

AMERICAN BUILDER
AND BUILDING AGE

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BUILDING INDUSTRY

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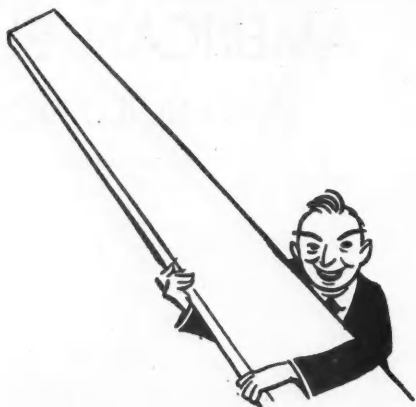
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AMERICAN BUILDER AND BUILDING AGE

UPWARD— OR STILL DOWNWARD?

FOUR years ago men in the home building industry awakened to the fact that, while business in general was booming, their own business was declining. They discovered that residential construction was off 32 per cent as compared with 1928. Nevertheless, a cheerful attitude was assumed on the ground that homes are a necessity and that, therefore, there would soon be a revival of home building.

Instead of the upturn expected, 1930 registered a still further loss of business, a decline of 42 per cent from the preceding year. In spite of this, a good deal of optimism was still in evidence; and 1931 with its accumulated housing demand was eagerly awaited.

Perhaps the demand was there *potentially*; but it did not translate itself into orders for new homes, farm buildings, apartments or business structures; and 1931 turned out to be a very disappointing year. Residential building expenditures were off 26 per cent from the year before and the depression curve took on the slant of a Gothic roof.

Surely the business of such an essential industry as housing—of providing shelter for America's millions—*could not sink further*, we all thought; surely THIS is the bottom!

And then 1932 opened 36 per cent off; and now at the mid-year, residential building for the first six months of 1932 is found to be only 33 per cent of last year's first half. The volume for the entire United States is just about equal to one good state total of normal times; and what were regarded last year as ocean depths now look like mountain peaks by comparison.

Where is this going to end? And when is it going to end? The construction industry normally employs 1½ million men directly on construction, and back of them are 5 million more employed in the factories, shops, forests and mines which supply the materials for building. These men have assumed that they are engaged in an essential industry, that the American public is a home-loving and home-owning people, and that shelter is just as necessary as food, clothing, transportation and amusements. They have believed that housing demand, if unsatisfied, will pile up and will finally overcome all obstacles.

Those in the home building industry have done very little to remove the obstacles or to channel the path



through which the assumed flood of home building instinct could find outlet. They have waited four years for home building to revive—for the public's love of home to assert itself. And in that time, home building has declined 75 per cent. No, the obstacles have been too great:

1. Confiscatory taxes, unfairly allocated on homes;
2. Lack of home mortgage money and of an honest, workable system of home financing;
3. Disorganization of the home building industry with no one responsible and ready to guarantee the entire job to the home seeker, but with inefficiency and lack of co-ordination on the job resulting in high costs out of line with present-day machine-age values;
4. Indifferent architecture and uncertain construction standards;
5. Lack of sales-mindedness in the industry as a whole and among its local representatives in particular, namely, the architects, the builders and the retail building material and supply dealers.

With five such obstacles looming in the way between the American buying public and the home, it is small wonder that the urge to build or to buy a home has pretty much faded out.

Some Light Ahead

This would be a gloomy picture if what has been said completed it. Fortunately, there are streaks of dawn ahead. The American public may again be led into home building ways; because some of the obstacles seem likely soon to be removed—or at least made less frightening.

1. Local and state taxes are being reduced in many quarters as a result of the hue and cry, nationwide in extent, for lower government expenditures. The tax burden is being redistributed in many places so that a fairer portion will be assessed against the home owner.

2. The Home Loan Bank Bill was passed by the House on June 15 and, on the day before, was reported favorably to the Senate by the Banking and Currency Committee. The administration is solidly behind this piece of legislation to establish a "Federal Reserve System" for home loans, and it now seems assured that before this is published, this new service for home owners and home builders will be an established fact—resulting in a release of mortgage money at lower rates to home owners for their mortgage renewals and for needed new home building.
3. The hard lesson of the depression is now bringing together the disorganized units of the home building industry so that builders and local dealers, backed up by the manufacturers, are getting together to promote home building and to sell home repairs and modernizing to their communities. In organizing to attract the elusive consumer dollar of today, builders and dealers are finding ways to render efficient service at a fair price.
4. The architects are now taking an interest in home design; and loaning agencies, dealers and builders are taking an interest in better construction.
5. And selling! There is the industry's greatest opportunity today! Real estate values have stood up through this depression better than stocks, bonds or any other form of investment. The wear and tear of time, obsolescence, fire, tornado, births, marriages, and the ever-increasing wants of a restless people are all piling up opportunities for the aggressive selling of home repairs, home improvements and new home building.

If the industry will profit from the lessons of the past four years, the outlook which is now ahead is anything but dark.

SALESOLOGY FROM HERE AND THERE

Score: 4 minus, 1 plus

E T. ANDERSON, a building industry manufacturer residing in Ontarioville, a Chicago suburb, decided to have some repair work done on his house. The carpenter he sent for walked five miles to the job. Arriving he remarked, "Every house I passed coming here needs at least \$100.00 in repairs that I could see from the street." "Well, why don't you arrange to do them?" he was asked. "Why, you are the only one who has sent for me," was his reply.

* * *

Bridgeport, Conn., recently organized a city-wide campaign for house repairs. An every-house canvass was part of the plan. Charles E. Wilson, an official of a large local manufacturing concern, kept track, along with four other home owners in his office; and throughout the campaign no canvasser called nor was any one of these five home owners asked to repair or modernize.

Fred M. Feiker, Chairman of the President's Conference Committee on Home Modernization and Repairs, resides in Bronxville, N. Y. He reports that during the past five years, although he has had considerable construction work done around his place, no builder or building supply dealer has ever yet called on him to offer him service or to try to sell him anything.

* * *

J. J. Mullen of the Lansing, Mich., Modernizing Bureau offered to write letters of introduction for carpenters, painters and others who registered with the bureau for them to use in making calls on homeowners. Only two out of 50 took advantage of the offer.

* * *

M. C. Fairfield, advertising manager of a Minneapolis concern serving the building industry, called in a carpenter not long ago to repair a garage door. He did a good quick job and, looking around for more, pointed out that most of the window glass was loose and needed reputting. "O. K.," said Mr. Fairfield. When that was done, the kitchen floor was repaired, smoothed and refinished. Then some doors were rehung and some shelves built in. What had started out as a \$15.00 job had been extended by common-sense selling methods to over \$300.00—much to the satisfaction of all concerned.

* * *

Enterprising selling, and a lot of it, is what the building industry needs.

THE SMALL HOUSE FORUM

THE Small House Forum held in New York City on May 24th and 25th, under the auspices of the American Institute of Steel Construction, was attended by architects, engineers, builders, magazine representatives and material manufacturers, who devoted two days to the consideration of new ideas in house construction, with an occasional reference to small homes.

There was general agreement that, in neglecting the small house, home builders have been bidding for only 10 to 20 per cent of their possible market, but those who came expecting to learn about small or inexpensive houses found little of such on the program.

Much stress was laid on the need of factory method in home building, with an adaptation of the modern systems of mass production and field assembly that have been worked out for other commodities. The most promising attempts to use mass production so far put into practice employ factory-built panels supported or reinforced by a steel skeleton or framework. Houses have been built by several such systems, but the completely worked-out house, including walls, floors and roof, built according to such a system has not yet appeared in a form satisfactory from the standpoint of cost as well as of permanent and lasting construction. There is, moreover, considerable doubt as to whether the general public is yet ready to accept this form of construction in preference to the brick, concrete or wood designs generally used in the past.



PICTURE What Building Industry Teamwork can do for Home Improvements in YOUR Town!

Most of the disrepair and obsolescence of a community goes unnoticed until some enterprising man in the building industry sees the possibilities for improvement and sells someone else on the idea. The hidden market for modernizing is a big one, and is daily growing bigger. Cooperation and aggressive selling will develop this business.

Building Permits Show Gain

"Two local dealers have had more business this year than for the corresponding period of last year," said Mr. Simpson, "and it is generally admitted that our campaign has created work for many carpenters, painters, paper hangers, electricians, and plumbers."

Although the building permit records do not show the volume of work created by this campaign because most of the jobs are small ones which do not require permits, Danville's record so far in 1932 bears up well under scrutiny. Here are the figures:

DANVILLE, ILLINOIS, BUILDING PERMITS				
Month	1931		1932	
	Number	Volume	Number	Volume
January	8	\$12,015	3	\$ 1,825
February	6	3,650	9	10,067
March	9	5,700	15	20,427
April	7	14,915	17	28,943

a—Point at which campaign started.
 b—For purposes of comparison, one industrial job costing \$30,000 is not included in the April, 1931, figures.

Publishing Names of Citizens Who Co-Operate

As fast as information was obtained, the Work Promotion Committee published names of citizens having work done. In this way, during the first four months of the campaign, brief descriptions of the work and names and addresses have been printed covering more than a thousand individual jobs. In one issue of the Danville Commercial-News details were published regarding: 45 new construction jobs, including five cottages and 4 garages; 74 repair and modernization jobs ranging from summer cottage work to repairs on a greenhouse; 8 interior decorating jobs; and 15 outside work projects ranging from cement walks, steps and driveways to concrete pools.

How Builders Were Advised of Jobs

Special forms were mailed to builders and sub-contractors daily, advised them of prospects' names and addresses and the kind of work desired. Contractors were warned that unless the Work Promotion Committee received prompt reports on the leads furnished, for which special report blanks were provided, no additional

inquiries would be sent to the non-cooperating contractor.

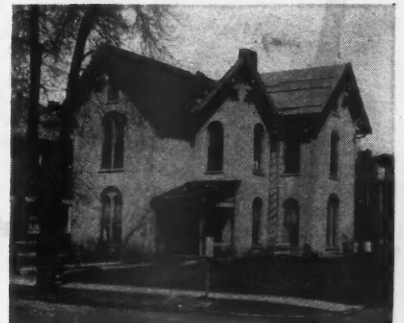
Although every community modernization campaign is bound to fail to please some of the inhabitants, Danville has had very few complaints. Out of a dozen contractors, an architect, and two or three dealers interviewed, about half of them said the campaign had helped the local building business. "We can't trace anything," said one builder, "but the campaign has focused public attention on modernization. After all, we don't worry about where our leads originate." Checking the names of builders and others against the Work Promotion Committee's list of active cooperators shows that those closely identified with the campaign have obtained work.

There is general complaint, on the part of builders, architects, and dealers regarding lack of first mortgage funds in Danville. "Danville would spend \$2,000,000 for remodeling and new work in 1932 if money was to be had," said one builder. "I personally know of at least 20 such jobs, but you can't get a loan of any kind here."

An architect stated: "We need money to build with. We could do considerable building right now if the work could be financed." Every building industry man interviewed held the same view.

Four mortgage companies, with total assets of some \$22,000,000 reported that they were all willing to lend money but they have little cash to put out because of heavy withdrawals, loans against deposits, and a falling off in payments by investors. Despite the regrettable lack of available mortgage money, Danville's campaign cannot be considered other than highly successful. "Our records show \$300,000 in additional work created so far," says C. C. Simpson, "and we are going right ahead with our activities. Our goal is a million dollars. We've got 600 Danville men and women lined up right now and we may start a house-to-house canvass next."

Well, if that's "The Spirit of Danville"—may it inspire countless numbers of other communities to emulate the worthwhile record of this midwestern city!



Hundreds of Low Cost Jobs Requiring No Building Permit Were Reported



Probably No Builder Would Have Suspected the Owner of This House Was Ready to Spend \$1,000 for Interior Modernization—but he did!

Many Jobs Being Created By Work Promotion Drive

Approximately 240 More Names of Residents of Community Have Been Added to Honor Roll Compiled at Danville Chamber of Commerce.

Danville's work promotion campaign swung into a double-quick tempo during the past two weeks, according to officials of the unemployment relief movement, and recent results indicate a renewed interest in the drive for jobs. Two weeks ago today 158 names were added to the "honor roll" of public-spirited citizens who contracted for work on their homes or business property to furnish jobs for the idle during the preceding two weeks. Today more than 150 new names of residents and business firms, or about two hundred and forty, are to be added to the honor list for their cooperation in the movement during the past two-week period.

On Home List.

Following are the most recent cooperators:

Milton Cook & Son grocery store, interior decorating, new floors.

Mrs. C. W. Lavelley, 808 Bryan avenue, enclosed porch.

Mrs. D. Berryman, 414 Franklin street, redecorating interior, painting exterior of house and garage.

Leah House, 1514 East Fairchild street, cement work, new roof on garage, general repairs.

J. V. Landman, 1810 Walnut street, concrete walk, for wild wood sidewalk, 1522 North 2nd

DANVILLE, ILL.

- 2, summer cottage.
- Roy Coon, Bismarck, new four-room cottage.
- Earl Long, Bismarck, new four-room cottage.
- Arthur Forkner, Danville, route 4, new porch.
- Ed Smith, 708 Chandler street, general repairs.
- George Curwin, 516 Lafayette street, screens.
- D. F. Hutton, 416 Lafayette street, repairs.
- M. M. Culp, Harmon avenue, repairs.
- H. C. Parks, 1106 Martin street, roof.
- Tom McGowan, 834 Gilbert street, sidewalk.
- Harry Fortz, 522 Marshall street, screens.
- Anna Rickman, Danville route 5, porch.
- A. J. Holman, Vine street, roof, repairs.
- Ben Applegate, Warrington avenue, repairs.
- W. F. Bush, 712 Franklin street, L. Vandevort, Grape Creek, remodeling residence.
- Charles Harrison, 444 Walnut street, remodeling.
- Harry Madden, Danville route 4, small cottage.
- Emma Batho, 119 West Davis street, general repairs.
- F. A. Cotton, 1013 Walnut street, roof work.
- Fred Taber, 417 North Jackson street, new work.
- D. W. Moore, 1522 Walnut street, general repairs.
- P. J. Peters, 1236 Franklin street, general repairs.
- Carl Schell, 516 Chester avenue, fence.
- William Woldenburner, 617 East North street, porch work.
- Johnnie Unholt, 1294 East Main street, store front.
- Beard Ice Company, 48 College street, insulating and general repairs.
- C. E. Brown, 709 Franklin street, concrete pool, for wild wood sidewalk.

Local Newspapers Co-operated in Publishing the "Honor Roll" of Citizens Having Work Done

An Owner Survey

HOW HARRY J. STEVENS, NEW JERSEY DEVELOPER, WORKED WITH HIS ADVERTISING AGENT TO SECURE FACTS ENABLING HIM TO BUILD BETTER AND SELL EVEN MORE SUCCESSFULLY

Best equipped to put the needs and dreams of home seekers into material form is the modern builder and community developer. Relied upon as an expert, he must study as scientifically as possible the needs of home seekers in his locality and must create his own standards for that community. This article explains the workings of a practical method by which the builder can conduct a study so that he may fulfill his function of supplying better homes.

Typical questionnaire used to get facts about homes.

Questionnaire for South Mountain Estates Home Owners

Visitor Should Fill In:

A. Name of Individual

Mrs. P. L. Brown

B. Location

24 Beech Road

1. How long have you owned this home? *7*

2. How many rooms are there here? *7*

3. How did you first learn of this home? If from an advertisement, what newspaper did you see it in? *Just driving through Newark*

4. In what community did you formerly live? *Yes*

5. Did you formerly pay rent? *Apt \$80*

6. In what type of home did you formerly live (Apt—2 family)? *Owning is cheaper*

7. Do you recall what monthly rental you were paying at that time? *Owning is cheaper*

8. Do you find that renting is cheaper or more expensive than home-owning? *Owning is cheaper*

9. Can you recall why you decided to purchase this home? *Not enough room with kids in the family - besides had trouble with landlord*

10. What advantages do you have in owning that you did not have in renting? *Privacy!*

11. Are you fully satisfied with owning or—if you had the opportunity to sell this home, would you revert to renting? If so why? *Owning O.K.*

12. As a result of your experience in living here, can you suggest any improvement in

A. The layout or size of rooms *Perfect*

B. Bathrooms (Tubs, shower, tiling, etc.) *O.K.*

C. Kitchen (Equipment, tiling, etc.) *O.K.*

D. Wall finishes *O.K.*

E. Porch *Like porch because it is off with kids*

F. Garage *O.K.*

G. Exterior architecture *O.K.*

H. Basement (Floors, walls, building recreation room, etc.) *O.K.*

I. Closet space (larger size; equipment such as boxes, shelves, etc.) *O.K.*

J. Additional rooms (guest room, etc.) *O.K.*

13. Are there any criticisms of this community you wish to make, or are you satisfied with the environment here? *O.K.*

14. If you were to buy a home over again, what would you look for that you do not have here? *nothing*

15. What community would you select? *Engineer*

16. How many children in your family? *3*

17. What is your husband's occupation? *Engineer*

WHAT do people really want in their homes? In order to answer this question satisfactorily, Harry J. Stevens, a developer of Millburn, New Jersey, undertook a survey of families in his development at South Mountain Estates. The campaign was conducted at the suggestion of his advertising agent, the United Service Advertising Company of Newark. It was thought that owners who had occupied homes for some time, whether entirely satisfied or not, would be able to make very valuable comments which would aid the builder in new designing and building.

From the selling standpoint, it was also believed advisable to become intimately acquainted with the desires of the home owners and buyers—so that those points might be emphasized which were most appealing and effective. It was finally decided to interview every family who had bought a home and was living on this development.

Preceding the visits of interviewers, advance letters were mailed to 150 residents of the tract to prepare them for the calls. The survey occupied about two weeks' time and resulted in 137 complete interviews.

A noticeable demand for greater and more convenient storage space was shown. Layout improvements

were freely suggested. Suggestions for additional items of equipment were occasionally made in general form.

Many of the questions asked by interviewers dealt with the relative value of advertising and selling methods. How do people learn about a builder's work? has always been an interesting question. In this survey, 42 answers out of 137 said they saw the houses while driving through and 18 declared that they had friends on the tract, showing the value of satisfied owners.

Are former renters the best prospects? In this survey, about 60% of those interviewed had previously rented, and most of them had lived in two-family houses, although a number had rented apartments. Rentals ranged all the way from \$65 per month to \$160 per month, indicating the range of accommodation which those interviewed had previously sought in rented quarters.

Is it cheaper to rent or to own your own home? There has been much debate about this problem, and it is interesting to note that, in this survey, answers were somewhat qualified—28 persons said renting was cheaper. About an equal number agreed that owning might be more expensive but they preferred to own because of advantages it brought. Some said owning was cheaper, but out of the total surveyed 92 declared they would never rent again and 20 more said they were satisfied with home ownership.

Helps Builder to Know His Market

Owners were asked why they had decided to purchase their own homes. The following were some of the reasons given, (number of times mentioned shown in parentheses): "Advantages for children" (38); "firm believer in home-owning" (29); "suburban living" (29); "better neighborhood" (21); "place of own" (16); "more room" (13); "privacy" (10); "settled feeling" (10); "garden" (10); "do as you please" (9); "make own improvements" (9); "something to show for money laid out" (9).

When asked what advantages they experienced in owning that they did not have in renting, illuminating replies were received. "Privacy" was mentioned 52 times; "freedom and independence" 44 times; "good neighbors" and "garden" 30 times each. Husbands were quoted as getting most enjoyment from the garden, ease of communication, out-of-doors, freedom and independence, privacy and "tinkering."

Can you suggest any improvements in houses? was an important series of questions. Here are some of the most common suggestions for improving layout: Install rear stairway, larger living room, larger bedroom, larger dining room, center hall, sun parlor, finished attic.

When it came to bathrooms, a larger number of owners wanted stall showers, cupboards in bathrooms, lavatory on first floor, an extra bathroom and colored tile. In the kitchen, an unusually large number of housewives desired storage space for brooms and suggested installation of broom closets as an improvement. Double drain sinks, more cupboard space, colored and white tile, refrigerator space and larger pantries were in demand.

As for wall finishes, opinion was about equally divided between paper and plastic paint finish.

Opinion on porches brought out an extraordinarily strong sentiment for this part of the house, a great

number of those questioned said they wouldn't be without a porch, and another large group, not having porches, stated definitely that they wanted them.

With respect to garages, a demand for attached and two-car garages was shown.

Interviewers even got down into the basement with the owners and asked them whether they could suggest improvements and 99 answered that they desired a recreation room. Additional suggestions were for waterproof basement, and painted floors and walls.

Another strong indication of the need for additional storage space, evidenced in the criticisms of kitchens and bathrooms, was shown in suggestions concerning closet space, a majority of replies expressing a need for equipment such as boxes, shelves, etc. Another improvement, suggested by a number of people, was to have the laundry on the first floor; about half as many preferred it in the basement.

Concealed radiation received a definite endorsement from the home owners, 89 voicing a preference for this type. A number of owners said they found one room in the house that was always hard to heat; usually one with northern exposure.

On questions with regard to community life, nearness to school proved to be an important thought in many people's minds, with transportation factors a close second. Size of lots was mentioned by some. Many emphasized the class of neighbors, healthy conditions for children, service by builder and landscape features as characteristics they liked. The great majority of owners interviewed had children in the family. All but a few of those interviewed expressed general satisfaction with their homes. Features mentioned as particularly desirable were: good neighbors, wholesome surroundings for children, service by the builder, winding roads, convenience to city, good schools, and sports.

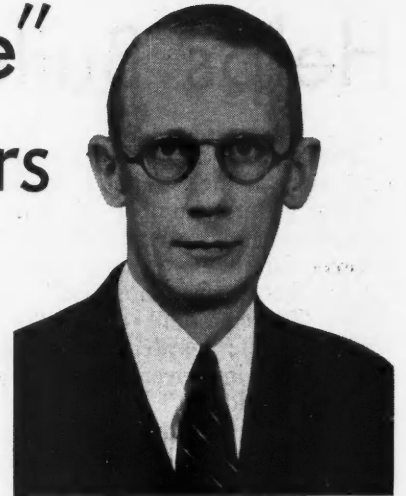
WHY THEY BUY, WHAT THEY WANT, SHOWN BY SURVEY

- 1—Newspaper ads stimulated prospects to inquire about homes but many of them first learned about the development by "driving through." Many "had friends on the tract."
- 2—Former renters provided nearly 60% of the sales. Rents they paid ranged from \$65 to \$160 per month. The majority said they would never rent again.
- 3—Many felt that home owning was more expensive but that it was worth it. Privacy, independence, good neighbors, and garden space were given as the greatest advantage of home owning.
- 4—"Advantages for children" was the reason most commonly given for decision to purchase. Husbands enjoyed the garden most but also liked nearness to work, outdoor recreation, freedom and independence, privacy and "tinkering."
- 5—A very common wish on the part of the housewife was to have a rear stairway from upstairs. Larger rooms were, of course, in demand. Others wanted finished attics. A wide range of layout suggestions revealed need for attention to individual tastes.
- 6—Stall showers in bathrooms were suggested by a large number of owners. Additional storage space of all kinds was desired by most of those interviewed, including broom closets, bathroom cupboards, closet equipment, refrigerator space and larger pantries.
- 7—Double-drain sinks appealed to many housewives. Many preferred wall paper as an interior finish, others liked plastic and other paint finishes.
- 8—Porches proved more popular than ever; many wanted a porch and others wouldn't be without one. A large majority wanted a recreation room in basement, especially for the children. Many expressed need for extra bedroom.
- 9—Concealed radiation was the most common preference as to heating improvements. Need for insulation was expressed by replies indicating coldness of special rooms in the winter.

How "Home Cost Service" Brings Builders and Dealers Together

By A. W. HOLT

Director of Service, Merchandising Council of
National Retail Lumber Dealers Association



A Michigan Dealer and Six Contractors Decide to Have a United Home-Town Building Industry

"WHAT'S this I saw in AMERICAN BUILDER AND BUILDING AGE about how you can quote me on the materials for any of these houses in just a few minutes?" was what a contractor in a well-known Michigan town asked his lumber dealer friend one morning last month.

"It's true," replied the dealer, as he produced the floor plan of a simple, one-story house, "and I'll show you how it is done."

"Here's a little house. It is fundamentally the same as every house, everywhere. It has a floor, walls, partitions, a roof, doors, windows, and all the component parts of any house. I figured all the materials for this house according to these specifications."

The dealer then showed him the material list and explained his selection of each item. "All the materials for this 'Basic House' came to \$1,330.00. That includes everything above the foundation except the 'variable features' such as plumbing, heating, lighting and built-in cabinets. Now I'll show you how to apply this to an actual house plan."

In the actual conversation the dealer used a plan from the June issue of AMERICAN BUILDER AND BUILDING AGE, but since the principle is the same for every house, let us assume he used the July House of the Month on pages 32 and 33 of this issue. Refer to it and note that its "Cost Key" reads, 2.590-187-1200-51-30-29. Multiply the first number (2.590) by the Basic House Cost (\$1.330) and you get \$3,444.70 as the price of all materials for the bare superstructure of the House of the Month.

The next number (187) shows that this house requires 187 lineal feet of foundation. Knowing your cost per lineal foot, you can quickly figure what the foundation will cost. The next number (1200) shows the number of square feet of cement floor for the basement—assuming that the prospect decides on a full basement. At 15c per square foot a full basement floor for this house would cost \$180.00.

You would figure 51 cubic yards of excavation per foot of depth for the house (see fourth number of Cost Key) and if it is excavated five feet deep you would have 255 yards. If you figure excavating at 60c per yard, you would add \$153 for this item. The next number (30) shows the squares of wall surface in case other than standard walls are wanted, and the last number (29) shows the squares of roof if something besides the shingles, adopted for the standard specifications, is wanted.

For purpose of illustration, suppose that a dealer had adopted a certain grade of 6" siding as his standard wall construction. The July House of the Month

shows brick and hollow tile for part and frame and stucco for part. If that is the construction desired, it will be necessary to subdivide this 30 squares of wall and add for the additional cost of each construction over and above the cost of the standard frame wall with 6" siding. If the wall is entirely brick veneer and the dealer knew that a certain kind of brick veneer cost, say, \$20.00 per square more than his standard 6" siding, it is only necessary to add \$600.00 (30 squares at \$20.00 more per square) to have the desired difference in cost for the house.

Regardless of what a plan may show, the standard specifications adopted by each dealer and his contractors when figuring the Basic House will govern the cost of construction of all other houses. This is in recognition of the usual practice of changing specifications to meet local conditions and the desires of each builder. The time is past when anyone can sit in a swivel chair hundreds or thousands of miles away and endeavor to specify what should be used in the construction of a home. Local dealers, contractors and architects are the ones who should and do determine this, and all should co-operate to the best interest of their community. If they will do this, they will be furthering their individual interests.

"Foundation costs vary according to the building site," explained the dealer, further, "and must be figured separately for every job. You might build this house with a half basement, or no basement at all if you were putting it on low ground. That is why foundation costs cannot be included in the Basic House figure."

"That's certainly logical," remarked the contractor, "but do I still have to get separate bids on plumbing, lighting and heating?"

"I've got that information for you, too," answered the dealer.

He told how he had asked plumbers for a price on a Basic Plumbing Outfit for a typical one-story house, and the proper amounts to be added for alternate bath tubs, pedestal lavatories, showers and extra toilets on the same stack. The dealer explained how he is in a position to sell plumbing for his fellow merchant, and how he had made similar arrangements with heating men and for electric wiring and fixtures for practically any house.

They next discussed built-in cabinets, and why these had to be figured separately from the Basic House. It was pointed out that the selection of built-ins is just like buying furniture for a house, except that the former are attached to walls. Even if a plan shows a kitchen

(Continued to page 44)

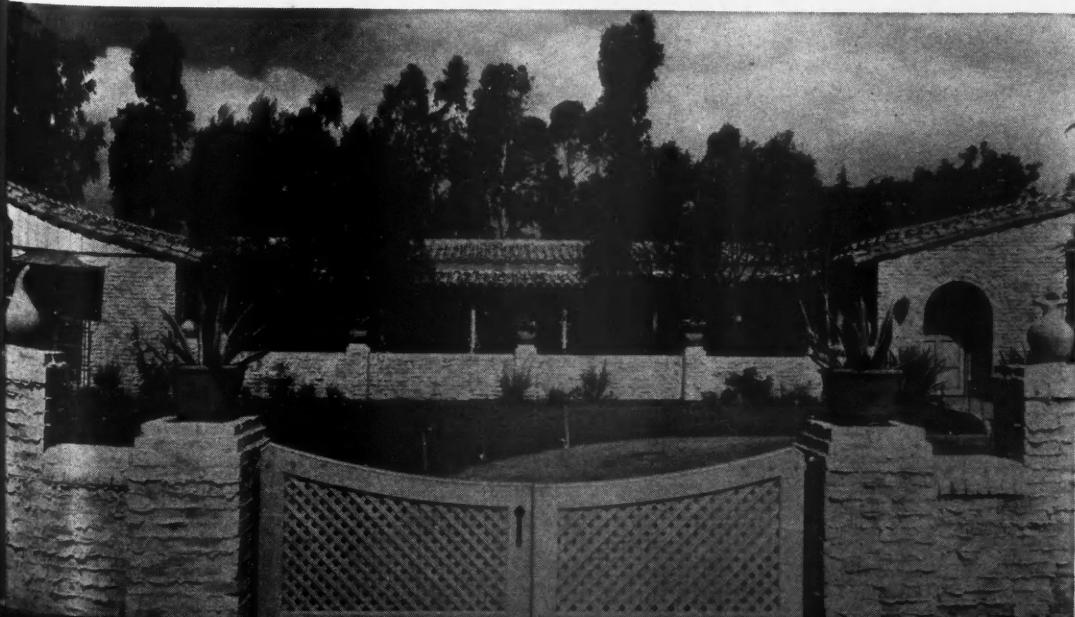


Whiting, Boynton & Potts, contractors

Photos by Mott

Homes That Are Growing More Popular Every Day

Home architecture is undergoing rapid development, and certain types are rapidly increasing in public popularity. The houses on this and the following pages have been selected because they are right in the course of progress.

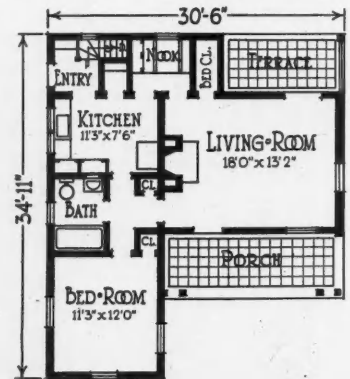


Above, left—a Connecticut Colonial of charm. Above, right—nice detailing in a small cottage located in Palos Verdes Estates, Los Angeles, Reroff & Munson, architects. Directly above—common brick interpreted in Spanish style. At left—a friendly gate and entrance to a rambling Spanish home.

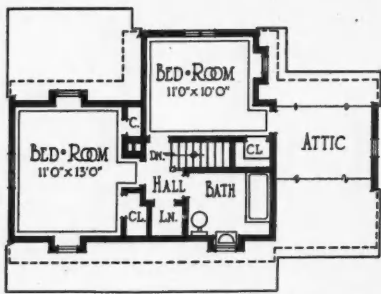


Three Bureau Plans

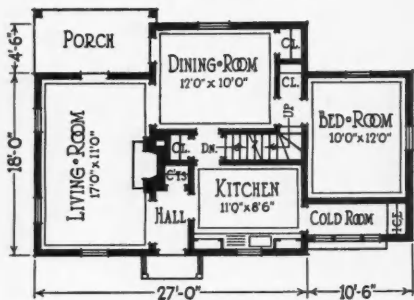
Copyright by Architects Small House Service Bureau, Inc.



Above: No. 3-B-1.
Cost Key .994—131—718—31—14—11

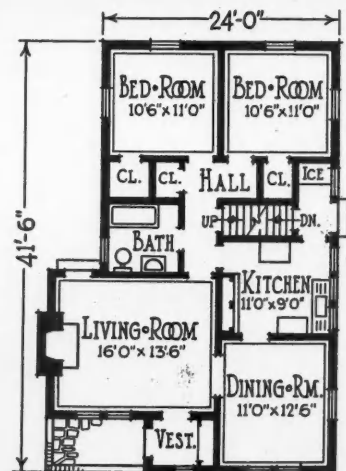


SECOND FLOOR PLAN.



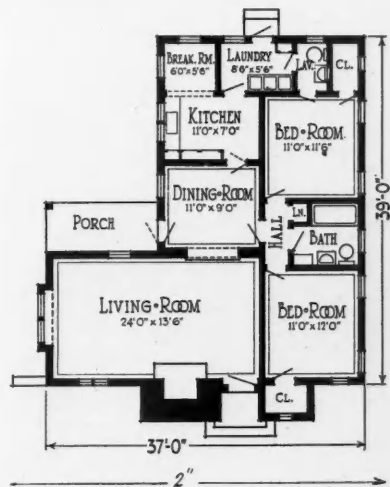
FIRST FLOOR PLAN

No. 6-F-6. Cost Key 1.672—122—750—32—18—17



No. 5-D-32 (at left)
Cost Key 1.243—141—1056—44—19—14

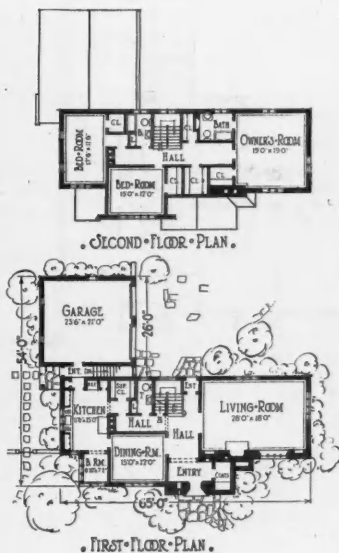




Above: Los Angeles House; Harold Bowles, Designer and Builder.
 Cost Key 1.433—158—1107—47—19—11 Sgl. and 6 flat

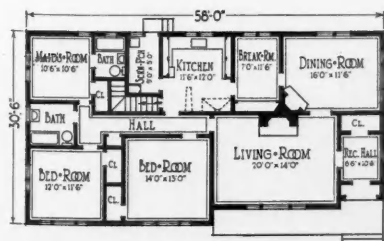


**Both Large
and Small**



Above: House at Great Bend, Kans.; Mann & Co., Architects.
 Cost Key 3.638—298—1776—77—48—40

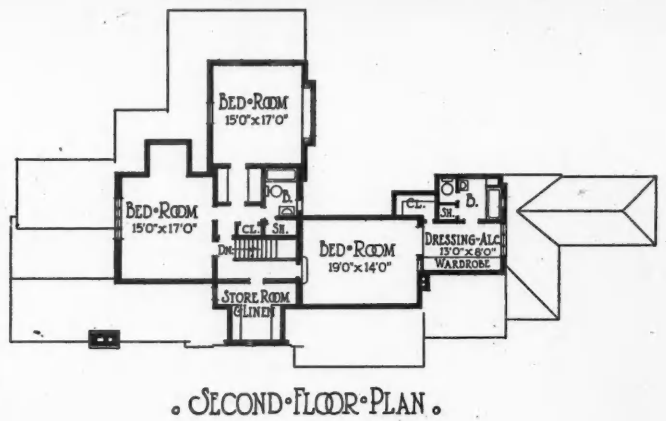
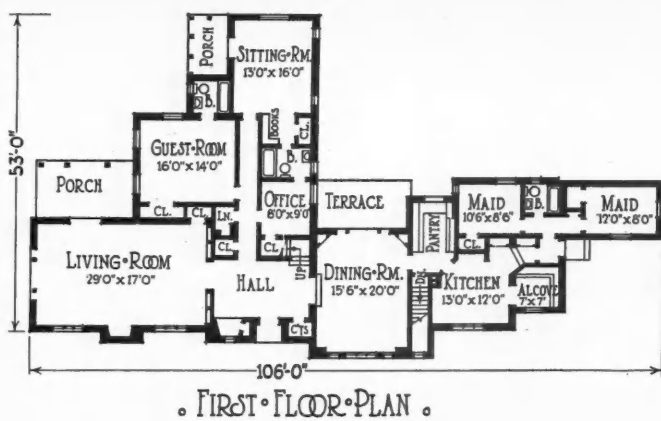
Below: Bungalow by Delux
 Building Co.
 Cost Key 1.937—174—1608—
 66—22—22



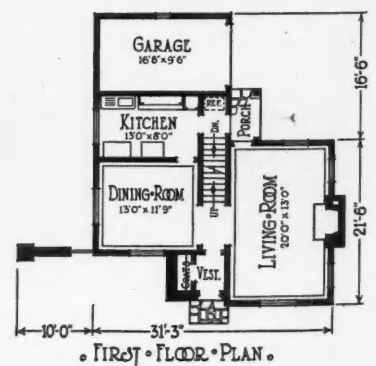
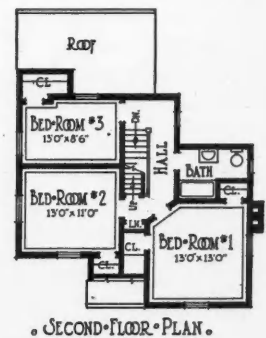


Cost Key 4.910—350—3150—130—45—53

House in Pasadena, David A. Ogilvie, Architect.

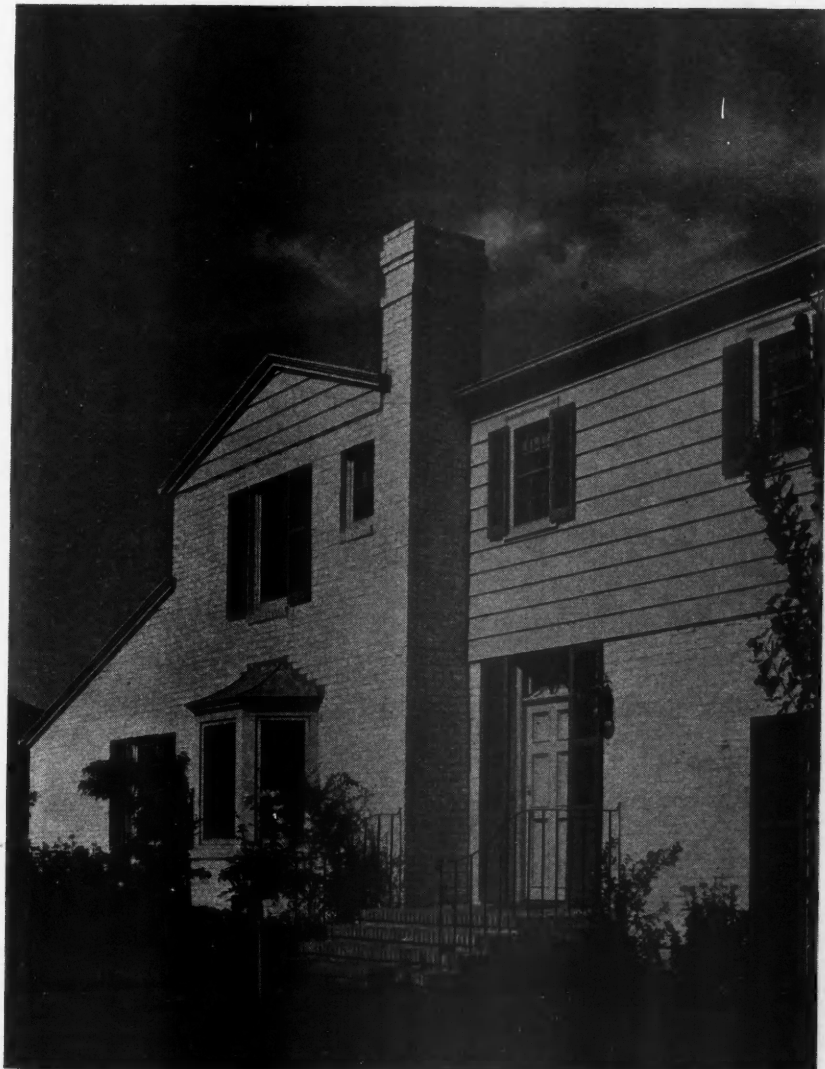


R. C. Hunter, Architect.
Cost Key 1.738—40—768—34—24—18



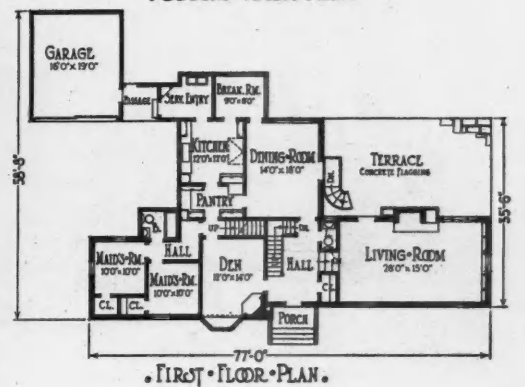
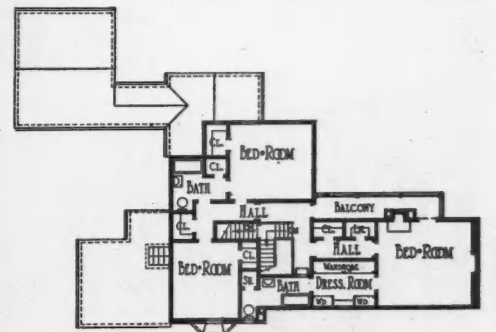


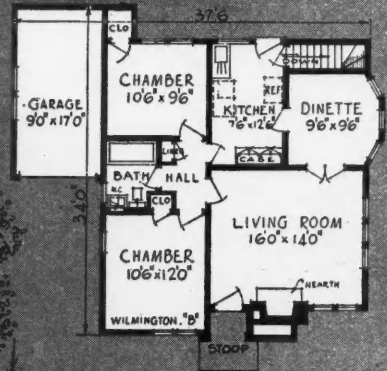
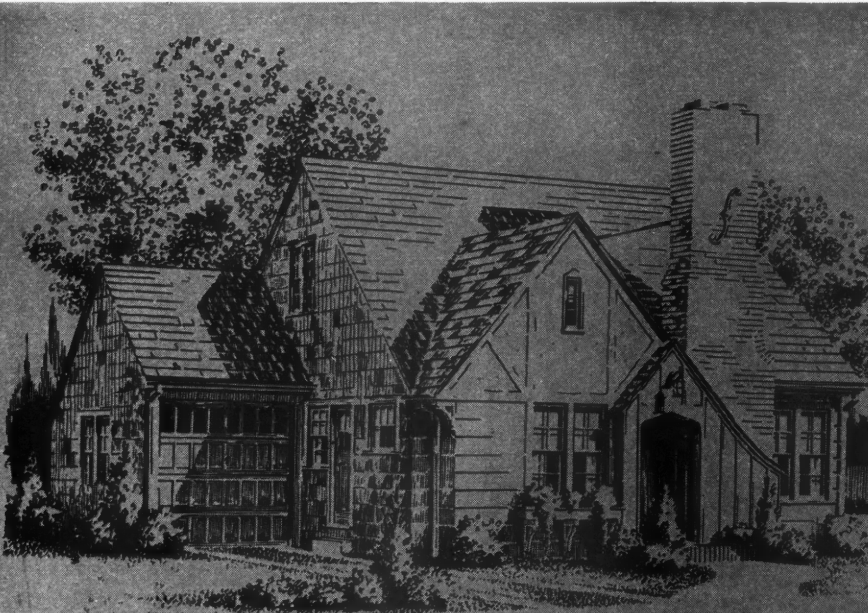
The J. B. Murray Residence in Brentwood Heights, Calif. John Byers of Santa Monica, Architect.



The Charm of The Monterey

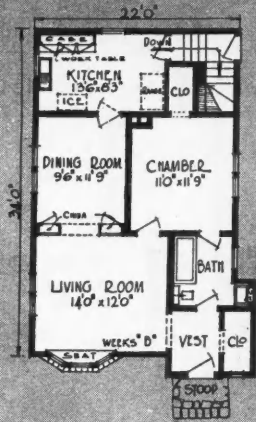
Cost Key 4.210—346—2016—87—53—30



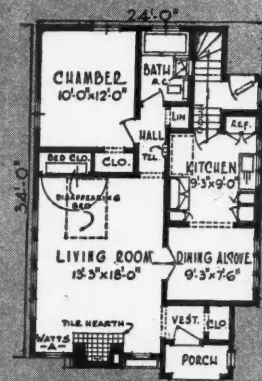
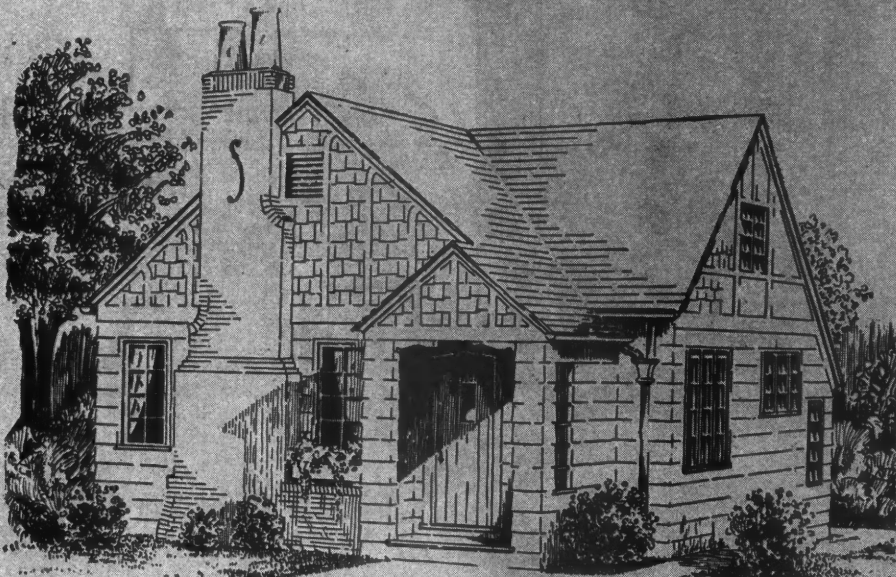


Five Rooms and Attached Garage.
Cost Key 1.260-144-840.
36-18-16

Three Small Homes



Four Rooms for Narrow Plot.
Cost Key .937-120-788.
34-14-12



Up to Date Small Home Efficiency.
Cost Key 1.028-116-790.
34-15-11

Modernizing Defaulted Apartment Brings Tenants

Repairs paid for out of increased rental income. Valuation boosted \$180,000

IN the present deflated state of the real estate market, modernization is a most effective way to restore values, according to Courtney R. Gleason, property manager of the George M. Forman Realty Trust of Chicago. More than \$180,000 valuation was added to a \$320,000 apartment property by increasing its earning power through modernizing. This earning power was restored with expenditures only from income.

The apartment, known as the 240 East Delaware Building (Chicago), was erected in 1925-1926 and the value of the land and the real estate was estimated at \$750,000. It secured a first mortgage 6½ per cent bond issue loan of \$440,000. Payments of interest and principal were defaulted and the property was taken under trust management September 1, 1931. The bondholders' advisory committee of the trust at that time estimated the property as having a sound value of \$320,000.

"Due to the fact that the owners had made strong advances to carry this property, practically no decorating, replacements of furniture or furniture repairs were made," said Mr. Gleason. "The whole property during that period sank to the decadent stage of most properties when defaulted loans are foreclosed.

"Thirty-seven apartments were vacant. We had an occupancy percentage of 57 per cent and a vacancy percentage of 43 per cent, and it was very apparent that the best operating result we could hope for under that condition was to pay expenses, and we faced the certainty that if we did not go into the premises and promptly restore them to a healthy and attractive condition, they would continue to be a leach on the income of the trust.

"We started steam fitters, plumbers and plasterers at the top of the building and corrected piping and plastering from the top floor down. We installed electric refrigeration (porcelain boxes inside and out) throughout the entire building, on 36 months' contract, making first down payment. We then started at the top and redecorated this building in beautiful shape, reenameling all woodwork, redecorating all public halls. The floors in public halls were in rough cement, all of which were refinished in color.

"We installed new carpets throughout. We put the elevators in splendid repair, covering the cab with flexwood and bringing it up to a modern appearance. We decorated in a plain but handsome way our lobby and the entire first floor public room. We caused the steam plant and all machinery to be repaired and put in first class condition; painted the entire basement, turning a dirty hole into a condition of which we are now justly proud. Door awnings were rebuilt and repaired. The roof was entirely re-coated.

"We also painted all exterior frames and sash two coats so that the exterior of the building was put in splendid order. In short, the entire building is healthy and clean—every corner of it.

"We are proud and happy to state that the entire building is now rented to tenants who are promptly



Although only seven years old, this structure was in bad disrepair and losing money. It is now 100% rented and making money as a result of thorough remodeling.

paying their rental. The building is fully tenanted and in healthy going shape.

"Where did we get the money necessary to do this work? Here is the most surprising thing of the whole story. Due to the fact that we immediately started painters and commenced to recondition apartments by redecorating them in an attractive manner, rebuilding the furniture and making the whole premises inviting, we commenced at once to meet with success in our renting campaign, notwithstanding the presence of a great number of workers and all of the muss and inconvenience in public halls that is occasioned by a rebuilding process.

"We gained ground at once on vacancy and quickly increased the income to a point that enabled us to meet the payroll and repair cost out of income as the work was done.

"We have not put an outside dollar on the premises. With the steady increase of income due to renting space as rapidly as it was repaired, we collected sufficient income to pay entire operating expense and cost of all repairs and reconstruction work and material, only leaving the monthly payments as they will fall due on our electric refrigerators and on our stoker, all of which can be easily met, the stoker over a period of one year, and the refrigerators over a three-year term.

"Now what will this do to the bondholders and to the earning power of this building?

"With continued aggressive management, the property can be made to return a net earning after operating expenses and taxes and before interest of not less than \$50,000 yearly, or a 10 per cent return on a valuation of \$500,000, instead of a loss on the rundown \$320,000 property we found last fall.

"Thus the valuation has been increased far out of proportion to the cost of improvements, simply by a comprehensive plan for establishing the rentability of apartments through modernizing."

Construction Details That Guarantee

FINANCING GROUPS DEMAND THOROUGH WORK AND CLOSE INSPECTION AS PROTECTION

By Scarff W. Downing

ONE outstanding conviction seems to have emerged from the post-war building boom and the period of depression that has followed, and that is that better construction details must be looked after by those engaged in building homes. The work of carless or unscrupulous men—call them jerry-builders if you will—has reflected on the honest, intelligent builders who are by far in the majority.

It is a question right now whether these men who do good work will band together to make it hard for the jerry-builder who gives a bad name to the entire industry. Whether they do or not, it looks as though it will be hard for anyone to get money to build without giving evidence of reliability and honest workmanship. A potent force in this direction is the action of Building and Loan associations to supervise construction on which they advance funds.

The supervisor of construction representing the Building and Loan can be of real help to the contractor as well as a safeguard of the loaning agency and the home purchaser. When he is intelligent, honest, knows methods of best construction, knows building materials and how to use them to best advantage, he can advise and help as well as criticize.

The vast majority of builders will have nothing to fear from such supervision and will, in fact, welcome it, and will co-operate in every way possible with the Building and Loan representative, for it is to their advantage to do so.

Undoubtedly a great deal of work was done in the rush of home building after the war that was not of

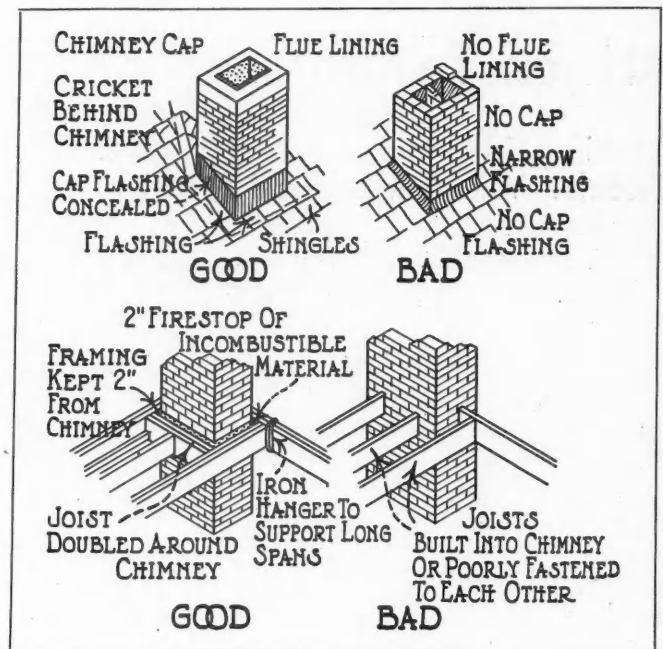


Figure 1—Framing at chimneys, illustrating some common errors that have caused trouble in past

the best. Boom conditions will bring about the same effect in any industry. The thing to do now is to profit by the mistakes made then and see that the most usual errors in important construction details be corrected. The Building and Loan supervisor, if he is on to his job, will help the home builder avoid such mistakes.

First he is on the alert to ascertain that the footings and foundation walls are correctly set or poured. Here is an item that has often been skimped with the result that cracks appear in the plaster due to the settling of the house. Figure 5 shows the good and the bad of three types of foundation walls and footings.

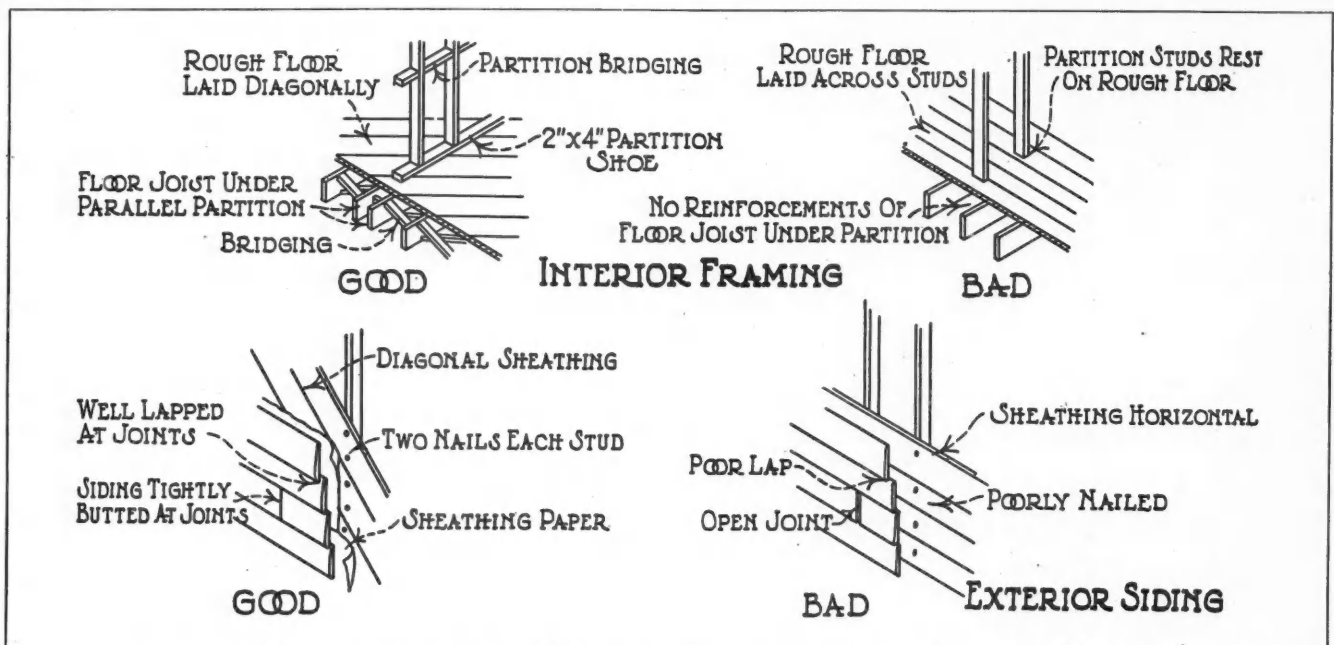


Figure 2—Points about interior framing and exterior siding that the author says are important in getting a good job

Better Houses

A well trained construction supervisor would not let such a thing get by nor would he put his stamp of approval on an improperly mortared concrete block foundation wall such as is shown.

Figure 4 illustrates a number of good and bad framing methods. A poorly framed job means that windows and doors will stick due to the bulge of an incorrectly braced opening. Over the opening the doubled supports should be securely fastened to the doubled uprights. The unfortunate part about these features is that they can be hidden by an unscrupulous builder. Good and bad methods of bridging are shown in Figure 2. A correctly bridged floor will prevent warping, side-sway and quivering.

To have firestops in a frame residence is essential and they cost little in comparison to the whole. Still this very important feature is often slighted. A wood and poured concrete firestop as shown in Figure 3 blocks the rapid spread of fire because it prevents drafts. Without a firestop in each position as indicated, flames spread to the whole house quickly, making it a seething furnace, because the air spaces serve as flues once the conflagration starts. The part of the diagram characterized as "bad" in Figure 3 shows how air currents can travel where there are no stops. In this same connection, single joists should not be built into a chimney but should be doubled and kept away from the bricks by at least two inches of fireproof material. Note Figure 1.

Another example of carelessness that often occurred in the past is poorly matched sheathing with no interlining of building paper. Figure 2 shows where alert inspection may save trouble. The rough sheathing should be diagonally placed on the studding if the exterior or finished wall is to be clapboard or shingle and horizontally placed if the exterior is to be stucco. The horizontal sheathing tends to lessen the cracking of the stucco. Sheathing should be doubly nailed to each stud.

Interior framing as shown in Figure 2 should rest on

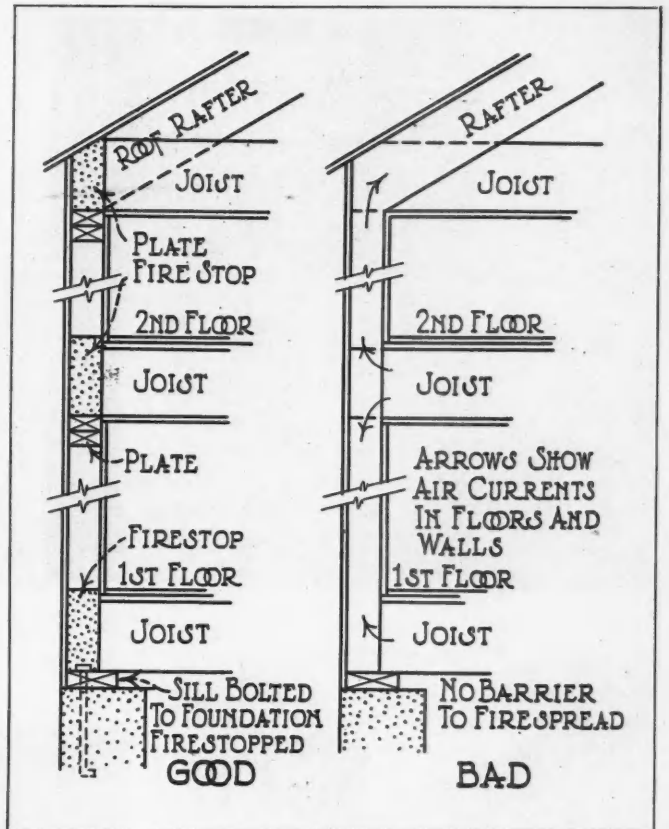


Figure 3—Details that make for good or bad wall construction. Fire stops are important

a partition "shoe" and be thoroughly bridged. This makes for rigidity and assures a permanent plaster job.

Enough has been said to explain the necessity of supervision if builders will not get together and take care of this work themselves. Undoubtedly the majority of general or sub-contractors for home construction are honest and reliable. They are the men who have welcomed or will welcome building loan supervision as a protection against less honest men.

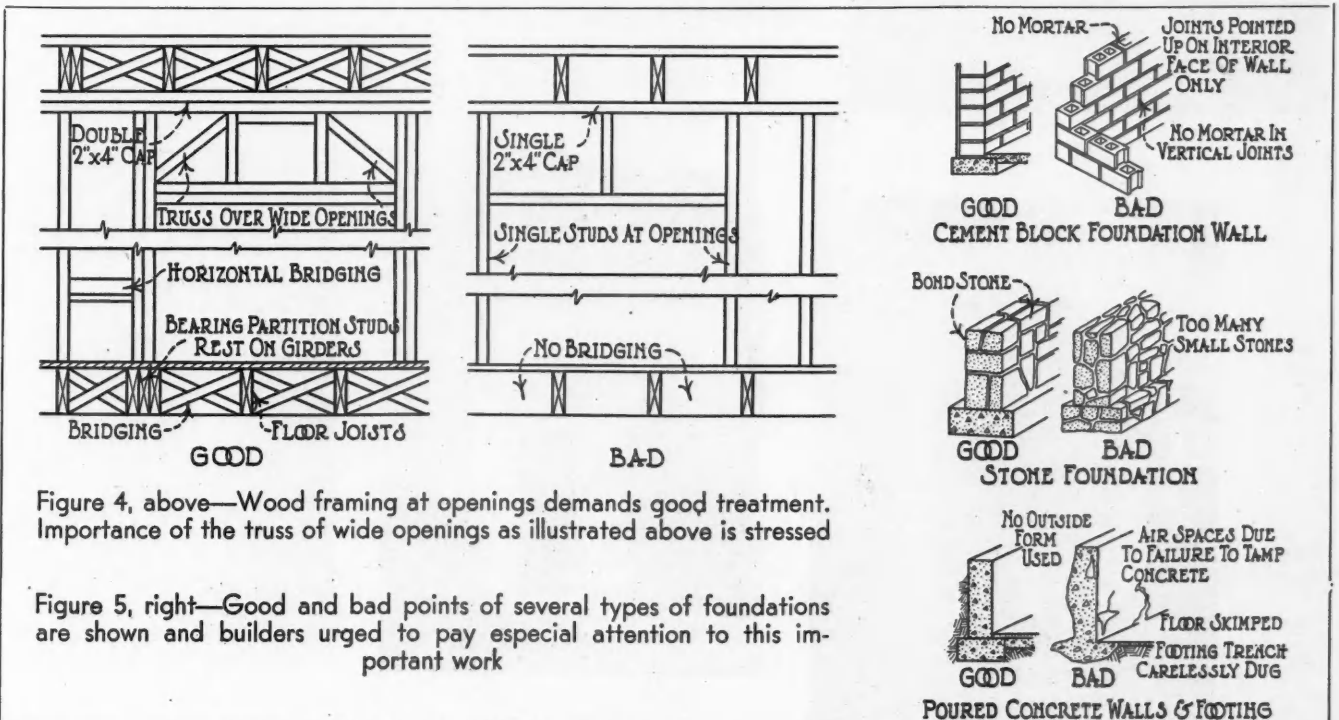


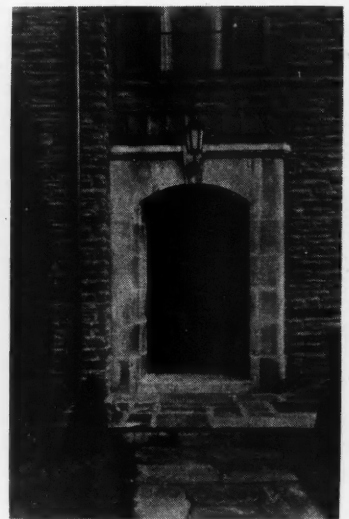
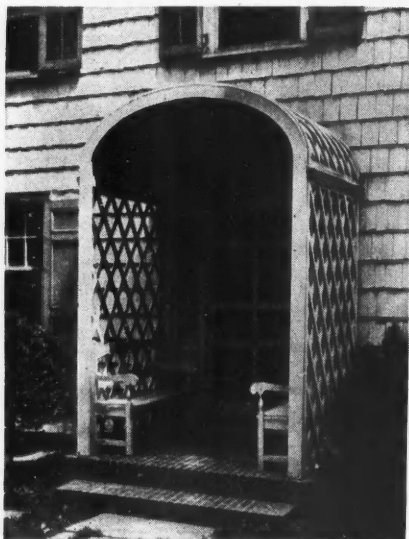
Figure 4, above—Wood framing at openings demands good treatment. Importance of the truss of wide openings as illustrated above is stressed

Figure 5, right—Good and bad points of several types of foundations are shown and builders urged to pay especial attention to this important work

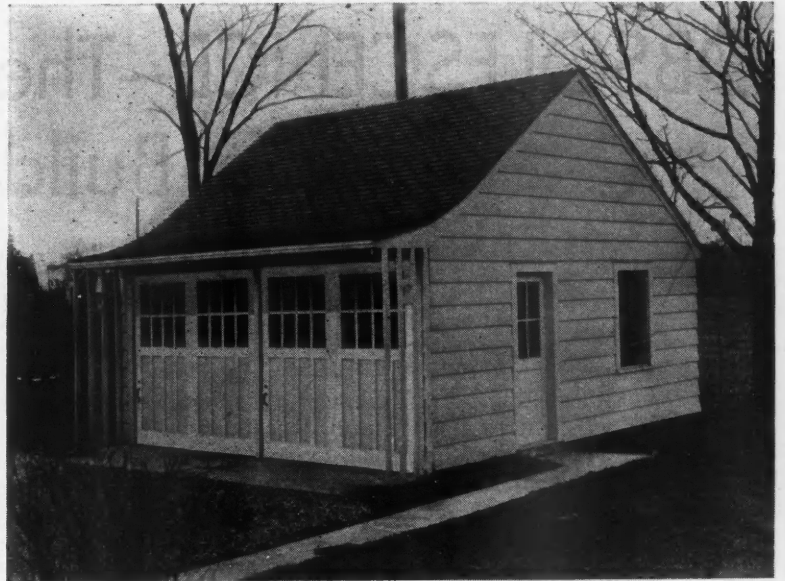


Charming Doorways

Nothing adds so much to the beauty of a house as a well designed and pleasant doorway. It greets the visitor and creates the first impression. The seven designs on this page are selected for their especial appeal and character.



Details of Good Garage Construction



A popular type two-car garage with wide siding, modern garage doors and attractive architectural details.

STUDY of details of the compact, two car garage at the right shows a number of good features as well as good workmanship. The design is low and graceful; cornice is not too large, as in many small garages. Windows and doors with large glass area admit an abundance of light. The doors are modern and easy to open. A concrete floor, apron and sidewalk to the house are good features. The wide siding adds to the charm of the design. For the convenience of the owner a workbench and closets have been supplied inside. The building is well lighted, properly drained, and is weathertight.

The two-car garage illustrated in detail below is of good standard construction. Recommendations by the Insulite Company concerning materials and construction are as follows:

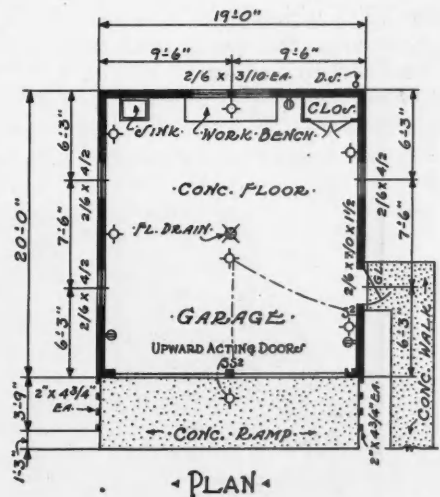
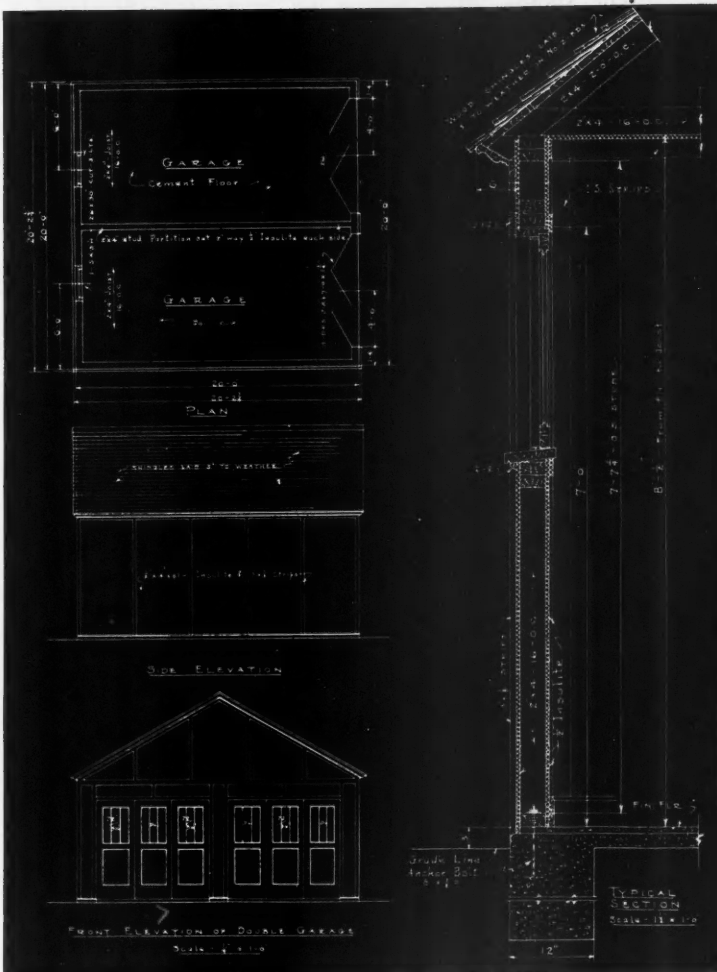
Excavation, trench type, 5 cu. yds.; footings, con-

crete, 17½ sq. yds.; floor slab, concrete, 44 sq. yds.; anchor bolts, 10, size 8"x3/8".

Framing—80 pcs. 2"x4"—8' o. s. studs; 23 pcs. 2"x4"—10' o. s. plates, 8 pcs. 2"x2"—10' part. plates; 30 pcs. 2"x4"—10' ceiling joist; 20 pcs. 2"x4"—12' rafters; 475 sq. ft. No. 2 bds. roof; 3750 sq. ft. 16" laid 5" roof.

Insulation—22 pcs. ½"x4'x8' insulating bd. o. s. wall; 26 pcs. ½"x4'x8' l. s. wall; 10 pcs. ½"x4'x10' ceiling; 480 lin. ft. ½"x½"x2½" l. s. strips.

Millwork—2 sash fra. 26"x30"; 2 sash fra. 26"x30"x1½" cut-3-lts.; 2 door fra. 8'0"x7'0"; 6 door fra. 2'8"x7'0"x1¾" glaze; 110 lin. ft. 4¼"x¾" wood base; 380 lin. ft. 7/8"x3" o. s. strips.



Above—Floor plan of the garage, top of page. Note well drained floor, windows, built in closets and bench.

At left—Construction details of standard 2-car garage as recommended by the Insulite Co., Minneapolis.

OBSOLESCENCE—The New Boon to the Building Industry

By WILLIAM D. SAWLER

Director Research and Design
Morgan Woodwork Organization

NEW homes for obsolete houses—bright, cheerful homes of good taste for drab, uninteresting dwellings, repellant to the eye and distasteful to the community. Here, indeed, is a field rich with sales opportunities now open to every branch of the building industry. Herein lies the greatest prospect of increased business for us all.

Eight out of ten houses standing today are partially or entirely obsolete and should be improved architecturally while from the standpoint of adding new comforts, conveniences and other improvements there are many needed changes in practically every old home.

According to reliable statistics, the building industry

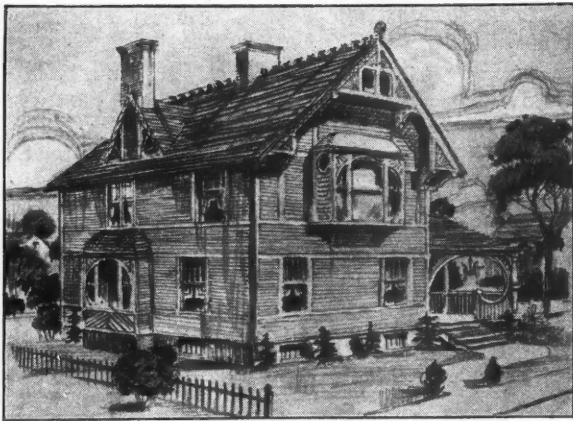


EXHIBIT "A": Here is a typical nondescript of the "gay '90's" with all the astounding maze of decoration, unrelated parts, and cumbersome detail so common to houses of this type. It has been out-moded years ago and today is an eyesore to the community. A relic of a bygone era.

Every remodeling dollar restores three or more dollars of resale value.

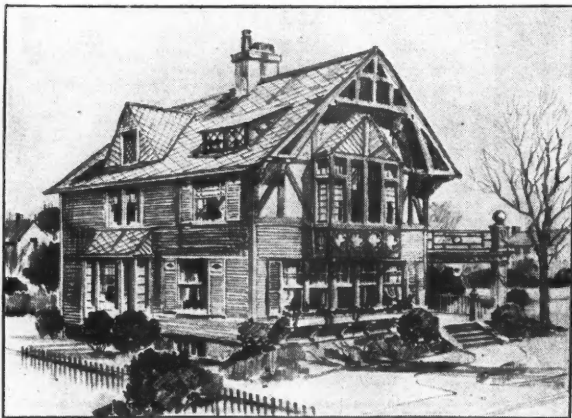


EXHIBIT "B": Above we behold the old home in a new dress—but somehow we are not impressed. The house is just as hopelessly out of key as the original shown above. Here an attempt to make a modern English adaptation failed—it is lacking in good taste and falls far short.

can no longer bank on the factor of increasing population as a stimulant to its business and must look to new fields. What else could offer the tremendous possibilities to be found in this factor of house obsolescence?

The American people are becoming more and more style conscious. They do not want to be out-of-date or looked upon as "old fashioned." They want everything up-to-the-minute, beautiful, practical, efficient.

We, of the building industry, can make capital of the obsolescence of millions of homes that now freckle our nation and the best way to do it is to make owners of these out-moded homes conscious of the fact that their homes are obsolete. We must start aggressive efforts to impress them with the need of remodeling and renewing the home. Use graphic, striking examples; frank arguments; shame them into action by demonstrating the importance of owning a modern home of good taste.

What of the home? Owners go on living in homes of out-moded design apparently content, although their homes are decidedly much more obsolete than a five year old motor. True, they have a shelter, but is that all a home should be? Just as we want more than something "to take us there and bring us back" in our automobile, so every one expects more of "home" than just "a place to hang his hat."

It is up to all branches of the building industry to join in a united drive to create a nation-wide wave of dissatisfaction in the conscience of owners of obsolete homes. We, as an industry, must do what other industries have so ably accomplished—introduce style as an outstanding element to stimulate business. The furniture industry is well on the way with a campaign to hasten the factor of obsolescence in furniture. Their efforts will help us and ours will help them.

Present day remodeling opportunities are the build-

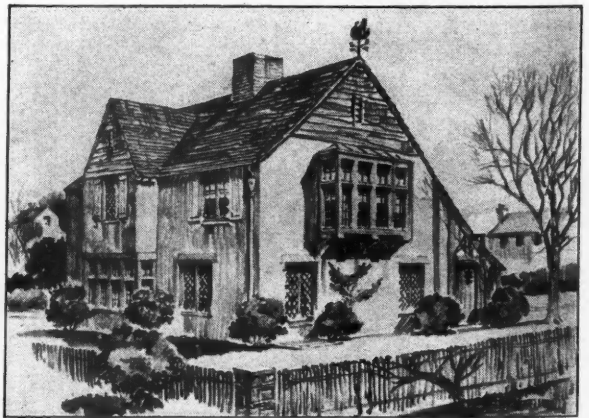


EXHIBIT "C": Here we show the nondescript transformed into a gem of living architecture. A delightful, cheery, inviting home most captivating in its new-found freshness. A perfect ensemble of harmonious, well-balanced detail. A True-to-Type English adaptation.

ing mistakes of the past fifty years. The majority of houses built in that period are today mongrels—nondescripts of atrocious design and misfits that make communities drab, unattractive and repellent. They are hodge-podges of design, "artfully" decorated with wood embroidery, "prison" towers, fancy cutup windows, freak proportions, in fact, all the artifices with which well-meaning builders attempted to make them enticing and salable. These homes form the sales field we must cultivate. Once we arouse the owner's consciousness to their obsolescence, we take the first step toward creating greater business for the industry.

Pride of home should be as great as pride of personal appearance or anything else. We must return pride of home to its rightful place in the make-up of our citizens. We must show them the way to rebuild their homes so that they may take real joy in home ownership.

There are many factors which tend to make a house obsolete. Poor design is perhaps the most outstanding. Lack of insulation; awkward floor layout; impractical, inconvenient kitchen arrangements; poor heating plants; are just a few more. There are many others. Once an owner is started on repairing or remodeling there is no end to what he may do. One job leads to another—and another. We must make each owner conscious of the short-comings of his particular home. We must make him see it in the light of present home comforts, conveniences and fine design. Make him see it as it really is, an out-moded misfit.

Now an Opportune Time for Remodeling

Never was the time more opportune for house remodeling than it is right now. Material and labor costs are low and owners may increase the value of their homes 25 to 30 per cent by a slight expenditure on intelligent remodeling.

Each job should be carefully planned because each successful remodeling job will be a boost to the entire movement. When we remodel houses let us recreate them into homes of correct and living architecture—homes of character, individuality and lasting charm.

Too often the remodeled home is more of a misfit than the original. When this happens, the public urge to remodel in that particular community has taken a backward step that will be hard to retrace. The three illustrations shown on the opposite page as A, B and C visualize for you clearly this situation. A is the original home; B is this home remodeled incorrectly; and C shows it as it should have been done.

This comparison illustrates forcibly the importance of correcting faulty, obsolete lines in home remodeling. Better to let every old home in your community stand as it is than to botch any of them into such shape as house "B".

Just one really good example of home remodeling in any community will stimulate the entire local industry. Other home owners naturally will become interested when they see how any old home may so easily be transformed into an architectural gem.

A community aroused to correct its house architecture will soon find it has enhanced its own beauty. A neighborhood of obsolete, drab houses most assuredly does not attract outsiders nor interest visitors. On the other hand, a community of beautiful homes attracts home buyers, improves business and enhances property values.

The entire local housing industry can easily capitalize on each remodeling job. Close co-operative effort between the groups interested will soon develop business for all.

Already one community in Northern Indiana, which is backed by the local building industry, has organized

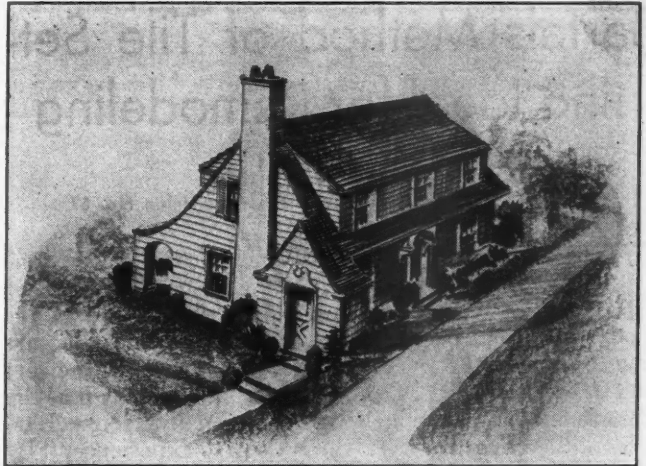


EXHIBIT "D": This typical nondescript costs today 8 to 10 per cent more to build than the architectural gem shown below.



EXHIBIT "E": This well designed home will always be in good taste and command a high resale price whereas the mongrel shown at the top of this page will become obsolete overnight and depreciate rapidly in value.

a civic program, to correct the architecture of its obsolete homes. Architects, builders, realtors, craftsmen and building material dealers are promoting this united drive in co-operation with local civic organizations, service clubs and the daily press, realizing that through their combined efforts they will not only improve the house architecture of the community but encourage their fellow citizens by stimulating jobs for the unemployed.

While we are considering this factor of obsolescence let us not forget the absolute necessity for good design in new housing. It does not cost a penny more to build a home of correct, permanent architecture, than it does to build an ordinary hodge-podge. As a matter of fact, in many cases it costs more to build the misfit than it does to build an architectural gem. As for example, note the two illustrations shown above. The house at the top of the page, if built today, would cost approximately 8 to 10 per cent more than the well designed house immediately below.

We, as an industry, will be doing a great service to the owners of obsolete homes by showing them how easily their homes may be transformed into models of comfort and convenience as well as gems of living architecture, and to new home seekers in protecting their home investments against quick ruinous obsolescence by building homes of enduring architecture.

Bartels Method of Tile Setting Ideal for Remodeling

By R. E. Shepherd

Financial Secretary, Chicago Tile Setters Union No. 67

THE tile setters have met the challenge of the substitute materials by perfecting a new method of applying genuine ceramic tiling which is ideal for modernizing old plaster walls, because the new tile surface goes right on over the old plaster without the dirt and delay of tearing off the plaster. This is known as the Bartels method, having been developed by Henry Bartels, a tile layer of over thirty years' experience. By this method, a special wire mesh is nailed right over the old plaster or wood wall or over the old floor. Mortar is immediately applied and the placing of the tile starts at once; job is completed quickly, with no dirt or fuss.

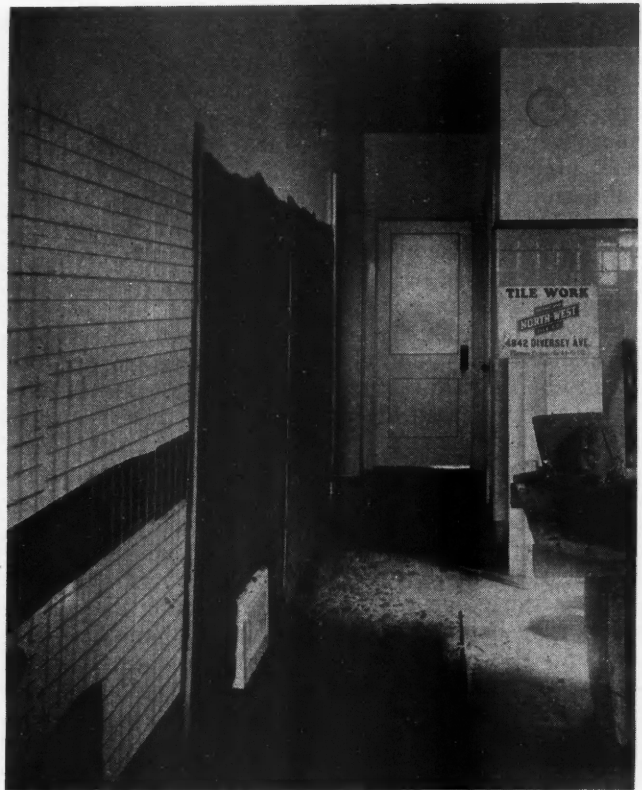
This method produces a tile wall that is stronger and better than the old time conventional method of laying tile over expanded metal lath. It is also very much less expensive. With this method, the ordinary size room can be tiled complete within two or three days, causing very little inconvenience in the home. In new work, this method reduces by almost one-half the weight of materials previously necessary for the installation of tile, thereby preventing settlement cracks.

The Chicago tile contractors have been using this method, and now have over one hundred installations giving satisfactory service. The tile setters and the tile contractors are co-operating to hold the costs down so that these customers are getting real tile at the same or lower costs of the tile substitutes.

Mr. H. J. Swardstad of the North-West Mosaic and Tile Co., Chicago tiling contractors, has done some interesting remodeling jobs with the Bartels method. Two of them are illustrated here. In the remodeled kitchen illustrated above, 160 square feet of wall tile were installed for \$200.00. One lather did the preliminary work, applying the wire reinforcing in four hours. Then one tile setter and helper finished in two days.

The bathroom illustrated below, with before and after remodeling views, contained 110 square feet of wall tiling. The cost here was \$155.00 complete, including new tile floor and pier glass medicine case. The improved appearance of this bathroom with its orchid colored tile, trimmed in black, and with new porcelain plumbing fixtures, is startling.

In applying the tile, Mr. Swardstad uses a mortar consisting of three parts sand, one part portland cement



Construction View of Kitchen Remodeling Showing Wire Mesh in the Foreground, Float Coat Toward the Rear and Finished Tile Wall at the Back.

and from one-tenth to one-eighth parts fire clay (powder). This last acts as a retarder. The special steel fabric is made in Pittsburgh and costs 4½ cents per square foot in Chicago.

We of the local trade would like to see this Bartels method adopted generally all over the country as we believe it would rehabilitate the tile industry and give the general public real tile at economy prices.

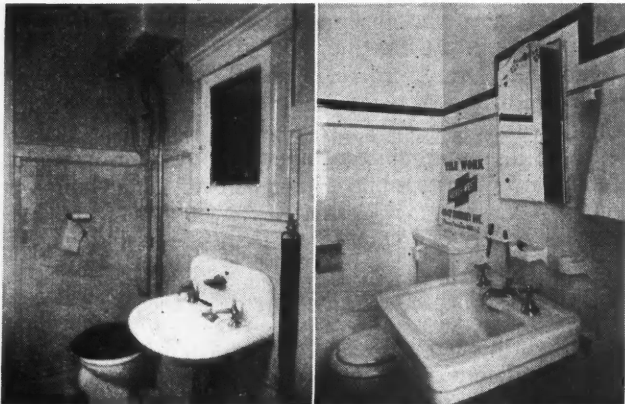
New Wiring for Old Homes

By FRANK THORNTON, Jr.

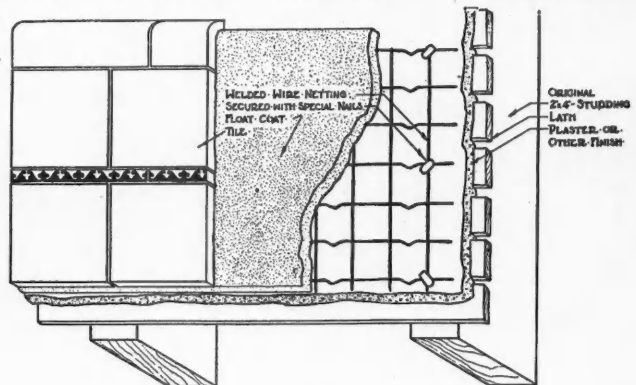
Westinghouse Electric and Manufacturing Company

SINCE the first use of electricity, it has been customary to protect wires against excessive currents by inserting short pieces of metal that would fuse when the current exceeded a certain value.

This sort of protective device was ample in the days of the chandelier and drop cord lighting in the gay nineties, but electrical requirements of today impose



A Bathroom Before and After Remodeling with New Tile Walls in Orchid and Black and New Plumbing Fixtures.



Detail Showing Method of Installing Wall Tile on Old Plaster Wall, Using Indented Wire Mesh Reinforcement.

entirely new conditions, and require revision of our ideas about wiring. To meet the new conditions, a new device has lately been developed. It is a combined switch and circuit protector. It can be operated as an ordinary "on" and "off" switch to control the circuit as desired. In addition it has built into it a trip mechanism which will cause the switch to open if the circuit exceeds the maximum for which it has been set.

With this new circuit breaker available, the design of the wiring layout itself should be considered. Wall plugs, lamp sockets and other outlets must be provided at all locations where a device is likely to be used. These outlets should not all be on one circuit but should be divided up among a number of circuits so that excessive loads will not be likely to come on any one.

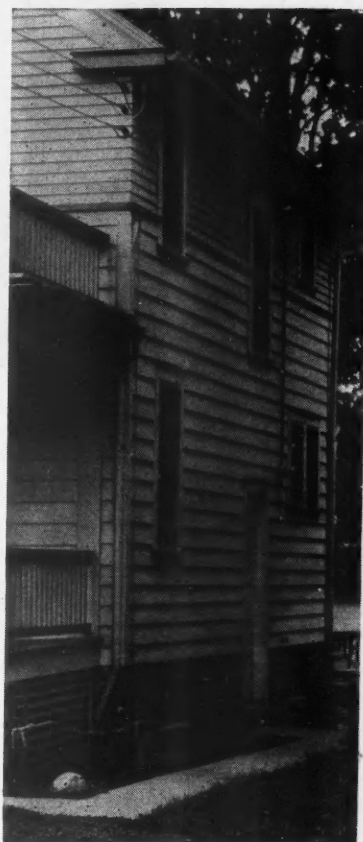
The proper principle on which to wire a house is to bring the main line from the street or alley pole in the most direct possible path to the load center which is now in the kitchen, and to distribute the circuits from that point to the different outlets where it is to be used.

A typical six-room house wired in this manner would be as follows:

1. Service wires to side of house under eaves, then in conduit along outside wall under eaves to a point about four feet above kitchen floor.
2. Meter installed on outside wall.
3. Entrance conduit continues from meter into wall and into load center cabinet.
4. Service wires attached to busses of group of circuit breakers in load center.
5. Ground wire attached to neutral buss and cabinet of load center and continued downward into cellar where it is attached to the water pipe.
6. Branch circuits radiating out from load center as required for range, water heater, appliance branch circuits, and lighting branch circuits.



The proper place for the electric meter is outside the house.



Service wires are brought in at eaves and piped down to load center.

New style load center in the kitchen, very accessible.



Sugar Cannot Be Used in Portland Cement Mortars

THROUGH an Associated Press release, considerable newspaper publicity has recently been given to the increase in tensile strength of lime mortar briquettes by the addition of sugar to the mixing water. The basis for this was a report by Gerald J. Cox and John Metschl, of the Sugar Fellowship, Mellon Institute of Industrial Research, presented at the April (1932) American Chemical Society convention in New Orleans.

The results of tension tests on lime mortar briquettes at the age of six months were reported. A 60 per cent increase was obtained in the tensile strength of lime mortar by means of sugar additions up to 6 per cent, by weight, of the lime putty.

A number of different newspapers have re-written this Associated Press release so that it implies that the addition of sugar to all types of mortars is beneficial. Mr. Cox specifically states, "The description of our work and our recommendations apply only to lime-sand mortar. Our search of the literature has revealed about 70 reports on the effect of the addition of sugar to portland cement. The authors are unanimous in their findings that cane sugar ruins concrete made from portland cement and must not be used."

In view of its recognized harmful effect in portland cement mixtures, the addition of sugar in any quantities to the commonly used portland cement-lime mortars, 1-1-6 and 1-1-4 mixes, should not be attempted.

"Ask Them To Buy"

By WILLIAM S. POWER
Campbell-Ewald Company, Detroit*

THE future holds much of promise for the building industry in all its branches.

New construction, to be sure, is at low ebb. It has been for several years almost at a standstill. Its return is apt to be slow and gradual.

The market for new construction is not a hopeful prospect for the immediate future. But, the same forces that have demoralized the new construction market, have been at work, developing another outlet for building energy, the modernization and remodeling of buildings and homes now in existence.

There are thousands of office buildings, apartments and hotels that need modernizing in order that they may rent more readily, and there are twenty million homes that need things done to them in order to make them more liveable.

And this market, especially the home remodeling and equipment portion of it, is larger and more promising than it ever has been before.

During the hectic days of expansion all the influences were drawing people away from home. Now the reaction has come. The public again has become home-conscious. As some one has said recently, "for the first time in many years, the American people have come back home."

A few years ago we over expanded. We had an epidemic of *house* building. Now we are due for a revival of *home* building.

People today want, not merely a house to sleep in when there is no place else to go, but a home to live in—a home in which to raise a family and cultivate contentment.

And this increased emphasis that is being placed upon home life spells opportunity to every industry and every organization that has something to sell to the home owner.

The public is in a mood to buy anything that will make home more attractive and comfortable.

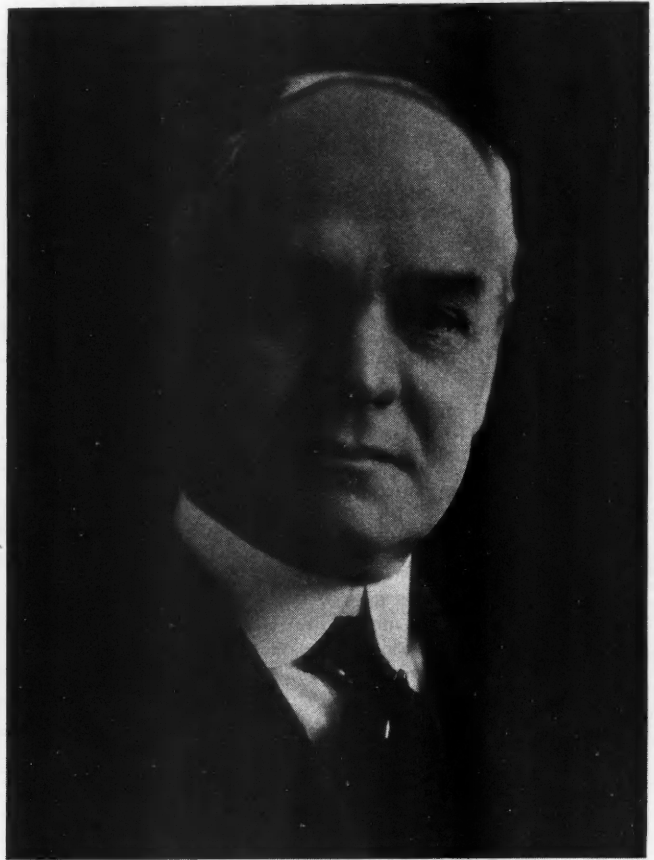
It has two or three billion dollars to spend on remodeling—on new and better heating systems, on plumbing supplies and bathroom equipment—and on the new and greatest of all developments in home comfort, air conditioning.

The market is ample. It is ready. It is waiting to be asked to buy.

That implies a new line of endeavor for the contractor. He must become also a merchandiser. He must sell his product and his service, not merely to the architect and general contractor, but to the individual home owner. He must be satisfied, probably with many small jobs, rather than with a few large contracts, and he must go out and get them.

There never has been a great deal of merchandising in the building industry.

*From an address delivered at the recent convention of the National Association of Heating and Piping Contractors.



Twenty million homes need to be made more livable, says Mr. Powers, and urges contractors to do better selling.

Ask a hundred home owners where they would go, or who they would call if they wanted something done to their heating plant, or were interested in new bathroom equipment, and ninety of them will tell you that they haven't the slightest idea.

The contractor has a distinct service to sell to his community and he should go about the selling of it so aggressively that never again will anyone, in his territory, have to admit that he does not know where to buy the service, or the products that accompany it.

That might mean a modest advertising program in local newspapers to make the name known. It should certainly mean a careful survey of homes in the territory covered and a listing of all possible prospects for repair or modernization work. It should mean the offer of free inspection service to these homes by a competent engineer to determine the condition of heating and plumbing systems and suggest changes that should be made. Direct Mail and telephone should be used liberally to secure requests for free inspection and these should be followed up tactfully and promptly. Practically every heating plant and plumbing system that has been in service two years or more needs something done to it. Most home owners will welcome the offer of a free inspection, if they can be made to feel that it will be honestly done by a competent man.

And that is the opening wedge. The free inspection is the introduction to a new prospect, and if it is done as a service and not as a direct effort to sell something, the inevitable result will be the good will of the home owner and—in a large number of cases a substantial volume of future business.

Making a man feel that you are doing something for him that you don't expect to be paid for is the surest way in the world to make him want to let you do something that you will be paid for.

There has been a lot of grief recently because of price competition, but here is one line of activity in which price competition does not need to figure.

The man whose heating plant is not functioning properly may balk at the price if you try to sell him new equipment, but will cheerfully pay twice as much for the assurance of seventy degrees of properly humidified uniform temperature in every room in his house, regardless of the weather conditions, hot or cold, outside.

That really is what the heating contractor has to sell—not furnaces and piping and radiators—but seventy degrees of uniform, dependable temperature.

And when you sell a man that you lift yourself above price competition—you are selling a service—not a product.

Then—having secured a customer and done a job for him—never let him forget you. Follow up your work. Re-inspect it at frequent intervals. Telephone or write letters to find out if everything is satisfactory. Make the customer feel that your interest really is in providing him with seventy degrees of uniform temperature. And, having sold him uniform heat for the winter months, get really modern and sell him uniform cool-

(Continued to page 46)

Preventing Cracks in New Wood Floors

By L. V. Teesdale, Senior Engineer, Forest Products Laboratory

CRACKS that develop within a few weeks or months in a new, well-laid floor are the result of a change in moisture content within the wood itself. This change in moisture content of the wood may be due to improper preliminary seasoning; improper storage conditions at the mill or retail yard; delivery to the building during wet weather or before the masonry or plaster walls are dry; or it may be due to the absorption of moisture from the air within the building either before or after the flooring is laid.

It sometimes happens that flooring is delivered on a damp day or even during rain, so that more or less moisture has been absorbed by the exposed boards in the bundles and in the ends of the stock. Laid in this condition, the flooring is bound to show gross irregularities in a short time.

Very bad results may also be expected if the flooring is laid or even stored inside the house before the plaster or masonry of the walls has had time to become thoroughly dry.

Where a succession of damp days follows immediately after the floor is laid (Fig. 2, A) and before the finish can be placed upon it, a very important pick-up in moisture content is likely to occur. The pick-up, of course, is very much slower after a floor has received even the first coat of its final finish. Bulging of cer-

tain boards results where they resist one another in the natural tendency to swell. Then some crushing of wood fiber is bound to result from moisture increase in a tightly laid floor. After a board has once been in this compressed condition, it never again completely recovers.

Another cause of cracks in floors, also aggravated by moisture changes, is the use of boards that have considerable crook in them; that is, boards that have bent edgewise. Slight crooking is of relatively little importance; but if the crook is so pronounced that considerable pressure must be applied to drive the board into place, cracks are sure to appear sooner or later. Such pieces should be used only in closets or other places where any cracking would not be important.

In summary: (1) Assure yourself that the dealer has properly protected the stock while it has been in his hands. (2) Do not allow it to be delivered on a damp or rainy day. (3) Make sure that the plaster or masonry walls are dry before the flooring is delivered. (4) Eliminate all badly crooked boards or use them in inconspicuous places. (5) Maintain heat in the house from the time the flooring is delivered until finished by the painter. The house interior should be maintained at least 15 degrees F. above outdoor temperature and should not be allowed to cool below, say 70 degrees during the summer or 62 degrees to 65 degrees when the outdoor temperatures are below freezing.



Figure 1—Results of moisture absorption when floor was newly laid. An even temperature of 70 degrees would have prevented cracks.

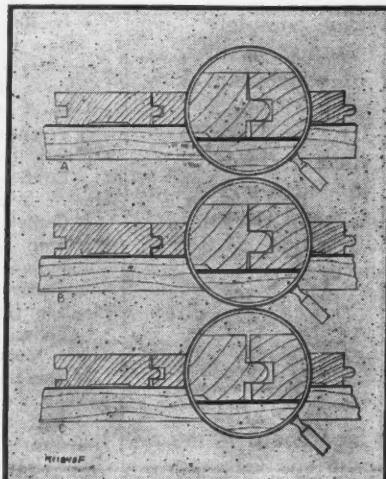
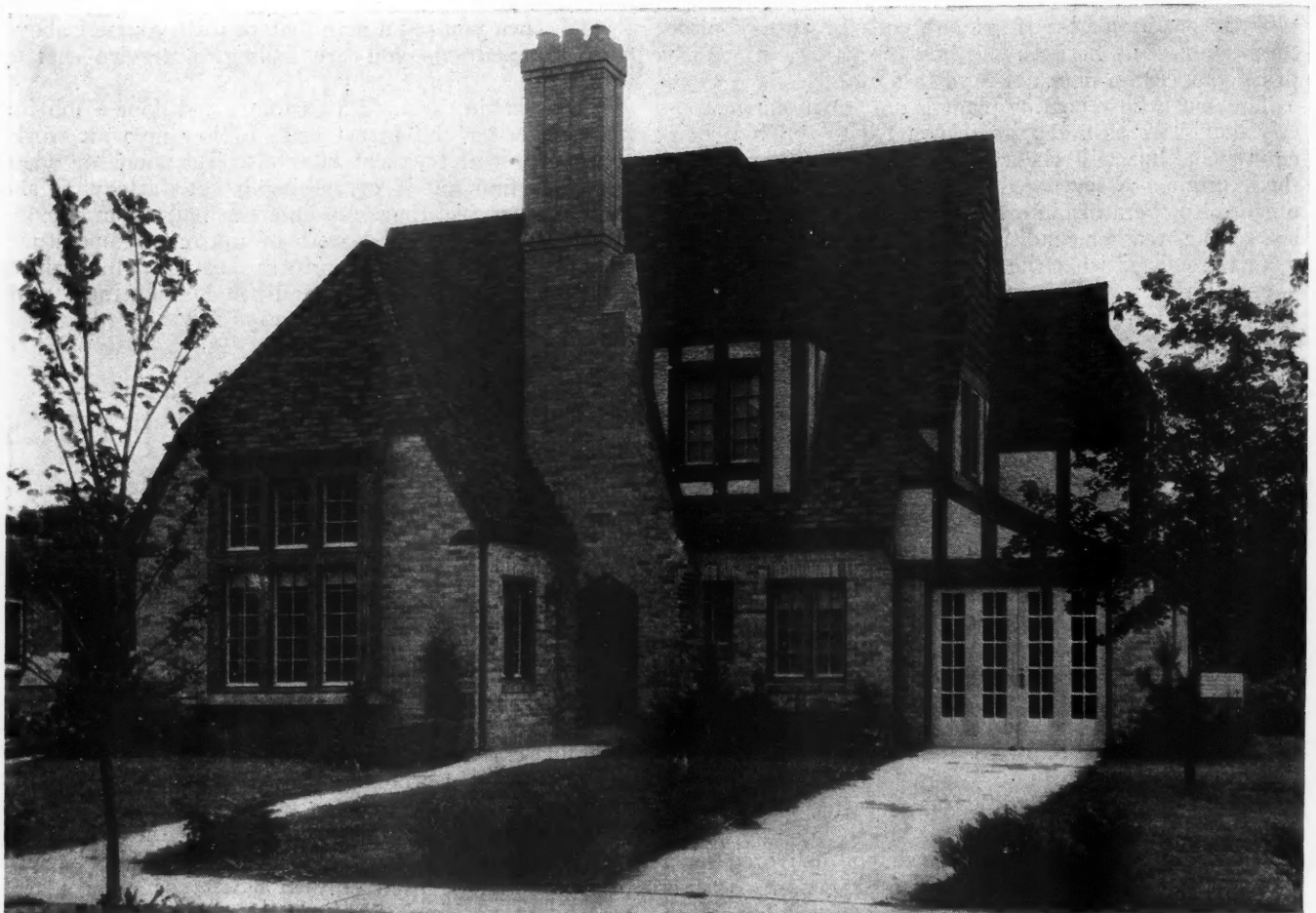


Figure 2—A, flooring when laid; B, flooring after it absorbed moisture; C, permanent crack after flooring dried out.



Figure 3—Crack resulting from use of a crooked board that was forced into place. Such pieces should not be used.

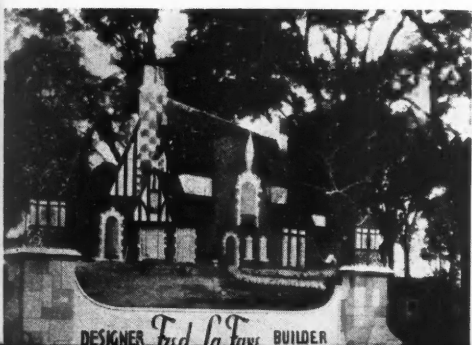


THE HOUSE OF THE MONTH

Cost Key 2.590-187-1200-51-30-29

Sturdy English Cottage Design Perfected by
Fred La Fave, Builder and Merchant of Fine
Homes, Elmhurst, Illinois

MANY of the better homes have a dual authorship in that they are designed on the drafting board by one skilled workman, the architect, and then created in actuality on the building site by another skilled workman, the builder. The best results are usually attained when these two work together in harmony and complete understanding. Occasionally we find an instance, as in the house illustrated here, of that unity of conception and execution which comes when a good architect becomes an actual builder or, as with Mr. La Fave, when an experienced builder is also an expert architectural designer. In this house you will find sturdiness of construction cloaking graceful design, and those features of arrangement and equipment which Mr. La Fave, the business man, has found to have the proper sales appeal.



A Striking Sign-Board in the form of House and Grounds (about one-fourth life size) displayed near Mr. La Fave's Development.

COST OF LABOR AND MATERIALS

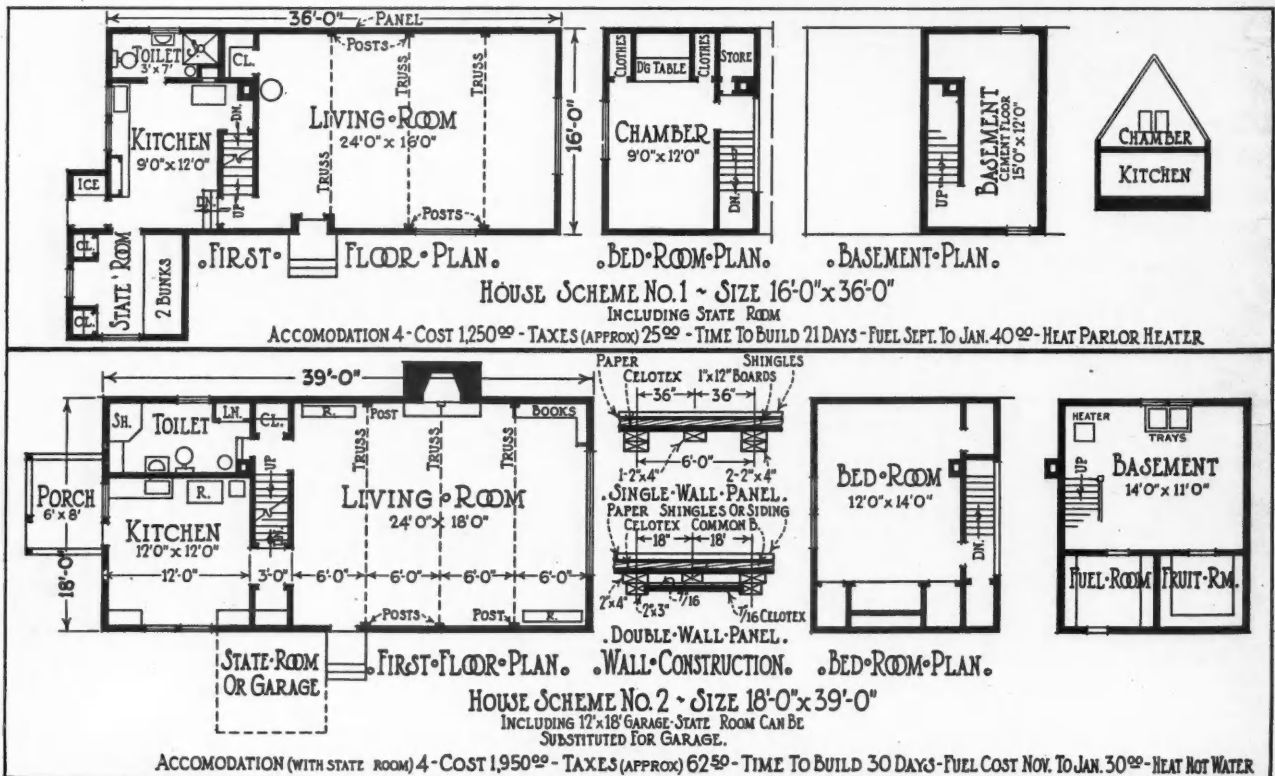
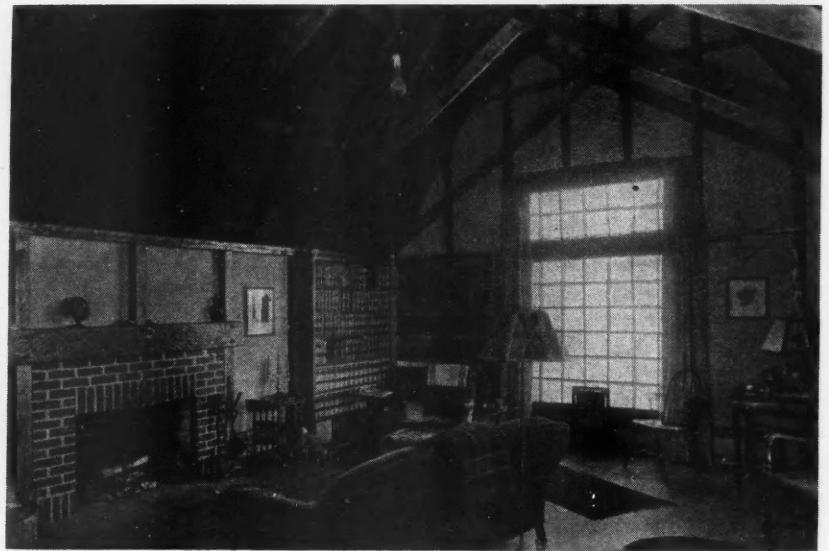
Excavation	\$ 170.00
1538 sq. ft.—342 sq. yds. Gen. earth, piers, trench and back filling.	
Cement and Masonry (Labor only).....	2,500.00
Footings, poured walls, steps, porch slabs, window area-ways.	
Carpentry (Labor)	2,000.00
Lumber and Masonry Materials.....	2,780.00
Steel beams, lintels, flooring, framing and grounds, sheathing, timbers, cement, sand.	
Millwork (Material)	1,260.00
Exterior trims, doors, sash, door frames, stairway.	
Electric Work (Material and labor).....	185.00
Outlets, plates, etc.	
Plumbing (Material and labor).....	825.00
Piping, fittings, fixtures, water and sewer connections, etc.	
Heating (Material and labor).....	1,050.00
Boiler, piping and radiation.	
Sheet Metal and Gutters.....	200.00
Sheet metal and gutters.	
Lathing and Plastering.....	825.00
Stucco on wire, 3 coat plaster, corner bead.	
Tile Work	588.00
Mosaic tile walls, 2 bath, 5'6, floors and accessories, kitchen walls 5'6, lavatory base and floor and vestibule floor, mantel.	
Painting (Material and labor).....	715.00
Hardware, rough and finish.....	190.00
Medicine Cabinet (3).....	48.00
Total	\$13,326.00

Attractive Insulated Homes for \$1,239 and \$1,950

Arnott Woodroffe, Architect

A DEQUATE shelter—an attractive, well-insulated home on a good lot—for less than \$3,000 has been achieved by a West Coast architect in two structures of similar design, but of somewhat different dimensions and construction, recently built at Walla Walla, Wash. Arnott Woodroffe, the designer, had the first built for his own use at a cost of \$1,239; it turned out so successfully that a friend asked him to design one slightly larger, this one costing \$1,950. Floor plans of the two are shown below while the photos to right are of the larger home.

The method of single-wall construction used in both houses is illustrated in the small sketch which appears in connection with the plans. The framing was of 2x4-inch studding, laid flat to the wall, on 3-inch centers, alternate living room studs being doubled as support for the roof trusses. On this framing there was laid first a sheathing of insulation board, then building paper, 1x12-inch boards, and, finally, the shingles. The living room ceiling is the under side of the roof of the house itself; trusses and rafters exposed. As this room is carpeted, it has only a single floor. The sash, screen doors, work table for kitchen, china closet and mouldings were the only stock millwork used, doors and frames being made on the job.



The carpenter labor, Mr. Woodroofe says, was let to two good mechanics for a flat sum of \$225. This method of construction was novel to the men, and they did not adjust themselves to it readily. Mr. Woodroofe thinks the men would have made union scale on the job if they had understood it better. The home was completed, ready for occupancy, in four weeks, but Mr. Woodroofe thinks that, under mass production methods, it could be erected in one week.

For those who want it, there is shown with the plan a small sketch of double-wall construction. Studs are alternately 2x4-inch and 2x3-inch flat to wall, on 18-inch centers, and the extra studs supporting roof trusses are 2x3's. This method gives an extra sheet of insulation and a smoother wall.

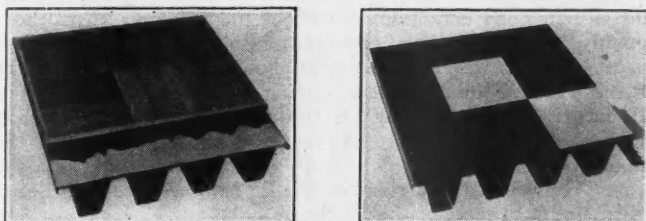
Bill of Material Used in \$1,239.00 Home

<p>BASEMENT AND CHIMNEY— 11 bbls. Cement. 9 yds. Gravel 5 yds. Sand 1000 Common Brick No. 1 COMMON FRAMING— 3 pcs. 4x6" 18' Girder 1 pc. 4x6" 12' Posts 120 lin. 2x4" Mud Sill 27 pcs. 2x8" 16' Joists 80 pcs. 2x4" 8' Studs 208 lin. 2x4" Plates 12 pcs. 2x4" 12' Gable Studs 44 pcs. 2x4" 14' Rafters 6 pcs. 2x6" 14' Scissors 8 pcs. 2x4" 12' Extra Studs 3 pcs. 2x4" 8' Collars 2 pcs. 2x6" 16' Ties 216 lin. 2x4" Purlins 20 pcs. 2x4" 10' Porch Framing 2 pcs. 2x12" 16' Stair Horses 48 lin. 2x4" Girt CELOTEX— 56 pcs. 36x100" 7/16" Walls 6 pcs. 36x96" 7/16" Bedroom Floor 20 pcs. 36x84" 7/16" Gables 63 pcs. 48x48" 1" Roof SHEATHING AND FLOORING— 2250 ft. 1x12" C. B. Wall and Roof Sheeting 19 M Extra Clear Shingles, Walls and Roof 820 ft. 1x4" No. 2 V. G. Fir Flooring DOOR AND FRAME MATERIAL— 150 lin. 1x4" Clear Fir Door Braces 200 ft. 1x6" V Ceiling, Door Material 250 lin. 2x4" Rabbetted and Grooved Window and Door Jamb PLUMBING—1 Toilet, 1 Shower, 1 Washbowl, 2 Lawn Sprinkler Sill Cocks</p>	<p>MILLWORK— 4 9-light Sash, 30½x47¾x1¾ 2 9-light Sash, 27¾x32½x1¾ 1 9-light Sash, 70½x20¾x1¾ 2 24-light Sash, 70½x65½ 1 3-light Cellar Sash, 9x12 2 Screen Doors, 3/0 6/0x1½ Plain Screen wire for first 3 Sash items 12 rolls 20-lb. Paper, Red Rosin Sized 2 Oak Thresholds SHEET METAL—1 Shower Enclosure, 2 Thimbles, 1 Flue Cleanout, Flashing for Chimneys. HARDWARE—All T-Hinges, Thumb Latches and Bolts for Inside Door; Yale Lock for Front Door; Loose- pin Butts and Catches for Case- ment. PAINT—All interior framing stained Asphaltum and boiled linseed oil; roof shingles left natural; wall shingles to get two coats of white lead and oil; Celotex left natural WIRING—According to code—6 con- venience outlets only in living room; 1 porch light, and 1 switch- controlled outlet in all other rooms</p> <p>Summary of Material-Labor Costs Excavation\$ 15.00 Foundation, including floors 125.00 Lumber, Celotex and sash.. 430.00 Carpenter labor 225.00 Plumbing 165.00 Painting 50.00 Electric work 50.00 Tinner and sheet metal.... 25.00 Hardware 26.00 Cabinets 35.00 Chimney 27.00 Water connection 14.00 Building permit 2.50 Architect's fees 50.00</p>
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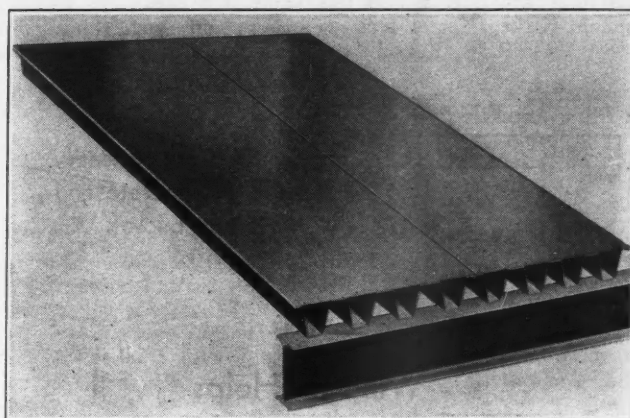
\$1,239.50

New Keystone Steel Floor

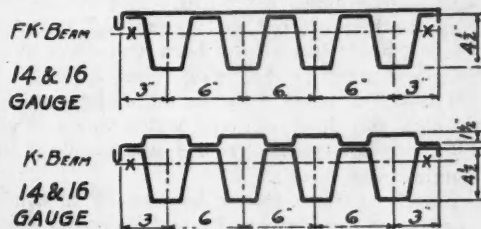
AN investigation carried out co-operatively by Mellon Institute of Industrial Research and the H. H. Robertson Co., of Pittsburgh, Pa., has created a new steel floor slab, called the Keystone-Beam Steel Floor. The units are 24 inches wide and up to 12 feet 5 inches in length, fabricated by preforming two steel sheets and welding them together in the plane above the neutral axis. A cross-section shows four keystone-shaped cells, all connected together near the neutral axis. This design is said to provide maximum load-carrying efficiency of the metal. It is reported that the high strength factors, combined with the relatively low weight per square foot, make possible savings in building construction. The four ducts that constitute each unit are spaced at six-



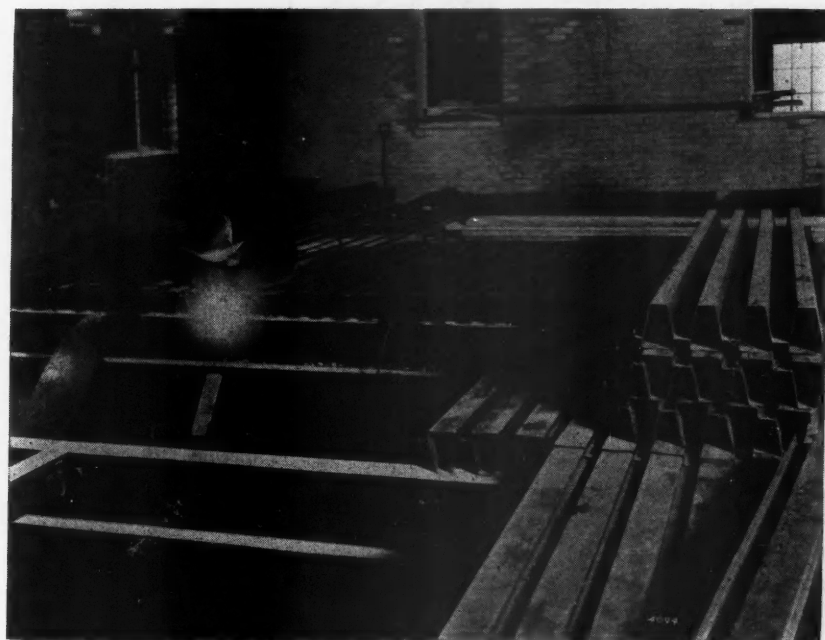
To Left—Cellized Wood; to Right—Mastic Tile Floor Finish Applied to Steel Flooring.



FK-Type Steel Floor Slab.



Dimension Details of New Steel Flooring.



Process of Welding Keystone Floor Units to Structural Cross-members.

inch intervals and connect directly, when installed, with the corresponding ducts of the adjacent section of floor slab. This arrangement enables the utilization of this new floor as a multiple floor-duct system for handling all types of electrical lines.

The keystone slab can be installed with ease and rapidity, since it may be handled as readily as a large plank. This 24-in. slab is laid across the structural beams and then bolted, clipped, or welded to the supporting members, thus eliminating planking and form work.

PRACTICAL JOB POINTERS

A reader's exchange of tested ideas and methods, taken from their own building experience. Two dollars will be paid for each contribution published.

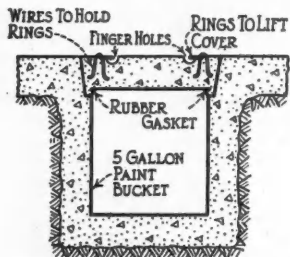
Cheap Fireproof Vault

A GOOD receptacle for silver or valuable papers, which might be lost in case of fire, can be built into a home at little cost. Here is my method.

Get a five gallon paint bucket with the rubber gasket on the lid still in good condition. Burn out the paint, or clean thoroughly, remove the bale, and paint inside, say with aluminum paint. Bury in waterproof cement about 3" under the basement floor. Have a tinner make a sloping collar 4" high and about 1" larger than the bucket on the small end. Set this collar with the small end down, around the bucket flush with the floor. Grease on the inside and fill with concrete to make a top cover. Imbed two iron rings in this lid held in place with heavy wires in the concrete. Leave finger holes so the rings can be raised for lifting off the concrete cover lid. This concrete cover must rest tight on the bucket lid to hold it damp proof.

If located where it can be hidden with say a basket or rug, no thief would ever find this vault. Of course its existence should be kept secret from neighbors and small children.

R. R. FLING, 1435 E. 20th Ave., Columbus, Ohio.



Fire-proof vault easily made of concrete and 5-gal. bucket.

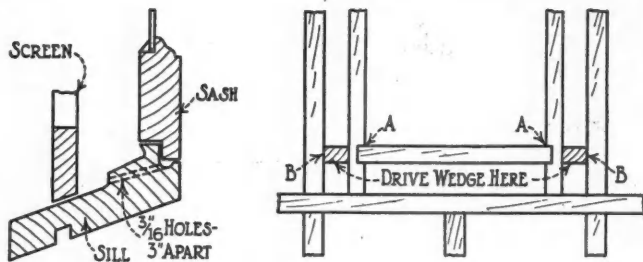
Window Helps

WE often see details of casement windows that swing out. I don't believe many builders experience any difficulty with out-swinging casements. The "swing-in" casements are very much preferred on account of outside storm-sash and screens, but it has always been a problem to make them water tight and stand hard driving rains.

The sketch below features more slope on sills, and the holes through sill, drain out any water which might come through. This sill can be run on a 4-side moulder in one operation, running face down.

Sketch at right shows how to fix a window frame so as to make it water tight. Point "A" shows the joint that causes so much leakage, and they don't know where it comes from. This joint sometimes opens up when nailing on window stop. We simply drive a block that is slightly wedged at point "B." We also set our window stool in white lead.

AUGUST WESSLIN, Barron, Wis.



To make windows water tight.

To Make Brass Pipe Leakless

OCASIONALLY I find a pipe fitter who claims that he does "superior" work and so does not lamp-wick his brass threads. In my opinion he will have trouble with leaks where the fitter who does wick his threads will not have trouble, other conditions being the same.

During the past two years considerable research work has been done on lamp wicking and real strides have been made in the manufacture of the product. As a result all of the better piping contractors I know are using lamp wick on brass pipes.

The pipe fitter who does not use wicking usually uses a "dope," or compound. It is much quicker to simply apply compound and make up a joint than it is to apply both wicking and compound. The fitter who uses wicking usually also uses compound and does not use wicking only. He uses wicking and compound because he wants to make the best joints that can be made.

Less time is required to wick iron pipes than is required to retrace threads with new taps and dies to insure a tight fit. In order to make sure some pipe fitters retrace with new taps and dies and in addition use lamp wicking and compound.

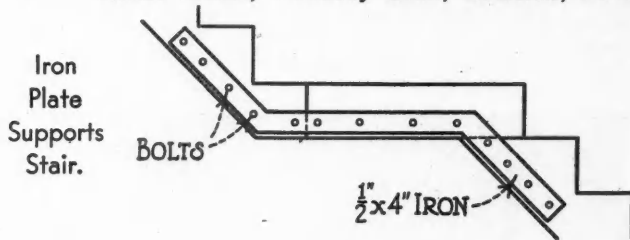
Carelessness is the principal cause of leaks. The entire burden of keeping joints tight is placed on joint compound, perfect cutting dies, and brute tightening force. I will admit that there was a time, and not so long ago either, when I believed that the pipe fitter who used lamp wicking was a "sloppy" mechanic. I thought that the use of wicking was comparable to stuffing an old pillow into a broken window for prevention of leaks. But I was wrong and have changed my mind in spite of the recent statement by Henry L. Mencken who said: "When a man tells me that anything I have written has caused him to change his mind I put him down for an ass." I have changed my mind a number of times and this was one of them.

W. E. SCHAPHORST, Newark, N. J.

Supports Stair Platform

ALTHOUGH I have been a subscriber to your publication for many years I do not remember of ever seeing illustrated a method of supporting the platform of a straight flight of stairs as shown in my sketch without extending platform posts to the floor below. Supporting the platform as I show it will be satisfactory. This piece of flat iron may be either bolted or screwed, and one piece to each stringer is required.

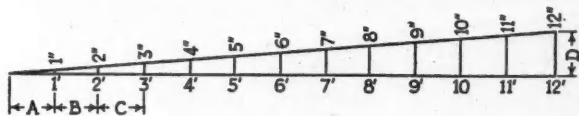
ROMEO LAROSE, 4 Bradley Court, Rochester, N. H.



Simple Drawing Scale

THE accompanying sketch shows a good substitute for an architectural drawing scale. It is a very satisfactory tool for a person drawing at home who does not possess a scale of this kind. Spaces A, B, C, D, etc., may be 1/4 in., 1/2 in., 3/8 in., or any other scale (to the foot) which the draftsman wishes to use. All inches from one to twelve and feet up to twelve feet may be found on this scale. Dimensions are transferred from these spaces to the drawing with the dividers. If half inches or quarter inches are wanted, spaces B and C, D, etc., should be doubled or quadrupled in number.

H. W. BOEKELOO, Kalamazoo, Mich.



Handy improvised scale for reading architectural drawings.

What's New In Building Products

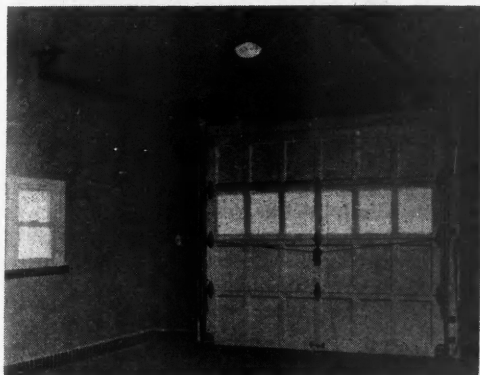
For further data about any of these items write American Builder Information Exchange, 105 West Adams Street, Chicago.

NEW MODERNIZING SIDING—One of the most interesting of newly announced building products is a brick siding made of asbestos and cement, which is offered as a side wall material for new or modernizing work. The siding material is made in rigid sheets of cement and asbestos, colored and textured like wire-cut brick. It is rigid, fireproof and easy to apply.

For remodeling purposes, this new material has many possibilities. It can be applied over old siding, stucco or other types of construction. The cost is low; it is available in many colors and patterns.

IMPROVED GARAGE DOOR—An upward-acting, sectional, overhead type door which is said to combine in itself perfect balancing, easy operation, positive closing, and strong construction—all desirable features from the point of view of the person investigating doors of this type—has been put on the market recently.

The special features of the new door include the following: The vertical track has a short sloping section near the floor to carry the bottom roller only, the other rollers being moved to position by the usual swinging hinge plates. A new ball-bearing roller is used which is simpler and is specially made to stand a great deal of abuse. Wood sections are made of 1¾-inch Western Pine stiles and rails and 3 ply Fir panels. Stock door sizes are 8'-0" by 7'-0", 8'-0" by 7'-6", 8'-0" by 8'-0", and 8'-0" by 10'-0". New bolt strikes on the locking device are used which can be adjusted to meet any changes in the floor level.



Strong construction, ease of operation, balance, and positive action are features of this new garage door

ASBESTOS CEMENT SHINGLE—For modernizing as well as new work, a permanent firesafe asbestos cement shingle has been developed that has architectural charm, rugged texture and mellowed colors. It is made of the best grade of portland cement reinforced with prepared asbestos fibers. Colors are mineral oxide. Because it is made of indestructible materials, it is itself fireproof and permanent. These shingles have a rugged, rock-like texture and a soft color that resembles natural rock. The shingles are tapered with a heavy butt that gives a desirable shadow effect. They are light weight, low in cost and easy to apply.

STOVE-REFRIGERATOR FOR MODERNIZING—A combination refrigerator and range designed for apartment house kitchens is a practical new product of interest to builders. This combination has been designed to appeal particularly to owners and operators who are confronted with a modernization problem.

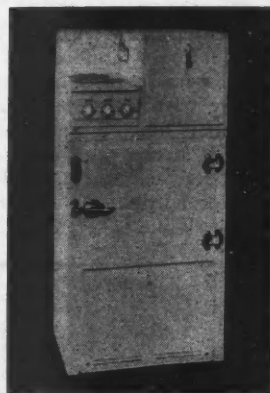
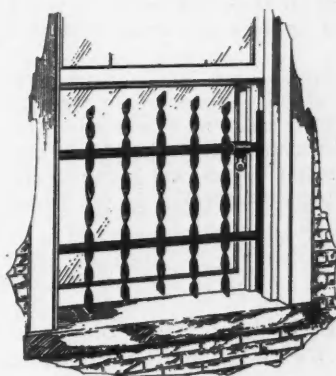
"While most of the newer apartment houses today have electric refrigeration, many of them do not provide the advantages of cooking by electricity," the manufacturer remarks. "Obviously the owner of an older structure wants to offer a few extra inducements to tenants, in order to compete on a stronger basis. A combination refrigerator and range makes an ideal feature."



Applying the new brick siding made of asbestos and cement to an old structure

This particular combination has been designed to afford the maximum cooking capacity and the maximum refrigeration capacity that can be provided in the amount of floor and room space occupied.

Over-all dimensions of the refrigerator-range combination are: height, 52½ inches; width, 26½ inches. Cooking top to floor, 44½ inches; width, 26½ inches and depth (including two inches for ventilation), 25½ inches.



At left is a new window guard; at right is an interesting combination stove and refrigerator

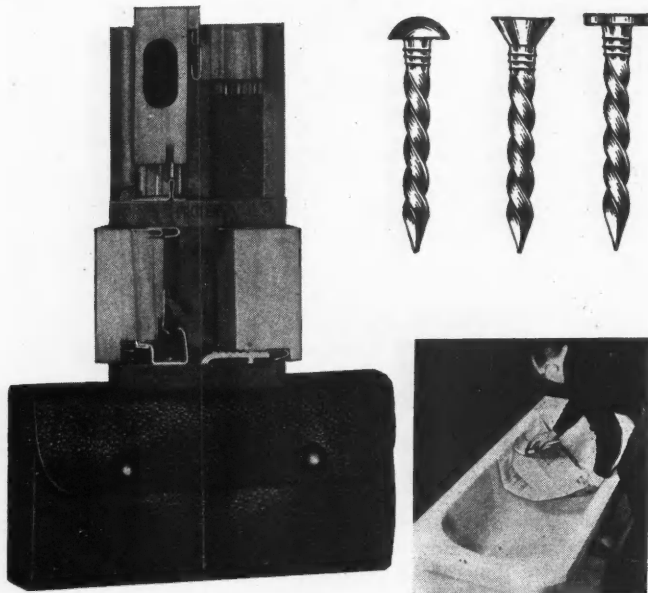
WINDOW GUARD—The slide adjusting bars on the ends of the window guard shown fit tightly against the window facings between the stops and are held securely by being locked with a key. The guard is placed directly below the upper window sash permitting the upper window to be lowered a few inches for ventilation, but interfering in no way with the operation of the lower sash. It assures perfect ventilation at all times with positive protection.

This guard does away with all bolts, screws, nails or rivets, does not damage woodwork or paint and cannot be removed until unlocked with the key. It is made of steel and electrically welded.

More Products For Better Buildings

WEATHER STRIP DEMONSTRATOR—Contractors will appreciate this entirely new, novel combination weather strip model, with which they can quickly demonstrate practical methods of weather stripping double hung windows, casement windows and doors. This model is so compact it fits into a coat pocket.

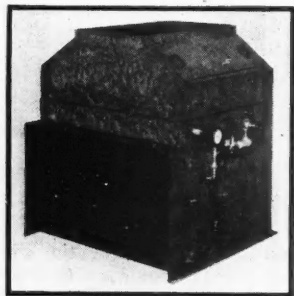
Weather stripping of office buildings, homes and apartments has become a necessity in most sections of America. Tenants demand this important improvement on windows and doors, to keep out not only cold drafts but also dust and rain, which so often leak in through loose fitting windows, soiling wall paper, along the sides of window mouldings and underneath the sills. This model will be a needed sales help.



The weather strip demonstrator shown above at left is so small it fits into a coat pocket—yet it is a big sales help

SPIRAL NAIL—A new heavy duty nail which makes a satisfactory wood to steel, steel to steel and wood to wood attachment and will not loosen or back out under vibration has just been announced.

It is made from a special composition high carbon steel square wire twisted into a spiral coil. When driven through a drilled hole, it automatically threads itself into the steel as it is driven and makes a permanent attachment. It also can be driven through sheet metal up to twelve gauge and heavier without the use of a punch according to the gauge of the nail.



This combination of fan, air washer and filter is enclosed in a single casing suitable for use with any warm air furnace

AIR CONDITIONING—A well known furnace company has just announced the addition of a new product to its line of air conditioning equipment. This unit consists of a combination of fan, air washer and filter, enclosed in a single, compact casing, suitable for use with any type warm air furnace, with either new installations or for addition to existing gravity jobs, to provide complete air conditioning

facilities. It has been designed to meet the need for a complete unit which can be quickly and easily installed, and of such dimensions that it may be taken through a 2'6" door.

A large diameter fan, of improved design, has secured performance which permits the use of efficient filters and washer, and the connection of complete recirculating ducts. The fan delivers the requisite volume of air against the resistance necessary to secure an efficient, balanced installation.

Simplicity of design and manufacturing economies have resulted in a thoroughly high-class unit available at reasonable cost to home owners.

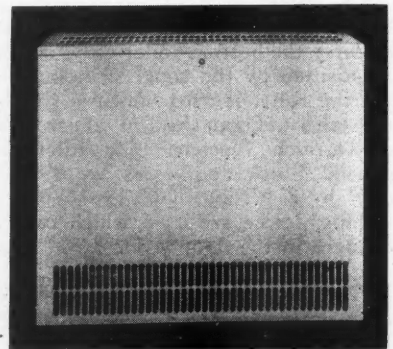
COMBINATION HEATING AND COOLING UNIT—

A large manufacturer of heating and air conditioning equipment has recently announced a new combination heating and comfort cooling cabinet, using either water, brine or direct expansion gases as refrigerants. Where city or main water of sufficiently low temperatures is available, the unit is connected directly to the main for summer cooling. Where water is too warm, it is either cooled by the application of ice or direct expansion refrigerant. On the latter type of unit, direct expansion refrigerants may also be used in the coil on small building or suite cooling installations.

Three types of units are available—the cabinet type as illustrated, a suspended type with a propeller type fan for factory or industrial cooling, and a blower type unit for large installations in which the cooled conditioned air is carried from the unit to various rooms by means of ducts.

The spiral nails at left hold well in concrete, brick or metal. How enamel of bathtubs is protected is shown at left below

The combination heating and cooling unit at right is another worthwhile addition to home comfort



PROTECTS BATHTUBS—A new powder paste that will not etch or injure the high glaze of enamel and will protect bathtubs and other equipment from mars and scratches while building is under way, has been developed. Using this paste and several thicknesses of ordinary newspapers, it is possible to produce a tough, hard covering that will withstand all common abuses. To remove, soaking with water loosens the paste, so the paper may be readily peeled off.

LOW PRICE METAL SINK—This new sink is produced in six models and four sizes and will sell at retail at very low cost. Sinks are of solid monel metal, will have straight lines and will be sound deadened. They are stain resisting.

In addition, the new metal sink has been provided with adjustable aprons and back splashes that fit it for use as a self-supporting fixture or as a cabinet sink.

This new straight line, all metal sink is scientifically designed for long use. It is stain resisting and low in cost



NEWS — building activities of the month

Home Loan Bill Passes House

THE Home Loan Bank Bill which has been watched with such interest by the entire construction industry was passed by the House of Representatives on June 15. The day before, a similar bill was favorably reported by the Committee on Banking and Currency of the Senate. It is predicted that the measure will be passed by the Senate and enacted into law by the time this issue of AMERICAN BUILDER AND BUILDING AGE reaches its readers.

Two major amendments were injected into the measure before passage by the House. The more important of these eliminates from the institutions which may participate in the proposed system trust companies, insurance companies, state banks and other banking institutions.

Membership is thus restricted to building and loan associations, savings and loan associations, co-operative banks, homestead associations, and savings banks.

The other major amendment reads: "No institution shall be admitted to or retained in membership or granted the privileges of non-member borrowers if the combined total of the amounts paid to it for interest, commission, bonus, discount, premium and other similar charges, less a proper deduction for all dividends, refunds and cash credits of all kinds, creates an actual net cost to the home owner in excess of the maximum legal rate of interest (regardless of any exemption from usury laws) in the state where such property is located."

Wide benefits to the building industry, as well as to business of the nation as a whole, are predicted from the bill. The chief purposes summarized by its sponsors are:

- (1) To refinance existing mortgages to permit smaller payments and accommodate the needs of withdrawing members and depositors.
- (2) To give home financing institutions funds, permitting them to carry along with the borrowers having difficulties in meeting interest or installment payments.
- (3) To assist borrowers in paying taxes and insurance costs, which it is contemplated would be maintained regardless of conditions.
- (4) To provide funds for modernization, repairs and maintenance of existing homes, thus increasing employment.
- (5) To provide a source of funds to refinance thousands of short-time mortgages which have been called for payment because of bank failures, and due to like financial institutions converting their resources into liquid funds.
- (6) To help the building of small homes now and stabilize their financing in the future.

Average Cost in U. S.	Frame	Brick Wood Frame	Brick Steel Frame	Reinforced Concrete	District	Type of Construction	1932 April	1932 March	1931 April		
1913 monthly average...	100.0	100.0	100.0	100.0	Pittsburgh District	Frame	151	152	170		
1914 monthly average...	96.7	100.4	97.6	98.2		Brick, Wood Frame	166	168	196		
1915 monthly average...	96.5	102.9	101.1	101.7		Brick, Steel Frame	156	157	178		
1916 monthly average...	109.3	114.2	121.6	119.6		Reinforced Concrete	159	160	183		
1917 monthly average...	133.7	139.5	155.1	147.4		Central Western States	Frame	147	148	172	
1918 monthly average...	164.3	171.4	179.3	171.4			Brick, Wood Frame	162	164	189	
1919 monthly average...	212.1	218.7	209.2	209.7			Brick, Steel Frame	153	154	174	
1920 monthly average...	268.7	283.5	256.7	264.4			Reinforced Concrete	153	154	180	
1921 monthly average...	195.9	215.7	201.2	207.4			Northwestern States	Frame	140	141	159
1922 monthly average...	189.6	195.8	184.7	187.6				Brick, Wood Frame	150	151	172
1923 monthly average...	208.9	216.9	212.1	209.6		Brick, Steel Frame		146	147	162	
1924 monthly average...	204.8	217.9	210.1	205.8		Reinforced Concrete	148	148	163		
1925 monthly average...	202.0	210.2	201.7	199.9	Southeastern States	Frame	138	140	165		
1926 monthly average...	203.8	212.9	198.7	200.8		Brick, Wood Frame	156	158	184		
1927 monthly average...	204.3	213.7	199.6	200.0		Brick, Steel Frame	144	145	166		
1928 monthly average...	203.5	212.6	197.3	200.3		Reinforced Concrete	140	141	166		
1929 monthly average...	204.3	213.6	197.3	201.0		Texas	Frame	144	145	164	
1930 monthly average...	195.4	208.1	191.0	196.8			Brick, Wood Frame	155	156	179	
1931 monthly average...	165.6	180.1	167.5	169.6	Brick, Steel Frame		147	147	164		
					Reinforced Concrete	145	146	164			
					Pacific Coast States	Frame	136	138	163		
						Brick, Wood Frame	144	145	164		
						Brick, Steel Frame	144	146	162		
					Reinforced Concrete	144	145	160			
					Average of Nine Districts	Frame	148	150	172		
						Brick, Wood Frame	162	164	186		
						Brick, Steel Frame	153	154	172		
					Reinforced Concrete	154	155	175			

Building Leaders Organize to Help Industry

AS a result of meetings held during the past month in New York and Chicago, attended by leading manufacturers and producers of the building industry, a definite organization of national character to represent the entire home building industry is being formed.

The immediate purpose of the organization will be to direct and promote modernization on a large national scale. However, the organization will do more than this as it is expected to bring together all home building interests which will bring about unity of action on the numerous problems that beset the industry.

The movement to form a permanent, all-inclusive building industry organization of national scope got under way early in April this year under the leadership of Bernard L. Johnson, editor of the AMERICAN BUILDER AND BUILDING AGE. A. J. Hager, president of the National Retail Lumber Dealers Association, L. R. Putman of the Southern Pine Association, and a number of others who realized the need for a unifying national group to promote modernizing.

A preliminary meeting of prominent manufacturers, dealers and building industry editors was held May 26. As a result of this meeting, co-operation of the President's Conference Committee on Home Modernizing under the direction of Frederick M. Feiker was secured, and two future gatherings were scheduled.

An eastern group met at New York on May 26 which was followed by a large and successful meeting in Chicago

June 1, attended by many of the representative leaders of the building industry.

Universal sentiment of both sessions favored the idea of organizing to conduct an aggressive, nation-wide home repair and modernizing campaign. A budget of \$100,000 was proposed to start the drive.

Appoint Strong Committee

Bernard L. Johnson was chairman of the nominating committee appointed at the Chicago meeting, presided over by Frederick M. Feiker, to select the personnel of an organizing group to raise funds and get the movement under way. Members of the organizing committee include the following prominent men of the building industry.

Gerard Swope, President, General Electric Co.

Clarence Wooley, Chairman, American Radiator & Standard Sanitary Mfg. Co.

Lewis H. Brown, President, Johns-Manville Corp.

B. F. Affleck, President, Universal Atlas Cement Co.

Walter Kohler, President, The Kohler Co.

Ernest T. Trigg, President, John Lucas & Co.

William Schlake, President, Illinois Brick Co., and the Common Brick Assn.

J. P. Gillies, Vice-President, Masonite Corp.

J. P. McKinney, President, McKinney Mfg. Co.

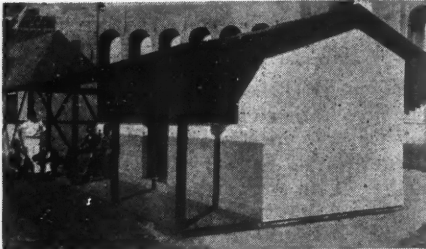
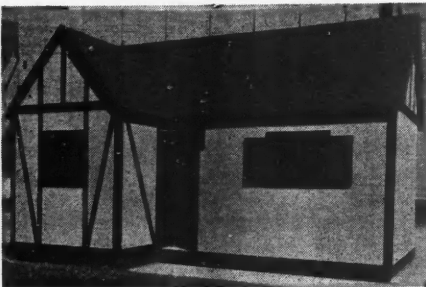
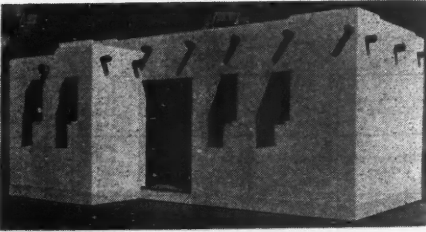
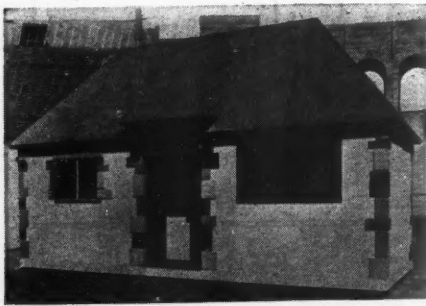
C. C. Shepard, President, Southern Pine Assn.

G. L. Curtis, President, Curtis Cos.

A. J. Hager, President, National Retail Lumber Dealers Assn.

Arthur M. East, Secretary of Committee.

F. M. Feiker, U. S. Dept. of Commerce.



550 Cottages Built to House Athletes

ILLUSTRATED above are the four representative types of cottages built to house the 2,000 athletes from 50 nations who are gathering in Los Angeles for the Olympic Games to start July 30.

House types, from top to bottom, are Norman French, pueblo, English and Mexican farm house types.

Five hundred cottages are grouped on a site within ten minutes' ride of the Olympic Stadium. Each cottage will house two male athletes. Structural insulating board is used, and cottages were produced at a low cost through mass production method.

Radio City to Use New Silencing Device

THE new sound-proofing and air-filtering device known as the Maxim-Campbell silencer and air filter, will be installed in the office buildings now being erected in Radio City, New York. The office and amusement center of this famous Rockefeller development will be the first building to receive the devices,

which prevent noise from entering open windows but permit the entrance of outside air under forced draught. At the same time the device filters the air, removing 97% of the dust and dirt.

Model Homes Show

THE World's Fair will demonstrate a number of model homes, erected by manufacturers of various types of building materials, it was recently announced. Each home will demonstrate the use of a different building material, and solve some particular modern housing problem.

Brick That Floats

A BRICK that floats upon water but which is strong enough to support its weight if built into a tower higher than the Empire State Building was recently exhibited at New York. Its weight is one-fifth that of ordinary brick. It is said to be high in heat-insulating quality, porous yet resistant to the entrance of water.

Armstrong Introduces a Line of Rubber Tile

RUBBER tile has been added to the line of floors offered by the Armstrong Cork Company, Lancaster, Pa. This addition rounds out a complete line of resilient floor materials and is available in twenty-one colors.

Current Construction Figures

BUILDING permits issued in 352 cities having population of 25,000 or over during the month of May totaled \$67,501,025, which was an increase of 24 per cent over April.

Since permits in May ordinarily are less than in April, this is an encouraging sign, but it is offset by the fact that the May total is 48.9 per cent less than for the same month last year.

Families provided for in new dwellings during the month totaled 2,696 at a cost of \$10,240,468. Value of new nonresidential work totaled \$47,127,136 and additions, alterations and repairs were \$10,133,421.

The U. S. Department of Labor index of wholesale prices on June 11 showed cost of building materials to be 71.0 based on prices in 1926 as 100. Average price of all commodities was 63.8, farm products 45.8 and textile products 54.3.

The increase in total permits for May over April was caused largely by an increase in public works. New residential construction declined 18.6 per cent.

Various agencies of the U. S. Government awarded contracts during May for buildings to cost \$29,241,856. This valuation was more than twice that for April and is responsible for the increase in public works figures.

Senate Passes 2 Billion Dollar Public Works Bill

THE Wagner federal loan and construction bill providing for public works and aid for the jobless was passed by the Senate on June 23, and indications were that either this or a compromise measure would receive favorable action in the House within a few days.

As finally approved by the Senate the bill provides \$500,000,000 for federal construction projects to be undertaken immediately. Of still larger significance to the building industry is the authorization given to the Reconstruction Finance Corporation to loan up to \$1,500,000,000 to states, cities and private industry for self-liquidating construction works such as bridges, tunnels, water works, docks, viaducts and canals.

A total of \$2,000,000,000 is thus made available for construction activities during the coming year which, the sponsors claim, will not only be a great stimulus to the building industry but will reduce unemployment and increase activity in industries supplying products and equipment for construction work.

As its chief feature, the bill provides that the Reconstruction Finance Corporation may issue additional bonds in an additional sum of one billion, 460 million dollars and make loans to states, political subdivisions of states, boards and commissions, to finance projects authorized by law, under some form of government regulation, and which are self-liquidating in character.

The corporation may also make contracts with such states and subdivisions for the purchase of their securities. Loans also may be made to limited-profit housing corporations, to private corporations for constructing bridges, tunnels, docks, viaducts, water works, and canals devoted to public use and self-liquidating; and for bridges paid for in part by taxation.

The public works section of the bill creates an "emergency construction fund" of 500 million dollars, to be raised through the sale of government bonds; the bonds to be first offered as a popular loan and to bear interest at a rate of not more than 4¼ per cent.

Projects are to be selected from those already authorized and on which work can be immediately started. Approximately 200 millions of the work is now carried in the annual appropriation bills. The total expenditure is to be divided as follows:

For federal highways, 120 millions; forest and park roads, 16 millions; river and harbors projects, 30 millions; flood control, 15½ millions; Boulder dam, 10 millions; air navigation, one-half million; lighthouse service and navigation, \$3,810,000; coast and geodetic survey, 1¼ millions; navy department yards and docks, 10 millions; public buildings, 190 millions; army housing, \$15,335,000. The remainder of the 500 millions is to be spent under the direction of the President according to present form of bill.

Warm Friend Offices Air-Conditioned

THOUGH modestly described as "a modern workshop for our office force" by President C. H. Landwehr, the recently completed office building of the Holland Furnace Company at Holland has been acclaimed by many as the finest office building in the state of Michigan. It is 270 feet long, 40 feet wide and three stories high above a full basement. In addition to being thoroughly insulated and sound-proofed, it is completely air-conditioned, direct warm-air heating being employed.

This air-conditioning system functions to perform all of the requirements regarded as indispensable to complete air-conditioning, namely, provides ample warm air supply, humidifies the air and thoroughly washes it. During summer the air is washed, cooled and dehumidified.

The major parts of the system occupy the middle portion of the basement. The battery of eight heating units is housed in a large casing of sheet metal and angle iron construction, 41 feet long, 10½ feet wide and 8 feet high, constituting a mammoth plenum chamber. The air in the building is kept in constant circulation by means of two large supply fans. Individual heat ducts distribute the air to all parts of the building through controlled damper

connection with the hot-air and tempered air chambers.

The air washer is of standard design, with a capacity of 36,000 cubic feet of air per minute at 500 feet velocity. The air is washed by means of two banks of sprays discharging water at a maximum rate of 240 gallons per minute. The washing equipment includes a pump for recirculating the water, if desired, or a continual flow of city water at a pressure of 25 to 40 pounds may be used directly by the sprays, the water being wasted into the sewer.

Summer air-conditioning in addition to constant circulation involves air washing and cooling and dehumidification for which the local water supply is employed as it comes to the building through the city mains. The system was originally designed with a 60-ton refrigerating plant for summer cooling, but, inasmuch as the city of Holland is amply supplied with artesian water, the water supply was experimented with during the summer of 1931 for cooling the indoor air. In spite of the record-breaking heat, it was not necessary to install a refrigerating plant, for adequate cooling was developed with the city water supply, the temperature of which varied from 52 to 55 degrees during the summer.

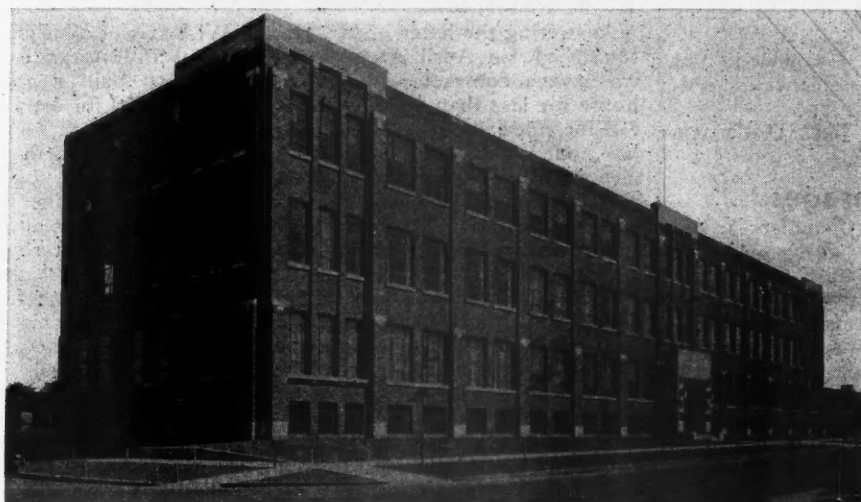
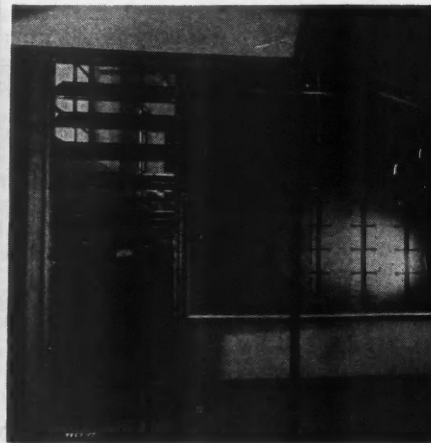
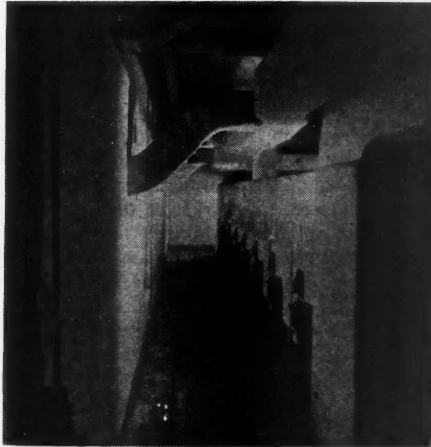
Unusual comfort was enjoyed in the building during the extremes of hot weather, the temperature being main-

tained at least 10 degrees below the outside dry bulb temperature, with a relative humidity not exceeding 60 per cent. The employees were loath to leave the office at quitting time during the hot spells. A marked increase in efficiency was noticeable in them. Records are being maintained of absenteeism, and sickness; and these to date reflect a marked decrease compared with former experience.

The warm-air air-conditioning system installed in the Holland office building is epochal in warm air heating, for it demonstrates that the use of warm air systems is no longer restricted to individual homes and small apartments.



One of the Private Offices with Desk and Paneling of Micarta Finished in Walnut.



Heating System, at Left, and Air Working Chamber, at Right, of New Holland Furnace Company Building. Frank Davidson, Architect.

Westinghouse Offices Finished in Micarta

THE executive offices at the East Pittsburgh Works of the Westinghouse Electric and Manufacturing Company are partitioned with 4-inch hollow tile walls, with a wainscoting 60 inches high of micarta veneered paneling and the field plastered and decorated with an oil paint stippled. The micarta paneling was chosen for its decorative and lasting qualities.

An American walnut satin finish was selected, beautifully grained, that will remain permanent without any refinishing. The furniture manufacturers made the desks with micarta tops and finished the metal parts of the desks to match.

The micarta is 1/16 inch thick veneered on birch laminated cores, the cores being of the proper thickness to make the sizes called for on the design. Wood grounds were fastened to the tile walls with toggle bolts to receive the paneling.

General Electric Forms Air Conditioning Department

THE organization of an Air Conditioning Department within the General Electric Company, which will market various electrical devices for home heating, humidifying and temperature control, has been announced by President Gerard Swope. One of the first products to be marketed by this new department will be a complete oil burning furnace. J. J. Donovan, of Cleveland, formerly in charge of apartment house refrigeration sales, will be manager.

LETTERS

from Our Readers

You are invited to write your views on any subject of interest to the building industry. 300 words should be enough!

How Eckstrom Bolts to Concrete

Toronto, Ont., Can.

To the Editor:

In your May issue an article shows how John Eckstrom lays planks in mastic. How does he get the expansion shield in the concrete. If he drills through the plank and puts the shield through the opening, as the shield would be larger than the head of the screw, there would be nothing to hold in the plank itself. If the expansion shields are spotted first, we imagine that it would be extremely difficult to locate them.

R. LAIDLAW LUMBER CO., LTD.

Answer:

We employ two methods for installing plank floors direct over concrete base.

Method A. After placing plank in proper location, drill hole 3/32" in diameter through plank at all spots where pegs are required and deep enough to show marks in concrete. Remove plank and drill hole in concrete of proper size to receive expansive shield (1/2"). Insert expansive shield, apply a thin coat of mastic, replace board, drill hole for peg (3/4"), place screw and cover hole with peg.

Method B. Apply a thin coat of mastic, place plank in proper location, drill holes of required size (3/4") where pegs are to be located and to a depth equal to thickness of peg. Then drill hole from this point through wood and into the concrete of proper size to receive expansive shield (1/2"). Place steel washer at bottom of the larger hole, place screw and cover with peg.

We have used both these systems and found method B somewhat less expensive and more time saving.

JOHN A. ECKSTROM, Mastic-Laid Floor Co., Chicago, Ill.

Thinks Prices Too High

New York City.

To the Editor:

In studying your June magazine, I find some estimates by a Mr. G. W. Bailey on building a house.

Twelve inch concrete blocks in this estimate cost about 22c apiece and ten inch blocks about 20c apiece. A gas range costs \$70.00 and a refrigerator \$325.00. It seems to me that if all the prices are in line with these the estimate is way out of line with actual costs, because while I am not a builder I cannot conceive of a builder paying over 20c apiece for concrete blocks today, nor can I conceive of a builder paying retail prices for gas ranges and refrigerators when he can buy them in lots of ten at considerably less figures than those shown.

If builders work on figures such as these I wonder if it is the reason why the mortgagees have lost confidence in lending money for the construction of houses.

JOHN D. COLGAN.

Recommends Larger Garages

Chandler, Ariz.

To the Editor:

A year ago we built a little home—a Spanish type stucco dwelling, with garage attached. The garage was built only 10 by 16 feet, which is ample only for the smallest car made. When we bought a little larger car, it was too long for the garage, and an extension had to be built, costing \$45.00 extra. However, even then there was room only for the car, and just room. Where could we put the lawnmower, garden tools, and other household essentials which did not belong in the kitchen and had no room elsewhere? Now here is my suggestion:

Whenever you build, make your garage plenty large, whether it be attached to the house, or stands alone. Make it three or four feet wider than necessary, as well as longer

than just to hold the car. You will then have a place for lawnmower, garden hose, garden and work tools, work bench, wood bin, as well as for the many odds and ends which accumulate around a home so quickly. You will also be able to get in and out of your car inside of the garage, and will have room enough to work on it conveniently whenever minor repairs are necessary. This extra space is actually needed, will increase the convenience of the garage many times, and will add but very little to its cost.

JULIUS FESTNER.

Wants Cost Data

Kearny, N. J.

To the Editor:

As a subscriber of this fine magazine I take this liberty to ask some information as to average costs per cubic foot of construction in New Jersey. I am just starting out in business as an architect and desire these costs for preliminary estimates. The types of construction follow.

- 2 story frame with siding or shingles, brick foundation.
- 2 story frame with siding or shingles, concrete foundation.
- 1 story frame with siding or shingles, concrete foundation.
- 2 story frame with siding or shingles, concrete foundation.
- 1 and 2 story frame with stucco, concrete foundation.
- 1 and 2 story frame brick veneer, concrete foundation.
- 1 and 2 story hollow brick walls, concrete foundation.
- 1 and 2 story solid brick walls, brick or concrete foundation.
- 2 story brick, stoves on first floor, concrete foundation.
- 1 story brick garage, steel truss roof, concrete foundation.
- 1 story brick garage, wood truss roof, concrete foundation.
- 1 and 2 car frame garage, concrete foundation.
- 1 and 2 car concrete block garage, concrete foundation.
- 1 and 2 car brick garage, concrete foundation.

Comparative cost per sq. yd. of the following wall finishes: Smooth plaster, textured plaster, and craftex finish (paint) on wood and metal lath and on plaster board.

I would also like to know the approximate cost difference of a wood burning fireplace and a false fireplace. About how much extra per cubic foot is the cost of the average heat insulating material above the costs without insulation. Any other cost data or sources of cost data would be deeply appreciated.

OSCAR J. MAUER, Architect.

For Less Than \$3000

Lenox, Mass.

To the Editor:

Answering the letter of Mr. Harold W. Davis of Washington, N. J., in April AMERICAN BUILDER AND BUILDING AGE, we have a contractor in town who has just built a good house for less than \$3,000. This covers \$250-\$300 for lot and \$75 for sidewalk. The house is 25 by 22 ft. outside measure, has four rooms and bath, pipeless heater, \$110 worth of electric work, asbestos roof, No. 1 common oak floors, sheet-rock walls and ceilings, and No. 2 Idaho White Pine for finish. There is a stairway to second floor and for about \$200 extra, a dormer could have been cut in, and a room finished off.

This contractor did not skimp on everything, as we furnished him Andersen frames at about 50 cents a frame higher than other makes. An asphalt roof would have been cheaper. Our list of materials, excluding cement and gravel for foundation amounted to \$938. And we could duplicate it today.

We would be glad to furnish anyone a plan and list of materials for this house. It would seem an easy matter to enlarge this house to five rooms and still be well under Mr. Davis' \$4,000.

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Prescotte Buffum, Manager.

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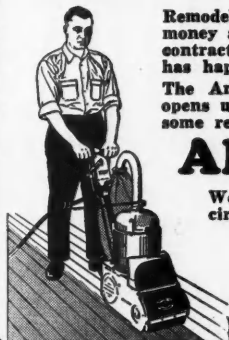


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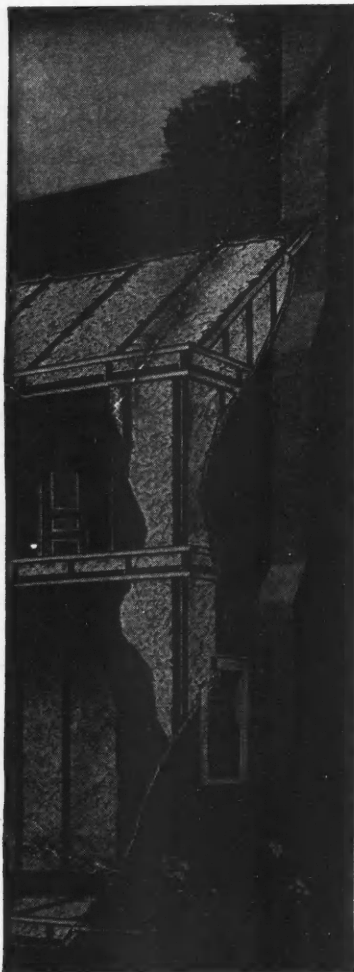
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Home Cost Service

(Continued from page 14)

cabinet the prospect may want to buy some particular kind from a cousin, or may not want the ironing board shown, or may omit a breakfast nook. Built-in cabinets must be figured separately, according to individual desires of the prospects, or may be included as an allowance, subject to change according to final selection. This is one cost factor that upsets the many lusty advocates of "cubical contents estimates," as will be explained in a subsequent article.

"If I only knew your labor costs on this Basic House, and what profit you want on your contracts," said the dealer, "I could close sales for you in a way that would insure a profit on every job. We should get together on this."

The contractor liked the idea. He knew his dealer would "shoot square" and would not disclose his prospects to other contractors in town. He figured his labor on the superstructure of the Basic House at \$450, and suggested the dealer add enough to cover liability insurance, bond, permits and a certain percentage for contractor's profit.

Up to this point the plan was working fine for both dealer and contractor, but when the dealer tried the same thing on five other reliable contractors he ran into a snag. Labor bids on the same Basic House ranged from \$425.00 to \$740.00. Think of it! The highest was about 75 per cent more than the lowest on a plain little house! Workmanship was about the same in each case, but something was wrong somewhere. Which labor cost was right? Who was guessing at his costs?

"I'll get the contractors together and thresh it out with them," thought he dealer. He invited each man to meet him in his office, without telling them that he had prices from the others. When all were present he explained the situation.

"Here's the plan of a simple little house," began the dealer. "I asked each of you to tell me what you want for the labor and how much to add for overhead expense and profit. Your labor costs ranged from \$425.00 to \$740. You are each figuring the same wage scale, and you all do first class work. Now, what in heck is the matter? It looks to me as though all of you were guessing.

"I want to help you men sell every prospect the best house he can afford, at a profit to you and to me. I can't do that with six different prices on the Basic House. What shall we do? One way is to add all six labor bids together and divide by six. That gives an average of \$545.60—let's call it \$550. Is that a fair price for all labor on this Basic House? If not, what is?"

"Now remember, fellows," he continued. "Don't get the idea I'm trying to tell you what to charge for your labor, or how much to add for overhead and profit. This isn't a price fixing conference and it isn't a get-together to divide jobs, but we can discuss what would be a fair price to ask people in this town when they want to know what it will cost to build a home here—instead of a lot of wild guesses based on building costs in New York or California.

"All I can tell you is that if you don't make money I can't make money. If your jobs don't pan out you can't pay me for the materials you use.

"Here's what I want to get across to you. Whenever any of you have a prospect for a new home or modernizing job, bring him to this office and let me

(Continued to page 46)



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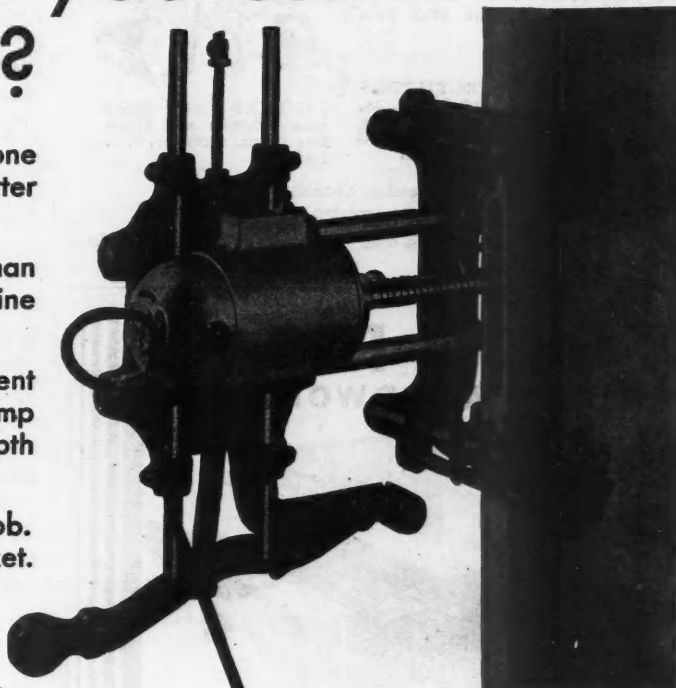
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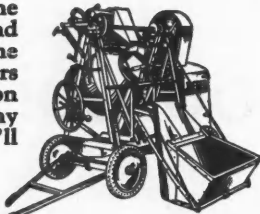


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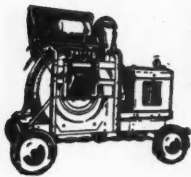
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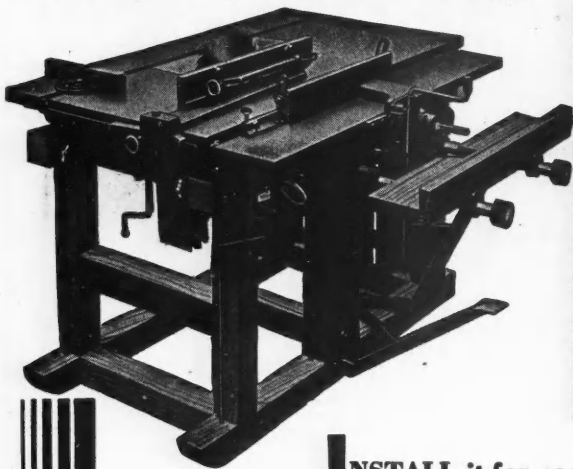
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Home Cost Service

(Continued from page 44)

help you sell him on good construction and quality materials. Let me quote you the difference in cost of alternate materials for any house. Instead of talking board feet of lumber, or brick per thousand, I'll quote a lump sum price on materials for the whole job. I can help you. I know materials. That's my business. Working together we can give better satisfaction than any of us can working alone. We've got outside competition to fight. Let's keep local building jobs for local labor, at a price that is fair to our prospects and fair to us. What do you say, are you with me?"

At this point the meeting got down to business. The low bidders admitted they had "guessed" low. The top-notch said he had based his price on a comparison with a house that included considerable built-on-the-job cabinetwork. In the end they all decided \$550.00 would be fair.

All agreed that it was to the best interest of themselves and their community that they co-operate. The dealer explained that on jobs he sold he would ask the customer to choose the contractor, and that jobs would not be assigned by turn. He refused to be party to any agreement to divide the business, and each contractor had the privilege of making whatever price he chose. All could co-operate on that basis, but the dealer explained that he intended to supply materials for houses in their community at a price that was fair to him, and that if they could not close sales on a profitable basis they should hire him as sales manager.

"I'm through doing business for the fun of it," he exclaimed. "Anybody can give stuff away, but it takes a business man to sell. I have over \$40,000.00 tied up in this business and I'm going to make it pay me a fair return by changing my sales policy. I don't want to go into the contracting business; I'm not going to sit around and let any of these out-of-town guys slip in and grab off the building business in this town. Now, are you fellows going to help make some money for yourselves, or are you going to try to play a lone hand?"

EDITOR'S NOTE: This plan outlined by Mr. Holt looks fair, constructive and workable. What do our contractor readers think of it? Will it help in *your* town? Study into this, and write us. More next month.

Ask Them To Buy

(Continued from page 31)

ness for the summer months. Air conditioning doubles the possible market for the heating contractor. It offers probably the most promising prospect for new business during the next few years.

The immediate essential, however, is for every contractor to make himself thoroughly known in the territory he serves. To impress his name and his ability to render service on every home owner in the community, and then to follow up that impression by newspaper advertising, by direct mail, by telephone and by personal calls until he is firmly established in the public consciousness as the one dependable source of supply in that community for the product and the service that he has to sell.

And in doing this he will not only find a profitable business for this present year, but will build for himself a foundation of prestige and good will in the community that will mean much when modernization again takes second place to new construction and business gets back into its normal stride.