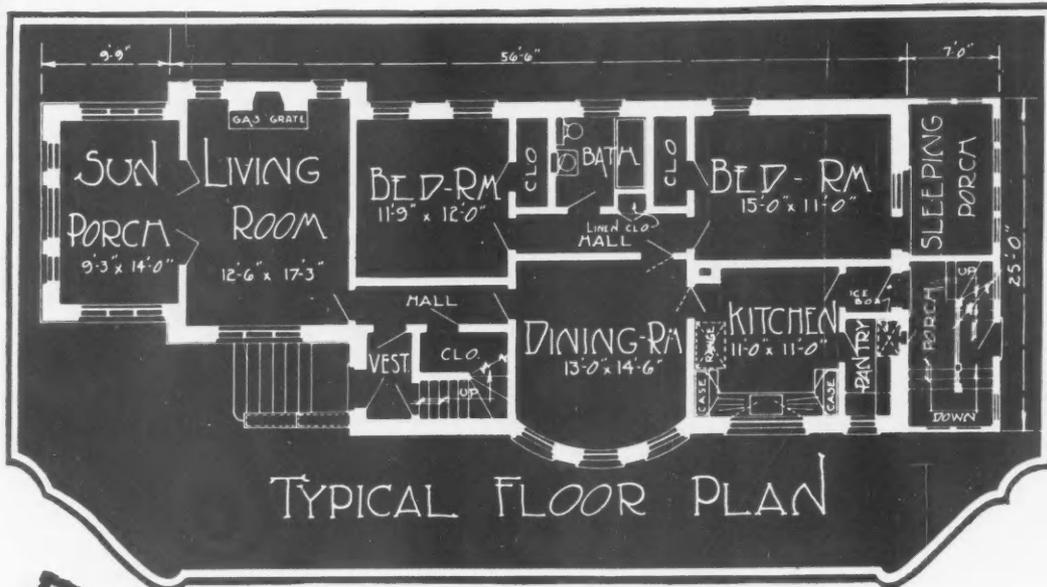
Linoleum flooring is easily cleaned with



The Laying of Linoleum Flooring Properly Comes After All Carpenter and Cabinet Work and Painting and Decorating Has Been Done. The above details show various phases of its installation.

PRACTICAL & ARTISTIC

BLUE RIBBON HOMES

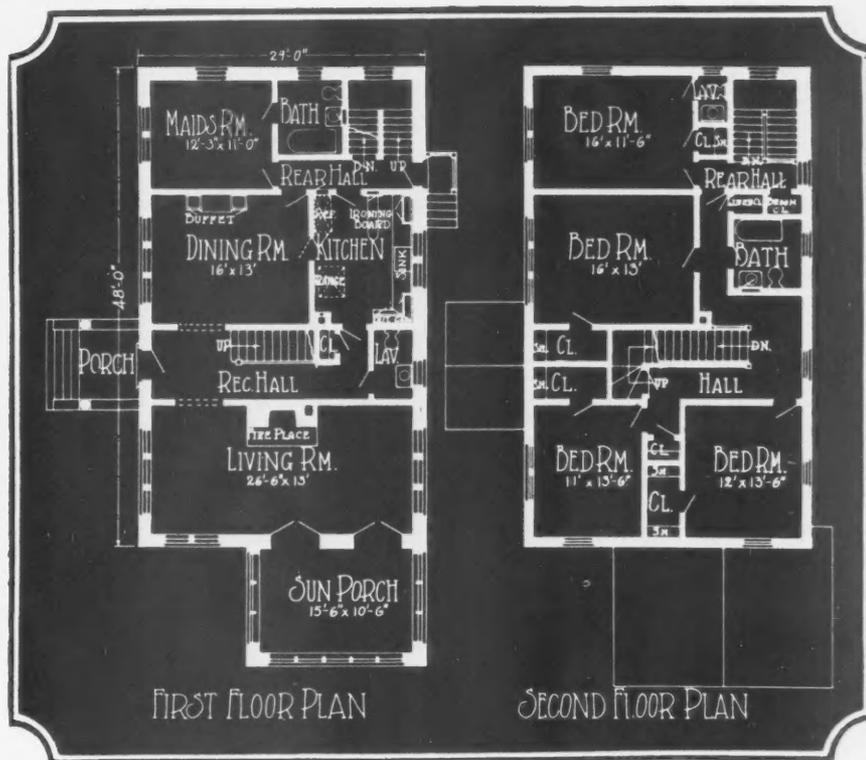


A HOME AS WELL AS AN INCOME PRODUCER. Illustrated is a two-flat building of a type which is becoming increasingly popular, not only in the larger cities, but in smaller places as well. A typical floor plan is shown, identical for the first and second floors. The "front" entrance, by being placed at the side, leaves full space-value for the sun porch. The latter is really an adjunct of the living room, from which it opens. Assuming that French glass doors were used between these rooms, the general effect would be of one large room,

made very attractive by the skillful placing of the windows and the fireplace. Another nice feature is the circular bayed wall which gives distinction to the floor plan of the dining room. There are two bedrooms and a bathroom, a kitchen and a sleeping porch. Although designed for a narrow lot, the building being 25 feet by 73 feet 3 inches over all, the rooms are amply proportioned. There would be no difficulty in renting either floor of such an apartment building.

BLUE RIBBON HOMES

PRACTICAL
&
ARTISTIC



SUBSTANTIAL, POPULAR STYLE DWELLING. There are some designs which possess a never-ending appeal to the intending home owner looking for a good, substantial type of dwelling. This is such. The design is rectangular as to floor plan, with no waste corners. Entrance at the side gives access to a reception hall, from which doors open at either side. The one on the right leads to the living room—a well proportioned room, 26 feet 6 inches by 13 feet, with fireplace, and a well-lighted sun porch reached thru French doors at the farther corner.

We pass thru the reception hall again to the dining room, 16 feet by 13 feet. The kitchen, with many built-in conveniences, directly adjoins. Worth noting is the maid's room downstairs, which may be used for a study or library or sewing room if desired, and arranging for no bathroom, utilizing the one upstairs for the household. Upstairs are four bedrooms, each well dimensioned and with fine light and ventilation. There is a rear hall and staircase in this house, which appeals to many. The over all dimensions, exclusive of sun porch, are 29 feet by 48 feet.

Garage Part of Home Design

Attaching the Garage to the House Offers Many Advantages and Is Satisfactory from Artistic Viewpoint

By R. C. HUNTER & BRO., Architects

ATTACHING the garage to the house offers many advantages over the detached garage.

Not only is this true from the standpoint of convenience and economy, but from the artistic viewpoint as well.

The built-in garage is by no means a detriment to the architectural treatment of the home. Full utilization of space without any sacrifice of beauty makes this type of construction more popular every day. The advent of the automobile has, in this case, made a distinct impression on modern architecture.

A look at the accompanying illustrations will convince one that such a scheme as here adopted is not disappointing in artistic values. Had the house and the garage each been separate and not attached, neither would have the dignity and charm that now exists. The house would appear much smaller and not so pleasing in proportions, while the garage would appear insignificant.

Then, of course, there is the practical side; no going out of doors to get the car, heat, water supply and electric light are all connected to the house systems at a very small cost, since the runs are short and direct.

With a separate garage these conveniences are, as a rule, considered a luxury, and indeed they are, at least their installation is very expensive. Long service runs are required and a separate heating plant, with its attendant nuisance, since these small plants require much attention and frequent firing. Then, with the isolated garage, there is much snow to shovel in the winter, and even in rainy weather it is disagreeable to go out of doors to get the car.

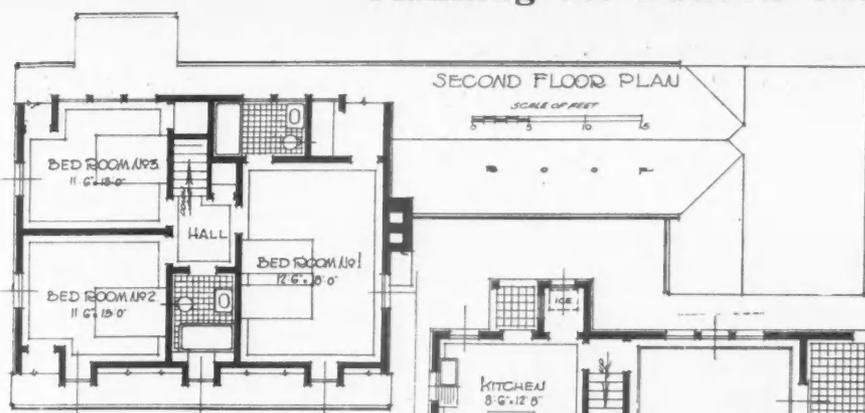
As is usual in cases of this kind, the law of compensation has functioned and the garage in the house has given an additional fire hazard fully recognized by city building departments and fire underwriters.

The automobile with its gasoline and oil storage makes full isolation absolutely imperative. This can be easily accomplished by the use of metal lath on the ceiling over the garage and as a fireproof partition. For all practical purposes this separates the house from the garage, as far as fire protection is concerned and still allows the full convenience of garage within the home.

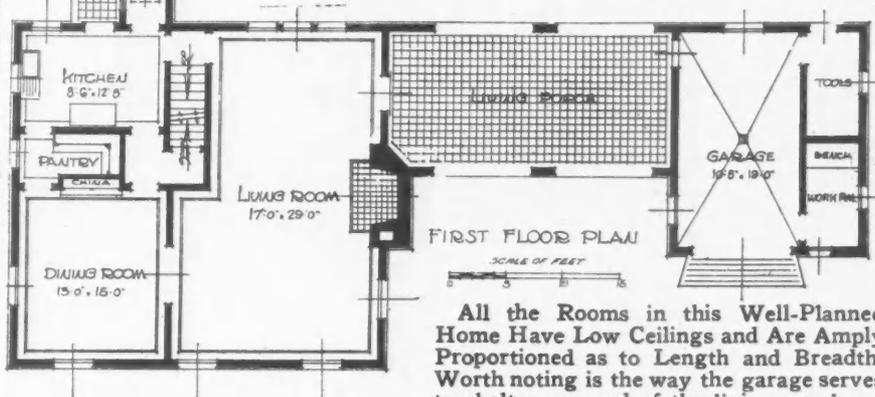
In the house illustrated, the living porch forms the connecting link between the house and the garage. It gives the desired protection from the weather and at



The Built-In Garage Is by No Means a Detriment to the Architectural Treatment of the Home, as Will be Seen from this Very Attractive Dwelling, with Attached Garage, Designed by R. C. Hunter & Bro., Architects, New York, N. Y. Both garage and house complement each other; separated, neither would have the dignity and charm that undeniably exists.



The Rooms Are Amply Proportioned, and a Feature Which Will Appeal Is the Possibility of an Upper Story Fireplace in the Large Bedroom. There are two bath rooms, but one could be replaced by clothes closet space if required.



work. As a result wallboard is on the high plane to which it belongs, and is considered a perfectly satisfactory material for walls and ceilings in very kind of building. A contributing factor, of course, has been the tremendous building boom of the past and current years, and

All the Rooms in this Well-Planned Home Have Low Ceilings and Are Amply Proportioned as to Length and Breadth. Worth noting is the way the garage serves to shelter one end of the living porch.

the same time lends architectural beauty to the scheme.

The treatment thruout is purely Colonial, that Early Cape Cod type; so neat, prim and charming; with the various outbuildings "hooked on" in a quaint and interesting manner.

The house itself provides a very homelike arrangement; all of the rooms have low ceilings that give a cozy effect to the interiors. The large windows are divided into very small panes by heavy muntins, after the old manner.

A huge fireplace gives opportunity for a real old-fashioned open log fire, a charming place to spend a winter evening; to sit before the hearth and watch the fantastic and everchanging fire, to enjoy a good book, or perhaps an old-fashioned chestnut roast. The hearth is the heart of the home. "Who hath a hearth hath a kingdom."



Interior Decorative Possibilities of Wallboard

WALLBOARD has come into its own with the carpenter, contractor and general consuming public. In the early days of the industry it was assumed that anyone could do a good job of wallboarding. The result was unsatisfactory, since the ordinary layman found he did not possess the required skill and experience in the handling of tools. His job went bad and he blamed the wallboard.

Recognizing this state of affairs one company incorporated in its advertising the suggestion that the home-owning wallboard prospect should employ a carpenter for the

the incidental scarcity of lathers and plasterers. Furthermore, applying wallboard is always an inside job, and work is always possible, regardless of the weather. Since the best wallboard cuts like high grade lumber—sawing, cutting and sanding perfectly—a carpenter feels at ease working with it. The illustration shows the possibilities of securing attractive panel arrangements, and without disfiguring nail marks showing in the panel centers.



April Reminders

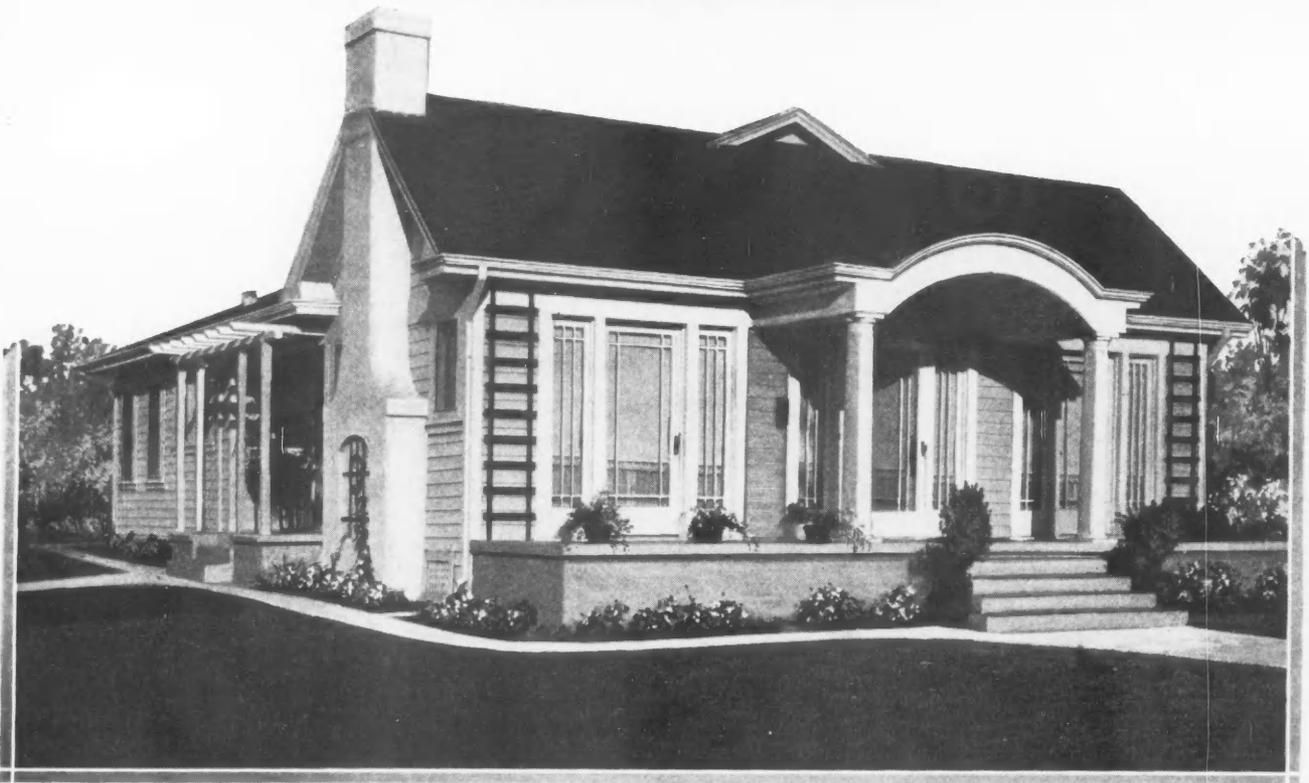
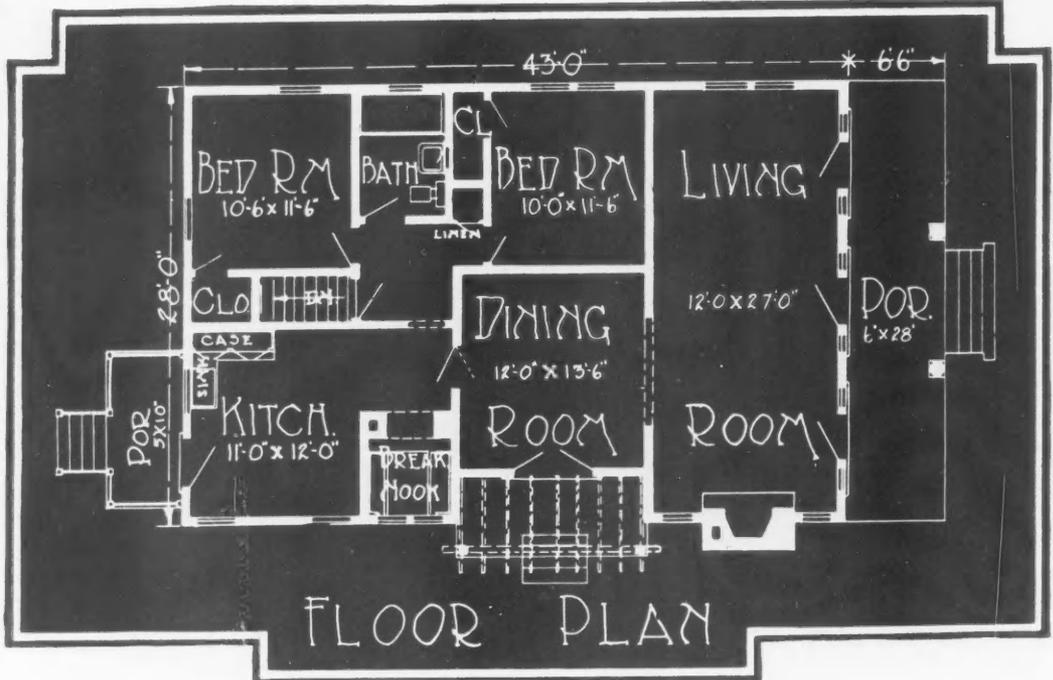
NOW is the time to suggest seeding the lawn of that new house you are finishing building. If the land is not well drained, save your client's time and grass seed by first suggesting a system of tiles. It is the right month in which to apply fertilizers.



The Illustration Shows the Possibilities of Securing Attractive Panel Arrangements Through the Use of Wallboard for Interiors. Wallboard has come into its own with the seeker after distinctive interiors.

BLUE RIBBON HOMES

PRACTICAL & ARTISTIC

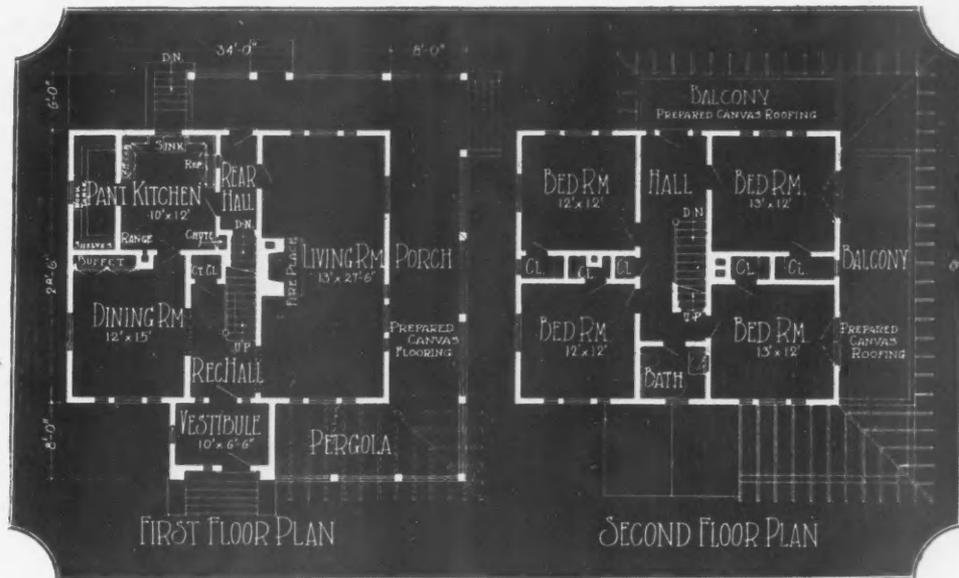


COSY, ATTRACTIVE BUNGALOW. Tucked away at the right side of this bungalow, and not quite caught by the photographer, is what most women will easily consider the most attractive part of the dwelling. It is the pergola porch, opening off the dining room, and which holds many possibilities for the summer luncheon or dinner with the advent of warm weather. But suppose we go thru the front door, passing under the attractive porticoed porch. The long glass doors are inviting. We are in the living room, 12 feet by 27 feet, with its fireplace at one end and fine light from the windows on three sides.

The dining room is directly off it. The French doors that lead to the pergola are inviting, and the room seems twice as large as it is. A convenience appreciated by most housewives is the built-in breakfast nook, just away from the kitchen and between it and the dining room. The kitchen is 11 feet by 12 feet and has a back porch. There are two bedrooms, 10 feet 6 inches by 11 feet 6 inches, with bathroom. There is a linen closet off this connecting bathroom, hall, and closets in each bedroom. The dimensions of this cosy, attractive bungalow, over all, are 28 feet by 43 feet 6 inches.

BLUE RIBBON HOMES

PRACTICAL & ARTISTIC



HOME WITH MANY-SIDED APPEAL. Attractive indeed is the effect created by the pergola at the side of this handsome home. The pleasing impression given by the exterior is heightened by the living room, to the right of the entrance vestibule. It is 13 feet by 27 feet 6 inches, and with its fireplace and windows on three sides should make a home-like, restful room. To the left of the vestibule is the dining room, with its built-in buffet. The kitchen is compact and has many built-in conveniences. Upstairs

are the bathroom and four bedrooms. Each has ample closet space, and there is an extra closet off the hall. A feature is the use of canvas for the covering of the porch, which, it will be noted, serves as a balcony floor at the second story. There is also a rear porch, with roof similarly covered. Properly laid and painted, such use of good canvas gives a permanent, weather-proof covering. This home should appeal to the prospective homeowner who values comfort.

Mister Bob and Mistress Betty Build a House

ONE of the many interesting features to be seen in the coming "Own Your Home" Exposition at New York during the last week in April will be "The House That Bob Built." The design has been prepared especially for the "Own Your Home" Exposition.

In planning this, "Bob and Betty," the couple for whom it is supposed to be built on the floor of the Exposition, have interviewed the heads of the various committees of the Exposition, each expert in his own line, and Bob and Betty have combined the ideas of them all in this Exposition House. It is, therefore, supposed to be the "last word" in small house planning and design.

Betty has done most of the work in planning the house interior so that she could reduce her housework to a minimum. We will let her take you thru.

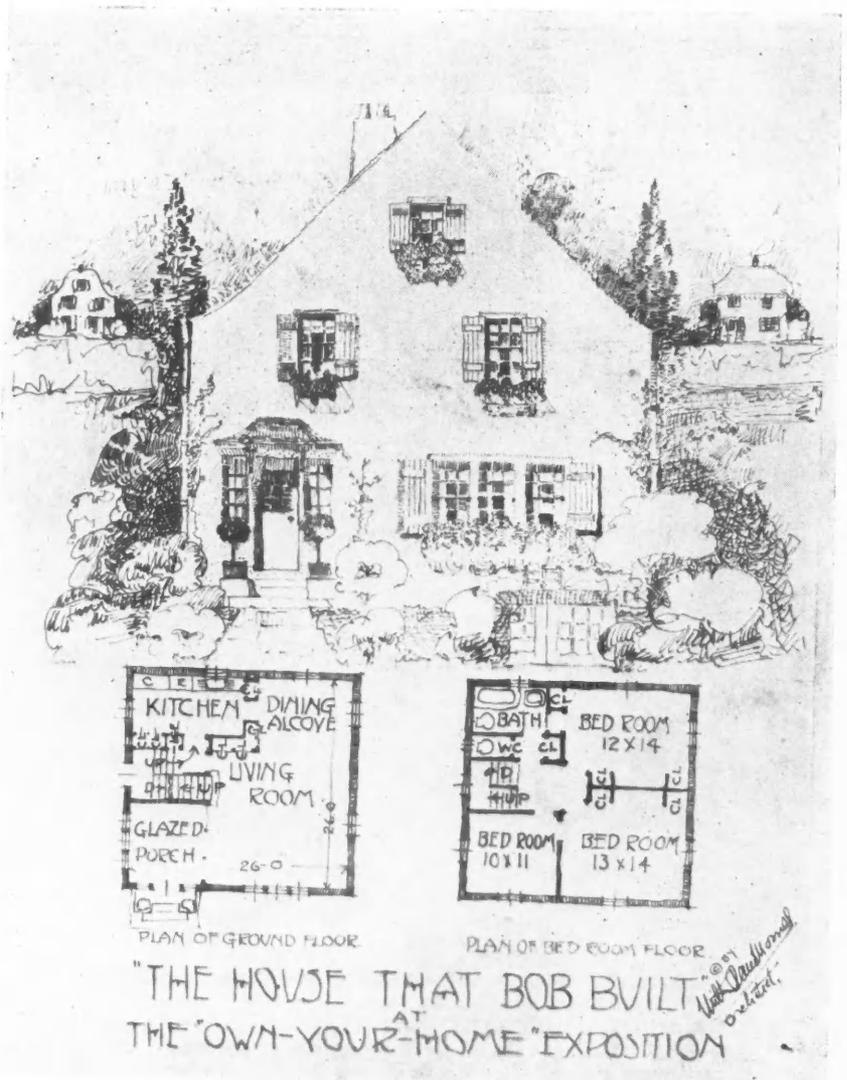
Betty Shows Us Around

"If you will come right in, we will start here. This glazed porch is planned for winter as well as summer use. Three glass doors open into it make it a part of the living room. The dining alcove is a part of the living room also. Really, the entire house except the kitchen opens up into one great room. That is the secret of how we get a spacious appearance. Our house is exactly square in plan. This made a saving in first cost as well as saving in house work—it is so compact and convenient. The rooms are only 8 feet high; this saves in heating as well as giving a cozy look. We have electrical outlets in every room for all those electric conveniences that mean so much in home comfort.

"Here, just at the foot of the stair, is a coat closet with rods and coat hangers. You will be surprised to see what little space our closets take up and still how commodious they are. There are no old-fashioned hooks; the hanging rods are built in and the whole hanger slides out so that you can get at any garment easily. In this way, in a small space, a lot of clothes can be hung up and kept in shape and out of the dust.

"I want you to see my kitchen. I am proud of that. This door takes us to the kitchen entry. The iceman

comes in here and fills our box from the outside. I put the food in the icebox from the kitchen side. There is a direct stair to the basement so that ashes, etc., are taken out without crossing my floors. There is also a built-in closet with an outside door. The milk and morning paper are left there. When I go out and lock up, this package door is left open so I do not have to stay home to wait for the things to be delivered. Just over the package closet is my cold-air closet, with an outside screened window. This saves us the use of ice at least four months of the year. There is my broom closet right back of the kitchen door with a place for the vacuum cleaner. The Household Economics Committee has helped me plan my kitchen. You will note that the kitchen cabinet, the sink and the gas range are all in a row so that I can cook a



Mister Bob and Mistress Betty Have Seen to It That They Have a House Built Exactly Square, and Which Gives Within the Finished Impression One Gains from the Outside—that of a Spick-and-Span, Sensible and Cozy Home. Betty likes flowers and shrubbery—one can see that.



First It Was an Old Stable Standing on Their Proposed New Office Site, and the J. A. Mahlstedt Lumber & Coal Company of New Rochelle, N. Y., Did Not Know Best How to Get Rid of It. They had a fine modern truck fleet; the barn was an eye-sore. But—

dinner without turning around. The icebox and the food closet are just at my back to reduce my steps to a minimum.

"Close to the dining room door is the sink, located in front of a high window with drain boards on each side. As the dishes are washed and rinsed I slip them into a drying rack. This is located over a radiator so that all dishes are dried quickly without wiping. This dish closet has a door opening from the dining alcove, so steps are saved in handling and setting the table.

"One strange thing about our house is that instead of the usual partitions between the rooms, this space is made a little deeper and is used for a row of closets. This gives space for table linen, etc., on the dining alcove side. The dining alcove gives a cozy effect. The wall table, when company comes, may be extended on the living room side.

"Upstairs, all three bedrooms open on the stair hall, so no space is wasted. The bath and an extra toilet room are located above the kitchen for economy in plumbing. There is a linen closet with shelves above and drawers under. The staircase leads up to Bob's study which takes the place of part of the attic.

"I did not tell you about our garage. In digging the cellar we used the earth to terrace up around the house. Then we dug an inclined driveway so we keep the car in the basement where it will not freeze. We made the floor above and garage wall of concrete. Bob has a workshop down there, too. Beside the space for our heating plant and coal, we have also a storage cellar for vegetables."

Presto! Humble Stable Becomes Fine Lumber Office

RECENTLY the J. A. Mahlstedt Lumber & Coal Company of New Rochelle, N. Y., consolidated its lumber and coal yards with its office at Mamaroneck, N. Y. On the lot was an old stable, useless because of the Mahlstedt motorized delivery service and a general eye-sore. The company had long been an advocate of the art-remodeling possibilities inherent in old dwellings as increasing their appearance and value at little cost. Here, it decided, was a chance to take its own medicine. A new office was needed—why not remodel the old stable?

The stable was moved to the front corner of the yard. The 18 inch by 18 inch stall windows were torn out and full size windows installed. The roughened plain siding was covered with self-furring steel fabric and two coats of magnesite stucco. A white marble dash was added to the stucco. Dormer windows were put in and a simple pillared porch built on. The roof was covered with stained shingles in seven different shades of blue and green, giving a pleasing contrast to the white stucco.

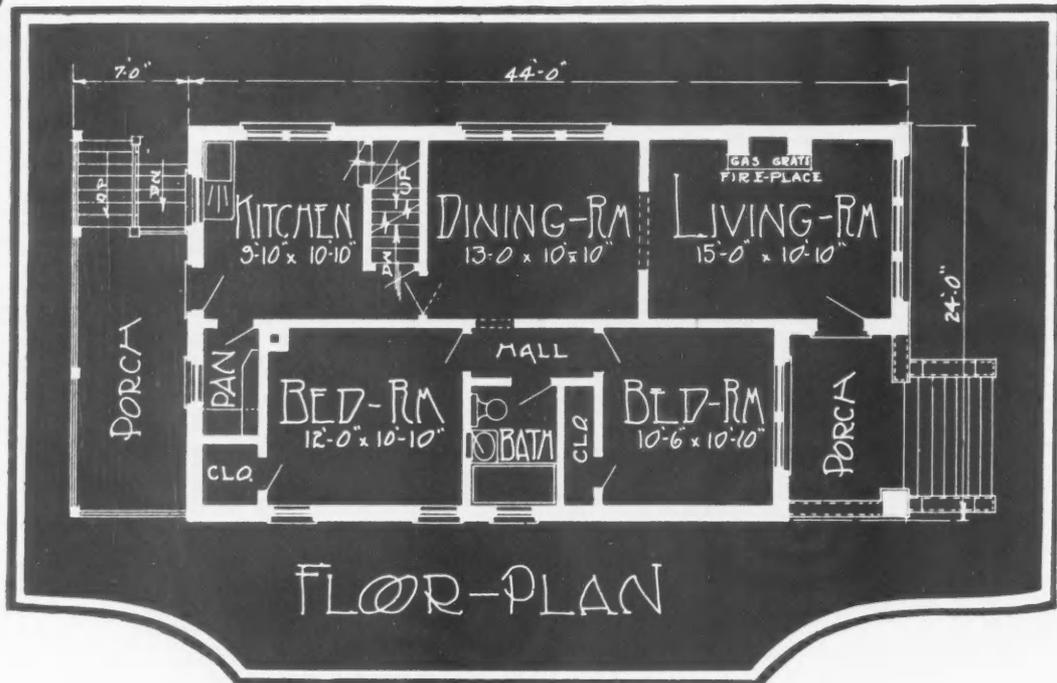
A chimney was added, and the exterior began to reflect the true Colonial style, which served to determine the character of the interior also. The main floor became one large office, where it was a pleasure for customers to call. On the second floor two rooms and a bathroom were put in for the office force.



—the company had long been an advocate of the art-remodeling possibilities of old dwellings, and decided to take its own medicine. Here, then, is the new office of the J. A. Mahlstedt Lumber Company, New Rochelle, N. Y. A fine incentive to all lumber companies to go and do likewise.

PRACTICAL
&
ARTISTIC

BLUE RIBBON HOMES

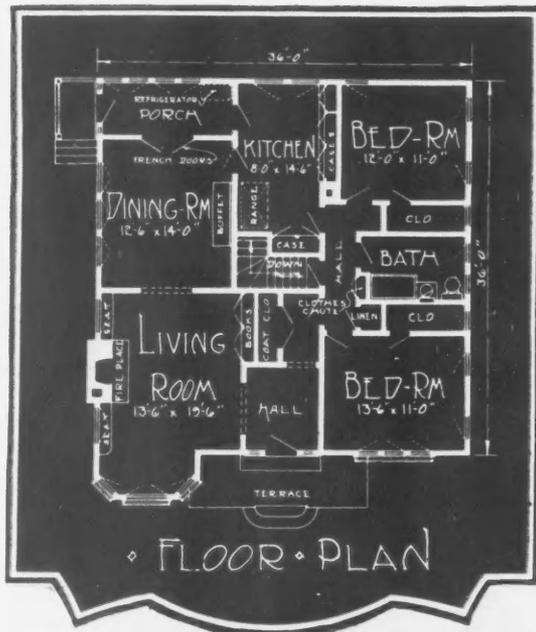


STURDY, COMFORTABLE BUNGALOW. This is a design which is making increasing appeal to the intending home builder of moderate income. Observe that it is designed to make use of every available bit of floor space over the width of a narrow lot, without waste. There are five rooms, and front and rear porches. The front entrance is directly into the living room, which is 15 feet by 10 feet 10 inches and has a gas grate fireplace. Opening off it is the dining room, 13 feet by 10 feet 10 inches. The

kitchen, lighted on two sides, has a windowed pantry, saving ice expense. The bedrooms, convenient to the bath room, enjoy full privacy and are reached by a doorway opening into a hall from the dining room. The second floor dormer treatment is for architectural effect, but an extra bedroom could be added in the attic if desired. The finish is brick with stone trim, and over all dimensions are 24 feet by 44 feet.

BLUE RIBBON HOMES

PRACTICAL
&
ARTISTIC



A HOME OF COMPACT CONVENIENCE. This home gives the effect of being as neat as the proverbial pin. It can be made so, if built, for it contains the maximum number of conveniences such as enable the housewife to organize her day's work and accomplish it without too great effort. There is an entrance doorway which uses a Colonial detail to good advantage. Thru it we enter the hall. Here the first convenience is noticed, for we have a clothes closet to accommodate the family's and guest's wraps. The living room is off this hall to the left, with a fine bay window, a fireplace with ingle seats, and a built-in bookcase. A set of open French doors

lead to the dining room, with its three casement windows and a built-in buffet. French doors also open off the dining room to the back porch which could serve as a dining porch in warm weather. The refrigerator is in one corner of this porch, directly off the kitchen. Notice the kitchen. It is 8 feet by 14 feet 6 inches but with many built-in conveniences, and a few steps away from it, down the hall, is a clothes chute to send the soiled clothes to the basement washroom. There are two bedrooms, with closets; a bathroom, and a linen closet. The dimensions over all are 36 feet by 36 feet, exclusive of bay window extension.

Revising Building Codes

U. S. Government Recommends Minimum Requirements for Small Dwelling Construction with View Towards Simplifying Building Codes

Editor's Note: This is the first of a series of abstracts American Builder is making from the report of the Building Code Committee of the Department of Commerce, and is done to give wider publicity to the Committee's Recommended Minimum Requirements for Small Dwelling Construction. The others will follow in succeeding issues.

THERE has long been a woeful lack of definite provisions in the majority of building codes thruout the United States in regard to the minimum requirements for dwelling house construction. When Herbert Hoover became Secretary of Commerce his long engineering experience led him to formulate a general plan for reducing all the lost motion possible in the various industries of the country. To this end his department engaged in conferences with the leaders in each industry. Investigations by a Congressional Committee during 1919 and 1920 having disclosed that existing building laws were operating to prevent needed activity in the building industry, a committee of experienced architects and engineers was organized by Secretary Hoover.

The committee was instructed to investigate building practice and code requirements, and to prepare standard building regulations based on the latest and best information, in order that proper recommendations might be recommended to cities and states adopting or revising building codes.

The co-operation of nearly one hundred architectural and engineering societies, builders' exchanges, and industrial organizations producing building materials was secured. Special questions were also referred to large groups of individual engineers, architects, building officials, to the Bureau of Standards, and to others whose experience quali-

fied them to discuss such subjects. Tentative recommendations were drafted and submitted widely for discussion and criticism by those interested in the work, and the final report of the Building Code Committee is now presented by the AMERICAN BUILDER to its readers. The first of others of a series to follow in succeeding issues, it covers recommendations for the construction of one and two-family dwellings having exterior walls of solid or hollow masonry, concrete, and frame, the latter including stucco and veneer surfaces.

Dwelling House Construction Unnecessarily Massive, Committee Reports

It was found that the methods and practices followed in the design and construction of dwelling houses are the result of blindly following tradition and past custom. There is, it is stated by the committee, no good reason for the excessive thickness of the masonry walls used for ordinary one and two-story dwellings which common practice seems to require, and for which the home owner has to pay. Recognition is also given to types of construction other than those so well known.

The Recommendations ARTICLE I.—GENERAL

Section 1. Limitations.

These requirements apply only to buildings used as dwellings, either detached, semi-detached, or in rows, and intended for the occupancy of not more than two families in each unit.

Note. No recommendations are made as to the proportion of the lot each building may cover, the distance between buildings, or between buildings and lot lines.

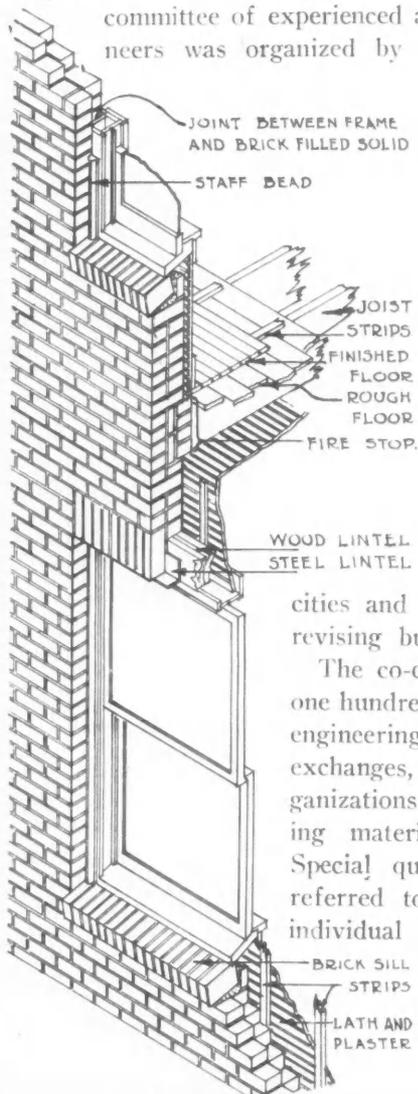
Section 2. Heights and Areas.

1. The number of stories in dwellings having masonry or concrete walls of the minimum thickness permitted is limited only by the permissible height of the walls. Dwellings classed as frame construction, where built for the accommodation of two families, are limited for the purpose of this ordinance to two and one-half stories.

A half story is a story situated wholly within the roof framing, or having a floor level not more than three feet below the top of the roof plate. No family shall be domiciled within such half story.

Note. Dwellings exceeding the height limitations fixed for the minimum wall thicknesses hereafter given require code regulation additional to that provided in the following sections.

2. No limitations are placed on the allowable floor area of dwellings for which minimum requirements are herein prescribed, except that not more than two families shall be housed within the same division or exterior walls.



Solid Brick Wall Construction.

Dwellings with Walls of Solid Brick

ARTICLE II

Section 3. Thickness, Height and Bonding of Exterior Walls.

The minimum thickness of exterior solid brick walls shall be 8 inches for a height not exceeding 30 feet. When gable construction is used an additional 5 feet is permitted to the peak of the gable. In all 8-inch brick walls at least every sixth course shall be a header course, or there shall be at least one full header in every 72 square inches of wall surface.

Note. The Committee found that two, or two and one-half story dwellings with 8-inch brick walls are in use in at least 40 per cent of American cities; that such walls have been found safe from a structural standpoint and practically as resistant to lateral forces as 12-inch walls; that they provide sufficient insulation to prevent transmission of fire thru the walls, and though less fire-resistant generally than 12-inch walls were not sufficiently so to justify restrictions against their use for two-family dwellings.

It is recognized that 12-inch walls, due to increased mass and better bonding, have superior stability, hence greater ability to withstand high wind pressures. The Committee would advise 12-inch brick walls as preferable for dwellings in regions subject to extremely high winds or to intense cold, and in general where cost considerations are not important.

Where sawed stone is available its use shall be permitted for walls under the same circumstances and subject to the same restrictions as solid brick.

Taking 8-inch as a standard wall thickness for brickwork, it is found that average building code requirements exceed those of the Committee by 15, 23 and 26 per cent, respectively, for one, two and three story dwellings. Corresponding reductions in volume of hollow clay tile and hollow concrete exterior walls, which adoption of the committee's recommendations would produce, are 14, 13 and 24 per cent, respectively, for one, two and three story dwellings.

These percentage figures represent the lesser cost of material to a building owner were the Recommended Minimum requirements followed in his locality.

Section 4. Piers.

The unsupported height of isolated brick or

plain concrete piers shall not exceed 10 times their least dimension. Stone posts shall not be used as supports for girders or walls in cellars or basements.

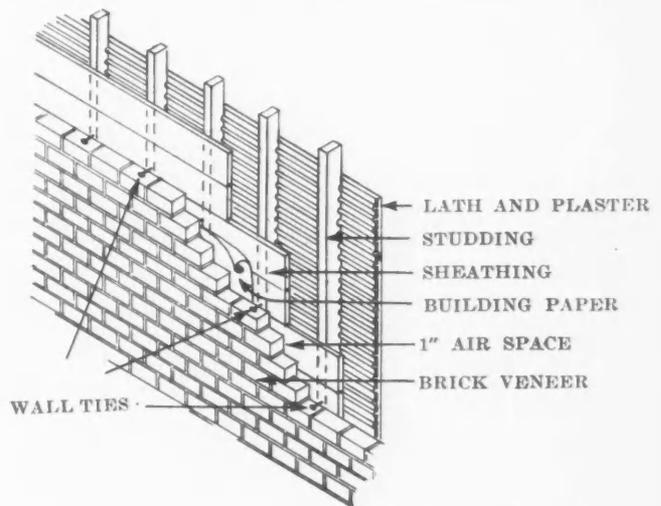
Note. Stone splits and spalls easily when attacked by heat, and a fire in the cellar is thus liable to cause the collapse of the building.

Section 5. Chases.

Chases shall not be permitted in 8-inch walls. In thicker walls the back of chases shall not be less than 8 inches thick.

Section 6. Arches and Lintels.

1. Openings for doors and windows shall have well-buttressed arches, or lintels of masonry, plain



Clay or Cement Brick Veneer Construction, With Inner Wall Surface Plastered Over Metal or Wooden Lath.

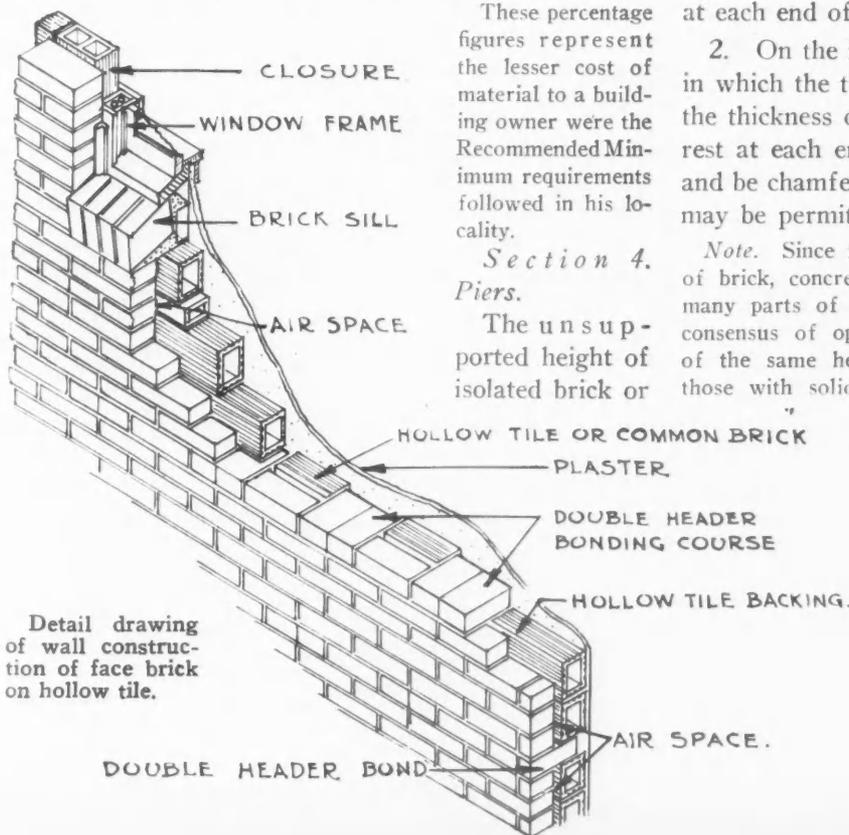
or reinforced, or of metal which shall have bearing at each end of not less than 4 inches on the wall.

2. On the inside of openings less than 4 feet wide, in which the thickness of lintels or arches is less than the thickness of the wall supported, timber which will rest at each end not more than 2 inches on the wall and be chamfered or cut to serve as centers for arches may be permitted.

Note. Since frame structures veneered with a single layer of brick, concrete block or structural stone are popular in many parts of the country, the Committee found that the consensus of opinion favored well-built veneered dwellings of the same height and under the same circumstances as those with solid 8-inch brick walls. It was recommended that such construction, however, should not extend below the first floor joists. The anchorage between the veneer and the sheathing should be frequent, non-corrodible and substantial. Outside should be carefully flashed to prevent the entrance of water behind the facing, and the use of building paper between the veneer and the sheathing was strongly recommended. Adequate firestops should be installed at floor lines and at the intersection of partitions with walls.

Section 7. Quality of Brick or Mortar.

Brick, whether of clay or other



Detail drawing of wall construction of face brick on hollow tile.

materials, used for 8-inch exterior, party or chimney walls or piers, shall at least meet the following requirements:

STANDARD SIZE: 2¼x3¾x8 INCHES

Kind	Absorption Limits, per cent		Compressive strength (flat) pounds per square inch		Modulus of rupture, pounds per square inch	
	Mean of five tests, maximum	Individual, maximum	Mean of five tests, minimum	Individual, minimum	Mean of five tests, minimum	Individual, minimum
Face Brick . . .	10	12	1,500	1,000	300	250
Common Brick	12	15	1,500	1,000	300	250

When sampled at the plant the age of concrete brick when tested shall not be less than 28 days nor more than 60 days. Tests may be made on the brick delivered on the job.

Mortar for foundation or exterior walls, chimneys, or piers shall have a strength not less than that of a

cement-line mortar of the following proportions by volume: One part portland cement, one part lime, six parts sand.

All cements and limes shall conform to the requirements of the standard specifications for such materials issued by the American Society for Testing Materials. (Copies of these specifications may be obtained from the offices of the society, 1315 Spruce St., Philadelphia, Pa.)

During warm and dry weather all brick should be thoroughly wetted just previous to being laid, in order that a good bond may be obtained between the brick and mortar, and so that sufficient water will be left in the mortar to permit its acquiring full set. In cold weather brick should be thoroughly dry when laid, and for best results both bricks and mortar should be warm, so that the latter may obtain at least a partial set before it is frozen.

Home of "Home, Sweet Home"

AT Easthampton, Long Island, stands this historic house—the birthplace of John Howard Payne, the author of "Home, Sweet Home." It is this house to which he returned, friendless and forsaken and ill, and resting once more under its comforting old roof wrote the words of that immortal song. The world's greatest singers have sung this simple tribute to the enduring beauty of "Home, Sweet Home" and many pilgrims have visited the quaint old

tree-shaded house, with its roomy kitchen in which hang the household utensils of other days. It is logical that this house should form the basis of the emblem adopted by the "Own Your Home Expositions" to advertise their recent Chicago exposition and the one forthcoming in New York, April 21 to 28.



At Easthampton, Long Island, Stands This Historic House, the Birthplace of John Howard Payne, Author of "Home Sweet Home." In the roomy kitchen hang the quaint utensils of other days, good as ever. This house formed the basis of the emblem used to advertise the Chicago and New York "Own Your Home" Expositions.

Slate,—Mother Nature's Roofing

Strong, Non-Absorptive, Non-Inflammable and Lasting, Slate Anticipates Modern Artistic Roof Requirements with Wide Range of Durable, Handsome Colorings

By ELDRED VAUGHAN

SLATE is a fine-grained rock with a more or less imperfect cleavage which permits its being split into thin smooth sheets. By reason of its strength, and non-absorptive, non-inflammable and insoluble qualities slate has long been in favor as a roofing material. Its weather-resistant qualities are great; a slate-roofed Saxon chapel at Bradford-on-Avon, Wiltshire, England, erected in the eighth century, still has its original slate roof. The slates are moss-covered, but after 1,200 years of constant exposure to climatic changes, are still in good condition.

Its slaty cleavage is what differentiates slate from other rocks, and gives it its economic value as a roofing material in the shape of shingles. Some of the finer grades of Pennsylvania slate split as thin as 1/32 of an inch. The modern leaning toward a variegated colored roof seems to have been anticipated by Mother Nature during her titanic preparation of the great slate beds in Maine, Maryland, New York, Pennsylvania, Vermont and Virginia, for gray, bluish gray and black alternate with reds, greens and purples. Yellow, brown and buff colors are also evident as a result of weathering processes, while other slates show in the same shingle mottled greens and purples and dappled reds. Slate as a roofing material would not be costly

if more people would appreciate the beauty which comes in time to a variegated or weathering slate roof, and not be misled for moderate-cost roofing into insisting of "non-fading" quality and uniform color grading, neither of which increase the weather-resistant and fireproof qualities of roofing slates.

High grade slate usually occurs in narrow beds or "veins," inclined at steep angles. The first thing necessary in quarrying it is the stripping. Taking off the "overburden," as it is called, requires the removal of from a few inches to fifty or sixty feet of useless material. In most cases the slate beds proper are clearly marked by ribbons or bands, so that the tracing of the original bedding is comparatively easy. But these slate beds are not straight; more often than not they are nearly vertical, curving back and forth at steep angles, sometimes dipping at an average angle of about 40 to 45 degrees and in others from 15 to 60 degrees. Such open-pit quarries often are 400 feet in depth—the deepest being about 600 feet—making the work more expensive than that of comparatively shallow pits. After the stripping has been completed there is still wastage, for beds of inferior slate alternate with good beds. In order to obtain sound blocks of slate slow and careful methods are necessary, for



High Grade Slate Usually Occurs in Narrow Beds or Veins Inclined at Steep Angles. In most cases slate beds proper are marked by ribbons or bands. Often they are not straight or nearly so, as in the picture, but vertical, dipping at angles of 15 to 60 degrees. In the lower right hand picture the hoist chain has been slipped beneath a mass of slate, and the overhead cableway will hoist it to the surface.





After the Slate Blocks Are Broken Across and the Preparatory Splitting Done, the Slabs Go to the Slate Splitter. Using a wide, flexible splitting chisel and a wooden mallet, he splits the slabs into slates of the desired thickness.

much of the slate in the good beds must be discarded because of siliceous knots, ribbons, cracks and similar imperfections. Where the slate vein is narrow and vertical, or nearly so, the mining of the blocks is done by shafts and drifts.

The good bed of slate being ready, drilling is done, compressed-air hammers being used; or, if there is still a considerable depth of waste rock, churn and tripod drills are pressed into service, preparatory to blasting charges for its removal.

"Plug-and-feather" wedges are used to make the cross-fractures in the slate, being driven in the shallow drill holes. Formerly explosives were widely used in the removal of the good slate blocks. Now, however, track channeling machines are used and mark a great advance, giving a smoother slate surface and making possible the obtaining of regular rectangular blocks.

Separation of large masses of slate from the quarry floor is done thru blasting in drillholes. If the portions are small, wedges are driven in notches instead. When this larger mass is set free it is subdivided into slabs small enough to be hoisted to the

surface. When a block is broken off the men work it with crowbars, and with a "Yo-heave-oh!" the block is pried up, the hoist chain slipped beneath it, and the overhead cable way brings it to the surface. Such blocks are now conveyed to the splitting sheds or mills for subsequent treatment.

A skilled operator marks each block with drill holes and supervises the drilling and wedging which follows, as an intimate knowledge, born only from long experience, is necessary for the proper breaking and splitting of the blocks. After they are broken across the slate masses are split with a hammer and a special chisel known as "splitter" into thicknesses sufficient for eight slates each. Only slate that splits easily into thin and uniform sheets and which resists weathering and discoloration goes into the manufacture of roofing slate.

The slate splitter now splits the slabs into the desired thickness, usually $3/16$ of an inch. He uses a wide flexible splitting chisel and a wooden mallet. The slab is always split in the center, and subdivided until slates of the desired thickness are obtained. A trimmer takes the thin sheets of slate from the splitter and cuts them to rectangular shape. The most common equipment used for this purpose is a straight or curved blade about three feet long, manipulated by a foot treadle or one run from a countershaft. An experienced trimmer understands how to increase or decrease the speed of the machine



A Rustic Roof of Attractive Design, Made of Architectural Grade Slate. Not the least attractive part of a slate roof is this rugged, irregular, artistic effect. Properly manufactured roofing slate, laid according to established practice on uniform and strong supports of moderately steep pitch, provide a roof that will not leak.

to suit harder or softer grades of slate. This is the stage of roofing slate treatment which produces the rugged, irregular and uneven, though artistic surface, preferred for roofing slate. Where an even edge is desired the trimming is done by circular saws, just as lumber is sawn. The finished slates are piled on rack cars, to be run next morning to the yard, and the empty cars of the day before sent back to the trimmers for the current day's work. The slates are usually damp, since most slate blocks split to better advantage when damp, and are piled on edge in the storage yard, in a position as nearly vertical as possible. Each pile is made up of slates of the same size.

In the United States slate is sold by the "square," a "square" meaning enough slate to cover 100 square feet with a 3-inch lap. Slates range in size from 7 inches by 9 inches to 16 inches by 24 inches, and the number of slates in a "square" will run from 85 to 686, according to size. Ordinary slates are approximately 3/16 of an inch thick. Large and heavy roofing slates with a maximum thickness of 2 inches and weighing 75 to 200 pounds have recently come into much demand for the roofing of large residences and other buildings. Naturally the roof trussing must be arranged accordingly. In the case of the commercial thicknesses, the weight of the average "square" of slate is about 650 pounds.

Sometimes slates are punched for nail holes prior to shipment from the yard, the punching being done with a foot treadle, the two holes being made simultaneously. Slates about 1/2 of an inch thick are drilled and countersunk thru the use of motor-driven rotary drills. Many slate roofers prefer to punch their own commercial slates at the job.

Usually, in placing slates, the rafters are first covered with 7/8-inch thick tongued-and-grooved roofing-boards, surfaced on one side, and the smooth side against the rafters, with the tongues upward to insure better shedding of water. Slater's roofing felt is laid on top of this, joints lapping, and in placing the slates

the nails are not driven "home"—this is, to the full depth of the nail. The slate is left just a bit free, to eliminate cracking when the sheeting seasons and shrinks. The slates are usually laid with a 3-inch lap, with sheet copper, lead, tin, or prepared roofing roll used for valleys and flashings. Wrought iron or good weather-resisting nails should always be used in constructing a slate roof, substituting copper nails in localities where smoke or manufacturing fumes are prevalent.

Properly manufactured roofing slate, laid according

to established practice on uniform and strong supports of moderately steep pitch, provides a roof that will not leak. Slate makes an admirable surface for flat built-up roofs also. Such a roof will maintain its quality without repairs or treatment other than the occasional replacement of a slate which may have been broken by other than natural cause.

A more general recognition of the inherent good qualities of slate is leading to its wider use, for altho the first cost is greater than that of some other roofing materials, the negligible maintenance and replacement costs over a long period of service render it inexpensive and a permanent roofing investment. Slates are always salvaged when a building is torn down, in one case being successively used to cover even the seventh building.

Building Dont's

DON'T permit Mr. and Mrs. Prospect to deceive themselves as to what they can afford. A tabby cat cottage is better than a mansion white elephant.

Don't fail to acquaint them with ways and means of getting full preliminary information. A dollar's worth of postage may save nine hundreds' worth of grief.

Don't weep when they tell of the homes their friends built so cheaply years ago. Mark the lesson to build now and gain likewise.

Don't allow them to feel they can build well without a set of plans. The Missus knows that even the best dressmaker uses a pattern.

Don't feel discouraged when a prospect says that he "can't make head or tail of those blueprints." Explain them, and win an admiring friend.

Don't think, designer and builder of houses, that Mr. and Mrs. Prospect haven't any idea what kind of home they want. They may not have had any other idea in their heads for years.

Don't allow prospects to entertain the impression that you can work without a fair profit. Like them, you have other plans than the poorhouse.

Don't permit the design or construction of fancy fixings unless you feel sure of your ground. Most "period" houses are only exclamation points.

Don't think your prospects can get along without building a home. They can't.



Chicago to Have New \$55,000,000 Station

A NEW passenger terminal covering fifty acres of ground and costing upwards of \$55,000,000, to be known as the "State Street Terminal Station," is planned to be built upon the present site of the Dearborn Street Station, in Chicago, according to announcement of H. G. Hetzler, president of the Chicago & Western Indiana Railroad. The old station was recently partially destroyed by fire.

Advertising Concrete Products

Unfavorable Selling Conditions Had to Be Overcome

By A. J. R. CURTIS

The second of a series of articles on successful marketing of concrete products, written especially for the AMERICAN BUILDER.

EDITOR'S NOTE: (A writer for the AMERICAN BUILDER, impressed by the statement that concrete masonry units, including concrete block and tile, were sold to the equivalent of 300,000,000 8 by 8 by 16-inch block in 1922, interviewed a number of the more successful manufacturers in order to learn what part advertising is playing in the almost phenomenal development of these concrete products.)

TWENTY years or more of unintelligent, haphazard production of concrete block very naturally piled up a large volume of prejudice against the use of the product and indeed it all but wiped sales away; so it is not surprising that the reorganized industry of the last three years has had to face and to overcome sales resistance more obstinate than has often, if ever, been encountered by a

construction material.

Analysis showed that the accumulated public dislike for concrete block was based on two reasons, poor appearance and variable quality, the former being in evidence almost everywhere and the latter occasionally. The public had been ascribing its aversion to poor quality to the block, and as a corrective measure building code standards were boosted, sometimes to what now seem unreasonable heights. Thought in the industry has been directed lately toward standardization of manufacturing methods, sizes and quality, and the general improvement in the appearance of block construction by (1) the abandonment of rock face patterns and (2) concentration on two types, those with flat, rough faces designed to make a base for stucco, and those with flat granite or marble finished faces, to be exposed in the wall. By far the greater

Penn Building Blocks are made in Philadelphia—"The World's Greatest Workshop"

Prices of regular and special sizes upon application

A Standard 8x8x16 block weighs about 32 lbs.

B 8x8x16 one end smooth weighs about 32 1/2 lbs.

C 8x8x8 half standard size block weighs about 17 lbs.

D Chimney block made in 4 styles weighs about 62 lbs.

E 4x8x16 block weighs about 26 lbs.

F 4x8x16 block weighs about 17 lbs.

G 8x8x16 reveal block 27 lbs.

H 3x8x8, 8 lbs.

I 4x8x8, 13 lbs.

When ordering specify size and letter

Passed by Building Inspectors in Philadelphia and throughout Suburbs

Fig. 1. Surely Nothing Unattractive About the Way the Penn Building Block Company of Philadelphia Advertises the Concrete Blocks of Its Manufacture. The illustration reproduces the inner two pages of one of its attractive advertising folders.

PENN BUILDING BLOCKS

*are used in every Suburb
of Philadelphia*



923 Sansom Street
PHONE 6
MAIN 8517 - WALNUT 5706

SOUNDPROOF DAMP-PROOF NON-CONDUCTIVE TO HEAT OR COLD STUCCO STICKS NAILS HOLD FIRMLY

Ten Reasons Why:—

1. Damp-proof, moisture proof and frost defying.
2. Sound proof.
3. Terracious with great strength.
4. Non-conductor of heat and cold.
5. Perfect key for inside plaster and outside stucco. (No wood or metal lath required inside or out.)
6. Fire resisting.
7. As good as wood for nailing. Nails can be driven into it with ordinary hammer as easily as into wood and the nails hold.
8. Rot and vermin proof.
9. Does not sweat—therefore calls for no furring or lathing. No mold.
10. GREAT SAVINGS IN COST.



8 x 8 x 16
Weight 15 Lbs.



1 and 2. Before and after showing effect of stucco and Hardie's Road Springfield, Pa. 3. Dutch and Colonial Style, Adams, Pa. 4. Colonial Style, Bensalem, Pa. 5. Dutch, East, Ardmore, Pa. 6. New York and Montgomery, Yorktown, York, Pa.

PASSED BY NATIONAL BOARD OF FIRE UNDERWRITERS AND ALL LOCAL BUILDING DEPARTMENTS

Fig. 2. This Shows the Cover of Another Penn Building Block Company Circulars, and the Three Inside Pages. It contains the ten recognized arguments for concrete masonry construction with cinder concrete block, and shows a few interesting residences. This company's advertising literature has led to scores of sales of houses—or the material for them.

part of the concrete block output of the country is now being concentrated on the rough finish to carry a covering of stucco.

Advertising Reaches Dwelling and Garage Market

The large volume of prospective dwelling house business and the steady demand for private and community garages quickly attracted the newly awakened concrete block industry and the larger block manufacturers, by the score, have tossed their hats into the competitive ring and gone out to sell the complete walls of the structure.

Small concrete masonry houses, erected in public locations, were filled with combustibles and publicly "fired" in a dozen different cities; elaborate series of fire tests are in progress at the Underwriters' Laboratories and exhaustive co-operative studies have been or are being made to lower manufacturing costs, standardize quality, lighten weight, simplify erection and enhance beauty. These are doubtless some of the factors which have encouraged even isolated manufacturers of this product to seek house wall business.

In developing business concrete



Your basement, porch, and garage floors, the best roads and bridges you drive over are made of concrete—Why?

WATERSEAL Concrete ROOF TILE

will last for centuries. They are made in beautiful permanent colors, waterproof and weatherproof, and very reasonable in price.

Manufactured by
PENN BUILDING BLOCK CO., INC.
923 Sansom St., Philadelphia
Phone—Rialton 3706 Main 8217

Fig. 3. Here is a Piece of Advertising Matter Which Never Fails to Interest. Like Fig. 1 it shows the actual unit.

block manufacturers must now address a larger audience than formerly—including contractors, realtors, architects and prospective homeowners. What shall the appeal be? What has concrete masonry construction to offer?

A perusal of leaflets and advertisements before us indicates that the most successful appeal is being made on the basis of enduring beauty. The secondary appeal presents maintenance free features while fire-resistiveness, rigidity and structural stability are all argued as additional advantages that are thrown in for good measure. The cost appeal is used only very moderately. The psychological effect of cost arguments is contrary on many people, and the purchaser is always doubly pleased if he finds, after making his choice on quality considerations alone, that he has also saved a modest sum in the transaction.

Advertising That Is Selling Block

Accompanying illustrations showing advertising of the Penn Building Block Co. are of unusual interest to building material advertisers. In the first place, the company advertises

under what is possibly the most respected name in Philadelphia and vicinity—that of William Penn. The name of the upright, wholesouled old Quaker, famed for his constructive, although conservative policies, is an advertising asset of no mean value. (See Fig. 1.) It may be considered almost a personal card of introduction in that neighborhood.

Figure 2 shows one of the Penn block circulars open. It contains the ten recognized arguments for concrete masonry construction with cinder concrete block and it shows a few interesting residences, so that the buyer may be impressed with the class of dwelling for which this material is used. What more is there to be said? If the prospective customer doesn't buy, it is because he doesn't believe one or more of the ten claims. The salesmen prefer to furnish the further evidence personally—invariably following it promptly with the contract and the fountain pen, quickly focusing attention on the little dotted line. The effective use of this advertising circular has led to scores of sales of houses—or the material for them.

The kind of advertising matter shown in Figs. 1 and 3 is particularly effective with builders and architects—and seldom fails to interest them. Almost the entire collection of units is shown with the simple data necessary for use in such a fashion that one recognizes the simplicity of the system of block construction and quickly visualizes the details. Clear, outstanding illustrations, shown in a chart effect, impress and sell builders. Your advertising must be simple and, if you want it to be particularly productive, among builders, you must put into it some simple information which they will want to keep.

Feature Quality Guarantee

Leading manufacturers of concrete products thruout the country brand their wares with a distinguishing mark which is registered with the local building departments and becomes a guarantee of quality. Every manufacturer should adopt such a policy and, what is more, he should turn it to good account wherever possible by advertising the trade mark generally.

One of the most successful eastern manufacturing concerns has adopted the arrow for its trade mark and uses on its advertising a reproduction of the metal arrows attached to the mold boxes for the purpose of impressing the mark on the block. See Fig. 4. Other manufacturers have adopted keystones, swastikas, triangles, clovers and numerals, some of which have been very widely advertised with good results. The Buffalo (New York) Concrete Block and Brick Co., for example, advises readers of

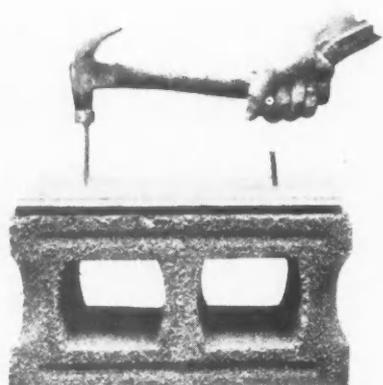
its advertising to "look for the block with the numeral 1 on it." These guarantee marks are attractively displayed on letterheads, envelopes, bill heads, advertising circulars, newspaper advertising and at fairs, exhibits and motion picture shows. The public often remembers an appealing trade mark even if the name of the maker is forgotten.

Newspaper Space Popular

Newspaper advertising offers a profitable field for the attention of building material men, no matter what they have to sell. But advertising space is like any instrument of service—it must be properly used or the results will not be fully satisfactory. An accompanying advertisement (Fig. 5) furnishes an example of the attractive use of space in selling concrete block for residences. It is a strong advertisement because it appeals from the viewpoint of the purchaser, is well composed and carries an attractive illustration.

It should hardly be necessary to observe for the benefit of local contractors as well as building material manufacturers, that the more they advertise in the

(Continued to page 178)



Ten Reasons Why Straub Patented Building Blocks Should Be Used

- PERFECT KEY FOR PLASTER OR STUCCO
- AS GOOD AS WOOD FOR NAILING
- FIRE RESISTANT PROVEN BY UNDERWRITERS TESTS
- FROST PROOF, DAMP PROOF AND SOUND PROOF
- NON-CONDUCTOR OF HEAT OR COLD
- COMBINE LIGHTNESS WITH GREAT STRENGTH
- SPEED UP CONSTRUCTION
- REDUCE UPKEEP EXPENSE TO A MINIMUM
- LOW IN FIRST COST CHEAPER TO LAY
- BACKED BY YEARS OF EXPERIENCE



LOOK FOR THE ARROW
STAMPED ON EVERY BLOCK

Fig. 4. One of the Most Successful Eastern Manufacturers of Concrete Products Has Adopted the Arrow for Its Trademark and Uses on Its Advertising a Reproduction of the Metal Arrows Attached to the Mold Boxes for the Purpose of Impressing the Mark on the Block.



Duty of Contractor to Protect Building Being Altered or Repaired from Damage by Sudden Rainstorm

By LESLIE CHILDS

AS a general proposition, a contractor who undertakes to remodel or repair a building is bound to use reasonable care in the matter of protecting the structure from damage caused by rain or storm. A situation of this kind requiring prompt action may easily arise where perhaps a roof has been removed, and a storm suddenly comes up. And generally speaking, in cases of this kind, if the contractor has been negligent, a broad provision in his contract exempting him from liability for damages from accident or other causes beyond his control will not excuse him.

Of course each case of this kind must necessarily be decided in the light of the particular facts involved; yet, as a usual thing, where loss has been caused by the failure of the contractor, to properly protect work which is exposed, it is up to the contractor to show that reasonable care was exercised. The holding in *Orschel Co. vs. Fischer et al.*, 191 Iowa, 74, a recent case on the subject, illustrates the duty of contractors in cases of this kind. The facts, considerably abbreviated, were as follows:

The contractors in this case had taken a contract to replace the roof upon a certain lodge building. The contract provided, among other things, that the contractors should not be responsible for damages or delay due "to strikes, fire, accident, or other causes beyond reasonable control." The work was completed and the contractors filed a mechanic's lien upon the property. They thereafter brought the instant suit to foreclose their lien. All right.

Now it seems there was no question about the amount due the contractors, but the defendants (who were trustees of the lodge) filed a counter claim for

\$150, claiming that when the work was being done the contractors negligently permitted the uncovered building to be exposed to a rainstorm which damaged the interior in the amount claimed.

Upon the trial of the case in the lower court this counterclaim was allowed. This on the ground that the contractors had been negligent in not protecting the exposed building. The contractors then carried the case to the Supreme Court of Iowa, where in stating the circumstances surrounding the damage to the building it was, in part, said:



Where a Roof Has Been Removed, as in the Case of a Repair Job, and a Storm Comes Up, a Broad Provision in His Contract Will Not Exempt the Contractor from Damage Liability.

How the Damage Occurred

"The undisputed evidence shows, that

during the progress of the work, the appellant [contractors] removed the old roofing from a space about 33 feet in width and about 30 feet in length; that this was done in the afternoon of the day in question. About 3 o'clock in the afternoon, a rainstorm came up, and the damage complained of resulted." * * *

After the above broad statement of the circumstances leading up to the damage the court reviewed the evidence relative to whether or not the contractors had taken reasonable care looking to the protection of the building. The evidence on this point was conflicting; some of the witnesses testified that it was cloudy six or seven hours before the rain fell. Other witnesses testified that the day was clear and that the rainstorm came up suddenly. In reviewing this evidence, and passing upon its sufficiency to sustain the conclusion of the trial court that the contractors had been negligent, it was, among other things, said:

"We are satisfied that the conclusion of the trial

court in regard to the negligence of the appellant [contractors] has ample support in the record. This work was performed at the season of the year when thunderstorms are frequent in the state of Iowa. The appellant undertook the work with knowledge of such conditions and knew of the condition of the building and of its contents, and necessarily the likelihood of damages from a rain.

"There is evidence to the effect that it would have been practicable, by using the roofing then on hand and laying the same temporarily, to protect the building from rain. The foreman of the appellant testified that it would have taken from half an hour to an hour to have made it waterproof temporarily, but that no effort was made to do so until almost the instant that the approaching storm struck the building.

"We are satisfied from the record that proper observation, lookout, and precaution on the part of the appellant, under all of the conditions, would have prevented the injury that resulted * * * and that it was negligence on the part of the appellant to have failed to protect the building in a reasonable way from injury from the rainstorm. * * *

"The written contract between the parties provided that the appellant 'shall not be responsible for damage or delay due to strikes, fire, accident, or other causes beyond our reasonable control.' This clause in the contract did not relieve the appellant from liability for the negligence complained of." * * *

In conclusion, the Iowa Supreme Court affirmed the judgment of the lower court, allowing the counterclaim against the contractors, holding, as outlined in the opinion, that there was ample evidence in the record to show that the contractors had been negligent in not reasonably protecting the exposed building from the rainstorm.

The foregoing is an interesting and instructive case from the contractor's standpoint when viewed in the light of all the circumstances. It illustrates the reasoning commonly followed in weighing evidence pro and con in situations of this kind, where everything depends upon the facts involved, and in a measure points out the rule of care required of contractors in the face of the danger described.



Great Increase in Savings in Building and Loan Associations

A VERY interesting chart issued by the Division of Building and Housing, Department of Commerce, shows that in ten years the per capita savings in Building and Loan Associations have more than doubled.

The only answer that can be is that the continued reiteration of the gospel of Home Ownership is having its effect, and like a leaven is working thru the American people. People are not making these increased deposits in Building and Loan Associations

for nothing. At the proper time they will begin to negotiate for loans. ✻

Mahogany Completes the Home

(Continued from page 97)

extreme. We are all familiar with the ripples with close cross figure sometimes seen on the cases of rare old violins. This is called by the not-inappropriate name of "Fiddleback," "Rain Drop" is another highly valued figure in mahogany, the fibres of the wood breaking into a myriad of patterns of rare attractiveness. The prized "Feather Pattern" comes usually from that part of the tree where the main trunk branches high in the air, commonly called the main crotch. A more familiar figure in veneer is the "Stripy Figure"—a well ordered regular stripe pattern, with tiny black grain convolutions.

When freshly worked, mahogany has not the deep dark Sherry red-brown we are familiar with in furniture and interior finish. On the contrary, it is pale



Not the Least Attractive Feature About Mahogany Is the Way in Which It Lends Itself to the New Decorative Furniture Favored Nowadays. There is fine contrast here between the cream-tinted spindles and the mahogany chair seats and backs, the tea wagon and the table top.

salmon pink in color, very similar in tint to that of the cedar we are accustomed to see in cigar boxes. African mahogany is a trifle pinker in the natural state than the wood from Central America, but both have the same range of handsome figuring. After working, finishing and exposure to air mahogany takes on a darker color. It is this, deepening and becoming richer and seemingly translucent with age, which endears mahogany to the lover of fine woods and makes it a pleasant wood to live with. Mere staining of other wood a so-called "Mahogany Finish" cannot reproduce the inter-related grain or give that well-nigh translucent appearance that real mahogany possesses.

Why Scoop? Elevators Save Effort

Architects and Builders are Providing Labor Saving Grain Hoists in Their Modern Farm Buildings

SO long as manufacturers co-operate with the builder and the farmer to take the backache and labor effort out of farm work much of our worry over the shortage of farm help is hysteria. With modern equipment the tasks of the big farm become small. One man with power machinery is doing more work and doing it better than the whole family of father and husky sons did a few years ago.

Important among the newer helps that take the excess of time and labor out of farm operation are the cup and bucket elevators now installed in farm buildings. While used in other buildings for years, their application to a dairy barn is more recent, but one of the most important developments of this handy device.

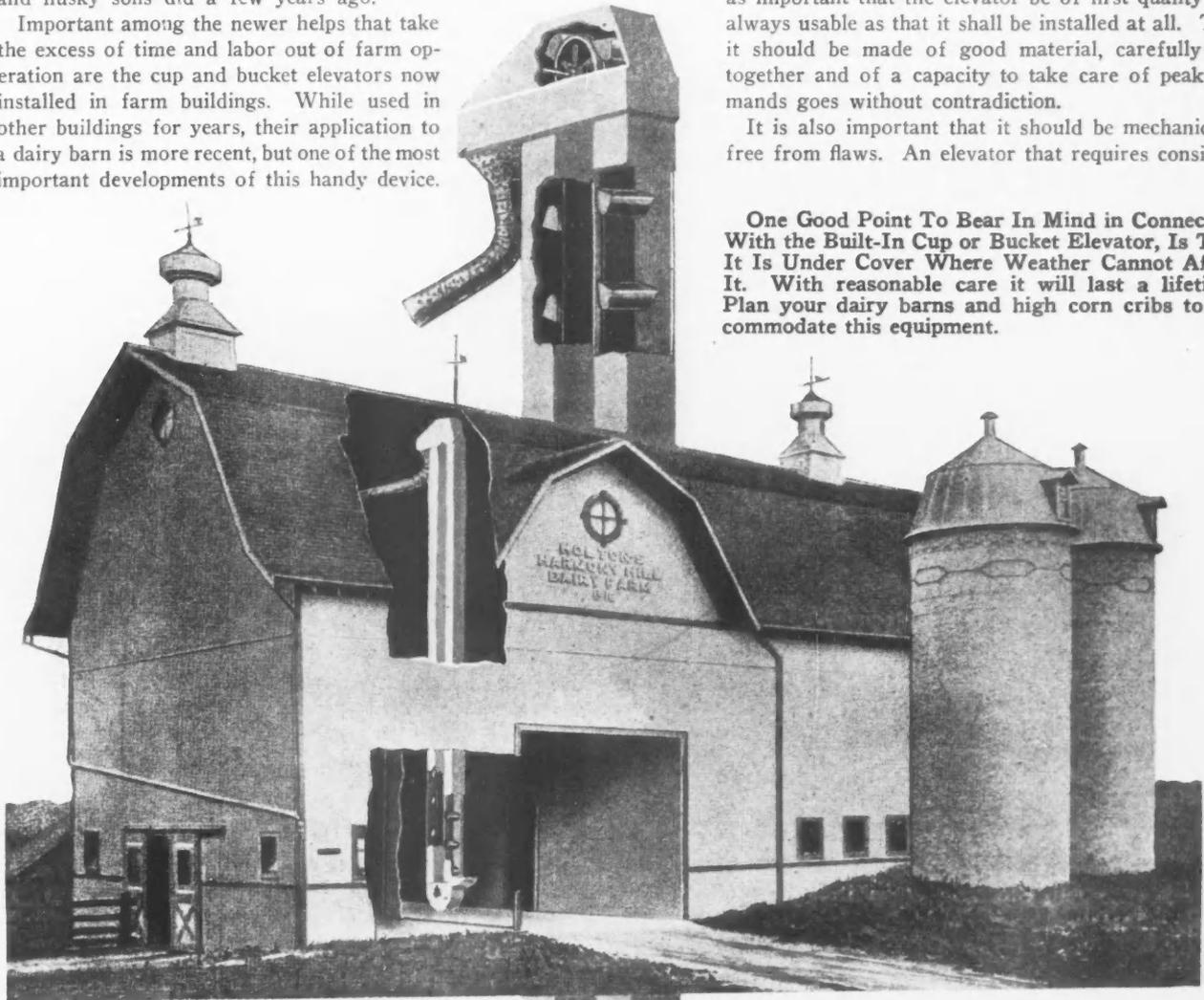
It can be operated with a 1½-horsepower engine or small electric motor.

Handling grain in sacks or scooping it is an expensive process if time and labor are usable in any other work and, of course, they are.

Now, while an elevator is right in principle it becomes just as important that the elevator be of first quality and always usable as that it shall be installed at all. That it should be made of good material, carefully put together and of a capacity to take care of peak demands goes without contradiction.

It is also important that it should be mechanically free from flaws. An elevator that requires consider-

One Good Point To Bear In Mind in Connection With the Built-In Cup or Bucket Elevator, Is That It Is Under Cover Where Weather Cannot Affect It. With reasonable care it will last a lifetime. Plan your dairy barns and high corn cribs to accommodate this equipment.



They make unnecessary the expensive and time-wasting habit of scooping grain. They are an improvement over a portable elevator which must be set up and which has the defect that it spills grain. A permanent cup elevator does the work of four men and easily handles 50 bushels of grain in three to five minutes, with no setting up or loss of grain.

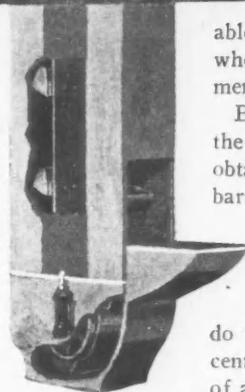
The elevator shown here is made for granaries, dairy barns and feed stores with overhead bins. It elevates small grain, such as shelled corn, wheat, oats and rice and ground feed. The machine sits on a level surface. It is equipped with seven 4½ by 4½-inch heavy steel buckets bolted to an 8-inch wide belt. The main drive shaft is 1¾ inches in diameter and runs in babbitted self-oiled bearings. The recommended speed for this shaft is 65 revolutions per minute. The top pulley is 16 inches in diameter and the bottom pulley is 12 inches. The elevating capacity is in excess of 250 bushels per hour.

able adjustment and goes down for repairs just when it is most needed is scarcely a paying investment.

But dependable types which pay for themselves in the savings they effect are now in proven use and obtainable by the dairyman, who wants his modern barn equipped with modern devices.

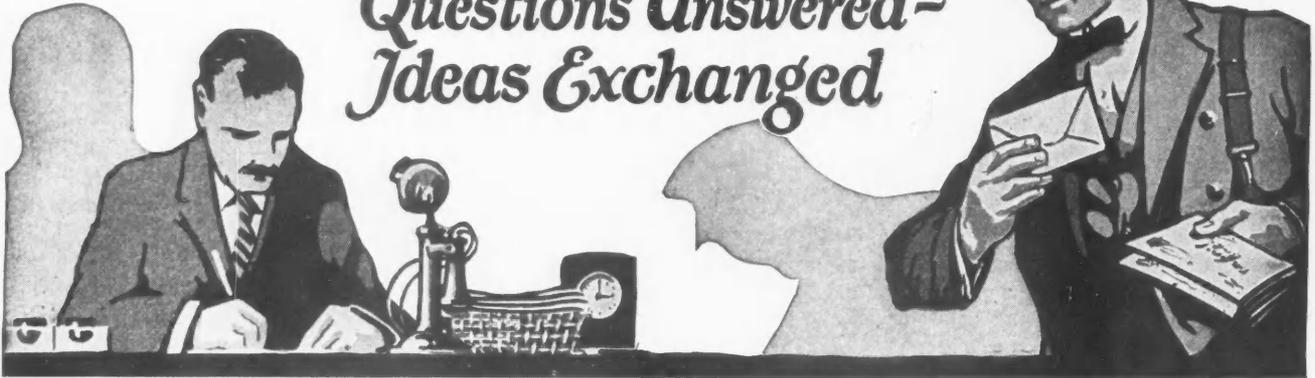
A point of value for the farmer is the question of help in harvesting time. Corn huskers, for instance, will give preference to the farm where there is an elevator to do the unloading, and will usually work for several cents less per bushel. An elevator may be chosen of a type which would have its use in this connection in view. Besides the type illustrated, there are portable types for ear corn, shelled corn and all kinds of small grains.

Another point to remember in connection with the built-in type is that the elevator is always ready for use inside where the weather cannot affect it and, with ordinary care, lasts a lifetime.



CORRESPONDENCE

*Questions Answered-
Ideas Exchanged*



Makes Miniature Prize Winner for Window Display

To the Editor:

Denver, Colo.

I am sending you a photograph of a window display at my office. You might be pleased to know that the house shown in the setting is a paper model of the prize winner



Window Display in Mr. Gates' Office, Denver, Colo. The house is a miniature model of a winner in an American Builder prize design contest.

that won first in your contest for the best designed house in proportion to cost, conducted by you some years ago.

CHAS. M. GATES, Architect.

Says American Builder is Incentive to Better Building

To the Editor:

Toronto, Ont., Canada.

Being a subscriber to the AMERICAN BUILDER for a period of about seven years, I think I am eligible to offer my congratulations. Here in Canada, of which I am a native, we are sadly lacking in a publication of our own like yours which so ably covers the field. You have so successfully attained the happy medium, in dealing with the various subjects, that they appeal to both the technically and practically inclined. The reading of the AMERICAN BUILDER inspires incentive to better, safer and more economical building.

Indications point toward a very busy future for Canada in the building business and many shelved plans are being perused with expectancy again. We use many "American Made" building products which are advertised in your pages. It would be very interesting to know what your Canadian circulation is?

May I make a suggestion, Mr. Editor? I suggest that if your Canadian circulation warrants it, that you incorporate in the AMERICAN BUILDER a section devoted to Canadian interests. In doing so I am sure that much advertising space would be used by Canadian firms dealing in building products. It would also be of great benefit to your present advertisers who wish to extend their sales to a very lucrative field. I feel convinced that increased circulation would be a natural result of this innovation.

Wishing you continued success, I am,

FREDERICK T. WILSON.



Effect of Roofing Tar on Cistern Water

To the Editor:

Bethlehem, Pa.

It is local practice to give the inside of cisterns a coating of good cement plaster. I was told to try roofing tar, and would like to know from AMERICAN BUILDER readers just whether there is any effect on cistern water where such an inside cistern coating has been used.

ARTHUR H. STEIN.



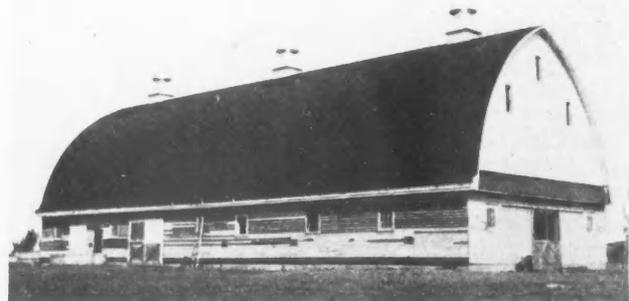
No "Makeshift" Building in Saskatchewan, Says Mr. McPherson

To the Editor:

Rouleau, Sask.

Just some photographs and a line to help show my appreciation for the AMERICAN BUILDER. Haven't missed a copy for years and would say the Correspondence Department appeals most to me because of the individuality expressed in each article.

Makeshift building in this part of Saskatchewan is a thing of the past. Gothic roofed barns have been very much in



A Gothic Roofed Barn Erected by Mr. McPherson in Saskatchewan. The dimensions are 40 feet by 106 feet.

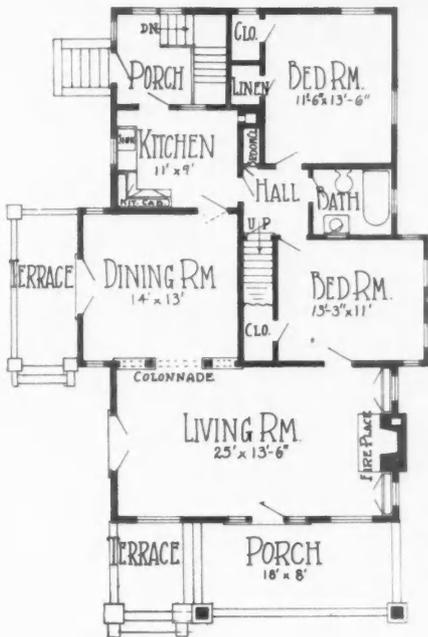


A Group of Farm Buildings Designed and Erected by Mr. McPherson in the Neighborhood of Roulea, Saskatchewan.

vogue for the past five years, and with my special equipment am able to build them for nearly the same money as barns having other style roofs. The larger barn shown in the photograph is 40 feet by 106 feet.

✻ CHAS. MCPHERSON.

Says "Blue Ribbon Homes" Offer Good Ideas



Norfolk, Nebr.
To the Editor:
We are enclosing under separate cover drawing and cuts of a bungalow we built the past year for C. F. Womeldorf, division engineer for the C. & N. W. R. R., this place, on which we have received a great deal of favorable comment. We combined several of the features taken from the plans of Blue Ribbon Homes as published in the AMERICAN BUILDER. We find it indispensable in our work, and wish to

commend the Blue Ribbon Home feature. Thanking you for your efforts in producing a magazine of the high standard of the AMERICAN BUILDER, I am, with best wishes for a prosperous year in the building trades,

F. E. HARRISON.



An Interior. This shows the dining room of the C. E. Womeldorf residence designed by Harrison & Benson, Norfolk, Nebr.

✻

Concrete Floor Presents Problem

To the Editor:

St. Clair, Mo.

In the month of September of last year I put up a building here, and put down a concrete floor. The floor was about 5 inches thick, with a 3/4-inch finish. The grout was a five-to-one mixture, well-tamped, and the finish was a half-and-half mixture. The grout was poured one afternoon, and the finish put on the following morning and troweled in the afternoon. This floor stood fine for a few months, and could not have looked any better. Now, however, there are any number of cracks all over the floor and in some places it has begun to raise. It also seems to be dusting off. As I am about to put in a very much larger floor in another building I would



Floor Plan and Illustration of a Bungalow Erected by Harrison & Benson, Norfolk, Nebr., for S. E. Womeldorf. Several features of American Builder Blue Ribbon Homes were used in this design.



A Miniature House, Barn and Other Buildings Erected by Mr. A. B. Coffman, Branch Manager at Marshfield, Mo., of the Burgner-Bowman Lumber Company. The work as done in his spare time evenings and constructed from designs which appear in the 1923 Radford's Blue Ribbon Calendar.

like to make sure of avoiding such trouble with it. I hope you can enlighten me on this subject.

EDWARD EDELMANN.

Answer—To clarify the situation our correspondent was sent a copy of "Standard Specifications for the Construction of Concrete Floors" adopted by the American Concrete Institute at its meeting in Cincinnati last January. These specifications are accompanied by explanatory notes intended to make clear the provisions of the specifications and explain the reasons for them.

There are a number of things that would explain the difficulties with the floor described. In the first place, Mr. Edelmann speaks of a grout of five to one mixture as forming the base for the finish. This does not give any information in regard to the grading of the aggregate used. By referring to the specifications above mentioned he will be able to compare the specifications for aggregates with the aggregate used for this floor.

In the second place, while a $\frac{3}{4}$ -inch top finish is ordinarily sufficient, it may be that the aggregate used for this was of very fine sand and furthermore, if too much water was used in constructing the base course, laitance would collect on the surface of it and prevent a proper bond with the $\frac{3}{4}$ -inch finish coat. In the specifications directions are given for preparing the surface of a subbase to receive the finish coat.

The cause of the phenomenon of dusting of concrete floors is commonly due to scattering dry material on the surface of the floor after it has been given a preliminary troweling. The purpose of this dry material is to take up excess moisture and an attempt is then made to trowel it into the surface. The result is a disturbance of the surface which has already experienced initial hardening and a decrease in the richness of the mixture. Excessive troweling usually accompanies this procedure and is responsible in many cases for "dusting."

Another factor contributing largely to satisfactory concrete floors is proper curing. This subject is also thoroly treated in the specifications.

EDITOR



Lumber Company Finds Miniature Model Buildings Profitable

Kansas City, Mo.

To the Editor:

We are enclosing a photograph of a miniature house, barn and other buildings erected by our local manager at Marshfield, Mo.—Mr. A. B. Coffman. The work was done in his spare time evenings and constructed from designs which appear on the 1923 Radford's Blue Ribbon Calendar.

It is our idea to have this exhibit and take it to the different towns in which we operate yards and either display it

in our office where the office is suitable or in some centrally located business house. These buildings are all stationary on the platform as you see them, and in arranging to ship it all we need to do is to close the lid of the box, first lowering the platform into the box on which the house and other small buildings are erected. Then by folding the lid back and locking it, it is ready for shipment.

When this was completed at the little town of Marshfield, we could hardly get it away from there to bring to the Southwestern Lumbermen's Convention because they wanted to have it exhibited indefinitely in the stores in the little town. We don't know that this will sell us any houses, but it will at least show what can be done by a good live manager, and we feel that it will create a desire in most of our managers to familiarize themselves with the details and plans of buildings and that will in itself be a great benefit to our company.

I want to say also that we had another house—an AMERICAN BUILDER Blue Ribbon Home design. This was built by Mr. D. W. Smith, our manager at Randolph, Kans. This yard is operated under the name of C. E. Matthews Lumber Company. We do not have a picture of Mr. Smith's house and, therefore, are not able to send you one. However, we are writing to him and if he might have taken a picture of it would be glad to send you this also. This house of Mr. Smith's is, I think, the most complete little model I have ever seen. The workmanship is almost perfect even down to the lock on the front door, and I hope to be able to send you a photograph of the same. At this time it is boxed and will not be opened up until our convention.

You can probably use it in some future issue. I believe that 75 per cent of the people who visited the Convention visited these little exhibits, and I am quite sure that this manner of advertising will be increased.

BURGNER-BOWMAN LUMBER COMPANY,

J. A. Bowman, General Manager.



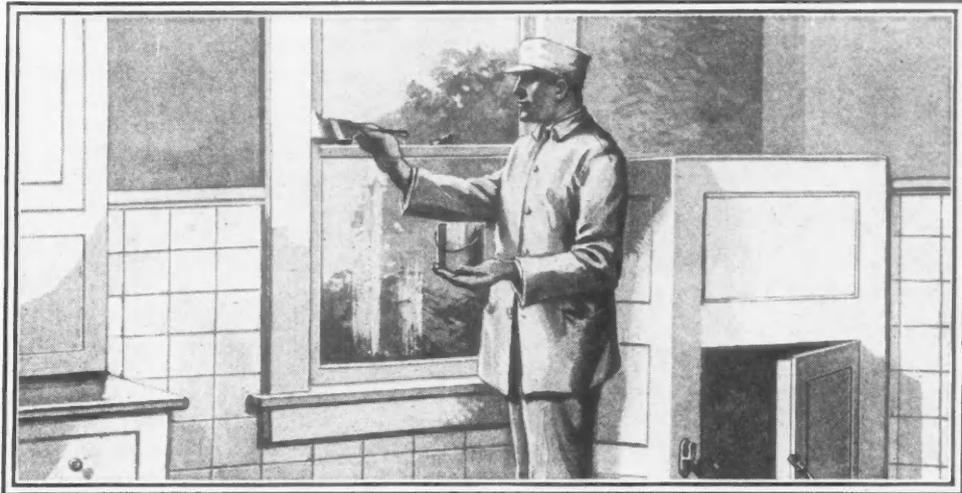
Sixty degrees Below—and Busy

To the Editor:

Pottersville, N. Y.

I think you might like some experiences in winter construction, so will give a few of my own. Sometimes the thermometer here goes to 60 degrees below and in the winter just past we had 39 days of below-zero weather without a break. Now, I begin to talk next winter's work as soon as the snow is off the ground. I never recommend anything that I will not stand back of and make good on. Last year I worked from five to twelve men all winter building camps; poured foundations every month in the winter. These were

For Light, Cheerful Rooms



JOHNSON'S ENAMEL

You can't do your best work with inferior materials—and your reputation and success depend upon *always* turning out good work. Build up a reputation as the best contractor in your locality—then you can get the price and will never experience a poor season.

Contractors who use Johnson's Artistic Interior Finishes soon find themselves getting more of the profitable, better class work. Johnson's Artistic Interior Finishes are right when they go into the can and they stay right. They do not change or deteriorate in any way.

You can give your customers the finest kind of a job by finishing both walls and trim with Johnson's Perfectone Undercoat and Johnson's Perfectone Enamel. These products will give equally good satisfaction on wood, plaster and metal. With them you can turn out perfect work—satisfy your trade and complete more jobs each season.

FREE—Book on Wood Finishing

It's the best book ever published on Artistic Wood Finishing—the work of famous experts—illustrated in color. This book is written for the practical man—it gives covering capacity, includes color charts, etc. We will gladly send it free and postpaid.

USE COUPON AT RIGHT



S. C. JOHNSON & SON
Dept. A. B. 4 Racine, Wis.
"The Wood Finishing Authorities"

Please send me free and postpaid your book on Wood Finishing.

I usually buy Varnish from.....

My Name.....

My Address.....

City and State.....

simply piers to grade, so I could protect them all right. I used wood posts above the grade to the sills. This was all outside work except the floors, and as these were common pine the work required did not amount to much in the way of time.

This winter I started a job the first of November and got



The Building Which Mr. Shaw and His Men Stuccoed in January, with the Thermometer Below Zero, Hustling It Through to Gain More Time for Spring Work.

the foundation in before serious frost, working a crew of 5 to 8 men all winter. Enclosed is a photograph of this building. It was stuccoed in January with the thermometer below zero. I finished with rock dash stucco, using the first magnesite plaster seen in this locality—like it very much. Used it over narrow key creosoted board. Used also steel basement sash, patent coal chute, dumb waiter and metal weather strips—all taken from advertisements in AMERICAN BUILDER.

I finished this job in time for spring work, of which there is an abundance. I think a winter slack season is avoidable by builders, as my own experience is that if a person wishes to build and you talk facts backed up with actual work, they are ready to do their part.

FRANK E. SHAW.



Good Sense on Subject of Moulded Glass Doors

To the Editor:

Miami, Fla.

In the February issue of the AMERICAN BUILDER, page 142, Correspondence Department, Mr. O. B. Buckingham wanted to know which side of a glazed door should be hung outside. Personally I am in the same position, and have had several arguments with other builders on this question. I contend that the side indicated by the arrow should be outside, but find that builders and carpenters have other reasons for the opposite practice, aside from the one of protection against burglars. One reason they give is that the "face" of the door should always be on the outside and that no practical man would contend that the solid moulded part of the door was not the "face." Again, if one were to agree that the solid moulded part of the door is the "face" and should not go in the outside—in spite of the fact that it is the "face"—they go on to show that all ornaments that go on a door as decorations are put on the solid moulded part.

Furthermore they argue—and very truly—that where the door has decorative treatment on both sides, that which is put on the solid moulded part is the more artistic and elaborate of the two. And again, they go on to reason very fairly from a practical point of view that no workman would go to the trouble to put a richer or more elaborate decoration on one side of a door than on the other, if there were not a specific reason for so doing—namely to improve the outside of the building. On the other hand, builders and carpenters hold that the same rule which governs a sash rules a "sash" door, or, as Mr. Buckingham has it, a "glazed" door. They argue that one might as well put the solid moulded part of the sash on the outside as to put it on the inside, for since the mill man wants his door ornamentation shown, he naturally would wish it shown on the sash. They also hold that in the case of severe wind and rain the rain would beat in over the moulded part of the door, and that, if it came to a mere case of keeping out a burglar, it would only deter an amateur, not a professional. They contend that the solid moulded part of the door should go on the inside, with the general better finish of the interior, and harmonizing with the solid moulding of the sash, which no builder hesitates putting on the inside. My workmaster would always hang a door with the solid moulded part inside, following the "sash rule," and I hang my doors the same way Mr. Buckingham hangs his, believing it the most practical, logical way.

Of course, I understand that the construction of sashes to receive the parting head together with the bevel on the meeting rail does not allow of putting the solid moulded part on the outside, even if we were to agree that it should go on the outside.



S. G. DAMES.

Sign of Spring

To the Editor:

Benton Harbor, Mich.

American Builder magazine,

You give us inspiration;

In every issue can be seen

Fine plans that beat creation.

We look for you with cheer and hope,

Each issue seems the best;

On building facts you have the dope—

You're best, and that's no jest.

February's handsome cover page

Is cause of my commotion;

That all-brick house is all the rage—

Stirred hundreds into motion.

Of brick they want their walls outside,

But no trade's left behind,

As all can do the work inside

And have enough, you'll find.

The writer's just a common chap—

Lays brick for occupation;

And through your pages likes to swap

The facts in this relation.

I say to always build with brick

And have your walls secure;

Keep bottom walls both wide and thick

And they will stand, for sure.

So let us all together pull,

We builders of the nation,

Made up of men ambition-full,

Our job's no skimping station.

Let's pull together—don't be strange—

Write in your kinks in turn,

And see them thru our Builder range,

It's one good way to learn.

O. M. SOUTHWORTH.



Laying Johns-Manville Rigid Asbestos Shingles right over the old roof

New Business!

—from every old roof in town

EVERY dilapidated roof in your neighborhood is a prospect for a new, fire-safe roof. Lay Johns-Manville Rigid Asbestos Shingles right over the old roof. It's easy to sell new roofs on this basis because the speed, economy and cleanliness of the job appeals to every house owner.

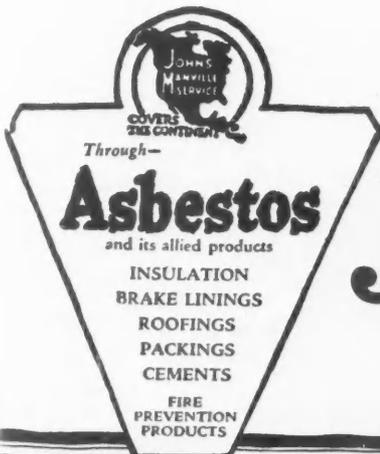
It's easier for you too. There's no tearing off the old shingles—an unpleasant job, you know. And then Johns-Manville Asbestos Shingles are surprisingly easy to

lay. The nails come with them; the nailholes are in them. Just line 'em up, hammer 'em into place and you're up the roof in no time.

If you get after the old roofs in your town on this basis you'll be surprised at the great amount of interest and profitable business you can create.

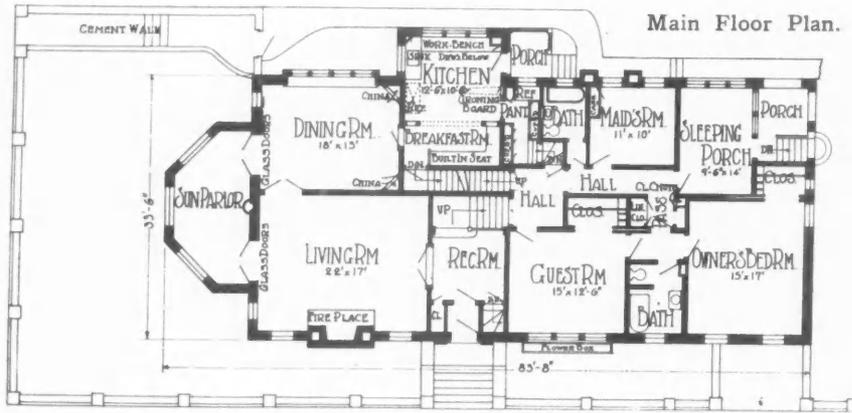
Write our nearest branch or to the address below for full particulars.

JOHNS-MANVILLE Inc.
Madison Ave. at 41st St., New York City
Branches in 56 Large Cities
For Canada:
CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto

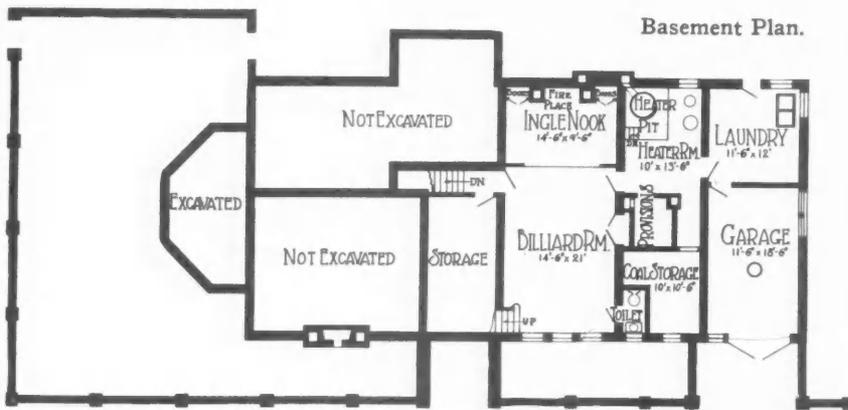


JOHNS-MANVILLE Asbestos Shingles

An Unusual City Bungalow

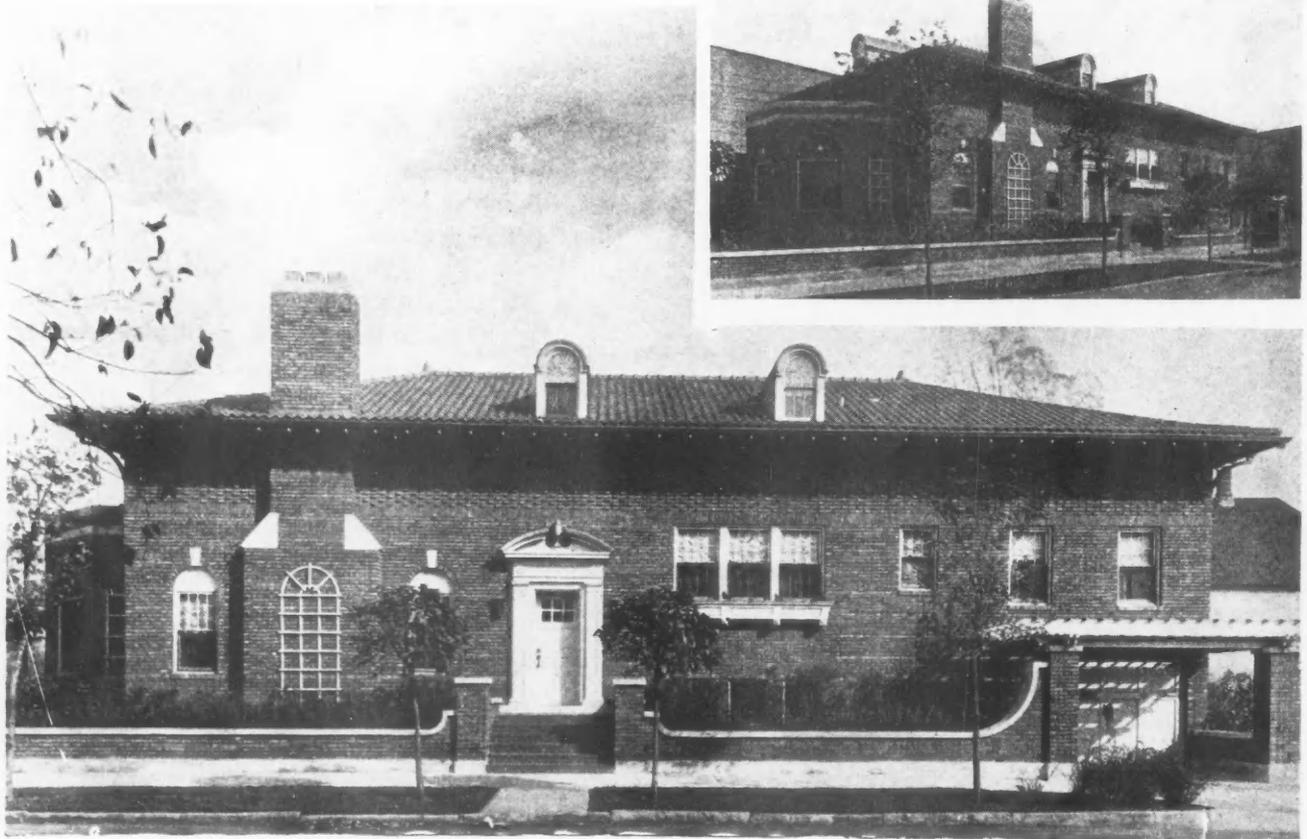


Main Floor Plan.



Basement Plan.

As a type of residence, the bungalow has many advantages, and it is not strange that architects should devote some thought to planning it to suit the more restricting conditions of city streets. Here is a residence designed by E. C. Fisler, Chicago architect, for Dr. William A. Reid. It is on one of the city's most beautiful boulevards. As will be noted, the garage is integral with the bungalow. Advantage has been taken of this arrangement to give a billiard room, and inglenook fireplace, laundry, boiler and storage rooms in the basement. The main living quarters are on two levels—the entrance reception room, living room, dining room, sun parlor and kitchen and breakfast room on one level; and the owner's bedroom, guest room, maid's room, sleeping porch and bathrooms are on the higher level. Outwardly, the appearance of this bungalow residence is very pleasing, the simple pattern under the cornice being calculated purposely to lessen the apparent height of the building.



Situated on One of Chicago's Most Beautiful Boulevards, the Bungalow Illustrated Is Interesting in That It Makes Use of the Inbuilt Garage to Break the Living Quarters Into Two Levels, as Is Apparent from the Floor Plans Above. Worth noting is how the lawn retaining wall serves to complete the general pleasing design. The bungalow was designed by E. C. Fisler, Architect, Chicago, for Dr. William H. Reid.

10¢



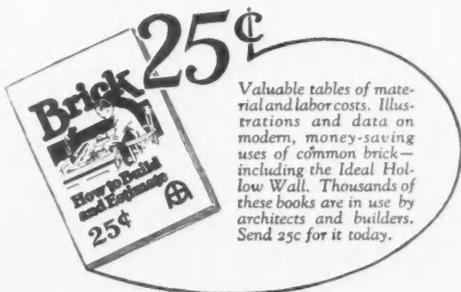
THE SAQUOIT
One of the 60 in
"Your Next Home."

You Can Increase Your Home Building Business Four Times —



THE HIAWATHA
Another of the 60. Has been called the finest house of its class ever designed.

The Book of Modern Methods



More than 100,000 of these plan books, "Your Next Home," are already in the hands of prospective builders. Hundreds of copies are going out daily.

Every home builder can cash in on this great interest in better brick homes. Get an assortment of the working drawings and specifications of these splendid, economical, brick houses. Sit down with your prospects and show them the attractive exteriors, the excellent arrangement of the rooms, the many unusual conveniences and distinctive features.

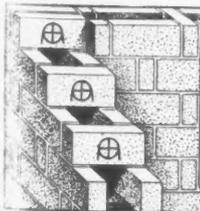
Be Ready to Show These Plans to Your Prospects

You can get these plans—original quarter-scale blueprints, as complete as can be made—at very low cost. Order at once the drawings for at least ten or twenty of these houses. Be ready to show them to the would-be home builder. See how easy it is to sell these homes.

Every one of the 60 selected brick homes shown in this book was designed by a competent architect, has *actually been built and lived in*.

If you haven't a copy of "Your Next Home" send 10c for it today. Make a selection of plans, order them, and watch the few dollars you invest grow into hundreds of dollars of increased business.

Send 35c and get both books, with price list of working drawings

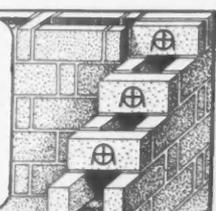


The Common Brick Industry of America

2131 CLEVELAND DISCOUNT BUILDING

Cleveland, Ohio

The Ideal Brick Hollow Wall
Made of standard brick—cuts the cost one-third

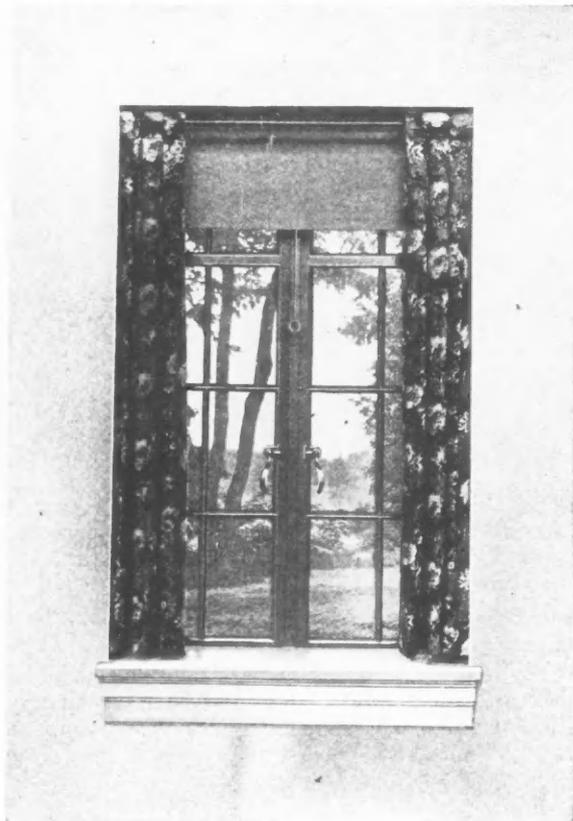




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Trim and Graceful Steel Casement Windows

THE beauty and grace of steel windows has long been recognized. Their slender, purposeful lines suggest more light-reflecting efficiency and larger light-giving area. Of all types of steel windows the out-opening casement offers the highest artistic possibilities. Hitherto steel windows of casement pattern have been purchaseable only for the more costly

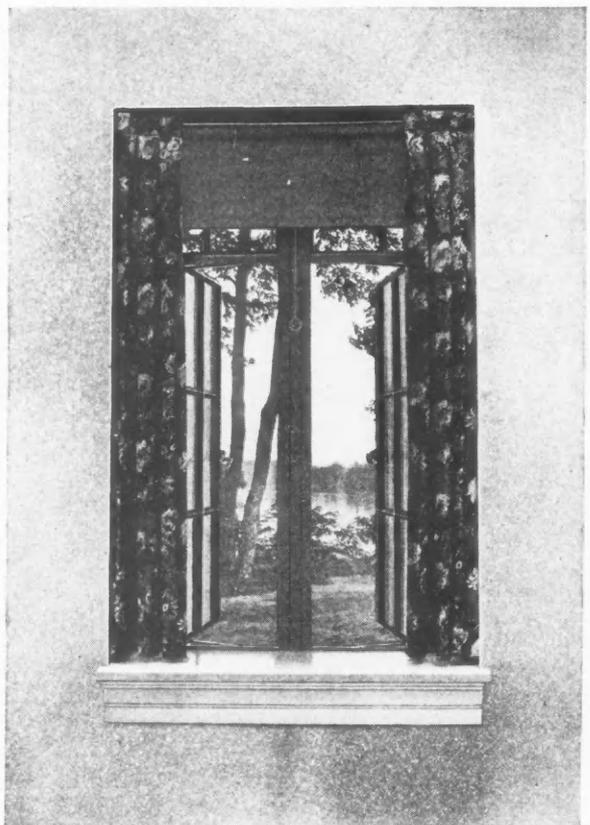


In Artistic Appearance Steel Casement Windows Are Far Ahead of the Ordinary Windows.

type of building. Now, however, steel casement windows, suited in size and price to the home builder, are available.

In the trim and graceful window here shown the problem of building artistic steel windows for small homes has been solved in a manner ingeniously simple. A special construction is used, making a mechanically perfect casement window.

Yet all the beauty of the hinged casement has been retained and when the window is hung it can be depended on to fit closely. This fit is permanent; they do not shrink, swell or stick. They work smoothly and do not rack or slam in a



A Pair of Steel Casement Windows "Out-at-Side." The "sight lines" are continuous for both stationary transoms and operated portions.

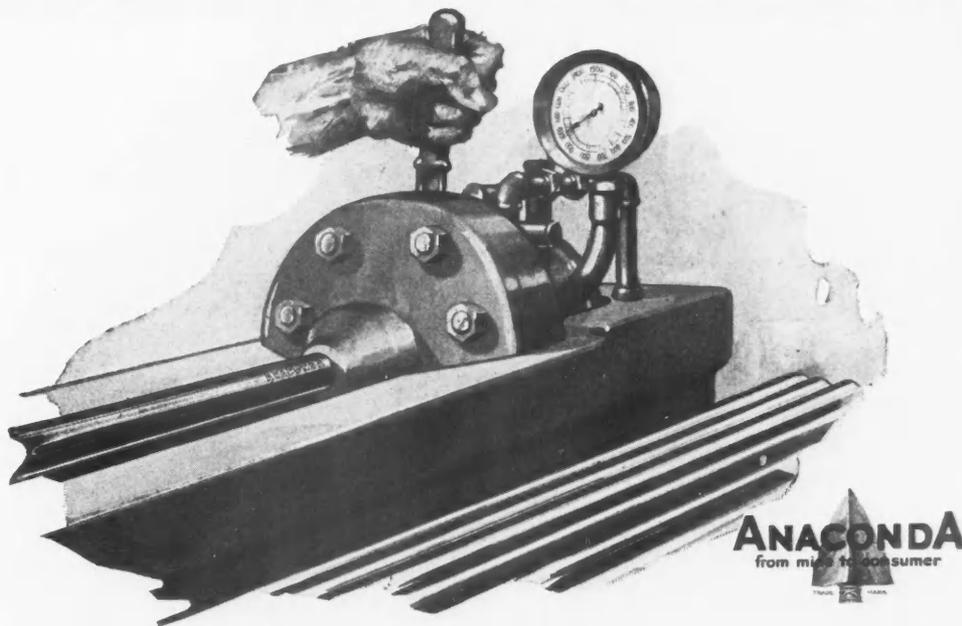
wind. Owing to a special friction elimination feature they do not rattle, whether shut or open. A feature of this construction, appreciated by the housewife, is that when the ventilators—the movable portion of the casement window—are fully open, the outer surface of the glass can be reached for cleaning without the usual inconveniences and risks.



Hot Water Heat From Kitchen Stove

ONE more advantage is added to the many offered by that housewife's friend, the wood or coal-burning kitchen stove. Equipped with a water-back set of piping, the kitchen stove is made to yield hot water heat sufficient to heat up 350 square feet of radiation in from 3 to 8 rooms. A temperature of 70 degrees is maintained, even with the outside thermometer standing at zero.

The principle is a natural one, since heated water, like air,



ANACONDA
from mill to consumer

1,000 pounds per square inch

Every piece of brass pipe that bears the Anaconda trademark is subjected to an internal hydraulic pressure of 1,000 pounds per square inch before it leaves the mill.

This pressure test will disclose even the slightest flaw in the metal—a flaw which the eye could not detect but which might result in a leak, once the pipe was installed. If the slightest defect is found, the pipe is rejected and scrapped.

Other tests—more far-reaching than those of actual service—make certain that the pipe meets Anaconda standards: Analytical tests to check the alloy. Tensile strength tests to check the physical structure. Special tests to safeguard the user against failure by splitting.

Anaconda Brass Pipe meets these tests because The American Brass Company has, through more than a century of experience, acquired a knowledge of improved methods and a technical skill in manufacturing which enables it to control the quality of its pipe at every stage of production. The trademark which is stamped in every length of Anaconda Brass Pipe is a guarantee of quality and dependability.

THE AMERICAN BRASS COMPANY GENERAL OFFICES, WATERBURY, CONN.

MILLS AND FACTORIES

Ansonia, Conn. Torrington, Conn. Waterbury, Conn. Buffalo, N.Y. Kenosha, Wis.

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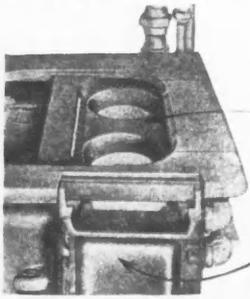
New York Philadelphia Boston Providence Pittsburgh
Cleveland Cincinnati Detroit Chicago St. Louis San Francisco

ANACONDA AMERICAN BRASS LIMITED, NEW TORONTO, ONTARIO, CANADA

ANACONDA

BRASS PIPE

risers, and as it cools it returns to the range to be heated over again. The entire consumption of coal in one winter, using this heating method, is stated by the makers of the



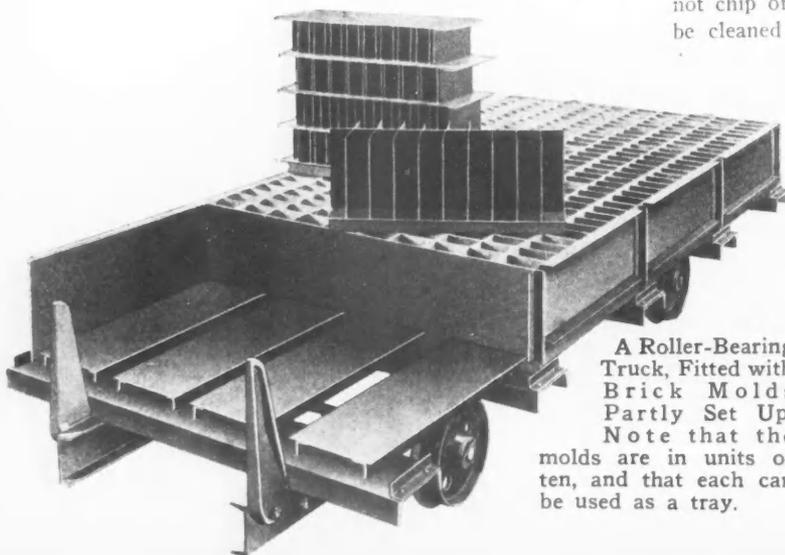
device to average four tons. Using the kitchen stove for pipe heating in this way saves the double labor and expense of two fires, and it is an installation suitable for the ordinary one or two-family bungalow or two-floor house, apartment, store or any type of building requiring no more than 350 square feet of radiation.

Equipped with a Water-back Set of Piping, the Kitchen Stove Yields 350 Feet of Radiation.

Concrete Bricks Made With New Multiple Mold Machine

A MANUFACTURER has perfected a new process for casting concrete bricks in multiple molds. This makes possible the handling of the cast bricks in units of 10, and 4,000 bricks can be made by one man per day.

The new system of multiple molds consists of forty open end units. Each holds 10 bricks, or 400 molds in all, mounted on a roller bearing truck. The molds can be quickly set up on the truck, and the truck run under a concrete mixing machine, where the slush concrete is poured directly in the brick molds. The truck is then run into heating tunnels or kilns, heated with steam pipes, and allowed to remain in a temperature of 120 degrees for eight to ten hours before removal. This allows the concrete to take its initial set before removing the bricks from the molds. The length of time required for the set to take place and the blocks to harden sufficiently to permit removal depends upon the temperature of the air. At ordinary summer temperature and without heated tunnels, and using fairly quick-setting cement, the bricks may be removed in from 20 to 24 hours. Molds can be used once each day in any event. After the initial set the bricks are ready for removal and final curing. The only handling they receive is when they are taken from the molds. The workman lifts out the 10-brick units, depositing them on a pile in one operation, without handling each individual brick. Owing to the use of slush concrete the bricks are perfectly dense and free from pores, decreasing porosity and



A Roller-Bearing Truck, Fitted with Brick Molds Partly Set Up. Note that the molds are in units of ten, and that each can be used as a tray.



This Shows How Cement Brick May Easily Be Handled, Ten at a Time. After the molds have been entirely removed and the brick placed in piles, the workman quickly sets the molds back into place and the truck is rolled back to the mixer for filling.

making for greater crushing strength. The new multiple mold process ought to make the concrete brick field appeal to an ever wider number of concrete plants, not to mention builders.

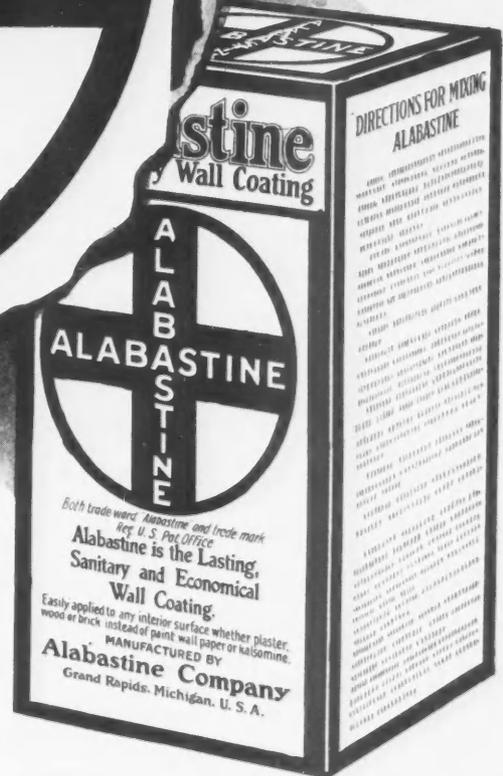
Nickel Sheet Metal Has Wide Range of Uses

ONE manufacturer is putting on the market high grade, select rolled zinc, coated with pure nickel by the electrolytic process in a way which does not affect the temper. The result is a light, pliable, tough sheet metal, with a rust-proof, non-peeling, nickel finish which in the ordinary gauge seems to be just the thing for odd and regular jobs, covering kitchen tables, cabinet work tops, pantry shelves, backs and drains for kitchen sinks, radiator deflectors, stove boards, wall protectors, reflectors, etc. The mirror-like surface will not chip or crack off under hammering, and the surface can be cleaned and polished, if soiled, with a dry cloth.

New Concrete Conditioner Densifies, Hardens, Waterproofs

A NEW product compounded from calcium chloride, gums and other carbon compounds not only accelerates and steadies the set of cement, but densifies, hardens and waterproofs it.

In the field it has proven very efficient, a fine quality of concrete being produced with only ordinary labor and materials. The acceleration given the set permits the early removal of forms. Laboratory tests conducted at George Washington University, Washington, D. C.,



name "Alabastine" and trade mark. Reg. U. S. Pat. Off.

Win Approval and Profit With Alabastined Walls

Alabastine enhances the value of every building. It adds selling interest. It makes the builder's work look better.

Bare, blank walls tax the imagination. They are unrelenting, hard and cold. At little extra expense those same walls can be artistically colored in nature tints and the man who buys for investment will see in these walls something easier to sell at a profit. The man and woman looking at a newly completed house can more easily visualize that house as a home, the renter is more surely attracted to the apartment or house which is to let.

Alabastine gives a finish, a touch of completeness. It makes the building, whether for business or home purposes, seem more habitable. Prominent builders almost without exception have learned the wisdom of showing building, office, or apartment ready for occupancy.

Alabastine comes in standard colors which may be intermixed, lightened, or darkened to produce any tone or tint desired. These

artistic colors are almost always acceptable, but should some other color be insisted upon, a change can be made quickly, easily and at very small additional cost.

Alabastine has been known for nearly a half a century as the leader among products of its kind. It is recognized everywhere by the cross and circle printed in red on each package. Almost all good stores selling paint have Alabastine in stock. It is used for new work and renewing by decorators of the better kind. Alabastine comes in five pound packages in powdered form, mixes with either cold or hot water and may be applied to almost any interior surface. Write for color chart and further reasons why you should use Alabastine instead of Kalsomine or wall paper.

810 Grandville Avenue

The Alabastine Company GRAND RAPIDS, MICH.

EVERY PACKAGE OF ALABASTINE HAS THE CROSS AND CIRCLE PRINTED IN RED

show a decided increase in flowability of mixers where the new conditions has been used, as compared with plain water and a high compressive strength at twenty-eight days.

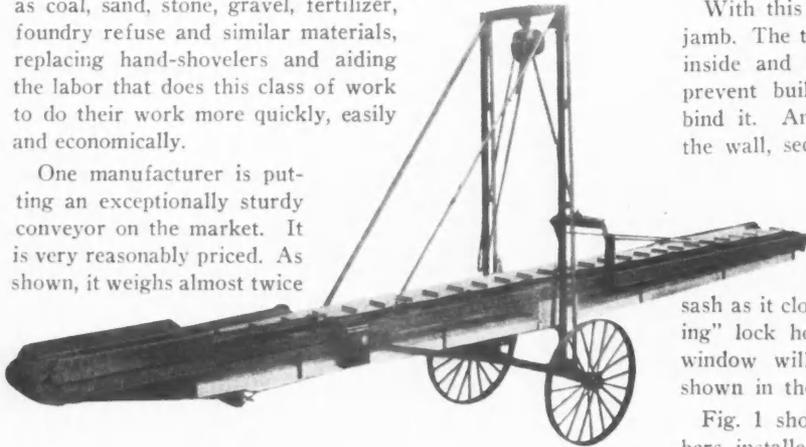
In addition to other advantages, use of the new conditioner ought to help greatly toward the speedy and economical finishing of floors. That it meets divers industrial requirements is proven by use in sugar houses in Cuba, where the new conditioner has enabled the concrete vats to withstand successfully the deteriorating action of sugar solutions. An improved method of production is placing it on the market at a moderate price.



A Multi-Purpose Belt Conveyor

PORTABLE belt conveyors are used for unloading and loading cars, trucks and wagons, of any loose material such as coal, sand, stone, gravel, fertilizer, foundry refuse and similar materials, replacing hand-shovelers and aiding the labor that does this class of work to do their work more quickly, easily and economically.

One manufacturer is putting an exceptionally sturdy conveyor on the market. It is very reasonably priced. As shown, it weighs almost twice



A Portable Belt Conveyor, Used for Loading and Unloading Cars, Trucks and Wagons. It replaces hand-shovelers and aids the labor that does this class of work to work more easily, speedily and economically.

as much as similar machines of its size and class. The 18-inch wide conveyor belt is guaranteed against cutting or fraying. The speed is 250 feet per minute, and with uniform feeding it has a capacity of 45 cubic feet per minute.



Improved Skylight Construction

IN the new model skylight illustrated one progressive manufacturer has endeavored to give a construction which will transmit a large amount of light and at the same time give perfect ventilation.

The small louvred vents in the end may be operated to permit a slight flow of air. The side lights may be operated if a greater flow of air is required. The operation of the side lights is performed by an automatic skylight lifter and lock.



In This New Model Skylight One Progressive Manufacturer Has Accomplished Construction Transmitting a Maximum Light and Giving Perfect Ventilation.

This lifter is operated by a heavy cord from the floor below. The ceiling height makes no difference. This lifter also serves as a lock. In other words, when the skylight is closed it is securely fastened so that it cannot be opened from the outside.

Steel Basement Window with Interesting Features

A NOTEWORTHY advance in the construction of a steel basement window has recently been accomplished by a steel sash manufacturer. With channel frame construction, this has two outstanding features—the jamb detail and the “self centering” lock.

It is believed that this will be of particular interest to builders, inasmuch as a very radical departure in jamb details has been adapted in this window. Builders who have seen it have become very enthusiastic over this new detail. Another important feature is the self centering lock which assures the builder that the sash will seat accurately when the window has been installed.

With this new jamb detail it is not necessary to plumb the jamb. The two channel legs provide a guide for laying up the inside and the outside of the brick wall. These legs also prevent building the wall so close to the ventilator as to bind it. An extending continuous fin at the jamb sits into the wall, securing a solid anchorage and preventing air leakage around the frame.

The advantages of the “self centering” lock will be evident upon examination. A slotted bracket, with tapering edges, solidly riveted to the frame at the sill, guides the sash as it closes and makes it seat accurately. The “self centering” lock holds the ventilator in place and makes sure the window will accurately center when installed. Details are shown in the photograph, Fig. 2.

Fig. 1 shows a vertical section of the head and sill members installed in brick. The frame at the head is an equal

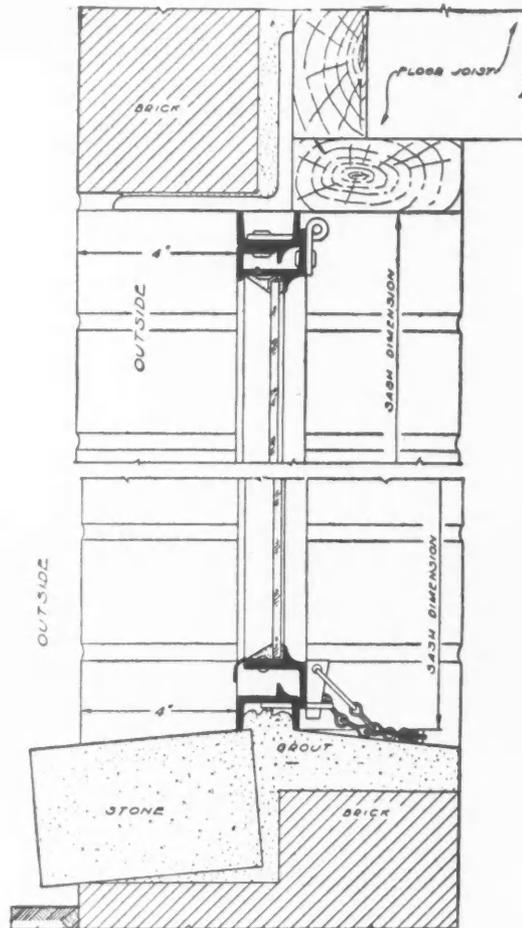


Fig. 1. A Vertical Section of the Head and Sill Members of New Steel Basement Window. The window is merely set in a bed of mortar and the wall laid around it.

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HOTELS



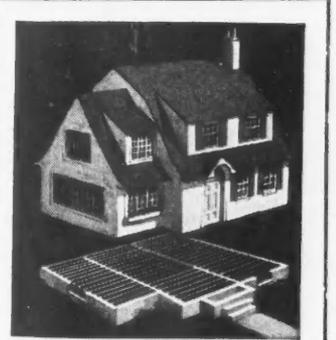
APARTMENTS



SCHOOLS



STORES and OFFICES



Firesafe First Floors for Residences

90% of residence fires originate in basements. Protect your dear ones against this grave danger by building the first floor of Truscon and National Steel Joist Construction. Also protect your home from cracking due to settlement and shrinkage. Real economy in the long run. Full information on request.

Men Who Weigh the Costs Use this Fireproof Steel Joist Floor in Apartments, Stores, Schools, Etc.

FIREPROOF floor construction for light-occupancy buildings can now be built more simply and at lower cost. In fact, Truscon and National Steel Joists are easier to install than wood. Steel Joists reach the job ready for use, requiring no cutting nor fitting. They eliminate forms, centering and special equipment.

Merely place the joists on the supports, fasten metal lath on top and apply concrete. Attach metal lath below for plastered ceiling. If a wood floor is desired, fasten wood screeds to joists before concreting. This constitutes a rigid, fireproof construction which weighs only half as much as other types of fireproof floors.

Soundproof, crackproof and verminproof, the construction saves in repairs and upkeep and lengthens the life of a building. Ideal for apartments, hotels, stores, office buildings, hospitals, schools and residences, large or small. Readily adapted to buildings already planned in wood.

Write for Useful Suggestions

No matter what the state of your plans, write now for suggestions on a better building at economical cost

TRUSCON STEEL COMPANY, YOUNGSTOWN, O.

Warehouses and Offices from Pacific to Atlantic. For address see 'Phone Books of Principal Cities. Canada: Walkerville, Ont. Export Div.: New York

NATIONAL STEEL JOIST COMPANY, MASSILLON, OHIO

TRUSCON AND NATIONAL STEEL JOISTS



Fig. 2. The Self-Centering Lock, Which Holds the Ventilator in Place and Makes Sure the Window Will Accurately Center When Installed.

channel. When filled with mortar this provides a weather-tight bond between the frame and the plate or bond timber, or other construction.

The hinges are placed low under the edge of the channel leg to prevent being fouled.

The frame at the sill is also an equal channel. It provides an even base on which the window stands upright without bracing. The window is merely set in a bed of mortar and the wall laid up around it.



Synchronous Motor Drive for Ammonia Compressors

FROM 1913 to 1920 the annual kilowatt-hour consumption of ice and refrigerating plants, in Chicago alone, has been increased from eight and one-half to nearly fifty-two million kilowatt-hours.

A share of this increase is attributable largely to the use of slow speed synchronous motors. Ice plants are almost always electrified with slow speed synchronous motors, which mean a power-factor of unity or leading.

After a thoro investigation of the demand and of the requirements for such a motor, an electrical manufacturing concern has prepared a special line of 50 degree motors.



Flooring with a Spring In It

(Continued from page 109.)

tion. Altho it is odorless, it has been found to continually give off minute quantities of acid gases, including formaldehyde and formic acid, that kill the germs that find their way into rooms—for instance, from dirty shoes. In one test it was found that virulent thyposus and streptococci or pus formers were killed by the bactericidal agents that are present as a result of linoleum flooring. This germicidal action of linoleum flooring is due to its linoxyn formation—that is, to the oxidized linseed oil. Naturally, the obvious conclusion is that it should be a very good type of flooring for a school or a hospital, or any building where human beings gather in any number.

One advantage of the patterned linoleum floor which is very real, but apt to be overlooked because it is so very obvious, is the service it performs in restricting patterns in a room. Some decorative pattern treatment is desirable, but highly-patterned wall paper is likely to become tiresome. The plain papered, painted or kalsomined wall is preferable; it gives windows, door, pictures, draperies, etc., their proper value and setting, and patterned linoleum flooring helps accent these in an unobtrusive, non-tiring way.



Record February Construction

FEBRUARY construction activity was greater than that of the corresponding month of any previous year, according to F. W. Dodge Corporation. Total construction contracts awarded last month in the 36 eastern states of the country (including about seven-eighths of the country's total construction volume) amounted to \$281,140,000. The increase over January was 16 per cent. The February record for 27 of these states shows an increase of 33 per cent over February of last year, and for the first two months of 1923 combined an increase of 32 per cent over the corresponding period of 1922.

It should be noted that while activity is large in volume everywhere, it is relatively stronger in the south and west than in the east.

Last month's figures included: \$113,902,000, or 40%, for residential buildings; \$40,275,000, or 14%, for industrial buildings; \$38,893,000, or 14%, for public works and utilities; \$34,698,000, or 12%, for business buildings; and \$27,668,000, or 10% for educational buildings.

Contemplated new work reported during the month amounted to \$686,813,000.



Building Boom in Canada

BUILDING in Canada has returned to its pre-war scale of activity; 1922 figures show an increase of \$90,000,000 over 1921, equaling the boom days of 1913. Building contracts awarded during the year had a value of \$331,843,800 as compared with \$240,133,300 in 1921.

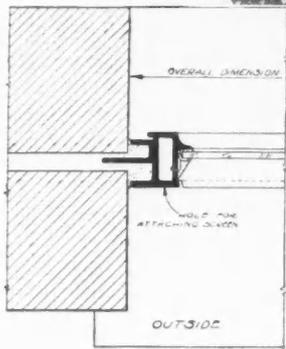
Ontario led in building, with \$166,628,000, of which \$60,000,000 was for home building. Quebec's total was \$103,291,800. The western provinces and the Maritimes combined accounted for \$61,824,000. All the large cities showed an increase of at least 30 per cent. In the prairie provinces home building showed an unprecedented activity, due to prosperity in agricultural centers; all of which indicates Canada's complete business recovery and prosperous times ahead—two things we are glad to wish for our northern friend and neighbor.



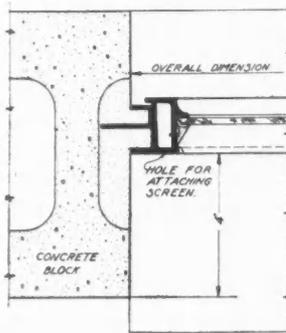
Lumber Company Gives Prizes for Suggestion Box Ideas

EARLY last fall the Goslin Lumber Company, Wildwood by the Sea, N. J., established a suggestion box at their yard. A notice was sent to customers and likewise printed in the company's publication, the "Home Builder," that any customer, salesman or visitor making the best suggestion for the improvement in service, sales increase or the betterment of the business would receive free of charge a handsome cedar chest. In addition, the company offered \$10 in gold to any employe making the best suggestion along the above lines.

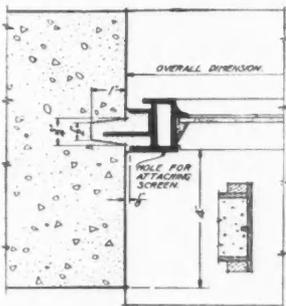
Cross section of jamb showing brick installation



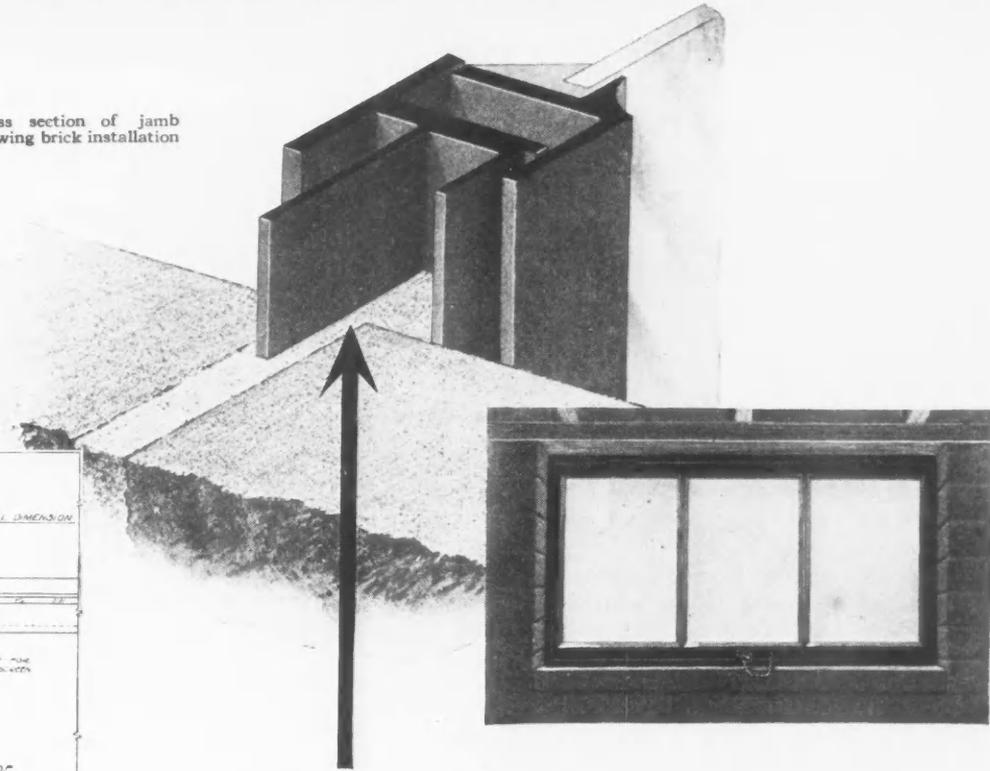
Cross section of jamb showing brick installation. See that fin.



Cross section of jamb showing concrete block installation.



Cross section of jamb showing the method of installing in poured concrete.



See That Fin

Look at the Fenestra jamb section above. See how the projecting *Fin* and the channel legs on either side provide a guide for the mason when laying up the inside and outside courses of brick. Note particularly how this jamb section makes it absolutely impossible to foul the swinging section, how solid anchorage is secured by means of the fin and how weather protection is made positive.

This is one of the outstanding features of Fenestra Basement Windows. It's one of the reasons why they can be installed with *one-third* the labor required to install a wood window of equal size.

Other Fenestra advantages are—1st, Fenestra Basement Windows being more compact are easier to handle; 2d, they stand on the sill without bracing; 3d, they come complete—locks and hinges are already attached, the sash is already fitted to the frame and the priming coat of paint is applied.

Equally important, they are better for the owner. They admit 80% more light. They never warp nor stick. They are fire resisting. Write for further details and helpful literature.

DETROIT STEEL PRODUCTS COMPANY
2302 East Grand Boulevard Detroit, Mich.

Fenestra

BASEMENT WINDOWS

Fenestra

The name of the ORIGINAL steel Window.

The symbol of superior QUALITY in material, patented design, workmanship and service.

Southern Pine Association and National Lumber Manufacturers' Association in Successful Convention

"TWO Conventions in One" characterized the annual meetings of the Southern Pine Association and the National Lumber Manufacturers' Association, held in New Orleans during the week beginning March 19. Three days—March 20 to 22, inclusive—were occupied by the two associations in actual convention business sessions, but preliminary, committee and other meetings began the morning of March 19, and the 23rd was utilized by the delegates for informal meeting and entertainment features.

The annual meeting of the Southern Pine Association convened at 10 a. m. March 20 and concluded at noon on March 21. The National Association's meeting began at 2 p. m. on March 21 and concluded the evening of March 22. All sessions of the lumber conventions were held on the 12th floor of the Grunewald Hotel.

More than six hundred visitors came to New Orleans for the two conventions, many of the most notable lumbermen from the North, East, South and West having made advance reservations at the local hotels.

The National Association Convention discussed subjects of codes, credits, insurance, taxes, waste prevention and economics.

Among the important subjects discussed at the Southern Pine Association Convention was the official report and recommendations of experts of the Forest Products' Laboratory, who have been engaged during the past year in co-operation with the Southern Pine Association in dry kiln tests, designed to improve existing methods, demonstrations of the machine which has been perfected during the year for the Southern Pine Association for the grade-marking and trade-marking of lumber, the movement inaugurated by Secretary Hoover for standardization of lumber sizes and grades, the statistical and market conditions of the lumber industry, utilization of cut-over lands, lumbermen's co-operation with and encouragement of Building and Loan Associations, and other matters of much concern to the industry and the public.



J. H. Russell New Sales Manager for Rybolt Heater Company

J. H. RUSSELL, who has had many years experience as a furnace mechanic and salesman, is now in charge of the Sales Department of the Rybolt Heater Company, Ashland, Ohio. Coincident with this change in personnel new additions to the factory and foundry of the company have been made, greatly aiding production of the excellent, reasonably priced furnace manufactured by this progressive company.



Association of Wood Using Industries in Annual Meeting

THE Association of Wood-Using Industries met at the Drake Hotel in Chicago February 23, 1923, for the purpose of considering matters of vital importance to the users of wood in every channel of manufacturing production. In view that at the present time the United States is cutting 25% more timber than it is growing, the Association of Wood-Using Industries strongly indorsed Senate Resolution 398, providing for the drafting of a national policy for reforestation of lands chiefly suited for timber production; and the Clark bill, H. R. 14225, which would provide, through co-operation between the federal government, the states and owners of timberlands, for adequate protection against fires, for reforestation of denuded lands and for extension of national forests.

Beckman-Dawson Co. in Larger Quarters

THE Beckman-Dawson Roofing Company, manufacturers of Winthrop Tapered Asphalt Shingles, Argotile and Slatile shingles and roofing, and Wearproof Rubber roofing, have moved their offices from 19 South La Salle St., Chicago, Ill., to larger quarters in the F. C. Austin Building, 111 Jackson Blvd., Chicago.

Recently the Beckman-Dawson Roofing Company leased the plant of the Beck Asphalt Shingle Company at 14210 Monnier Road, Detroit, Mich. This modern plant is being operated as the Detroit branch of the Beckman-Dawson Roofing Company and the well known Beckman-Dawson brands of roofing materials are being manufactured there.



Hardwood Manufacturers in First Annual Convention

THE Hardwood Manufacturers Institute announces its first annual convention for May 10 and 11 at the Blackstone Hotel, Chicago. Elaborate plans are under way. The program will provide a fitting celebration of the tremendous strides the institute has made since its organization in June, 1922, with but some 70 members. The May annual, less than a year since the organization, will show the institute with over 300 bona fide hardwood producers.



Harvey Hubbell, Inc., Opens Up New Boston Sales Office

HARVEY HUBBELL, INC., announces the opening of a Boston sales office at Room 413 Weld Building, 176 Federal Street, Boston, Mass. For the convenience of the trade samples of their complete line of approved wiring devices will be on display at the new office, and catalogs and circulars will be available.

No warehouse will be maintained in Boston, all orders being shipped from the company's factory at Bridgeport or from distributors' stocks.

The new office will be the headquarters of the company's Boston representative, Mr. R. M. McCormick.



Paasche Air Brush Company Occupies Fine New Plant

THE Paasche Air Brush Company, Chicago, has moved into fine new, specially built quarters at 1909-1913 Diversey Parkway. The new structure, which is of brick and reinforced concrete construction, was designed and erected by the firm of Frank D. Chase, Inc., structural engineers, to meet the steadily growing demand for Paasche air brush painting machines.

Jens A. Paasche, president, formerly was a native of Norway and while in the ordnance department of the Norwegian government collaborated prominently in the invention of the Krag-Jorgenson rapidfire gun. For the past twenty-two years he has been a citizen of the United States, pioneering in air brush invention and development.



Wallboard Users Urged to Survey 1923 Requirements and Equalize Demand

THE Upson Company, Lockport, N. Y., has issued a bulletin to its trade in which it points out that maximum shipments during April will aid in maintaining prices at a normal level. It urges that wallboard users, by anticipating their needs now, can help avoid congestion and secure adequate stocks for heavy spring business also, by helping the company augment its volume ahead of the later demand pressure, aid toward avoidance of higher prices.



For Your Fair, Exposition and Parade Advertising

The new Mule-Hide 1923 Advertising Campaign book for dealers.

Lists all the materials necessary for a parade float or a fair exhibit. Offers valuable suggestions that have been proven in our own displays for years past.

This is but one of the nine services in the new Mule-Hide advertising handbook for lumber dealers.

Organize your advertising and get real results!

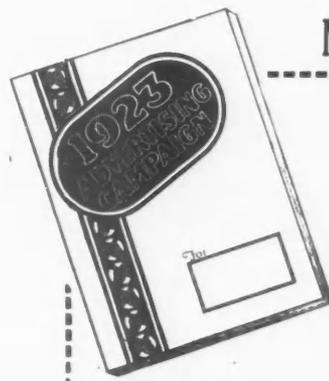
Fill in the coupon below as the start towards a successful advertising campaign for 1923.



THE LEHON COMPANY
44th Street and Oakley Ave. CHICAGO

Some of the other services are:

- Get Action Letter Service.
- Carpenter aprons.
- Road and fence signs.
- Novelties.
- Mailing inserts and cards.
- Newspaper electros.
- Films and slides.
- and many others.



Mail This Coupon Now For Your Copy!

THE LEHON CO. A. B.
44th St. and Oakley Ave., Chicago, Ill.

Please send me a copy of the 1923 Dealer Advertising Campaign Book. I am interested in your extensive plan of dealer co-operation.

Name.....

Town.....

State.....

Line of Business.....

ELECTRIFY ALL BUILDINGS

A Department of Up-to-date Information
for all who Plan and Build

WE, of the electrical industry, are very gratified to have the privilege thru this department of talking to the men who plan and build the homes of America. We have a message of great importance to all. Follow it carefully, and you will make your homes and other buildings more modern, more attractive, more salable and more livable.

Electrify all buildings. Plan from the beginning on adequate wiring, adequate outlets and a proper investment in lighting equipment. Look ahead and see the ever-growing use future occupants will want to make of electrical appliances and labor-saving electrical conveniences of all kinds. You will find this a policy and a line of approach that will instantly appeal to your clients and prospective clients.

Make full use of the Electrical Section of the AMERICAN BUILDER, feeling free to call upon us of the electrical industry for information or suggestions. We are organized to help.

E. W. Lloyd

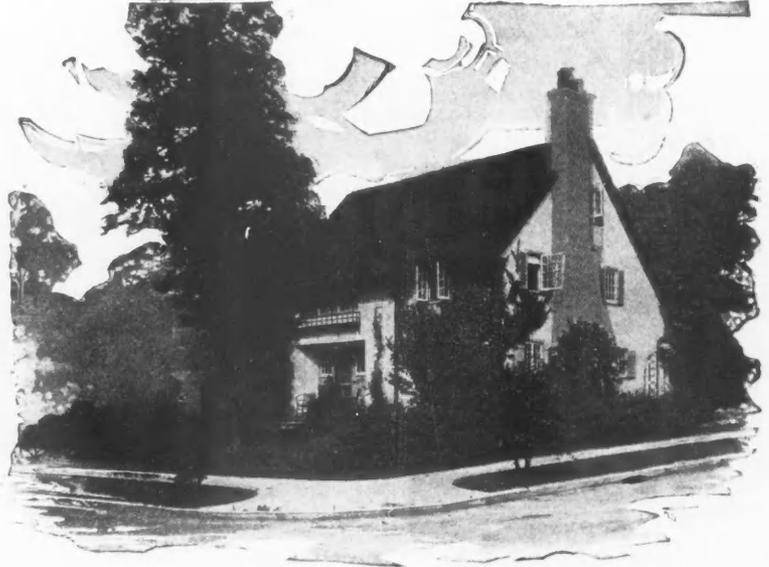
General Chairman, Joint Committee for Business Development of the Electrical Industry.

EDITOR'S NOTE: The Joint Committee for Business Development comprises representatives of contractors, dealers, jobbers, manufacturers and central station organizations including:

1. Association of Electragists, International, New York City.
2. Canadian Electrical Association, Montreal.
3. Electrical Manufacturers' Council (Associated Manufacturers of Electrical Supplies, Electrical Manufacturers' Club and Electric Power Club), New York City.
4. Electrical Supply Jobbers' Association, Chicago.
5. Lighting Fixture Dealers' Society of America, Cleveland.
6. Illuminating Glassware Guild, New York.
7. National Council Lighting Fixture Manufacturers, Cleveland.
8. National Electric Light Association, New York.
9. The Society for Electrical Development, New York.

The Joint Committee for Business Development is organized with an Executive Committee and a Headquarters Staff, office 29 West Thirty-ninth street, New York, H. A. Lane, Director.

NONE of us should fail to appreciate what complete electrical wiring and equipment has come to mean today in the well-equipped, modern home. Besides the appliances shown in the floor plans in this section of the AMERICAN BUILDER there are many other devices that should be included in any modern home equipment—vacuum cleaner, irons, toaster, grill, percolator, chafing dish, waffle iron, plate warmer, cigar lighter, portable lamps, floor lamps, electric clocks, phonograph motor, electric firelogs,



Every House That Is Built Nowadays Where Electric Service Is Available Is Wired. The Owner Wants Electric Light as a Matter of Course, but Owners Are Learning That Electric Light Is Only One of the Advantages of Electricity. The Comforts and Conveniences Offered by Electric Appliances Make It Necessary to Wire the Home so Appliances Can Be Used. Here Are Presented Several Designs and Plans for Completely Wired Homes. You Will Find This Entire Department Helpful in Planning Your Electrical Features.

radiators, fans, drink mixer, water purifier, battery charging rectifier, tire pump, and other accessories.

Wiring a house in the most complete manner possible is not expensive. It seldom exceeds 5 per cent of the cost of building. It is the greatest labor saver that a home can have and it is the cheapest of all the permanent comfort equipment of a home. It costs less than plumbing, or heating, and when it becomes as thoroly understood as plumbing and heating it will be as carefully planned.

Our Home Electrical No. 1

Colonial Bungalow Illustrated in Two Colors on Page 154, Proves a Model of Beauty and Convenience—Full Details of Very Complete Electrical Installation Described

AT the present time there is a tendency which is constantly growing stronger to make of every dwelling that is being built, and, in fact, those already finished, a complete home electric. The idea has taken hold in such a way that architects, builders and real estate men now feel impelled to provide for complete electrification of every home. It makes for comfort on the part of the ultimate occupant; a home so equipped is more easily disposed of in the market, and people are now demanding that provisions be made for the complete electrical installation.

In the final analysis, the man best fitted to speak on the electrification of a home is the electrical man, and the *AMERICAN BUILDER* has made arrangements with the best posted men of the electrical industry to tell its readers in non-technical language just what the best practice is in this regard. These men are leaders in their respective branches of the electrical industry and are interested in seeing the proper electrification of every home in this country. What they indicate as good practice in electrification is based upon sound engineering principles only.

In this series of houses of various types and sizes, floor plans with complete wiring diagrams will be supplied, together with an exterior view of each dwelling. These diagrams have been prepared by experts in the electrical contracting field and may be accepted as sound practice. They have been laid out with one thing in mind—proper and safe electrification. The

series will also include the proper lighting of each home. This, too will be prepared by the best illuminating engineers.

It is not long since a home was considered properly equipped electrically when it had a lighting fixture in each room, with possibly a switch with which to operate it. But the advent of the labor-saving device

with reference to the place where they are used, much more satisfactory service can be secured. For instance, it is obvious that it is much easier and more satisfactory to use a vacuum cleaner attached to a plug in the baseboard or the wall than by attaching it to a ceiling fixture.

These wiring diagrams, therefore, have been laid out with this in mind. The lighting fixtures have been placed where best engineering and illuminating practice dictates.

The most important part of the electrification, of course, is the wiring. It is the basis of the use of electricity, and on it depend the lighting installation and the use of labor-saving appliances. The location of the switches with reference to their convenience is important, the lighting fixtures should be well placed with regard to their illuminating qualities as well as to their general effect on the room and surroundings. The outlets for use with appliances must be carefully placed.

The number of outlets installed as a rule has not kept pace with the number of devices and appliances to be used with them. The result is that frequently one outlet is made to do double and even triple duty by use of multiple plugging attachments, with the result that the wire leading to it is likely to become overloaded, causing it to break down and make an added fire risk. This is bad practice, and these wiring diagrams have been laid out with the idea of eliminating this procedure. It has been argued that sufficient outlets will run up the cost of a new building to a point which is beyond what the owner wants to spend, but the answer is that if they are put in at the time a smaller number is being installed, the cost will be but slightly greater, whereas after the house is completed their cost will be several times what it would be if they were specified originally. Furthermore, the eventual occupant is beginning to demand sufficient outlets and correct and beautiful fixtures. The result is that this subject has become an important selling point. The wiring diagrams shown herewith have been arranged with a view to eliminating all danger and are heavy enough to take care of the "load" that will be used.



The Dressing Table Is One of the Pieces of Furniture Often Wired so That There Is an Outlet Conveniently Placed for the Electric Curling Iron or Pair of Candle Lamps.



Wires from the Twin Outlet, Conveniently Placed, Operate the Fan and Light the Floor Lamp at the Same Time.

has brought about a change; it has made necessary the introduction of what has come to be known as the "convenience outlet." This is nothing more than an outlet arranged at some convenient location for the use of an appliance, such as a vacuum cleaner, toaster, or percolator. By arranging them in a proper location

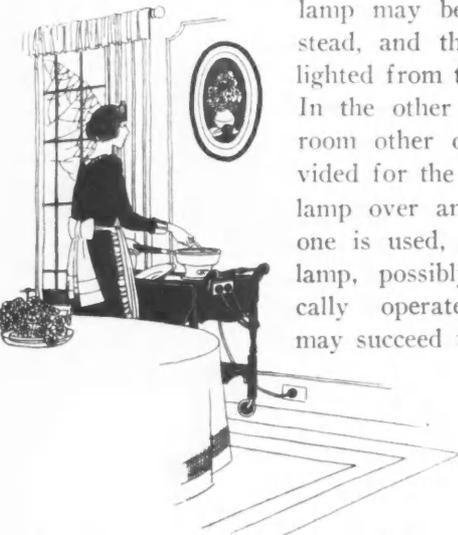
General Layout of Wiring

On the porch of this dwelling (page E) there has been provided a light which is controlled from a wall switch in the living room, and this also operates an illuminated house number. A switch has also been provided for the center ceiling fixture in the living room, and one is indicated for operating the lights on the mantel. The chances are that a divan will be placed in front of the fireplace, with possibly a table immediately behind it. If it is desired to have a portable lamp or two on the table, means for their illumination are provided by the baseboard outlets indicated. A floor

lamp may be used in their stead, and this, too, can be lighted from the same source.

In the other corners of the room other outlets are provided for the use of a bridge lamp over an easy chair, if one is used, or for a piano lamp, possibly. An electrically operated phonograph may succeed the hand-wound

machine of the occupant, and it is an easy matter to hitch it up to one of the outlets provided. At various times an electric



The Electrically Wired Tea Wagon Makes It Practical to Use the Chafing Dish, Toaster, Coffee Percolator, or Other Electric Cooking Units That Are So Necessary to Modern Housekeeping.

corn-popper may be used in the living room, or a chafing dish, tea samovar, vacuum cleaner or wired tea wagon. And their convenient use has been made possible by the location of outlets.

Dining Room

The main fixture, over the table, in the dining room is controlled from wall switches located at different points, one from the entrance to the room from the living room and the other near the pantry door. In this way it is possible to light the fixture handily either from the kitchen or the living room. The wall brackets are all operated by a pull chain, and baseboard outlets have been provided at four convenient locations in the room for use with the appliances which will likely be used. Under the table there has been specified a duplex outlet for use with table appliances, such as toaster, percolator, waffle iron, grill, tea samovar, chafing dish, egg boiler, disk stove, or candle sticks. The buzzer connection to the kitchen is also located beneath the table, making it a simple matter to signal the kitchen merely by pressing down with the foot. The arrangement of the baseboard outlets makes possible the use of appliances on the buffet or serving table with no inconvenience.

The kitchen wiring provides for an electric range, the most efficient and satisfactory means for preparing

food. There is also to be installed an electric ventilating fan, the modern means of making the atmosphere of the kitchen free from the odors, heat and other results of cooking. The center ceiling light in the kitchen is controlled from a wall switch, while the one over the sink is provided with a pull chain. Baseboard outlets are provided for the use of the appliances employed in the kitchen. These include a washing machine, if the laundry work is done there, cooking appliances, dish washer, bread and cake mixer, iron, refrigerating machine, fan, utility motor for the meat chopper, coffee mill, grinding, polishing and buffing machine, and the fireless cooker. The light on the rear porch is controlled from a switch located in the kitchen.

The Bedrooms

Each bedroom is equipped with a ceiling fixture and four side-wall brackets. The ceiling fixtures and brackets are controlled from two separate switches. The closets in each of the bedrooms, as well as in other parts of the house, are operated with pull chains instead of the automatic switch which operates when the door of the closet is opened. The reason for this is that sometimes it is desired to leave the closet door open for cleaning or other purpose, at which time the light is not necessary.

The wall brackets in the bedroom are arranged to be placed on either side of the dressing table, and the outlets are arranged so that it is possible to enjoy a reading lamp while in bed. They are also arranged for the use of other appliances such as a hair dryer, curling iron, massage vibrator, heating pad, violet-ray outfit, fan, radiator, water heater and vacuum cleaner.

Bathroom

In the bathroom there is a pull-chain light over the basin, providing ample light for shaving, etc. Alongside the basin, in the baseboard, there is a duplex receptacle provided for use with a radiant heater, immersion heater for quick heating of water for shaving, etc., hair dryer, curling iron, massage vibrator, fan or vacuum cleaner. When two or more receptacles supplying heating appliances are to be fed from one receptacle, as in the case of electrically equipped furniture, the master receptacle should have a rating of 20 amperes.

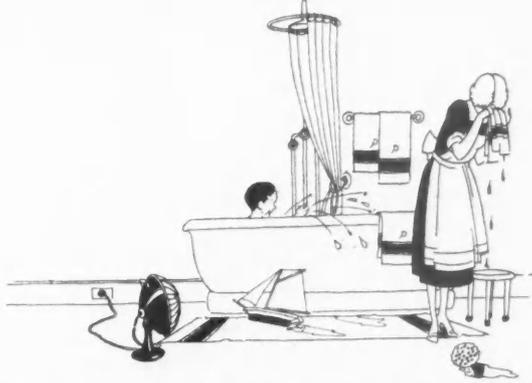
Low-voltage calling circuits should be installed for bells, annunciators and buzzers. One from the dining room to the kitchen has been indicated on the plans. Push buttons should be put on each door, and in any part of



The Fully Equipped Electric Laundry Is the Pride and Joy of the Modern Housewife.

the house desired by the owner. The use of a bell-ringing transformer does away with the necessity of batteries.

Free use has been made in the wiring diagrams of duplex receptacles, and some of them may be replaced satisfactorily by single receptacles. But the difference in cost is so small that it seems to warrant the use



The Convenience Outlet in the Bathroom Furnishes Timely Heat Units by Way of the Handy Radiant Heater.

of duplex receptacles wherever there is a possibility of their being needed.

The Wiring Specifications

In the case of the wiring specifications, it should be understood that while they have been made up in accordance with the National Electrical Code, local ordinances may cause some slight changes to be made because of a different interpretation of the code by some cities and towns. They have been prepared with the idea of telling what is best practice and are correct in their fundamentals. Also, they have been arranged in such a manner as to make them readily understood by any one, so when he tells his builder what he wants in the electrical line he himself will know just what he means. The builder, in turn, will be able to outline to the electrical contractor to whom he gives his contracts just what he wants in the building. The architect in preparing a set of plans for a house similar to those to be shown here knows that the specifications he prepares have received the approval of the electrical industry as sound practice.

The first thing for the electrical contractor to do is to find out from the local electrical company the current which is to be furnished the premises. This may be one of several kinds, but the chances are that it will be 110-volt, single-phase service. For this particular type of house a three-wire system should be used thruout. Sometimes the general practice is to run a two-wire system whenever there are less than 100 outlets to be installed, but in this dwelling the fact that an electric range is specified, makes it necessary to use a three-wire system.

For all practical purposes a house of this kind should be wired with flexible-steel armored conductors. This is known to the trade as BX cable. It is possible for a wire to become overheated because of an excessive load, short-circuit or ground, and a destructive fire

is liable to result. With this metal covering, however, the fire risk is reduced to a minimum. Where the current is taken into the dwelling, the wire should be run in rigid iron conduit, or piping.

All runs of BX cable should be secured in place by means of pipe straps, and where the end of a run is at an outlet box or panel, an approved box connector should be used, with lock nut. Care should be taken that there are no bends with a radius of less than four inches, and conductors should be fastened as far as possible from the water, gas or other pipes. Where there is a water system in the house, the electrical system should be grounded to it on the street side of the meter.

Conductors should be continuous from outlet to outlet, there being no splices at any point over their entire length except in the outlet boxes themselves. The best practice is to use wire not smaller than No. 14, Brown & Sharpe gauge, but where circuits more than 100 feet are employed, No. 12 wire should be used. In this house, however, there will hardly be any runs of that length, so there need be only No. 14 used. The electrical contractor should see to it that the wires used at the outlets are of sufficient size to eliminate any strain in connection to apparatus, and the splices should be such as to be mechanically and electrically perfect in every respect, and should be of National Electrical Code standard.

Installing the Service Feeder

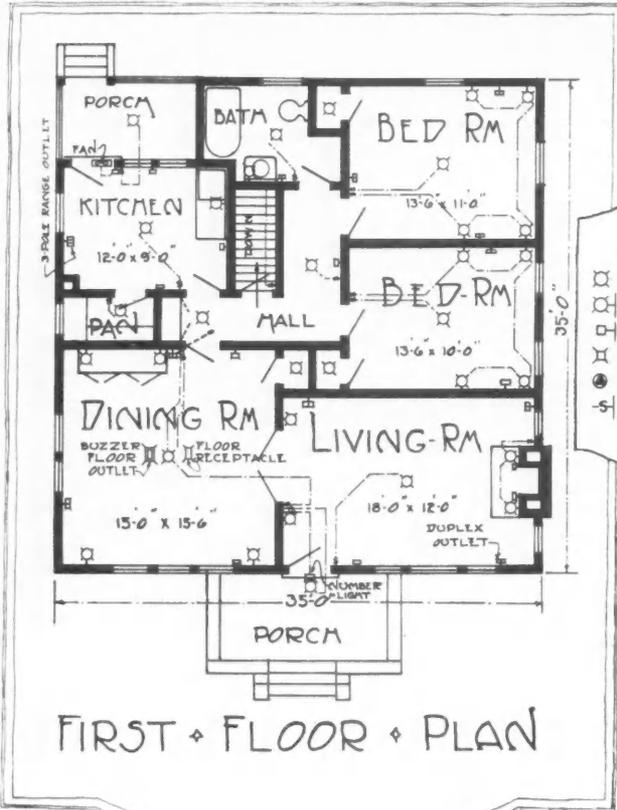
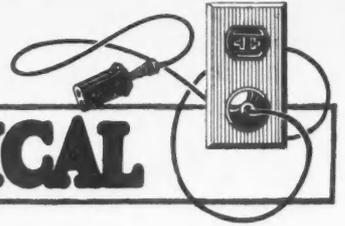
There is a variety of practice regarding the installation of the service feeder. Some lighting companies specify that the electrical contractor shall do this, and some others prefer to have their own men perform the work. It is a part of the architect's or builder's duties, therefore, to consult with the central station and learn of its preference. The service may be overhead, that is, the current-carrying feed wires are strung on poles;



Lighting the Kitchen—the Housewife's Workshop—Is Most Important. Don't Forget the Light Over the Sink.

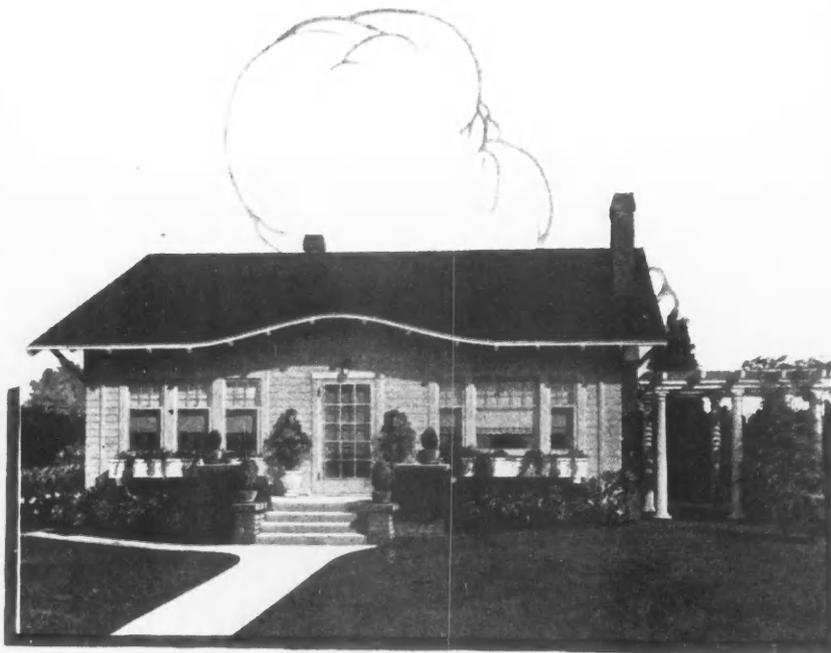
or they may be laid underground in the street. Where it is the preference of the lighting company that the electrical contractor install the feeder service, it is done from the company's line to the service switch, and must be satisfactory to the company. If it is coming in overhead, weatherproof wire should be used; if underground, galvanized iron pipe conduit should be employed, with lead-covered wires, the conduit to be painted with asphaltum.

BLUE RIBBON HOMES ELECTRICAL



- SYMBOLS**
- ☐ CEILING OUTLET
 - ☐ BRACKET OUTLET
 - ☐ CONVENIENCE OUTLET
 - ⊗ FLOOR RECEPTACLE
 - ⊙ SPECIAL OUTLET
 - S- SWITCH

FIRST FLOOR PLAN



OUR HOME ELECTRICAL NO. 1 This Colonial Bungalow Was Designed for Beauty of Exterior and Convenience of Interior Arrangement and Electrical Appointments. The Architect or Builder Who Will Strive to Make Every New Home as Complete Electrically as This One Is Will Find Himself a Very Popular Man in the Home-Building Field. Present Clients and Future

Occupants of the Home Will Bless His Thoughtfulness and Foresight. A Relatively Small Amount of Money, Less than 10 Per Cent of the Entire Investment, Will Assure All of the Wiring and Outlets Needed and a Liberal Appropriation for Lighting Equipment and Labor-Saving Appliances in the New Home. See Accompanying Text for Wiring Specifications of This Home.

Where the current is taken into the house, there should be installed in a dwelling of this size a 60-ampere switch of the knife-blade type mounted on a slate base with connections for cartridge fuses. These switches vary with the size of the house and number of circuits on the line, taking into consideration the wattage requirements of the installation. There is also to be considered the installation of the meter as required by the lighting company.

The Electric Range

In this particular house, and in all homes completely equipped for the use of electricity, the electric range is a feature, and to insure its proper use, a feeder is to be run from the service entry to the location of the range in the kitchen. This is a circuit in itself and should be heavy enough to carry the load required for the operation of an electric range.

Sometimes the service switch is installed by the lighting company, but in localities where this is not

the case, it should be installed by the electrical man, in a moisture-proof box with a hinged cover.

The electrical contractor must install the feeder from the service switch to the distributing panel after he has figured, in accordance with the National Electric Code rules, its carry-

switches. The distributing panels should be fully equipped with fuses, and it is well to have several on hand in case of emergency. The distributing panel should be set in a cabinet of steel which is not less than 12 gauge, well reinforced and securely riveted in place. It is well to enclose the distributing panel in an ebony, asbestos or slate partition one-half inch thick which will form a wire space around the panel.

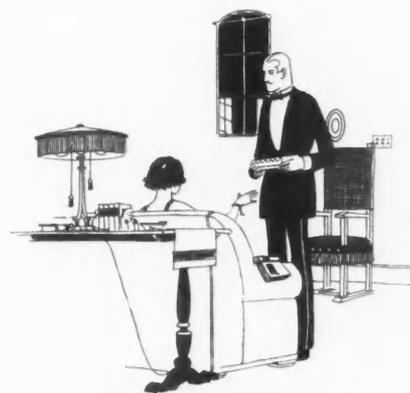
Outlets

The outlets to be installed are the standard type best suited to harmonize with the hardware to be used in the dwelling, and the outlet boxes should be galvanized. They must be securely held in place by approved methods, and those intended for fixtures should have fixture studs or hangers. It is an almost universal practice to set the outlet for wall brackets five feet above the finished floor in bedrooms, and five feet six inches in all other rooms. Wall switches are usually placed four feet above the floor, this being accepted as the proper height. The electrical contractor should see that all outlets are centered with reference to paneling, trim, etc., and set flush.

Two-button flush-type switches have been specified because of their ability to stand up under hard usage. There are several other styles, all of which have their good points, but for real, hard service, the two-button switch seems to have the call.

"Elexits" have been specified for the wall and ceiling fixture outlets for reasons which have been stated below. The plug receptacles shall be made with a beveled-edge brass cover plate. They come in either single or tandem, the latter being preferable in many cases because it permits the use of two appliances at the same time. There is also to be supplied a heavy-duty receptacle of 20-ampere capacity for use with the range in the kitchen. For use with the electric iron, it is well to install a receptacle with a pilot light which glows when the current is on, enabling the user to tell when the iron is being heated.

The plan does not show the wiring diagrams for electric bells and buzzers, but the electrical contractor should be instructed to provide for them. They are operated on a bell-ringing transformer, and should be attached to the doors of the house, placed in the dining room, and any other places designated by the owner.



Everyone Today Wants Lamps. Every Home Is Full of Lamps—Table Lamps, Floor Lamps and Wall Lamps. Put in Enough Outlets So That No Lamp Cord Has to Cross in Front of a Window or Door Opening.

ing capacity, allowing for all circuits being fully loaded. It is well to have the feeder of sufficient size to confine the drop in voltage with all circuits fully loaded to not more than 2 per cent of the line voltage. For the current distribution in this house, five 3-wire, 125-volt porcelain-base, dead-front panelboard units are required, and 30-ampere fusible branch circuit

The Lighting Installation

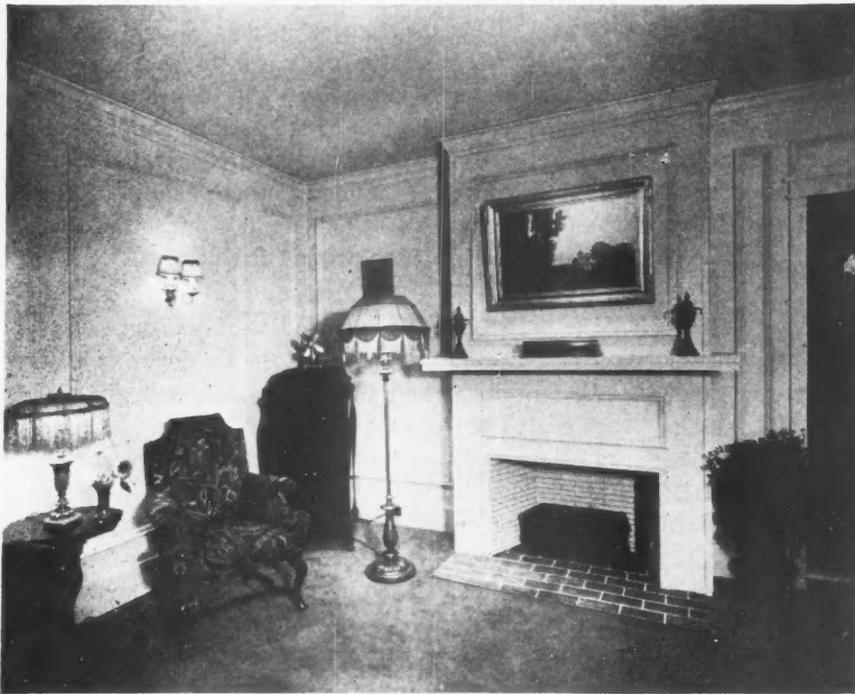
A Discussion in Detail of Ideal Lighting Arrangements for Our Home
[Electrical No. 1, as Illustrated on the Page Opposite]

IN lighting the home, there are two important points to be given consideration: The quantity as well as the quality of the light required, and the varied decorative effects obtainable by artistic lighting arrangements.

The quantity of light varies in different rooms. Domestic activities, such as sewing, cooking, etc., require evenly distributed, properly diffused light in

greater quantity and of purer quality than rooms that are used primarily for rest and recreation.

Direct unshaded light causes not only unnecessary and unpleasant eye-strain, but has been proved by demonstration to act as an irritant to the nerves. In rooms where there are a great many domestic activities, sewing, etc., there should be an even illumination—no sharp contrasts of light and shadows. Such con-



A Modern Living Room, Well Lighted and Appropriately Furnished.

trasts in rooms where considerable work is done cause injury to the optic nerve because of the rapid expansion and contraction of the pupil of the eye when passing quickly from light to shadow or the reverse.

In consideration of the second salient feature of home lighting, decorative effects, it is much more artistic and less expensive to decorate with light. Beautiful fixtures can be secured, many of period designs, others not of any particular period yet equally attractive, fixtures making for harmonious atmosphere, and primarily on all these fixtures correct and true artistic decorations can be secured by the proper shading of the lamp. There is no limit to the artistry of design which can be executed on glassware. Restful, decorative and altogether charming effects are obtained by the careful selection of lighting fixtures, glassware for the shading of the lamp used and by the selection of table lamps, floor lamps, torchettes, etc.

For this house we are specifying "Elexits," which are receptacles placed in the wall or ceiling to which a lighting fixture may be directly attached. By this means the fixtures may be changed at will as easily as a vacuum cleaner or fan may be attached. It has been predicted that the date is not far distant when houses built for sale or rent will be equipped with "Elexits," and the tenant will furnish his own fixtures, moving them from place to place when necessary the same as any other furniture. The householder will then be able to gratify his own taste and pocketbook in the selection of fixtures, and he may change them at different seasons, just as furniture and hangings.

Living Room

The living room, that very important part of the home ensemble, is, first of all, illuminated by a cen-

tral ceiling fixture, so that upon the occasion of special gatherings a full and well distributed decorative lighting effect can be secured. This type of fixture varies from the candles to the pendant hall lamp, and all can be shaded with decorative glassware. Attractive mantel lamps are available for either end of the mantel, and outlets have been provided for their use. Provision has also been made for the use of portable lamps. These permit of both general and local lighting to the extent that the ceiling fixture may be omitted if desired. A good practical reading lamp should be part of the equipment of every living room. Slender standards of wood or metal supporting a shade of silk or parchment, or of dense glass or even metal are obtainable. It is desirable that the shade be ad-

justable so that the light may be directed to the printed page, fancy work or sewing.

Table portables, like all other lighting equipment, should be selected only after seeing what effects they produce, with particular attention to form of shade and height of stand, which control the brightness and the spread of light. Greater height of stand is necessary to increase the lighted area beyond the table. The side-wall fixtures may do much to improve the decorative effects of the room. They are adapted to this purpose, and the attempt to utilize them for general illumination should never be made because, unless glaring, they give little light and the number necessary would prohibit their use for this purpose. Opal glass, silk and parchment, and diffusing bulb lamps, are among the best means of controlling the brightness of the unit, of shading the light source and of producing comfortable lighting.

Dining Room

The problem of lighting the dining room presents three results that are to be attained: (1) a strong illumination on the table itself; (2) soft but adequate illumination on the faces of the diners; (3) a lower level of illumination thruout the room. The problem seems a simple one, but there is not one home in a hundred in which the lighting fills these requirements. The electric candle has come to be popular in the dining room. When arranged about the table in sufficient number and equipped with suitable shades they provide a lighting effect that is extremely pleasant. To illuminate in this manner it is necessary to have the table wired for electricity. A central portable lamp has also been used with success in the dining room, placed on the table. Such a lamp when properly de-

signed meets the three fundamental requirements, but it is of utmost importance that the shade be sufficiently dense to protect the eye from the bright lamp bulb within. Furthermore, its diameter and location with respect to the table and lamp bulb should be such that while strong light entirely covers the table, it does not extend far beyond the table edge.

The fact that the portable lamp on the dining table precludes the use of a center piece and that it interferes somewhat with the vision across the table, brings the ceiling fixture into preference with a great many. This may take the shape of a dome fixture, a shower unit, candle fixture or one of a special type. In the case of the dome, care should be taken to have it hung at the proper height from the table, in general a space of twenty-four inches being accepted as the proper distance between the table and bottom of the fixture. In the case of the shower fixture, too, unsatisfactory lighting effects can usually be traced to improper hanging with reference to its height above the table. The shower unit, which is made up of three or more open shades, should be hung fairly low, about thirty-six inches above the table being considered the proper height.

The candle fixture has excellent decorative possibilities, but care must be used in its use to produce proper illumination. The lamps must be shaded to avoid glare, and the shades should be of a light color to help direct the light toward the table. Unsatisfactory results follow the use of this style fixture without shades.

Some types of the semi-indirect fixture are inappropriate for the dining room because of their monotonously even illumination without the pleasing contrast of light and shadow afforded by the fixtures already discussed, altho they are entirely satisfactory from the standpoint of comfort. If supplemented with pendants, however, it may more nearly approach the dome lighting already mentioned, especially if but a moderate degree of illumination is provided by the semi-indirect bowl.

In this house four wall brackets are specified, and they afford excellent means of enhancing the lighting in the room. A proper shade or shield should be provided, and it should be understood that such fixtures are secondary lighting units, never to be considered alone as the principal means of illumination. Excellent portables are available for the serving table, but they, too, are to be considered as tasteful

ornaments rather than as adjuncts to the general illumination.

Bedrooms

The bedrooms have been provided with central ceiling fixtures and wall brackets. They are so arranged that the dressing table will have one on each side, and these will eliminate the shadows that would result if the ceiling fixture were the sole source of illumination. The convenience outlets specified will be ample for a table lamp at the side of the bed or for a reading lamp at the head of the bed. This is considered more satisfactory for reading by many persons.

The lighting of the bathroom is almost entirely a case of proper illumination at the mirror. Illumination in this case should be on the person's face and not on the mirror itself. There is also a center ceiling fixture provided, which adds to the light in the room.

The kitchen illumination should be good thruout the room. This is best obtained by the installation of a well designed enclosed unit of diffusing glass at the center of the ceiling. There is also provided a wall bracket with a pull-chain socket over the sink. This will eliminate shadows thrown by the ceiling fixture while work is being done there.

Our Home Electrical No. 2

Will be presented in full details in May American Builder



Only Those Who Have Enjoyed the Comforts of the Electric Fan and Adjustable Floor Reading Lamps Know the Home Appeal to Its Fullest.

When You Lay Out the Electric Wiring

Where to Get Expert Advice on Modern-Day Electrical Conveniences Which, at Negligible Cost, Will Make Your Houses Sell Faster

By O. H. CALDWELL

Editor of Electrical Merchandising

FOR each hundred dollars' worth of extra electrical wiring and convenience outlets installed in a house, the selling value of that house is almost invariably increased four or five hundred dollars.

In Louisville they built a "home electric" which the builder estimated should be sold for \$11,000, but when the house was wired and equipped for appliances it promptly went at auction at \$15,025! In Cleveland a "home electric" brought \$10,000 more than was anticipated. In California several of the "modern electric homes" that have been so successfully exhibited there, were bought at values greater than the owner had expected before the installation of electric comforts "turned his houses into homes" and made them worth more than they were before.

And so it goes. There is an almost unbroken record of such experiences across the country—each case another bit of undeniable evidence that complete wiring pays not in some vague, intangible benefit, but in an immediate and concrete increase in real estate value and salability.

Progressive builders are using such electrical features as convenience outlets, "burglar lights," outside-reading meters, radio wiring, etc., to make their houses sell more readily than merely "average" houses on which little thought is expended. Just as a cut-glass flower-vase will often settle a woman's choice of the automobile she is going to buy, so will electrical conveniences and provisions for labor-saving appliances fix in the feminine purchaser's mind the house she wants.

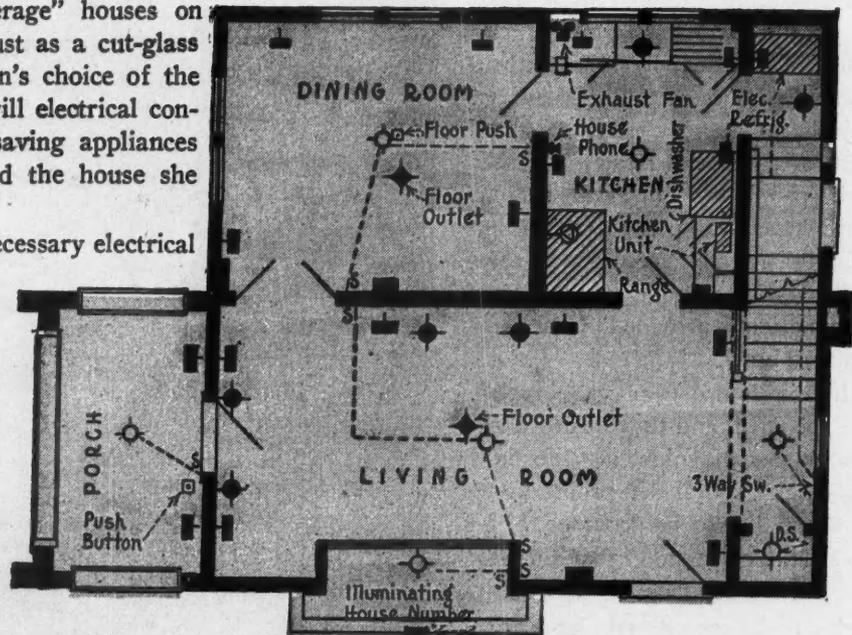
How can the local builder get the necessary electrical information to help him plan his wiring and spend wisely the \$50 or \$100 extra, which will make his house distinctive for its electrical convenience?

1. He can consult his local electric light company. He can get in touch with the manager or the sales manager, exhibit his plans, and ask for their expert advice on the location of outlets, switches and other electrical convenience features. His questions will be freely answered, and he will get information which he can convert into real cash money

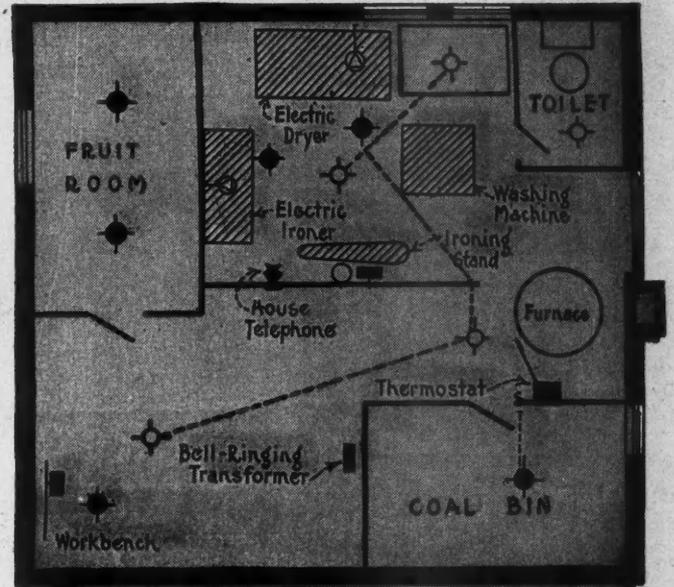
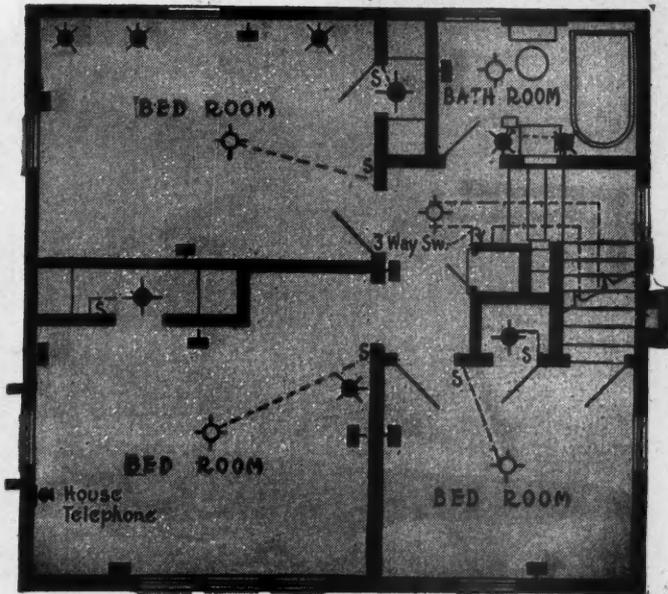
when the time comes to sell his house.

2. He can seek the counsel of his electrical contractor and get that electrical man's advice on the electrical conveniences to install which are popular with the public. Too often the only conferences the general building contractor ever has with his electrical man are those centering around efforts to cut out some electrical feature and so reduce the cost. Instead, the building man should recognize that the electrical features he puts into his house are his strongest selling points, and urge the electrical man to show him more such points to include in his "home convenient." When one recalls that the cost of a finished room is from \$1,000 to \$1,500, it appears poor economy to save on two or three outlets, costing a few dollars each, at the risk of impairing the "livability" and salability of the room.

3. In certain cities there are co-operative organizations of electrical men, which organizations have for their purpose the supplying of information to intending builders, to enable owners, architects and contractors to get the best arrangement of electrical conveniences, and enough such conveniences to put the house in the up-to-date class. Such advisory bureaus are maintained in Cleveland, St. Louis, Milwaukee,



These Plans Show Layout for a Series of 18 Houses in Cleveland as Prepared by Co-operative Bureau Like That Mentioned Under 3. The Black Shows the Electrical Equipment Proposed Originally by the Builder; the Blue the Features Added by the Advisory Bureau. The Houses Were Built and Equipped with Built-in Washing Machine, Dishwasher, Etc.



In These Three Plans on This and the Preceding Page Is Shown in Black the Bare Necessary Wiring That Must Be There to Put Light in the Rooms. The Blue Shows the Additional Electrical Facilities That Should Be Installed.

and other cities, and give disinterested advice on electrical wiring problems.

4. There are also national sources of such information. The Society of Electrical Development, 522 Fifth Avenue, New York City; the Joint Committee for Business Development, 29 West 39th Street, New York City; business magazines like the *AMERICAN BUILDER* and *Electrical Merchandising*, and the manufacturers of electrical devices and supplies are equipped to supply this information and will answer inquiries from individual contractors.

Information on the proper layout of electrical conveniences is so easy to get nowadays, either right in

one's own home-town, or at the expenditure of a two-cent stamp on a letter to some central or national bureau—that no builder or contractor should fail to take advantage of the opportunities open to him to get the best and most up-to-date ideas. For a few extra dollars invested in electrical conveniences he can add fivefold or tenfold to the selling price of his house. Or looked at in another way, the house which has *not* these conveniences is likely to be out of date and as much of a "sticker" to sell as a gas-lighted house itself—for the public has become pretty discriminating in its electrical requirements, and is going to have and is willing to pay for what it wants!

Electrical Home of 263 Outlets

Electrical Features of the Fresno (Cal.) Dwelling Pictured on Next Two Pages

THE home of Mr. A. E. Wishon, general manager of the San Joaquin Light and Power Corporation of Fresno, Cal., contains 263 electrical outlets—and almost every species of electrical appliance known to man. Perhaps because of the support which the central-station company gives to the electrical idea locally by thus showing that it believes in homes electric, Fresno not only has one electrical home, but it has a whole electrical home district, where the general contractor builds nothing but houses which are fully equipped with convenience outlets and modern wiring.

Mr. Wishon's home is pictured on the two pages following, thru the courtesy of *Electrical Merchandising*, which publication, covering the electric dealer field, is co-operating with the *AMERICAN BUILDER* in the conduct of this department.

His main living room contains sixteen outlets, including the master burglar switch which is found in every room of the house and which controls one light in every part of the house.

The electric fixtures are placed considerably lower

on the wall than is the usual custom. In spite of the fact that modern "luminaires" are usually of the candle type, with the light higher than the outlet, rather than pendent, as was formerly the case, electrical contractors generally still persist in locating outlets six feet above floor level. Wall brackets in the Wishon home are located about 4 feet 6 inches from the floor. In cases where the light is required at table height, the bracket is even lower.

In the bedrooms there are switches at each major entrance, convenience outlets near the beds and bureaus, convenience electric heaters, and all such other equipment as go to make a bedroom comfortable. A burglar switch is located where it may be reached from the bed. Wall brackets are placed low on either side of the bureau, giving better light with no shadows.

The washing machine and electric ironer are conveniently situated on the laundry porch where convenience outlets are at hand for all needs. Attention is also called to the fact that these outlets are situated some fourteen inches above the floor rather than at the floor level, as a more convenient height.



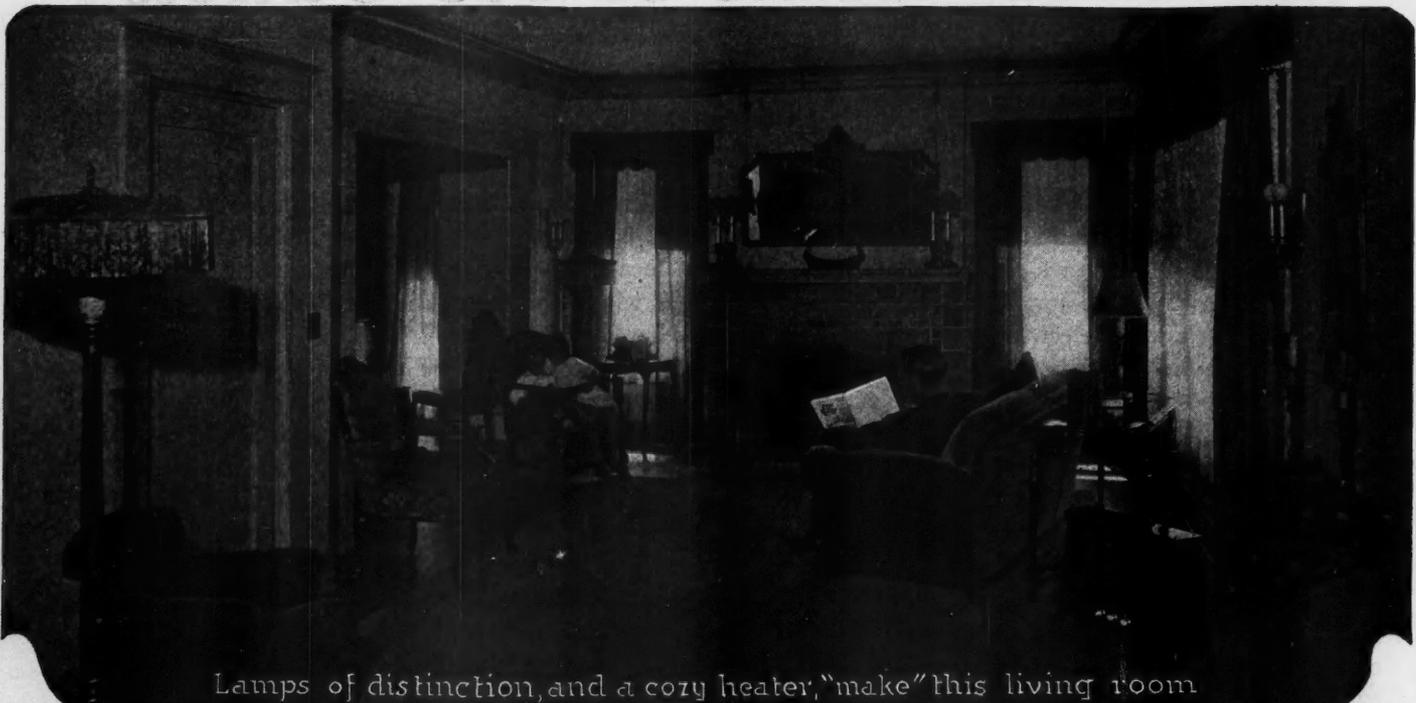
Sewing electrically -
more speed,
less strain.



Electric ironer, washer
and drier make a
happy laundress.



Breakfast together? - Yes, with percolator and toaster at one's elbow.



Lamps of distinction, and a cozy heater, "make" this living room

Photographs Showing a Few of the Many Electrical Appliances in the Home of Mr. A. E. Wishon, Fresno, Calif., as Illustrated in "Electrical Merchandising."

ELECTRIFY ALL BUILDINGS



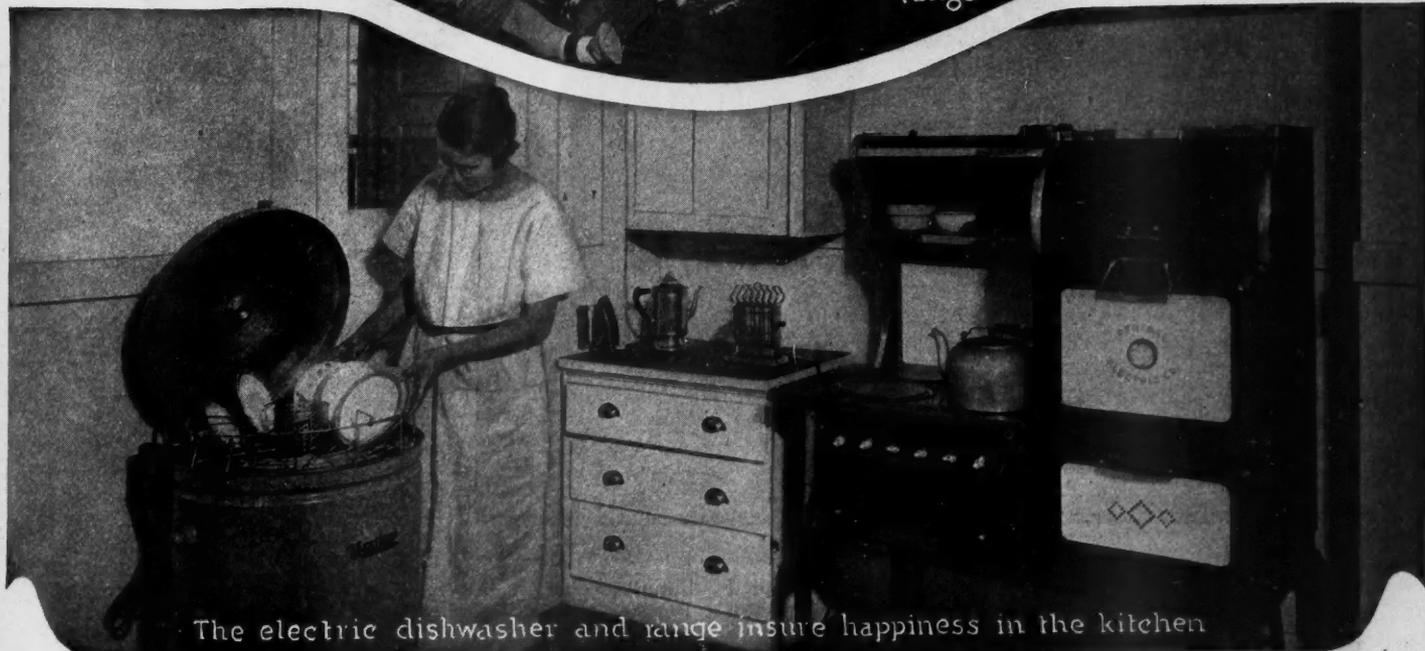
Important to bedroom comfort are the heater, good lamps, hair drier and heating pad.



Cooking's better fun than games—on a real, electric range

"A happy home is the result of happy thoughts."

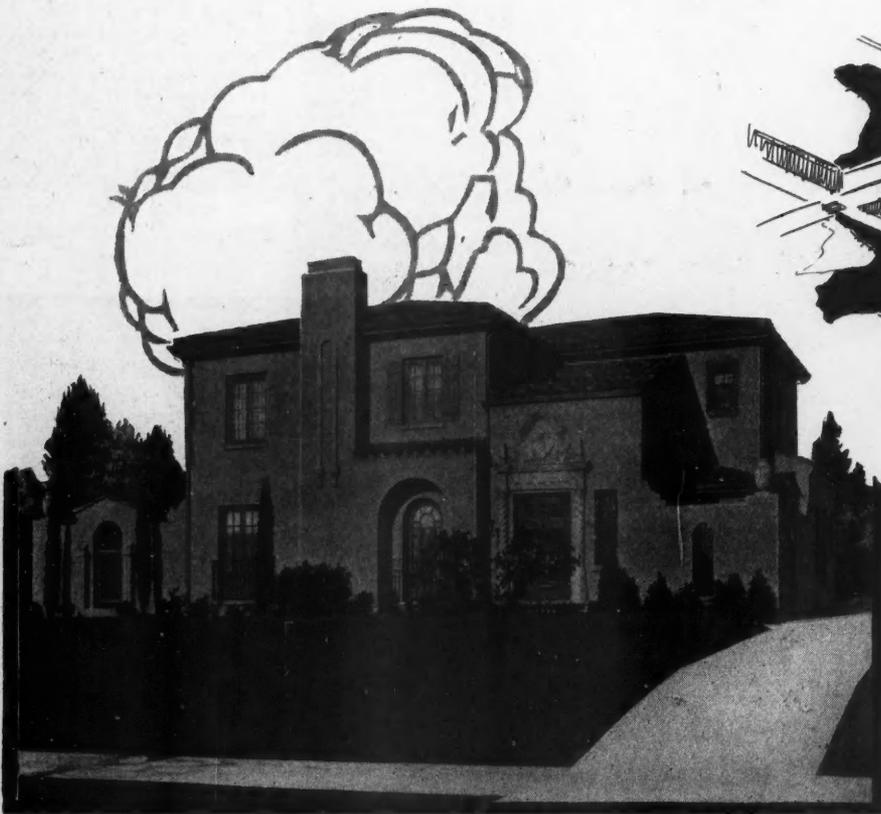
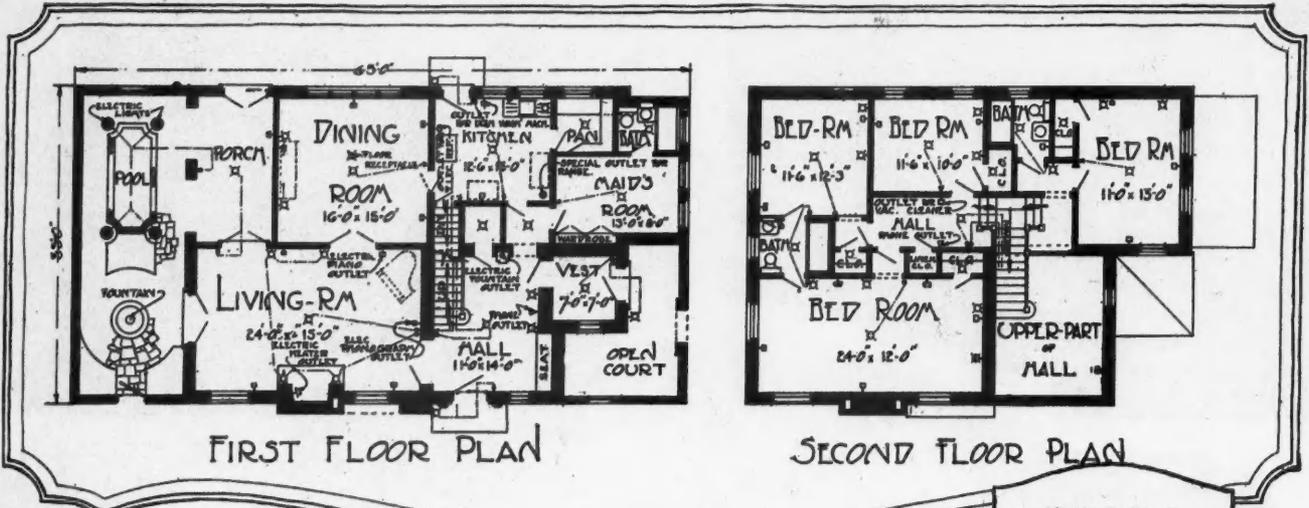
—and there never was a happier thought than the enlightened application of electricity to workaday tasks. For those of us who want to give a Christmas gift that will really help make a happier home these picture-glimpses into an electrical home will have many welcome suggestions. It is the home of A. E. Wishon of Fresno, Cal.



The electric dishwasher and range insure happiness in the kitchen

Mr. Wishon's Home Has 263 Electrical Outlets. Pictures Show How the Current from Some of Them Is Used.

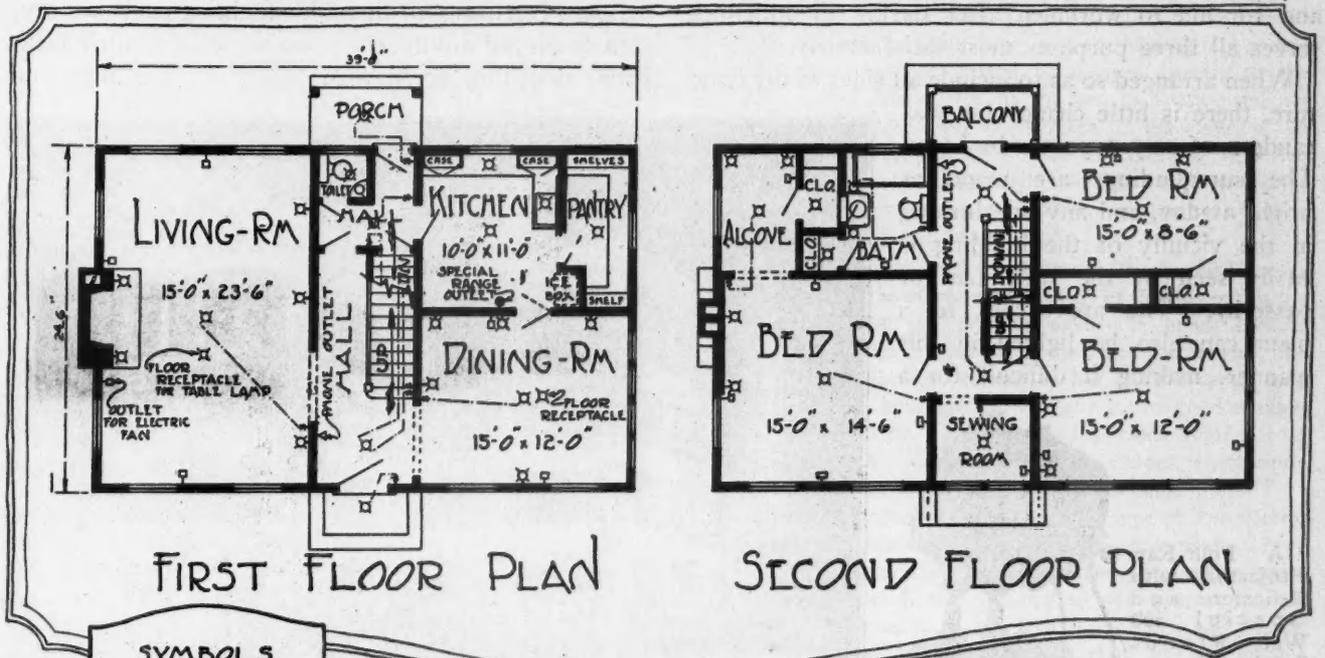
BLUE RIBBON HOMES ELECTRICAL

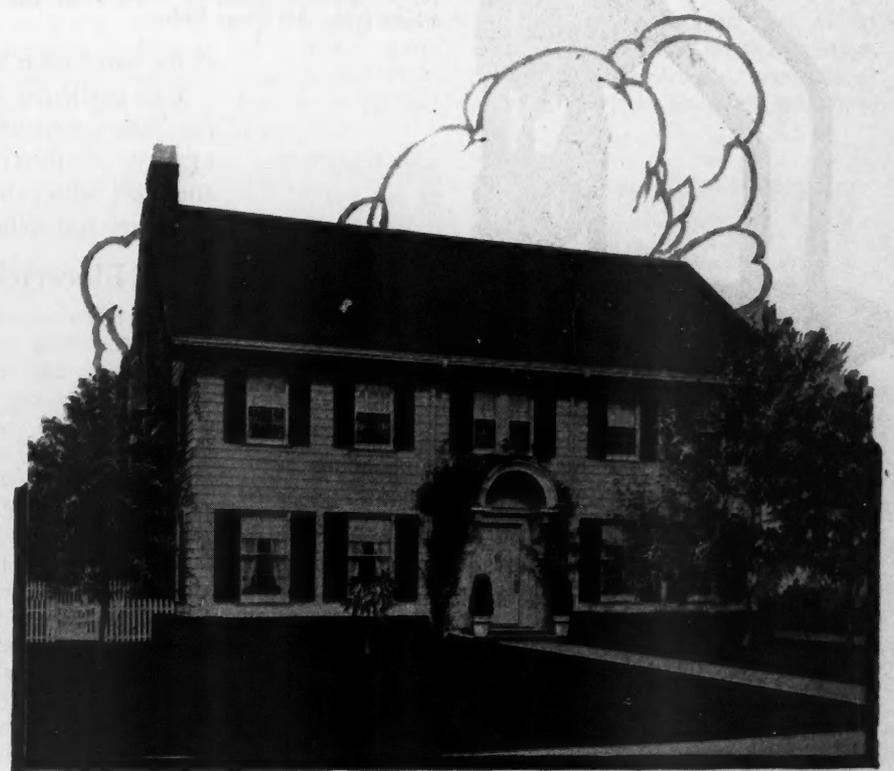
THE ARCHITECTURE OF OLD SPAIN adapted to the Requirements of the Present-Day America. The Building Plans and Wiring Layouts on These Two Pages Were Compiled Jointly by the *American Builder* and *Electrical Merchandising*, New York. They are Published

Simultaneously in the April Issues of Both Magazines for the Purpose of Stimulating in the Minds of Both General Builders and Electrical Men a Timely Interest in the Complete Electrical Equipment and Wiring Demanded in the Modern Home.

BLUE RIBBON HOMES ELECTRICAL



- SYMBOLS**
- CEILING OUTLET
 - ⊠ BRACKET OUTLET
 - ⊡ CONVENIENCE OUTLET
 - ⊞ FLOOR RECEPTACLE
 - SPECIAL OUTLET
 - S- SWITCH



NEW ENGLAND CONTRIBUTES THIS COLONIAL to Our Exhibit of Completely Equipped Electrical Homes. These Blue Ribbon Wiring Plans Will Suggest to Archi-

itects, Builders and Their Clients, as Well as to Electrical Contractors and Dealers, the Many and Increasing Uses for Electricity in the Modern Home. "Electrify All Buildings," Is the Winning Slogan in the Industry Today.

Using Floodlights for Protection and Advertising

INDUSTRIAL plants of various kinds are taking up the use of floodlights as a means to protect their property at night, for advertising purposes and for aid to workmen after dark. Floodlighting serves all three purposes most satisfactorily.

When arranged so as to include all sides of the structure, there is little chance for marauders of any type to do harm. The surroundings are made as bright as day, and any one lurking in the vicinity of the building is easily seen by the watchman or passerby. The approaches to a plant can also be lighted in this manner, making it difficult for a

mention of its product is made to stand out in bold relief.

In addition to affording protection and being an excellent advertising medium, floodlighting enables workmen employed around the place to perform their tasks better than they could with darker surroundings, and

A Four-Ray Projector, with Reflector and Special 500 Watt Floodlighting Lamps.



Floodlighting Installation, Night View, Wheatena Company, Rahway, N. J. This Is Lighted from Four Stations, the Projectors Floodlighting the Plant from All Four Sides.

person to go near the building without being seen.

There is one manufacturer whose plant is located in New Jersey, between Rahway and Newark, who uses floodlights to bring his message to the public after dark. The factory is located on the main line of the Pennsylvania Railroad, and thousands of travelers pass the spot every day. On the other side of the structure there is an automobile highway which affords an excellent opportunity to get the message home to the passing automobilist. As a result of this means of illumination, the building stands out in the darkness like a beacon and impresses one by its contrast with the surrounding territory. The company's name and

at the same time minimizes the possibility of accident.

This particular building is illuminated at nine different points around the building, and the installation consists of thirty-two 500-watt floodlighting lamps equipped with reflectors, and a typical bank is shown in an accompanying illustration.

Electricity Washes the Dishes

NOT a woman lives but dreads the return of the period each evening when, tired after the day, the dishes present themselves to add to her disgust and weariness. Let such a woman merely see the demonstration of an electric dishwashing machine and she begins to plan ways and means to acquire it. More, almost, than any other electric comfort-inducing and labor-saving device, the electric dishwasher appeals to her as the deciding factor in any plans she makes with reference to the kitchen in her present or prospective home.

Who would not favor it, when the simple pressure of the electric button above the sink makes electricity step in and lift the drudgery of the dishes off her mind and body?

A part of the roomy, deep sink, one electric dishwasher is obvious only as a wire basket. The mechanical aspect of it is below the sink, out of the way. As soon as the housewife has the dinner ready to serve, into this wire basket go the pots and pans, and the knives, forks and bowls and other utensils she used in the preparation of the meal. She adds a little washing powder, sprays in the hot water, and goes on with her serving.

By the time the last dish is on the table and the family is called, she steps to her electric dishwasher, pulls up the drain,



New Type Electric Dish Washer That Is Built In with the Sink; It Is Being Supplied as Regular Equipment in Several Chicago Apartments Now Being Built.

rinses everything with a quick flush of hot water from the sprinkler and leaves the cooking dishes and pots and pans and utensils to dry in the warm air that comes rushing from the blower with the pressure of the button. Her mind is at ease already; the hardest part of the dishwashing over, and herself cheerful and rested to radiate at her best around the family board. Later, the dinner table silver and dishes, in a suds of soap flakes, are finished also. If there are tea cloths that require rinsing, the use of a small attachment instantly converts the contrivance into a clothes washer.

No particles of food are in the bottom of the sink bowl, as a trap at the bottom catches them, removing them from the sink bowl proper. As the trap is porcelain, it can be easily cleaned, and the sink with its electric dishwashing machines always is ready as a clean, sanitary, willing and cheap guardian against any return of the needless drudgery—hand-washing of dishes.

Electric Range That Saves Space

ABSOLUTE cleanliness, securing full value from the heating unit, speedily, and without smoke or odor—these are four main essentials of meal preparation. The housewife secures them all at their best only in the electric range.

A clean range and bright, un-blackened pots and pans mean that cleanliness enters into the prepared food and helps the family to enjoy its full flavor and savor. Full value from the heating unit means that the heat should be applied directly to the under side of the pot or pan or kettle—and not waste itself over the surface of the stove, or up around the side of the utensil. Nothing is heated in an electric range kitchen but the food. No money is spent for cooking heat except for heat that is actually required and used.

Speed is another essential. The hurried breakfast in the morning; the batch of muffins put in the oven for the evening meal—the quick heating electric units give the housewife no concern. She knows she can depend on her electric range, and that the heat will be even, and insure good cooking and baking. A built-in stop clock regulator is supplied with standard electric ranges, which shuts

off the current when enough has been used to cook.

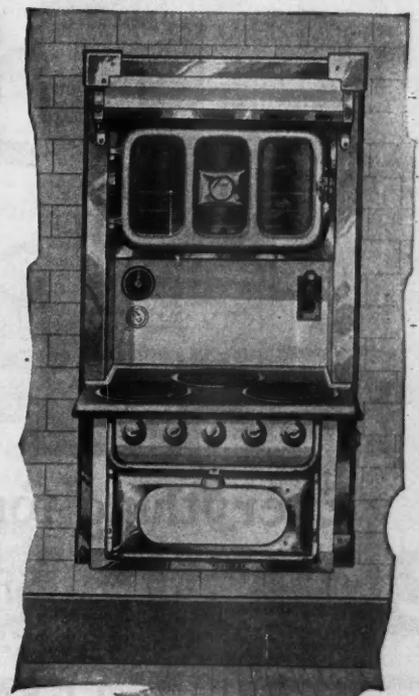
Smoke and odor associated with the usual type of non-electric range cooking are absent when an electric range is used. There is, first of all, a natural absence of smoke, the heating units being flameless. Odors that accompany the preparation of food are not permitted to escape into the kitchen and thence into the other rooms. With one electric range, the heat creates a draft upward thru a ventilating flue which leads from the range canopy upwards thru the kitchen wall. All odors are thus drawn out of the kitchen, leaving it the odorless, clean-smelling place it should be.

There are of course many other advantages, such as the elimination of extra fuel expense on account of heat wastage, and also the avoiding of danger to the children, by reason of burning, or the accidental opening of the unlighted burners of a gas range.



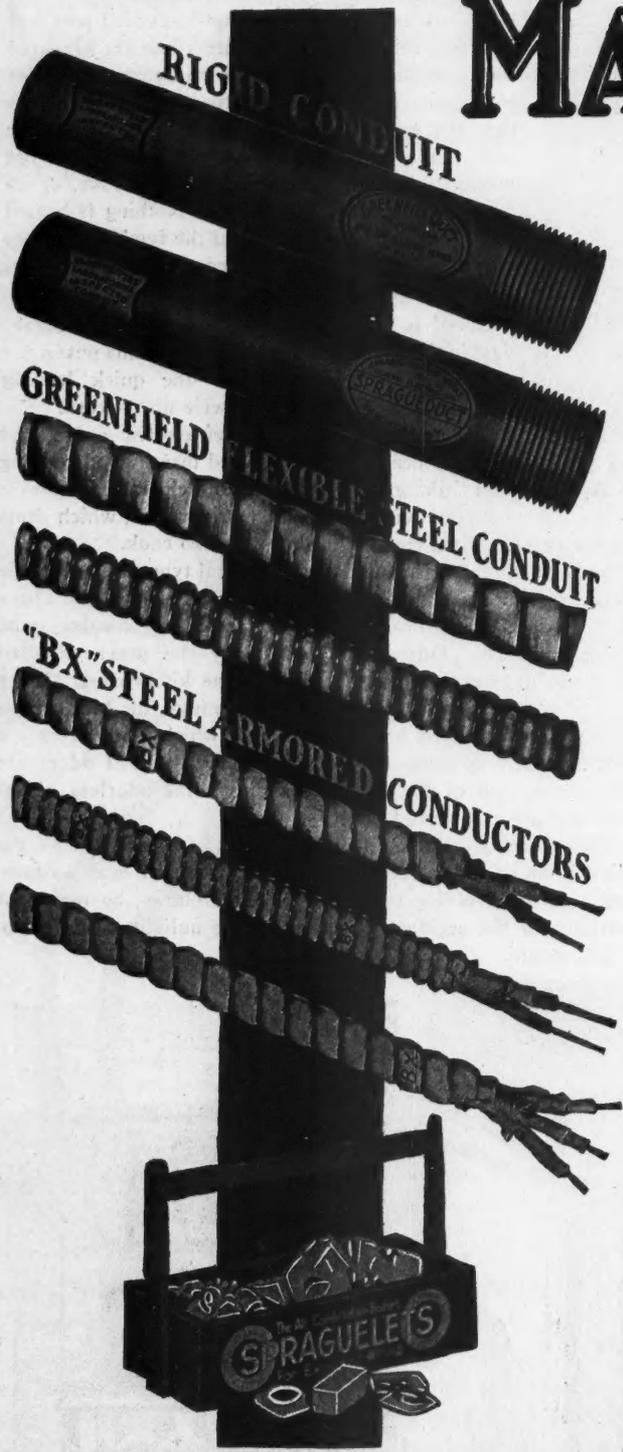
Installation of Electric Side Wall Range. It Saves Space and Ventilates Kitchen. Cooking Odors, Steam, Smoke and Greasy Fumes Are Removed—Walls Do Not Become Discolored—Adds a Distinct Note of Refinement to the Home.

In This Home the Side Wall Range Is Installed in the Outside Wall and Projects Through to Porch. Saves Space Inside. Puts Cooking Odors Outside. Ventilates the Room.



Front View of New Space Saving Electric Range.

SPRAGUE WIRING MATERIALS



Hot Galvanized RIGID CONDUIT

Black Enameled RIGID CONDUIT

|| THREADS ARE STRONG ||
|| CLEAN CUT AND TRUE ||

Double Strip
Single Strip

"BX" Twin Conductors

"BX" Single Strip

"BX" Three Wire

Everything for the complete wiring system

Branch Offices

ATLANTA
BALTIMORE
BOSTON
CHICAGO
CINCINNATI
CLEVELAND
KANSAS CITY
MILWAUKEE
PHILADELPHIA
PITTSBURGH
ST. LOUIS

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PIONEERS OF THE INDUSTRY

Branch Offices
in Principal Cities

Pacific Coast
Representatives

LOS ANGELES
PORTLAND ORE
SAN FRANCISCO
SEATTLE
SPOKANE

A GENERAL ELECTRIC PRODUCT

When they stop
and ask

"How about outlets for conveniences and floor and table lamps?"—you take them from room to room and show them that you have anticipated all their needs—both present and future.



"Homes Electrical" by the Thousands

A hundred and more model "homes electrical" in as many cities, will be visited this season by an army of home buyers, intent on having the comforts and conveniences that electricity alone affords.

For every model home publicly exhibited, hundreds of other electrical homes will be privately sold at good prices, and quickly.

The shrewd builders of the country have sensed the demand for electrical convenience and are preparing to meet it.

Any type or size of house can be made a model "home electrical" by complete convenience wiring with G-E Reliable Wiring Devices.

A slight addition to the cost—and you have a house sure to command a much better price.

G-E Reliable Wiring Devices, nationally known as the standard of excellence, are the home buyer's assurance of dependable electrical service.

Merchandise Department
General Electric Company
Bridgeport, Connecticut

G-E Wall Elexit Outlet for "plugging in" side lights or electrical appliances.
G-E Twin Convenience Outlet for simultaneous use of two devices. . . .

All dependable and experienced contractors using General Electric Reliable Wiring Devices are prepared to cooperate with you in making your houses "complete electrical homes."

National distribution of the booklet "The Home of a Hundred Comforts" has focused the attention of hundreds of thousands of home builders and buyers on complete wiring and quality wiring devices.

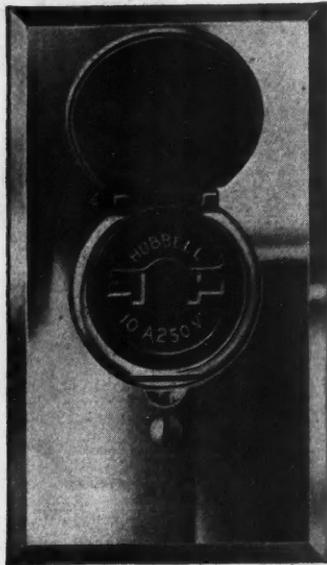
Send for your copy of this booklet today.
Address Section AB4.



Wiring Devices

A GENERAL ELECTRIC PRODUCT

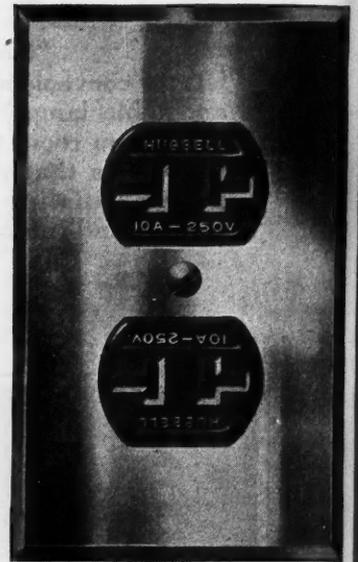
HUBBELL



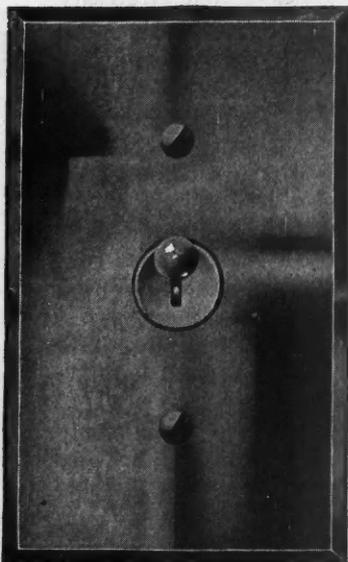
Convenience Outlet with Lift Cover Plate (Double Hinge). Body only, No. 5579; Single Hinge Plate only, No. 6801; Double Hinge Plate, No. 5580.



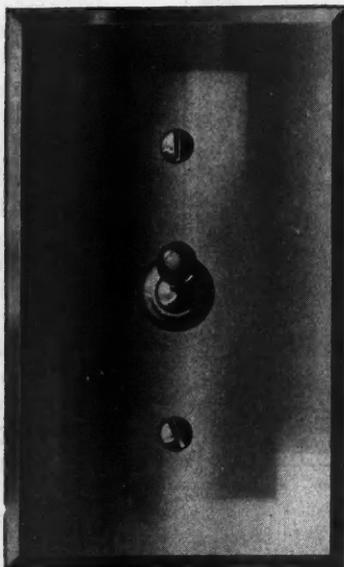
Single Convenience Outlet. Body only, No. 5547, porcelain; Body only, No. 5850, composition; Plate only, No. 5548.



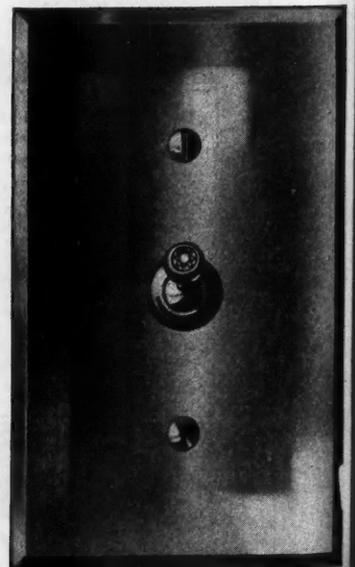
Duplex Convenience Outlet. Body only, No. 6257, porcelain; Body only, No. 5890, composition; Plate only, No. 6258.



"Service Type" Toggle Flush Switch. Body only No. 8141, Single Pole; No. 8143, Three-Way; Plate only, No. 8401.



"DeLuxe" Toggle Flush Switch. Body only, No. 8121, Single Pole; 8122, Double Pole (10 Amp.); 8132, Double Pole (20 Amp.); 8123, Three-Way; 8124, Four-Way.

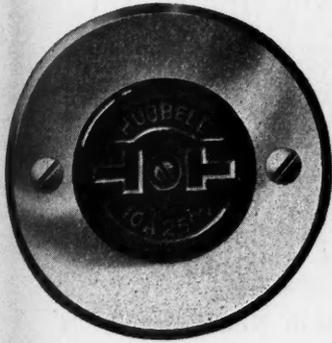


"DeLuxe" Toggle Flush Switch with Radium Luminous Tipped toggle which will shine in the dark. Body same as for plain tipped toggle. Plate No. 8291.

ELECTRICAL SPECIALTIES

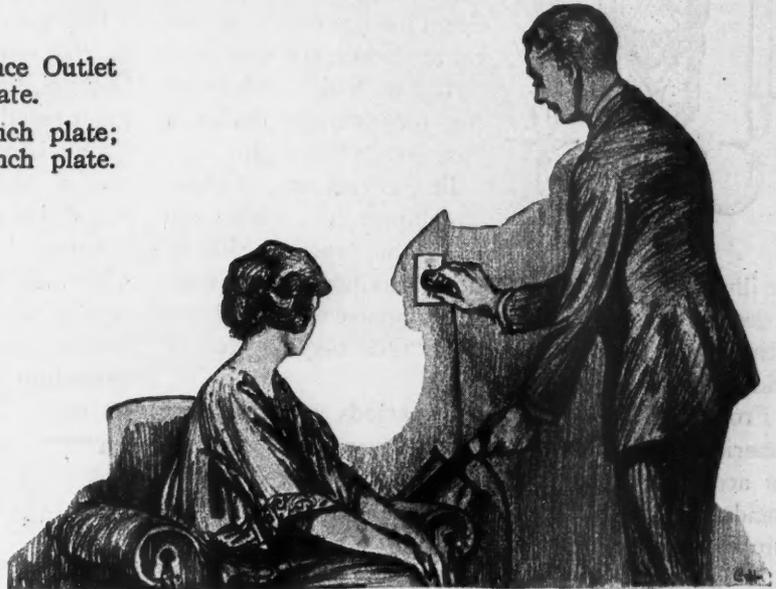
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

HUBBELL



Single Convenience Outlet
with Round Plate.

No. 6282, 2 $\frac{3}{4}$ inch plate;
No. 6283, 3 $\frac{1}{4}$ inch plate.



Hubbell Electrical Equipment

*affords best Electrical Service
and makes Homes easier to sell*

A HOME wired for lighting only is not adequately equipped for *lighting*, because no provision is made for the use of table or floor lamps.

Convenience Outlets

Hubbell Convenience Outlets provide universal Te-Slot receptacles in wall or baseboard, of sufficient electrical capacity to safely operate heating appliances. These beveled Te-Slots accommodate the parallel or tandem blades of standard attachment plug caps. Two or more convenience outlets in each room make it possible to place floor or table lamps, or to operate appliances without connecting to wall brackets or chandelier.

A house equipped with Conveni-

ence Outlets is completely wired for future needs, and becomes a home easier to sell.

Hubbell Duplex Convenience Outlets provide two identical but independent Te-Slot outlets in the space normally occupied by one. It is far more economical to have too many outlets than not enough.

Toggle Switches

Hubbell Toggle Switches have come into wide favor due to their simple operation, handsome appearance, and sturdy reliability. A short brass toggle arm grounded to the face plate, can be moved upward or downward by a flip of the fingers, or jog of the elbow.

Both DeLuxe and Service Type Toggle Switches are made in the round top *surface types*, fitting outlet boxes or conduit fittings.



HARVEY HUBBELL INC
ELECTRICAL SPECIALTIES
BRIDGEPORT CONN. U.S.A.

Circulars—

Write today for circulars imprinted with your name for distribution to home builders. Let us send you an assortment covering Hubbell Wiring Devices.

ELECTRICAL SPECIALTIES

Period Lighting Equipment

Authentic Designs in Electric Lights to Harmonize With Period Styles in Architecture and Furnishings



Elizabethan

the illuminating question is often sacrificed to exactness in design, which we rule must harmonize with our home fittings and furnishings. For, "One may as well be dead as out of style."

From each of the important periods in history, we inherit a distinct style of architecture with its accompanying fittings and furnishings. Incidentally, each offers its individuality in lamps and lighting fixtures.

In both our exterior and interior schemes of modern application of "period" styles, we follow closely the type of Colonial, English, Italian Renaissance, or whatever it may be; and in lighting fixtures we subordinate our ideas of design only to the utilities of the one great illuminant—electricity!

This is a wonderfully fascinating subject and large enough to involve a lifetime of study. Therefore, the few numbers admitted by our limited space here offer but a suggestion of the wealth of creations our modern electrical fixture houses have on display.

The modern lanterns used today in halls and corridors are very similar to the old lanterns of iron carried by watchmen a couple of centuries ago, but in the modern fixtures, glass has been substituted for horn, and tungsten lamps for the tallow candle or smoky oil wick.

The Gothic style (1100 to 1500) is full of Christian symbolism. At first crude and heavy, it yielded later to a highly ornate form of treatment. This bracket fixture illustrated is a good example of the "Perpendicular Gothic." Beginning with 1200, walls of houses were wainscoted and painted and often decorated with romantic, biblical or legendary subjects. Raftered

ceilings were common.

Elizabethan (1558-1603) reflects the Italian spirit. This was an era of panelled rooms and stuccoed ceil-

FROM the beginning of record time, turning darkness into light has been a human artifice. From the age of our primeval ancestors, we have been trying to find a substitute for the sun—to devise a "man-made" daylight.

But, as creatures of habit, worshipper of mode and style, the practical side of

ings. Oak prevailed. Painted linens and hangings, tapestries and embroideries hung on side walls.

Georgian (1714-1820). In the reign of the early Georges, there was a mania for everything French. From 1720 to 1730 there was a popular preference for elaborate gilt fixtures.

Colonial (1770-1880).

This little bracket is a good

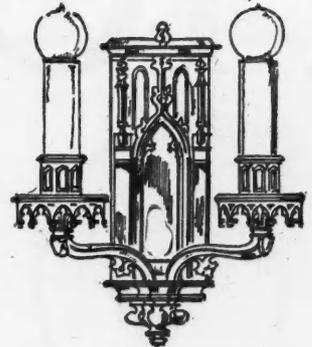
type of the cottage Colonial style of New England. It was during this period (about 1750) that glass lamps came into favor. This fixture shown is modeled after an early Colonial oil lamp. The glass shade is an adaptation of the astral lamp type of 1778. White woodwork was very popular during this period and this bracket is particularly harmonious to such finish.

Obviously, where an interior is planned with a desire to produce faithfully, a particular decorative period, the proper choice of fixtures is important in relation to an authoritative decorative scheme. The Elizabethan, Colonial and Georgian readily admit of incorporation into any decorative scheme not typically representative of these periods. On the other hand, were the Gothic fixture illustrated to be used in a typical Colonial interior, they would be an

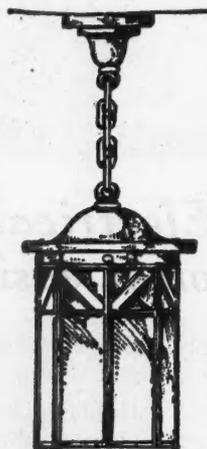
anachronistic note which would jar the artistically sensitive.

Again, the Lantern shown need not necessarily be a hall lighting fixture, as one might imagine. It would go well with an interior which reproduced the timbered ceiling characteristic of certain English and Continental periods, or with other severe forms of decorative treatment where a purposely "rough" or arts-and-crafts effect was desired to be attained.

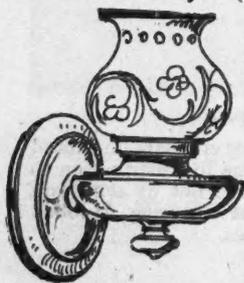
When we compare the present advance in Period Lighting Equipment with the crude lighting arrangements which were common not many years ago, it must be conceded that, in scouring the world's odd corners for authentic designs and artistic suggestions, we owe much to the designer and fabricator of our modern electric lighting fixtures.



Gothic



Modern Lantern



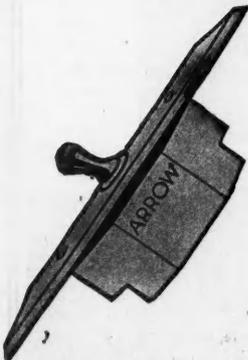
Colonial



Georgian



Your copy of this Manual is ready—use the coupon



Arrow Tumbler Switch
Catalog Number 6944



ALL Arrow Tumbler Switches can be made luminous with the Arrow Glow Tip.

THE Arrow line of 1-inch switches and receptacles has been developed for two distinct purposes; (1st) to meet the need for proper electrical equipment in 2-inch solid partitions and other installations with limited space, and (2nd) to give more wiring room in 3-inch and 4-inch partitions than has heretofore been possible.

The builder can profit by *standardizing* on Arrow fittings. He can talk Arrow quality and convenience in selling. Everything that might be wanted in the way of house wiring devices is available in the Arrow line.

People are demanding *standard* products. It means something to say: "This house is fitted throughout with *standard* Arrow electrical devices." Absolutely trustworthy mechanical principles backed by careful workmanship and inspection make all Arrow products **STANDARD**.

Here's another point. It costs only three or four dollars extra to have all the switches, either push type or tumbler, with radium luminous inserts. Think of the emphasis that can be laid on this extra convenience. It is the little extras such as this that make one house stand out above the others.

THE ARROW ELECTRIC CO.
Hartford, Conn.



THIS Duplex Flush Receptacle (Catalog No. 8212) is one of a *complete* line of convenience electric devices, switches, receptacles, etc.

This Manual gives complete authoritative information compiled by our engineers.

THE ARROW ELECTRIC CO.,
HARTFORD, CONN.

Kindly send me the new Shallow Device Hand Book.

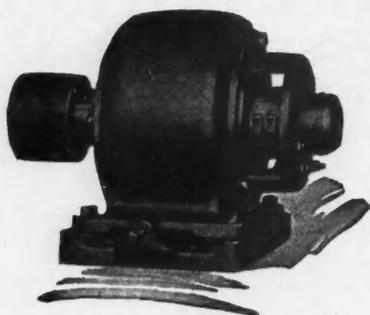
Name.....

Firm.....

Address.....

ELECTRICAL
ARROW
WIRING DEVICES

The complete line of Wiring Devices



CROCKER WHEELER Form L Direct Current MOTORS

115, 230 and 550 Volts

Motors $\frac{1}{8}$ to $7\frac{1}{2}$ H. P.—Generators
0.35 to 5 K. W.

TIME TESTED

The C-W Form L is a small motor used in hundreds of ways and known widely for its remarkable durability and trouble proof characteristics. Often subjected to rough treatment and neglect by laymen, this motor has been remarkably successful, not because of any one special feature, but because of the careful design and construction of every detail. And this applies to all C-W machinery. It is the chief reason why Crocker Wheeler equipment possesses its enviable reputation for reliability.

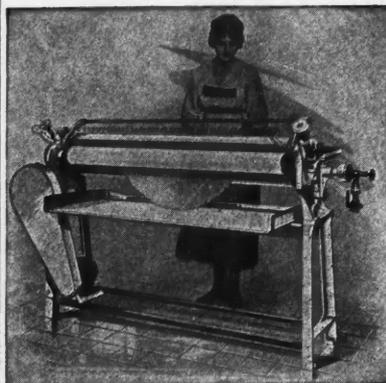
In small motor generator sets, as belted or direct connected exciters or wherever small amounts of direct current power are required C-W Form L Generators should be specified.

CROCKER WHEELER CO.
AMPERE, N. J.

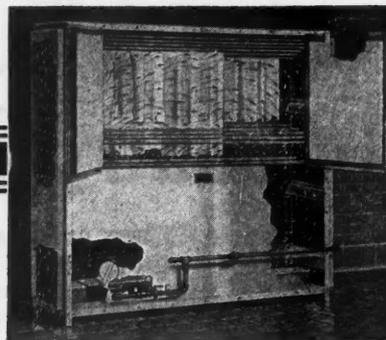
CROCKER WHEELER MOTORS
Niagara's Rival Dependable Power

CHICAGO

CLOTHES DRYERS AND LAUNDRY APPLIANCES



ADAPTED
FOR USE IN
Residences,
Apartment
Buildings,
Schools,
Clubs, Hotels,
Colleges,
Gymnasiums,
Hospitals,
Sanitariums,
and
Institutions
of all kinds.



GUARANTEED

to be absolutely as represented and fulfill all claims made. Our policy is to furnish the best, most efficient and economically operated appliances that can be produced and offer them to the public at the lowest price which such appliances can possibly be sold for by any manufacturer.



Architects, Builders and Prospective Users

Plan on CHICAGO Laundry Appliances. Our Engineering Department is at your service without obligation or expense to you. Send us your problems and we will gladly offer suggestions as to appliances that will suit your particular needs. If you will submit a rough sketch of room in which you contemplate locating appliances we will return to you a blue print showing just how appliances should be located. We have a complete line of laundry appliances that meet the most exacting requirements of Architect, Builder or Prospective Owner. When planning the laundry, investigate our Dryers, Electric Washers and Safety Wringers, ironing machines, ironing boards and other appliances. We guarantee absolute satisfaction on every product. Write us or come in and see us.

CHICAGO DRYER CO.
2210-2218 North Crawford Ave. CHICAGO, ILL.



Frost National Bank Bldg., Located at San Antonio, Tex., Architects, Soquinet & Staats. Martin Wright Electric Co., electrical contractors.

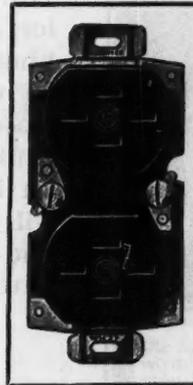
Connecticut Electric Products have no superior from any point of view. This we can safely say.

The emphasis we have put on quality and serviceability of our line gives us strong prestige among prominent builders of today.

Try Connecticut Products on your next job. We know you will be more than pleased.



The Shallow Switch is one of our many superior products. When the contractor installs it on a job, the best of service is assured.



These switches are not only attractive in design, but excel in workmanship and quality. They are built to withstand the hardest of wear.



CONNECTICUT ELECTRIC MFG. CO.

OFFICE AND FACTORY: :: BRIDGEPORT, CONN.

NEW YORK
Aolian Bldg.

Branch Offices:
CHICAGO
Manhattan Bldg.

SAN FRANCISCO
74 New Montgomery St.

"CONNECTICUT" MEANS QUALITY

The Man who *Plans* the Building is the Man who must be "Sold"

THE AMERICAN BUILDER, reaching monthly more than 60,000 men who plan and build homes, is establishing this special department for the Electrical Industry, in which the educational and sales work on adequate wiring and adequate outlets can be done.

The slogan, ELECTRIFY ALL BUILDINGS, which appears at the top of both editorial and advertising pages in this section of the magazine, is the keynote of this campaign.

Prominent men in the Electrical Industry are working in close co-operation with the editors and publishers of THE AMERICAN BUILDER to prepare electrical features along a very comprehensive plan.

Each month there will be illustrated articles demonstrating the uses of electricity in the modern homes.

Twelve complete floor plans will be illustrated, showing wiring layout and outlets for

lighting fixtures and various electrical conveniences.

Decorative possibilities of lighting will be developed, and the use which the future occupants of the home will want to make of electrical appliances will be carefully and thoroughly explained to the men who plan and build.

The importance of providing, at the time the buildings are planned, for all of these modern electrical appointments will be effectively sold to the building public through this work.

The representative manufacturers in the electrical industry are urged to co-operate.

Write us your ideas and desires.

AMERICAN BUILDER

1827 Prairie Ave., Chicago
261 Broadway, New York

Put in a real laundry



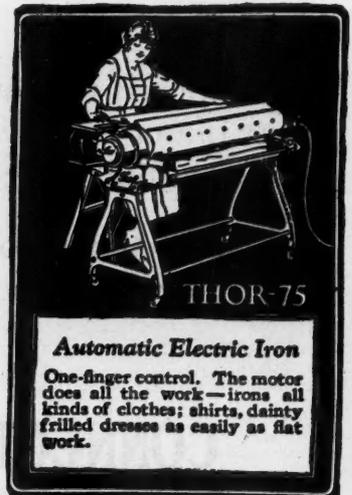
THOR-32

Family size. A beautiful all-metal washing machine with the Luminoid Revolving-Reversing Cylinder. Self-cleaning; need never be lifted out of the machine.

\$10 DOWN

Provide now for future ease and comfort. Put into the home you are planning a laundry that will be a pleasure to use and profitable. A properly planned home laundry in which Thor equipment is permanently installed is an index to absolute modernity. We will be glad to work with architects and builders in the planning of up-to-date home laundries.

HURLEY
Thor



THOR-75

Automatic Electric Iron

One-finger control. The motor does all the work—irons all kinds of clothes; shirts, dainty frilled dresses as easily as flat work.

Balance in 12 equal monthly installments

HURLEY MACHINE COMPANY

22nd Street and 54th Avenue
CHICAGO

147 West 42nd Street
NEW YORK

66 Temperance Street
TORONTO

Western Office: Rialto Bldg., San Francisco, Cal.

Electric Ranges For Modern Homes

THE most important item in the kitchen is the range. The most modern range is the electric range. It is clean. Plan your new kitchen with a Standard Electric Range.

Architects, contractors, and builders are planning modern kitchens with Standard Electric Ranges.

Cook with Electricity. "The Standard Way" is the slogan of the modern housewife because of the low cost, cleanliness and labor-saving qualities.

Efficiency, Economy, Durability and Convenience are all combined in the Standard Electric Stoves.

Our Electric Fireless Cookers, Hot Water Heaters, Hot plates, etc., are the most popular of any on the market today.

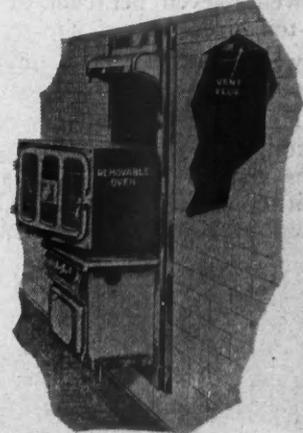
Let us tell you more about our many styles and sizes of electric heating appliances. Send for our catalog and booklet, "Modern Stoves for Modern Homes."



FIRELESS COOKER
Sold under Standard Guarantee. Made for 32 to 220 volt current



MODEL C39
Standard Water Heater. Hot Water in a hurry.



MODEL A5
Saves space. Ventilates the kitchen



MODEL 755
A big range that cooks a whole meal for less than it costs to smoke one small cigar

The Standard Electric Stove Co.

TOLEDO, OHIO
U. S. A.

THE STANDARD ELECTRIC STOVE CO.
TOLEDO, OHIO, U. S. A.

Please send me your free catalog and booklet "Modern Stoves for Modern Homes."

Name.....

Street.....

Town.....

State.....

A. S.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Motor Trucks, Mixers,

Reports Show That AMERICAN BUILDER Readers Believe in Power on the Job

IT is interesting to learn how thoroly motorized the building industry has become. Our recent investigation in which a questionnaire was mailed direct to every subscriber has brought out some very important facts about the use by contractors and dealers of motor trucks, power woodworkers, mixers and other motor equipment.

These reports, coming back to us from every State in the Union and each one signed by a responsible man in the building business, constitute as reliable a basis for judgment as one could desire.

Mechanical Equipment Owned and Operated

MOTOR TRUCKS—Sixty-five per cent of the builders, contractors and dealers reporting operate trucks; which, if typical of our entire list of builders, contractors and dealers, would mean that 31,200 motor trucks are in use by AMERICAN BUILDER readers.

Fifty-two per cent of these motor trucks are one ton and under.

Twenty-seven per cent of these motor trucks are two-ton size.

Twenty-one per cent of these motor trucks are three ton and over.

TEAMS—Sixty-two per cent of the builders, contractors and dealers reporting state that they employ teams in their work. If this is typical of our entire list it would indicate that 29,760 horse teams are employed by AMERICAN BUILDER readers. Certainly a

great opportunity and market here for motor truck advertising.

CONCRETE MIXERS—Fifty-six per cent of the builders and contractors reporting own and operate concrete mixers. If this percentage holds good for our entire list of builders and contractors, it shows that 20,160 mixers are in use by AMERICAN BUILDER readers.

SAW RIGS—Forty per cent of the builders and contractors operate saw rigs, a total of 14,400 saw rigs in use by AMERICAN BUILDER readers.

HOISTS—Twenty-one per cent of our builders and contractors own and operate power hoists, a total of 5,760 hoists in use by AMERICAN BUILDER readers.

PUMPS—Thirteen per cent of our builders and contractors have power pumps, a total of 4,680 power pumps in use by AMERICAN BUILDER readers.

Power Shop and Wookworking Establishments

POWER SHOPS—Nineteen per cent of all reports answered yes to the question "Do You Own and Operate a Power Shop?" This indicates a total of 11,400 power shops owned and operated by AMERICAN BUILDER readers. Five machines is given as the average number in each shop, which indicates the substantial total of 57,000 power woodworking machines in use in these contractors' power shops.

PLANING MILLS—Eleven per cent of all reports answered yes to the question "Do You Own and



These Original Reports, each one signed, together with the tally and work sheets on which the data is compiled, are preserved in the offices of the AMERICAN BUILDER, 1827 Prairie Ave., Chicago, Ill., and will be gladly shown to any executive, sales or advertising manager who wants to investigate them.

Power Wood Workers

Operate a Planing Mill?" This indicates a total of 6,600 planing mills owned and operated by readers of the AMERICAN BUILDER.

SAW MILLS—Five per cent of all reports answered yes to the question "Do You Operate a Saw Mill?" which indicates a total of 3,000 saw mills operated by AMERICAN BUILDER readers.

The American Builder is Big Enough to Reach and Influence the Immense Present Day Field

WITH its present circulation of 60,000 copies monthly, equal to that of all other building papers, and double that of all other architectural journals combined, the AMERICAN BUILDER blankets the big general building field and effectually reaches all projects both large and small.

It matters not where a home building project is in contemplation or under way—there you will find an enterprising builder in charge; and he is a reader of the AMERICAN BUILDER. With its wide circulation among master builders, architects, supply dealers and real estate operators, the AMERICAN BUILDER holds the attention of the professional building field by means of the practical and usable house designs, blueprints and up-to-the-minute ideas and helps it presents in every issue.

Our subscribers are practical men—busy every day of the year—planning, promoting and executing building improvements; and they value the strong, clean-cut, well illustrated building magazine which they find only within the cheerful 4-color covers of the AMERICAN BUILDER.

Every Sort of Structure Planned and Built

AMERICAN BUILDER readers handle every sort of building—Homes, Apartments, Schools, Churches and Public Buildings, Store Buildings, Factories, Farm Buildings.

AMERICAN BUILDER readers are the trusted, experienced builders, each in his own community; and whatever building is wanted there, it is an AMERICAN BUILDER reader who handles it.

Almost a Million Buildings Are Planned and Built Each Year by American Builder Readers

If you could get a reliable list of 60,000 prospective home builders—men who are certain to build this year—you would consider you had first lien on a gold mine or an oil field, wouldn't you? The AMERICAN BUILDER list of subscribers, according to the investigation we have made, is at least sixteen times as good. If 1923 is as busy as 1922 was, every one of our

readers will, on an average, plan and build and sell materials for sixteen new buildings this year, a total of nearly a million new buildings.

There is no other publication in the entire country that has such a large circulation exclusively among men who make their living or derive their income from the building industry. There is no waste circulation for advertisers of building products or equipment—it is 100 per cent right.

OUR 18 years of successful merchandising experience in the building field is freely at the call of executives, sales and advertising managers.



These are the types of buildings that AMERICAN BUILDER readers plan, specify for, buy for, and then build.

Without obligation we will gladly meet with you any time and any place to lay additional data before you, to learn from you more about your own propositions, and to discuss merchandising plans and problems.

Write, phone, or wire

AMERICAN BUILDER

Publication Offices

1827 Prairie Ave., Chicago

Telephone Calumet 4770

New York Office, 261 Broadway — Telephone Barclay 5265

*Write for
Our Distributing
Plan*

KILMOTH
*Aromatic Red Cedar
for Closets*

A model home feature endorsed by leading architects and builders. Makes clothes closets into big, roomy cedar chests—ideal for all homes, apartments and hotels.

Cost compares favorably with lath and plaster. For closets already built, Kilmoth is fabricated in panels for quick installation over lath and plaster.

It's the aromatic qualities of Kilmoth that gives lifetime protection against moths.

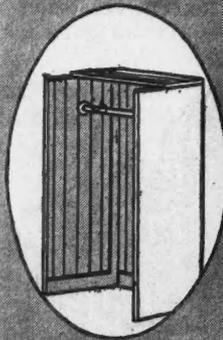
Distributing Representatives Wanted

Exclusive distributing rights open to lumber supply dealers, or the like, equipped to handle quantity shipments. Representatives also wanted to sell straight lumber and panels. Co-operative sales helps supplied. Write for our plans.

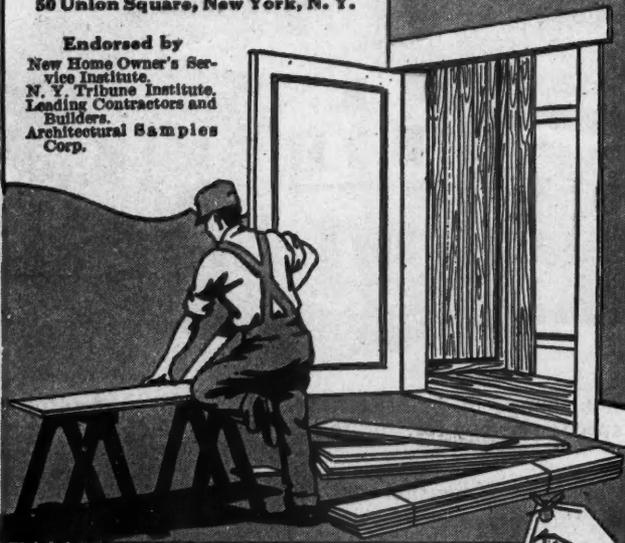
Kilmoth Products Corp.

50 Union Square, New York, N. Y.

Endorsed by
New Home Owner's Service Institute,
N. Y. Tribune Institute,
Leading Contractors and Builders,
Architectural Samples Corp.



*Kilmoth Panels
as installed over
lath and plaster
in
old construction*



KILMOTH PRODUCTS CORP.,
50 Union Square, New York

Please send complete information about Kilmoth. This request places me under no obligation.

Name

Address

Advertising Concrete Building Products

(Continued from page 128.)

local papers, the more space will be given over to building in the local news columns. Advertise intelligently and the local editor, along with the public, will believe in your products and mention them when he has a chance. Enough intelligent building material advertising usually leads to a weekly—or even daily—building page.

Notice particularly that in all of these advertisements attention is focused on what the advertiser has

**Strength
clothed with
Beauty**



5 Large Rooms

Wonderful design for narrow lot. Dutch Colonial style. Sun porch, living and dining room. Two bedrooms, cross-ventilated. Good kitchen. Ask to see plans and estimates.

TWO building materials—each of which has long been in use—are now combined to make a better home.

These materials are portland cement stucco and concrete block.

**CONCRETE BLOCK
PERMANENT
BEAUTY
STUCCOED**

To this new union of old materials, concrete brings strength; stucco brings charm and refinement, humanizing this strength with soft lines, warm tones and pleasing finish.

In addition, these houses are fire-safe and maintenance-free at near the cost of frame.

We have a number of plans for concrete houses, all designed by good architects.

Among the selection is a home you will like at a price you can afford to pay.

B-J CONCRETE PRODUCTS CO.
117 1/2 B-J, 17 1/2 O. R.—Phone 136—Red Oak, Iowa

Fig. 5. Newspaper Advertising Offers a Profitable Field for the Goods of the Building Material Man. This furnishes an example of the attractive use of space in selling concrete block. Note that it appeals from the viewpoint of the purchaser.

to sell rather than on the competitor's products. Never waste space "knocking" a competitor or his products.

The advertisements shown above have all actually attracted large volumes of sales for the concrete products manufacturers using them. Some of the little circulars reproduced are credited with having actually sold several houses, while all of them have attracted many inquiries and a great deal of comment. Each advertisement or circular tells its story in simple, direct, appealing language, and all of them speak from the viewpoint of the customer. These are the cardinal principles of successful advertising.



The Shingle that *never* curls

Carey

ASFALTSLATE SHINGLES

CAREY ASFALTSLATE SHINGLES cost very little more than the cheapest and poorest substitutes.

Their use greatly increases the value and salability of the houses you are building.

You are able to show prospective buyers that—

Carey Asfaltslate Shingles never require painting and effect big savings in upkeep.

That Carey Asfaltslate Shingles retain their beauty, their color, their neat appearance and their tight waterproofing security year after year because they never curl.

Whenever you see or hear the expression "The Shingle that never curls," Carey Asfaltslate Shingles are meant. Write for samples and name of nearest dealer.

THE PHILIP CAREY COMPANY

510-530 Wayne Avenue

Lockland, Cincinnati, Ohio

1873

FIFTY YEARS OF PROGRESS

1923

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Good customers deserve good a

—and *Farm Mechanics* magazine will provide you and your farmer customers with the best, most complete and most reliable knowledge there is to be had on farm buildings and farm building improvements. There's room for **USE IT!**

Farm
Building
Number
Out
May 1

Four
Color
Covers

Magazine
Same
Size
As The
American
Builder

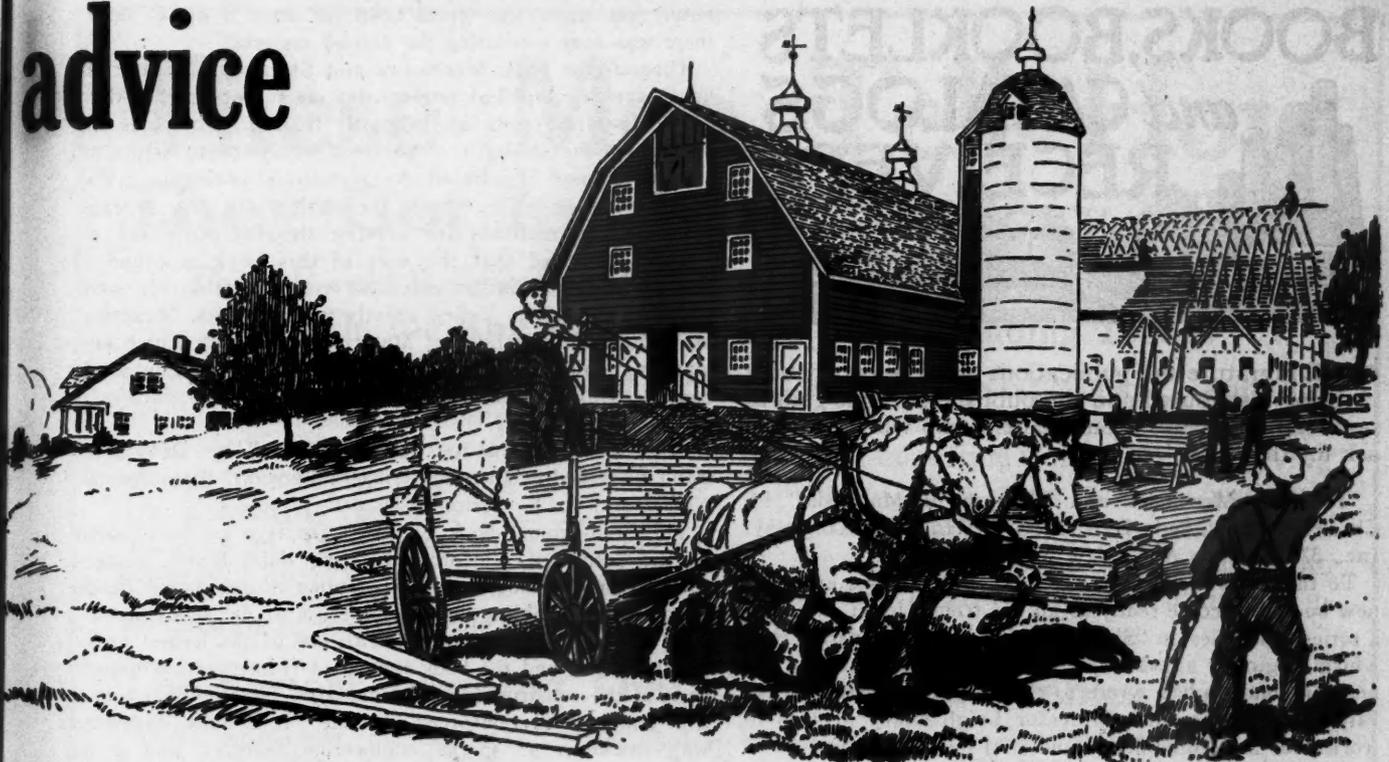


THOUSANDS of lumber dealers, contractors and builders depend on *Farm Mechanics* to help them *sell* their farmer customers. They know that *Farm Mechanics* is the only agricultural publication *promoting* and *specializing* in better farm buildings. They endorse *Farm Mechanics* for its persistent effort in stimulating interest in practical, modern farm structures. They study and use each month's issue.

You, too, can profit thru the use of *Farm Mechanics*. It will cost you but a few cents a month and give you faithful, dependable service. Take advantage of the special offer shown on the opposite page. Do it now!

Above illustration shows striking front cover design of the Farm Building Number of *Farm Mechanics*. Actual size, 8½ x 11½ inches, four or more colors.

od advice



Get Farm Mechanics On the Job!

EVERY reader of the American Builder, city or country, will find Farm Mechanics of practical, definite aid in his business. We offer you a subscription to Farm Mechanics at the special, reduced rate of \$1.00 for two years, or 24 consecutive issues (regular price \$2.00). This figures down to less than 5c a month. *You certainly can afford it!*

Your subscription will start with our **Big Farm Building Number**, out May 1. This feature edition alone will be worth the subscription price. It will give you a great fund of ideas and

information on dairy barns, hog houses, poultry houses, implement sheds, corn cribs, residences and other subjects of allied character. You'll want to keep the **Farm Building Number** before you for constant reference.

Use the special coupon below so that you may be sure to receive the May issue. Many of your influential customers also would like a copy of this feature number. If you are interested in placing Farm Mechanics in their hands, mark the square in the coupon and we shall send full information at once.

Subscription Order for American Builder Readers

TEAR OFF HERE

FARM MECHANICS, Wm. A. Radford, President
1827 Prairie Avenue, CHICAGO, ILL.

TEAR OFF HERE

Gentlemen: Please send me Farm Mechanics magazine each month for two years, beginning the subscription with your May Farm Building Number. Enclosed is check for \$1.00 in payment.

I am interested
in subscriptions
for my customers

Name

Address

City State

A. B.

BOOKS, BOOKLETS and CATALOGS RECEIVED



THE literature and publications listed below are now being distributed and the publishers will be glad to send copies to any of our readers who will write and ask for them.

"Practical Mechanics and Strength of Materials," by Charles Wilbur Leigh, B. S., McGraw Hill Book Company, Inc., 370 Seventh Ave., New York, N. Y., \$2.25.

To the many readers of AMERICAN BUILDER this excellent new book will come really as an old friend, for it embodies a series of articles on "Simple Design in Safe Construction" which originally appeared in AMERICAN BUILDER pages. So many of our readers wrote to the author commending the value of the series that Professor Leigh finally decided to work over and combine the material in book form.

This volume, as the title suggests, presents those principles of Mechanics and Strength of Materials that are believed to be essential for the practical man. The author is Associate Professor of Mechanics at Armour Institute of Technology, and while giving courses to groups of men from offices, foundries, shops and construction companies

found that there was great need for such a book, since there was none containing the desired material.

Thruout the book Mechanics and Strength of Materials have been developed as one continuous subject, rather than as two separate ones, as ordinarily treated. Formulas for estimating the strength of parts of machines or structure are given, and illustrated by numerous problems. The constants used, taken from the tables, are the average values. The methods for solving the problems are so clearly presented that the user of this book will find it easy to apply in similar cases the constants that his local condition require. Taken strictly on its merits, "Practical Mechanics and Strength of Materials" is a book which any man engaged in any phase of building construction work can not afford to be without. Make a point of getting it for your bookshelf.

"Concrete Construction for Architects," by DeWitt C. Pond, published by Charles Scribner's Sons, 597 Fifth Avenue, New York, N. Y. Price, \$4.00 net.

This well-printed book of 203 pages is a concise treatise on the design of reinforced concrete slabs, beams, girders, columns and footing, and a description of the actual design of a concrete building involving the use of flat slab construction. The author is identified with one of the largest architectural firms, and the book is written from practical experience in the construction of many large factories and industrial buildings of reinforced concrete. It is fully illustrated with drawings of special engineering features, and is an authoritative and uptodate work for the architect and builder.

"The Construction of the Small House," by H. Vandervoort Walsh, published by Charles Scribner's Sons, 597 Fifth Avenue, New York, N. Y. Price, \$5.00 net.

This is a book of practical instruction for any one who intends to build or alter an old house. It deals with methods

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J. D. Simpson, Spartansburg, S. C., tells practically the same story. He writes: "I have been foreman and general plan reader during the construction of a \$175,000.00 memorial building and a \$250,000.00 school building. With the knowledge I got from your course I handled the job with ease."

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It is surprising how rapidly the pay check grows when a man once gets the "know how" of directing work instead of merely doing it. Theo. E. Anderson, Duluth, Minn., furnishes a striking example of this. He writes: "I have drawn up plans for five residences totaling about \$60,000.00. I give all credit for my success to the training received from the Chicago Technical College. My salary has been increased 75 per cent in six months."

Goes in Business for Himself

Albert S. Ross, Ada, Okla., writes: "My promotions came rapidly after I took your course. Salary was increased to \$225 per month. I am now in business for myself and my prospect file shows a total of \$220,000.00 worth of work."

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of construction, pointing out the right and wrong, and with such essentials as heating, lighting, plumbing, painting, roofing, trim, doors and windows, etc. It is a book for architects and builders, and likewise for the layman who needs to know how to avoid mistakes and costly rebuilding. The author is Instructor of Construction in the School of Architecture, Columbia University.

The "Loxo" Compound Level is a catalog issued by its manufacturers, B. L. Makepeace, Inc., 387 Washington Street, Boston, Mass. It describes and illustrates the "Loxo," a simple, well-made compound level suited for the purposes of the architect and builder. New England readers will be interested also in the section of the catalog dealing with the company's repair service for Transits, Levels, Alidades, Compasses and similar instruments of precision.

"Up-to-Date Electrical Specialties" is the title of the serviceable, compact Catalog No. 6 issued by the Connecticut Electric Manufacturing Company, Bridgeport, Conn. Its pages list one of the most complete lines of wiring devices made by any one organization, and the method of arrangement, listing, etc., greatly simplifies the problem of buying for stock or immediate delivery.

"Willis Products, Catalog No. 8," is issued by the Willis Manufacturing Company, Galesburg, Ill., to describe and illustrate its architectural sheet metal goods. In line with the company's policy of making products not merely to sell, but to last, it has won an excellent reputation for such well-recognized standard products as Willis skylights, ribbed glass, skylight and window guards, marquees, ventilators, gutters, etc. It is the intention of the company to keep users of this catalog supplied with current discount sheets, adding greatly to this well-arranged catalog's usefulness.

"Weatherbest" Stained Red Cedar Shingles are well-illus-

trated and described in some attractive colored folders issued by the manufacturers, the Transfer Stained Shingle Co., Inc., North Tonawanda, N. Y. The different ways in which shingles may be laid to secure plain, variegated and thatched effects are described and illustrated, and emphasis laid upon the low cost of Weatherbest stained shingles per year of service. It is good news to many who favor shingles for siding, that Weatherbest stained shingles may be had in Colonial white.

Topping "Easyfold" Folding Partition Hardware, manufactured by the Topping Manufacturing Company, Ashland, Ohio, is described, illustrated, and installation details given, in a folder issued by the company. The hardware in question is a simple, well-nigh indestructible equipment of tested strength and sound construction which insures the easiest operation of opening and closing folding partitions. The folder describes some of the most successful installations.

"Successful Methods of Collecting Old Accounts" is a reprint of an article formerly appearing in "American Lumberman," and now issued as a pamphlet by "American Lumberman," 431 S. Dearborn Street, Chicago. It is a symposium of methods tried and found successful in the collecting of difficult accounts, and deserves perusal both for the information it contains as well as the lesson in profitable tact many of these methods hold for the man with a hard bill to collect.

"Asbestos" is one of the regular visitors to the Editor's desk—a newsy, pocket-size little monthly issued by Secretarial Service, 246 N. Seventeenth Street, Philadelphia, Pa., and devoted to the interests of the asbestos and magnesia industries. Judging from the wide use of asbestos in modern structural material we should judge that our architect, dealer and builder readers would find "Asbestos" interesting and instructive. The subscription price for the United States, Canada or Mexico is \$1.00 per year.

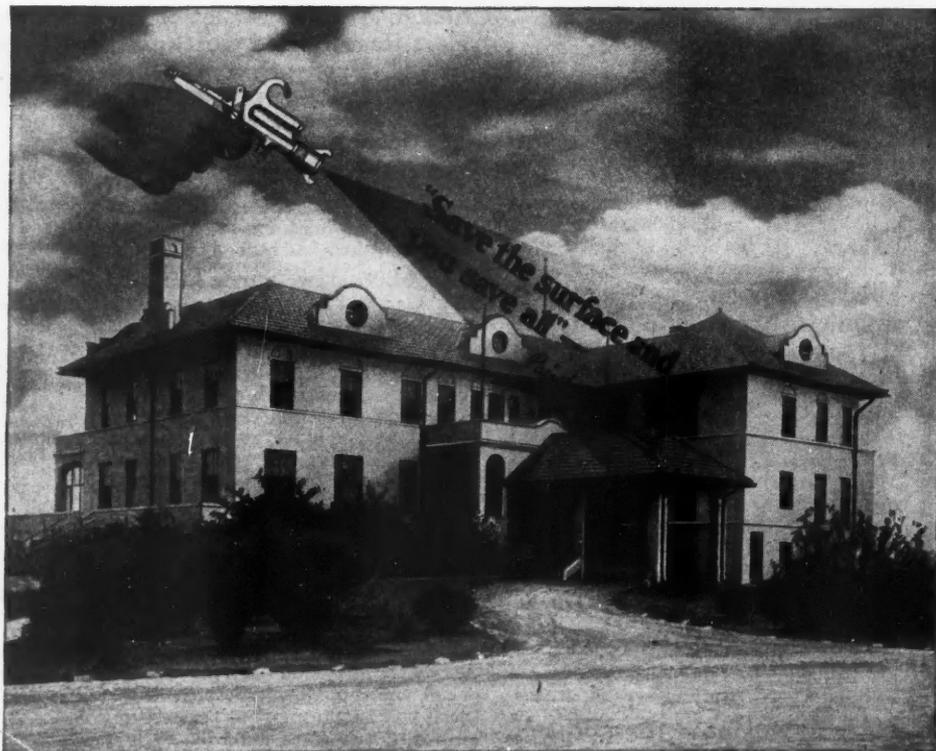
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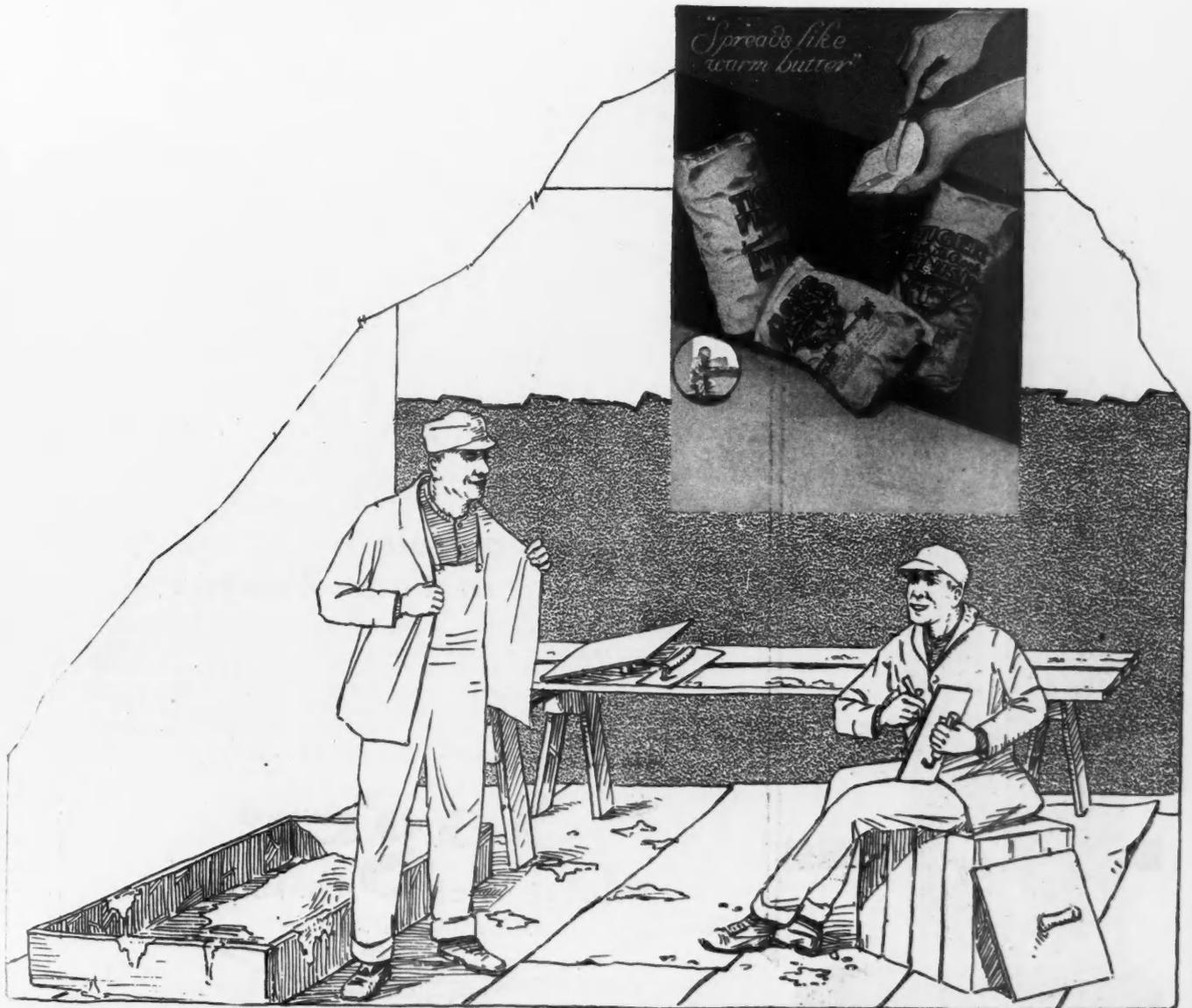
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"Building for Permanence and Beauty" is an attractive book issued by the General Fireproofing Company, Youngstown, Ohio, encouraging the wider use of Herringbone metal lath as a base for stucco. The company has gone to considerable pains to make the book likewise a genuinely helpful manual for the intending home builder, and illustrations of exteriors and interiors and floor plans contain many structural suggestions. The home owner who wishes to make over a dwelling is likewise not neglected, and the advantage of Herringbone metal lath and stucco as an aid thereto is emphasized.

"Handbook of Steel Erection," by M. C. Bland, McGraw-Hill Book Company, Inc., 370 Seventh Avenue, New York, N. Y., \$2.50. This, the publishers claim, is the first practical handbook on steel erection methods and equipment. The book covers the erection of falsework in navigable waters, of bridges, of viaducts, of buildings, of water tanks and standpipes, and of transmission towers. It also describes essential erection equipment such as cranes, derricks, travelers, gallows, frames, jigger sticks, jacks, etc. It gives, further, step-by-step examples of methods on typical steel erection jobs. In the latter portion of the book are 43 pages of extremely helpful tables. The format of the book is attractive—flexible fabrikoid black cover, gold printing on back, and handy size, 4¼ by 6¾ by 9/16 inches thick.

"The Cement Industry in 1923" is a pamphlet reprinted from the January 8th issue of "The Annalist" and issued by the Atlas Portland Cement Company, New York, N. Y. It gives wider circulation to a very optimistic article by John R. Morron, president of the Atlas Portland Cement Company, in which the favorable building outlook for 1923 is reviewed. Naturally portland cement is considered in relation to the part it is to play in increased and varied building during the current year. The point is made that, considering the high quality of portland cement and the

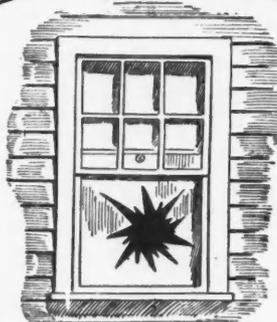
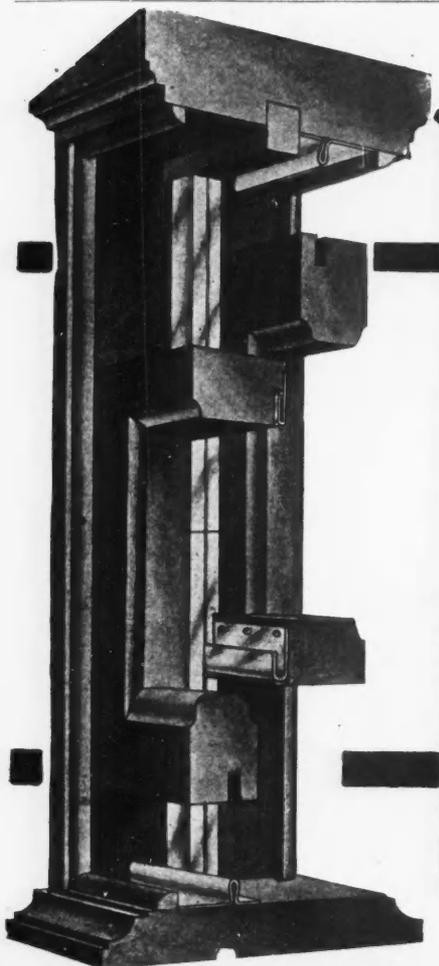
care required in its manufacture, this building material is yet the cheapest of manufactured products.

"The Catalog of Architectural and Art Industrial Books," The Architectural Book Publishing Co., 31 E. Twelfth Street, New York, N. Y. This lists the company's own publications and imported standard and scarce books on architecture. It may surprise many who long to possess a good library of illustrated books on architecture to note from this catalog the reasonable price at which such may be had. The catalog mentioned may be obtained from the publisher's New York office or from Albert E. Beaubien, Chicago representative, 2253 Argyle Street, Chicago, Ill.

"Atlanta City Planning Commission's Annual Report, 1922," issued by the Atlanta City Planning Commission, City Hall, Atlanta, Ga. Municipalities and interested citizens will do well to obtain a copy of this book, which outlines results in Atlanta since the city planning movement received its first impetus there in 1915. Zoning, control of land subdivisions, a major street plan, parks and recreation and transportation services and routes are treated comprehensively. An appendix gives charter amendments, ordinances, rules and regulations which other communities might find of service.

"Ceramic Mosaic" is an attractive illustrated publication issued by the Associated Tile Manufacturers, Beaver Falls, Pa. Tile patterns are shown in color, and the contents is a concentration of eleven different factory catalogs, classified therein so that by number alone any producer is enabled to furnish the required pattern. The book is highly creditable to the Associated Tile Manufacturers, and should keep the ceramic mosaic industry busy. "Ceramic Mosaic" is not for general distribution, but for the interested architect, builder and dealer.

"Alamo Engines, Catalog No. 52," is at hand from the Alamo Engine Company, Hillsdale, Mich. Alamo station-



There's a Hole in Your Window

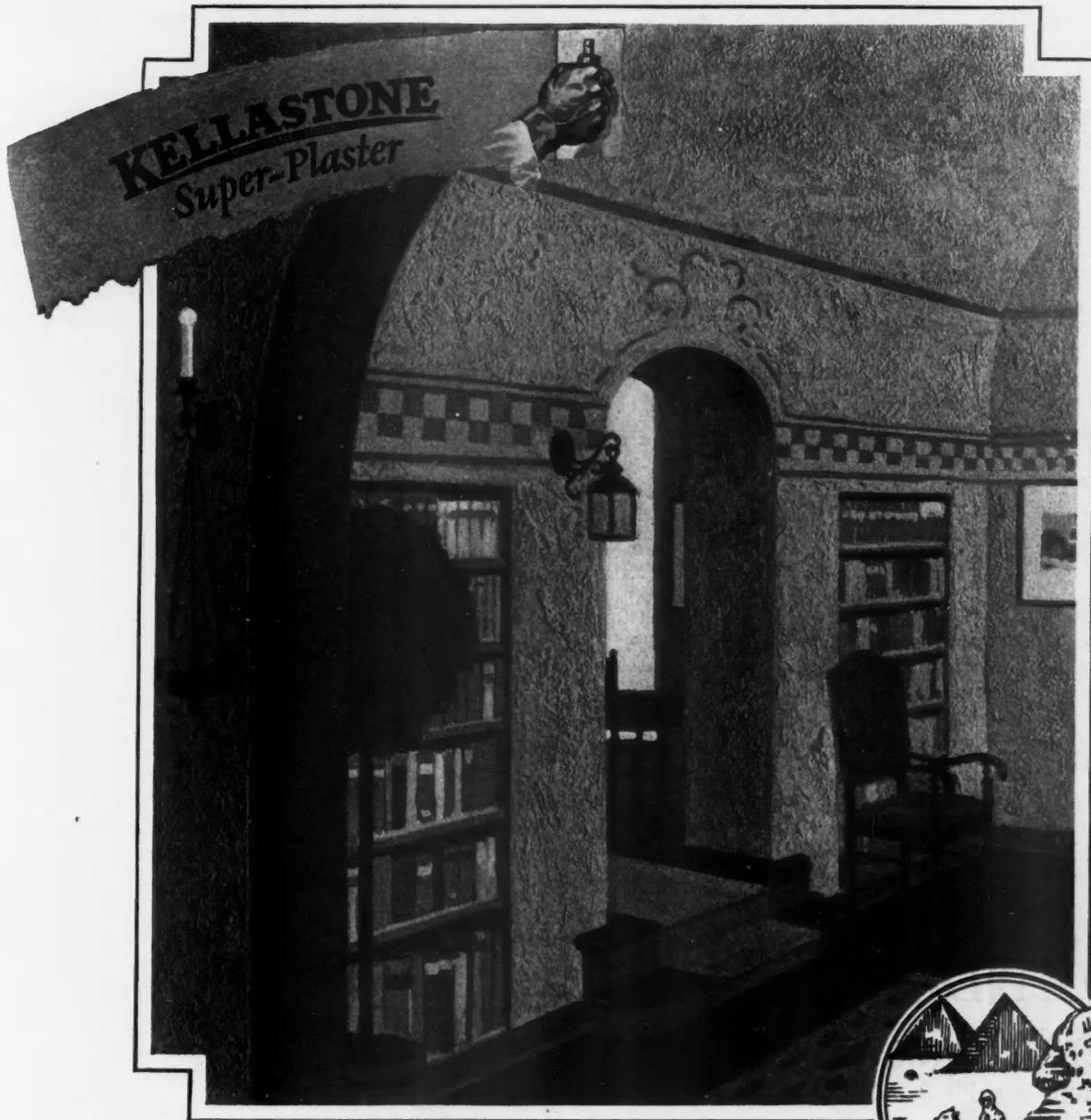
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ary and portable engines are considered standard construction for internal combustion engines generally. The catalog emphasizes that the policy of the company has been such as to bring out the pride of accomplishment and loyalty inherent in satisfied employes, which may partly explain the enviable position in which company, employes and product find themselves today.

"Hoffman Casements" illustrates and describes the Hoffman casement window, manufactured by the Andrew Hoffman Manufacturing Company, 28 E. Jackson Boulevard, Chicago. It is a portfolio of details, of a size with binder to meet A. I. A. recommendations. Thruout it is gotten out in a manner calculated to make most easy the specifying and detailing of Hoffman casements. A facsimile tracing gives full size details of the millwork required—sash and frames naturally being obtained for each installation from local planing mills, since the hardware only is manufactured by the company.

"Good Practice in Construction," by Phillip G. Knobloch, published by Pencil Points, Inc., 19 E. Twenty-fourth Street, New York, N. Y. \$4.00. Mr. Knobloch began by selecting detail sheets from the files of eight or ten architects' offices, from buildings that had actually been built. He availed himself of critical but friendly helpers who know well the characteristics and methods of employment of particular building materials. A final re-drawing, re-lettering and re-checking, and the preparation of the plates began. The book is creditable to both the author and the publishers and worthy of a place on every architect's, builder's and draftsman's bookshelf.

"Keeping Down the Cost of Your Woodwork," issued by the Curtis Service Bureau, Cliton, Ia., gives pertinent suggestions to homebuilders in connection with securing the best possible results in interior finishing with reason-

able expense. The book is full of illustrations, many in color, showing Curtis Woodwork grouped and used as part of well-designed interiors.

"Stewart Concrete Mixer Book, No. 23," from the Stewart Mfg. Co., 124 Rath Street, Waterloo, Ia. A careful reading discloses several new features and improvements of importance, making these sturdy, light, compact and simple mixers appeal more than ever for all classes of general concrete construction. Stewart "Plant" Mixers are also described for service in concrete products plants, factories and other industrial projects where the mixer becomes a permanent piece of inside plant equipment.

"Better Built Homes, Vol. XV.," received from the Curtis Service Bureau, Clinton, Ia., shows four four-room houses and thirty-five five-room houses. These are from among the small houses designed for the Curtis plan service by Trowbridge & Ackerman, Architects, of New York City, a firm with national recognition in the small-dwelling field. The homes are shown with perspective illustrations and floor plans and represent four types—English, Southern, Western and Colonial, two of the latter being the popular Dutch Colonial. This plan book is \$1.00 a copy, but is sent free if requested thru any local Curtis dealer.

"Some Forgotten Farmhouses on Manhattan Island," is the curiosity-piquing title of Number 1, Volume IX, in the famed White Pine Series of Architectural Monographs, issued by the White Pine Bureau, St. Paul, Minn. The illustrations are in the highest degree provocative of admiration for the designing and constructive ability of the architects who gave character to American farmhouse building in the formative days of the country. The introductory text is by Lemuel Hoadley Fowler, an architect who early helped direct attention toward the wealth we possessed in Colonial building design. The illustrations and text complement and are worthy of each other.

The VENDOR SLATE CO.

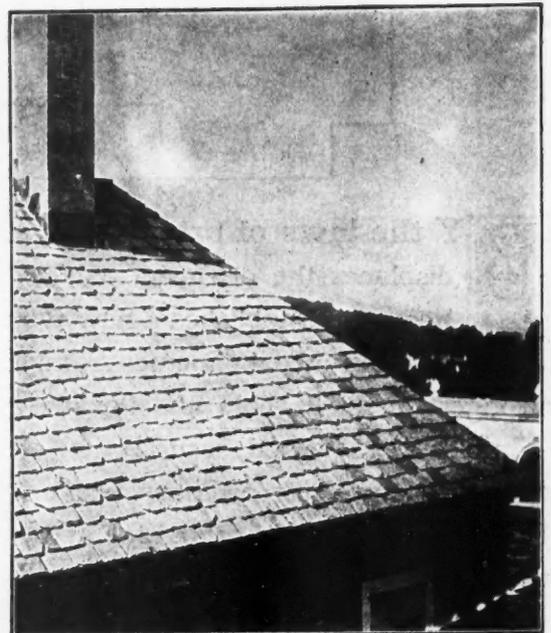
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"Stucco Houses Reinforced with Triangle Mesh Fabric" is the name of an illustrated booklet issued by the American Steel & Wire Company, from each of its many offices scattered over the United States. It shows Triangle mesh fabric in every shape to the time it is lost in the wall of a stucco house, an integral part of the concrete wall, and has many construction hints. Some excellent house illustrations and floor plans are shown, and the matter proves that the American Steel & Wire Company knows house plan requirements in a practical, liveable way.

"What's Home Without a Homer?" breezily inquires the the handsome colored cover of the catalog issued by the Homer Furnace Company, Coldwater, Mich., makers of the Homer original patented pipeless furnace. This is a complete hot-air heating system in which piping is omitted, and a constant current of properly warmed and healthfully moistened air kept circulating thruout the home. The point is made that the Homer can serve as an auxiliary to a large steam heating plant during spring or fall when the larger heating plant is not needed.

"Graver Zeolite Water Softener," Bulletin 509, is an interesting new publication issued by the Graver Corporation, East Chicago, Ind. It describes the chemistry of Zeolite water softening in as simple and understandable a way as we have seen a chemical formula explained in many a day, and illustrates and tells of the Graver Zeolite Softener. The bulletin is sized and punched for easy filing, with especial reference to A. I. A. Standard File requirements, in which file it would classify under 29 d 32.

"Carney" is the title of a book issued by The Carney Company, Mankato, Minn., and sets forth the unique merits of "Carney" cement. Architects, builders and contractors generally are familiar with the superior quality of mortar possible with the use of "Carney," and this book illustrates some of the more important structures recently erected

and in which "Carney" has been used. The points are made that there is nothing in "Carney" but the natural rock; that it is sold only for mortar work; and final lower cost. Thruout, the familiar slogan—"1 part Carney, 4 parts sand"—is reiterated with practical application to the build-ings shown.

"Lumber and Its Utilization" is Chapter I of Volume V of the Fire Prevention Series issued by the National Lum-ber Manufacturers' Association, Washington, D. C. It is the first of others which are to follow seriatim, with the hope that interesting home builders will avail themselves of the suggestions therein and secure more fire resistive and efficient construction. It classifies under A. I. A. File No. 29e.

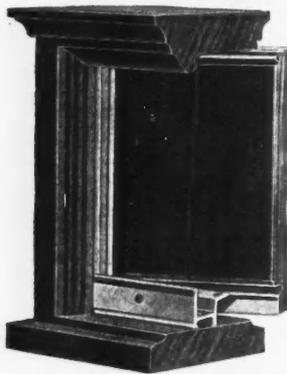
"The Chicago Automatic Conveyor" is a folder issued by the Chicago Automatic Conveyor Co., Old Colony Building, Chicago, to illustrate and describe practical examples of their Automatic Conveyor's efficiency in connection with con-veying sand, gravel, clinkers, lime, sacked cement. It should interest builders and contractors.

"Acme Levels" is a catalog at hand from the Acme Level & Manufacturing Company, Archbold, O., describing its com-plete line of steel levels, steel squares and wood plumbs and levels. The company recommends its products as meeting all demands of the carpenter or builder for a practical service-able tool which will not warp or lose effectiveness.

"Index to Volumes XIII-XX of the Proceedings, American Society for Testing Materials" is at hand from the Society, 1315 Spruce Street, Philadelphia, Pa. The price is \$2.50 in cloth binding, or \$3.50 in half-leather binding. The index covers the contents of the volumes mentioned, and contains 189 pages, including preface and list of key words. A very valuable book for all producers and users of struc-tural materials.

"The Unit Panel Porch Screen Plan" is a folder issued

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BASEMENT WINDOWS



Build Your Own Home to be Permanent

Build your home to be fireproof and permanent, at an economical cost. Save in repairs and redecoration by forethought when building or remodeling your home or garage.

Truscon Metal Lath

used in ceilings, partitions or sidings will make them fire-resisting and enduring. Truscon Metal Lath will give you crackless plaster, saving in future expense for repairs.

Old wooden houses are easily remodeled into modern homes by overcoating with metal lath and stucco. Garages are made additionally fireproof by stuccoing on metal lath.

There is a Truscon Metal Lath for every building need; homes, garages, offices, stores, schools, hospitals, etc., from the smallest residence to the largest factory.

Ask us for suggestions on how to fireproof and permanentize your building.

TRUSCON STEEL COMPANY
Youngstown, Ohio

*Warehouses and Offices from Atlantic to Pacific.
For address see 'phone books of principal cities.
Canada: Walkerville, Ont., Export Div.: New York.*

There is a Truscon Metal Lath for every building purpose.



by the Gilbert & Bennet Manufacturing Co., Chicago, Ill., which points the way to the easy installation of screened porches, using Pearl Wire Cloth. A working plan in fac simile blue print style is part of the folder, giving specifications for the construction of porch screen panels, and ought to make the folder highly acceptable to the architect, builder and dealer.

"Lupton Steel Windows," from David Lupton's Sons Co., Philadelphia, Pa., gives the new sizes of Lupton Projected Sash and emphasizes the superior beauty and grace of the solid steel-framed windows manufactured by the company. These are shown as being in residential and other styles—"out at side," "in at top," and "out at bottom." Factory hinged sash and basement hinged windows are also included, and full descriptions and specifications given covering all styles.

"Noark Enclosed Fuses," Catalog No. 50, is at hand from the Johns-Pratt Company, Hartford, Conn. What a fuse is, what it does, what its parts are, and how these work, what makes a fuse dependable? are pertinent questions for the contractor and builder, or dealer in electrical equipment. Facts supplying the answers are presented in a brief and understanding way in this handsomely gotten up little catalog. It is 5 inches by 6 1/4 inches, has 63 compact, illustrated pages, and tho but a miniature of the larger "Noark" Fuse Catalog No. 50, is a perfect copy and sufficient for all practical purposes.

"Oak Flooring" is at hand from the Oak Flooring Adver-

tising Bureau, Chicago. The book has entered its nineteenth edition with this issue, and its successful reception has been due to the practical advice it gives for the laying, finishing and care of oak floors. Each detail from the bundle to the finished floor has been carefully considered, in a way which makes it easy to understand by builder and layman alike. The book is being distributed thru lumber dealers.

"The Book of Masterbuilt Floors," issued by the Master Builders Company, Cleveland, Ohio, contains specifications and descriptive matter for the architect, builder, contractor and building owner on "Masterbuilt Floors." The products covered are Master Builders' Hardner, Master Mix, Colormix, Saniseal, Colorseal, and Master Builders' Waterproofing material. Care has been taken to have the catalog of a size and description which makes for easy filing, a fact further helped along by the finding tabs which serve as guides for the various products listed and described.

A melancholy chap was he
Until an "Ad" he chanced to see
which said!

"BOMMER SPRING HINGES" are the best

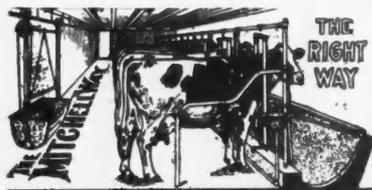
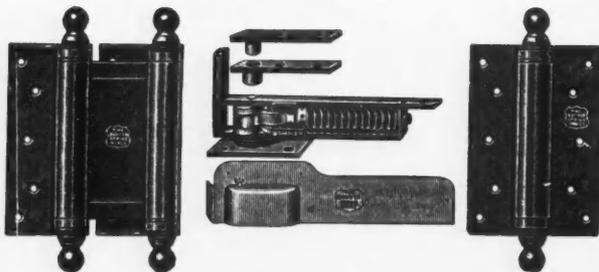
And now he is a happy man
with every comfort blessed—
It pays to take that "Ad's" advice—
be wise

"BOMMER SPRING HINGES ARE THE BEST"



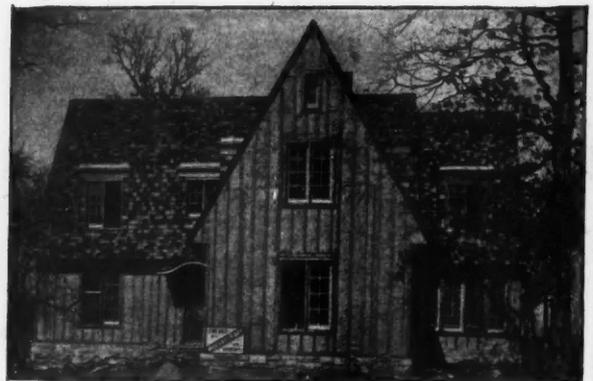
BOMMER SPRING HINGE CO., Brooklyn, N. Y.

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

Underwear for Houses

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

Cabot's Insulating Quilt

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

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

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