

[A Simmons-Boardman Publication]

AMERICAN BUILDER

and Building Age

NAME REGISTERED U. S. PATENT OFFICE AND CANADIAN REGISTRAR OF TRADE MARKS

SEPTEMBER, 1937

59th Year

Vol. 59—No. 9



MODEL homes still pull the crowds; 2,000 people visited this Westinghouse Home-That-Grows near Pittsburgh on first day of showing.

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The Truth



THE building industry has been put on the defensive by widespread propaganda that says, "Building costs are too high."

Present prices are higher than the abnormally low ones that were in effect at the bottom of the depression. People do not expect to buy good common stocks today at 1933 quotations, but for some reason they expect to buy houses that way. Few persons, including many professional building men, realize that the industry is actually delivering more house for the money today than in 1926, 1929, or at any time in history. Attention should be focussed on present building values in relation to former active years rather than on depression lows.

Manufacturers of building products have contributed to "More House for the Money" through research, greater plant efficiency, and improvement of their materials and equipment. Contractor-builders have developed cost-saving methods. Dealers have adopted

a campaign that will tell the truth about building costs and values. Here between two covers will be assembled and presented complete, startling information about building costs and values. Here will appear the industry's answer to claims that building costs are too high. Here will be a selling tool that can be used to offset the effects of destructive cost propaganda.

Not since the justly famous February, 1934 issue of *American Builder*—an issue that made the country realize the building industry's importance to national welfare—has there been so timely and momentous a contribution to the industry as this October issue.

Each branch of the construction industry, each group, each manufacturer, builder, dealer, is invited to furnish comparative data that can be used in this campaign manual. Each manufacturer is invited to co-ordinate his advertising, and tell what he has contributed individually to "More House for the Money."

An Answer to Claims That Costs Are Too High

THE following editorial outline of the October issue shows how thoroughly it will equip each man, each group in the building industry, to forestall claims that building costs are too high, and to demonstrate the soundness of present values:

EDITORIAL

A broad picture of today's home building situation, important contributions made by manufacturers who supply approved products at mass-production prices, and a challenge to local building industry men to spread this information through their communities.

SURVEY OF LATEST BUILDING PRODUCTS

A "deadly parallel" presentation of today's products, each pictured, priced, and contrasted with similar offerings in 1929.

SAVINGS IN FINANCING COSTS

A survey of present home financing costs under long-term FHA, or Building and Loan, fully amortized first mortgages, as compared with expensive and hazardous short-term second and third mortgage financing, premiums, bonuses and financial racketeering practices of a prior era.

MORE HOUSE FOR THE MONEY SECTION

A group of appealing home designs, each with photo-

About Home Building Costs

graphs and dimensioned plans, to demonstrate the economy and superlative values of today's homes in contrast with offerings of previous years.

MORE COMMERCIAL BUILDINGS FOR THE MONEY.

An illustrated article that shows how store fronts and other commercial buildings are benefiting from re-styling, and from improvements in materials and equipment, including modern millwork, veneers, illumination, glass block, enameled steel, stainless steel, structural glass, plastics, decorative plywood, and other modern products.

CONSIDER ALL FOUR COSTS OF A HOME

A comprehensive presentation of home-building and home-owning costs, including the four major factors:

- 1, Cost of development of site; 2, Cost of financing;
- 3, Cost of construction; 4, Cost of occupancy.

This article will also reveal the certainty of higher costs later for those who postpone the decision to build.

BUILDERS CUT COSTS IN NEW WAYS

A practical "how-to-do-it" discussion, presenting actual experiences of successful builders, with details of their cost-saving methods.

LOWER COSTS AND MORE EFFICIENCY—

- in Structural and Finishing Materials
- in Mechanical Equipment and Specialties

Companion articles prepared in form to be released to newspapers and magazines, and to be quoted by speakers before conventions and business meetings.

CONTRACTOR-DEALER TEAMWORK

Showing why property owners are well served in communities where retail lumber and supply dealers and home-building contractors work together and set up attractive selling headquarters for the guidance of prospective home builders.

BUILDERS' EQUIPMENT AND TOOLS

The whole range of labor-saving power tools and equipment developed for builders and contractors during the past decade will be illustrated and described.

A LOCAL DRIVE IN EACH COMMUNITY

An outline showing building men how to organize to acquaint property owners with facts about building costs, and so change the trend of price-thinking; suggestions for meetings, newspaper co-operation, chamber of commerce activities, and demonstrations.

SPECIAL NOTICE

To Manufacturers of Building Products:

Thousands of reprints of the editorials, "More House for the Money TODAY," and "Turn the Tide of Price-Thinking," from the July and August issues of *American Builder* are being used by manufacturers' salesmen to restore and bolster the morale of their customers.

The October issue should be in the hands of every manufacturers' salesman. It will pay to equip your men with this valuable selling tool. Far-sighted manufacturers are placing *advance* orders for enough copies to supply their entire sales staffs. This is the *sure* way.

To Contractor-Builders, Dealers, Architects, Realtors, Finance Men:

This concerted move by the building industry to turn the tide of price-thinking will reach its full objectives by having its great message delivered to the general public. Its final success depends on your co-operation and participation. Select now the several prominent, key men in your community, the leaders who influence local thinking. Plan now to place a copy of the October issue in the hands of each of these men. Extra copies may not be available in October. The *sure* way to get your supply is to order now, in advance.

Send orders or reservations for extra copies to either of the addresses shown below.

How the Industry Can Conduct a Nation-Wide Campaign

THE October issue of *American Builder* will be widely used by manufacturers, contractor-builders, dealers, architects, realtors, and finance men to offset prevalent false impressions, because both editorial and advertising pages will offer many potent arguments that can be presented to price-conscious prospects.

The importance and power of the Press is fully appreciated in this campaign. Newspaper releases from the July, August, and September issues have appeared in many newspapers. Additional advance releases from the October issue will be mailed this month. Furthermore, the complete October issue will be sent to the editors of all daily newspapers. They will be granted full freedom to use the material contained therein. But even this is not enough.

There is no industry in greater need of effective "public

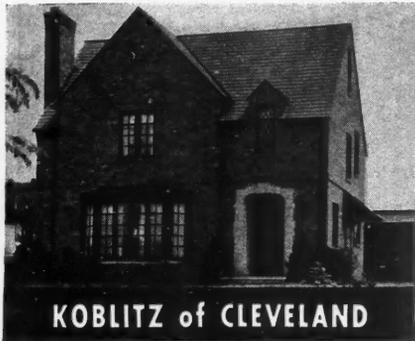
relations service" than the building industry today. The present stigma of prejudice and misunderstanding is a far costlier burden than most men in the industry realize. Only an active campaign, conducted and supported by the building men in each locality can forcefully bring before the public the truth of the statement that the industry is delivering more house for the money in 1937 than ever before. The October issue of *American Builder* will place in the hands of its readers the material for effective, productive local campaigns that will turn the tide of price-thinking.

AMERICAN BUILDER

105 W. Adams Street, Chicago.
30 Church Street, New York City.



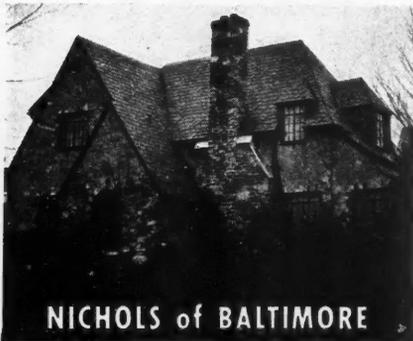
LEVITT of NEW YORK



KOBLOITZ of CLEVELAND



MEAGHER of PHILADELPHIA



NICHOLS of BALTIMORE



SHOREHAVEN of NEW YORK



McCLATCHY of PHILADELPHIA

A MAN *Learns a Lot . . .* WHEN HE BUILDS A *Hundred* . . . OR SO . . . *Houses . . .*

These builders . . . Levitt, Koblitz, Meagher, Nichols, Shorehaven, McClatchy, and many others . . . have used Fenestra Steel Casement windows in at least 100 houses apiece.

What they have learned about Windows . . . a lot . . . is best summed up in their own words:

"Our customers are quick to appreciate the advantages of Fenestra Casements." "The public's approval of Fenestra Casements is very evident. People like the extra light and ventilation, finger-touch operation, easy washing and convenient screening." "Women, especially, are enthusiastic about their appearance. They add real beauty to both exterior and interior."

Why not get acquainted with Fenestra . . . the up-to-date windows . . . today? Just mail the coupon.

Detroit Steel Products Co., 2252 E. Grand Blvd., Detroit, Michigan

Please send me free literature on the following:

Fenestra Casement Catalog of Types and Sizes. Fenestra Air Conditioning Windows (Storm Sash). Fenestra Casements in Early American (Colonial) Houses. Hidden Savings in Window Costs.

Name _____

Address _____

City _____

State _____

BETTER WINDOWS THAT COST LESS

Fenestra

PUBLISHER'S PAGE

Housing—an Experiment in Socialism

THE Wagner Housing Act passed at the recent session of Congress assumes that many persons live in city slums because they are unable to pay enough rent to have good homes. Therefore, it provides for the use by government of the taxpayers' money in paying a large part of the cost of providing such persons better homes.

Slum tenements are to be torn down and new buildings erected. Apartments in these new buildings are to be rented below cost. The difference between the rentals paid and the total cost of providing the buildings will be borne by the taxpayers; and the cost borne by the taxpayers may be as much or more as the rentals paid by the tenants.

The widespread experiment contemplated in providing some of the people with homes largely or mainly at the expense of the rest of the people raises some important questions.

WHY are there in this country of great natural resources people who are assumed to be unable to provide themselves with decent homes? Is it because their incomes are so small, or because it costs so much to build and maintain housing—or both?

If it is because their incomes are so small, why not adopt government and business policies to help increase their incomes? What policy is better adapted to increasing all incomes, including theirs, than that of increasing construction and production—the source of all incomes? What policy is better adapted to *restricting* construction, production and all incomes than that of reducing hours of work and restricting the amount of work each worker may do in an hour? Yet our governments that are going to use the taxpayers' money to help provide these people with housing are doing nothing to

increase private construction and production and much to restrict them.

If the inability of these people to provide themselves with decent homes is due to high costs of erecting and owning buildings, to what are high costs in general mainly due if not to high costs of labor in particular? Labor costs could be reduced without reducing labor's *earnings* by reducing *hourly* wages and having labor work more hours per day, week or year. But government is encouraging labor to demand higher *hourly* wages and shorter hours of work—both tending to increase building costs and rentals.

ANOTHER natural question is—Why is it assumed in Washington, D.C., that a minority of persons should permanently have help in paying their rent, while the great majority should both pay their own rent and help the minority pay theirs? If the majority should permanently help pay the rent of the minority, why should not the majority also permanently help buy clothing and groceries for the minority?

What have the provident majority of the people done, besides being provident, for which they should be punished by being required to help provide perhaps better housing for the minority than many of the provident majority themselves have?

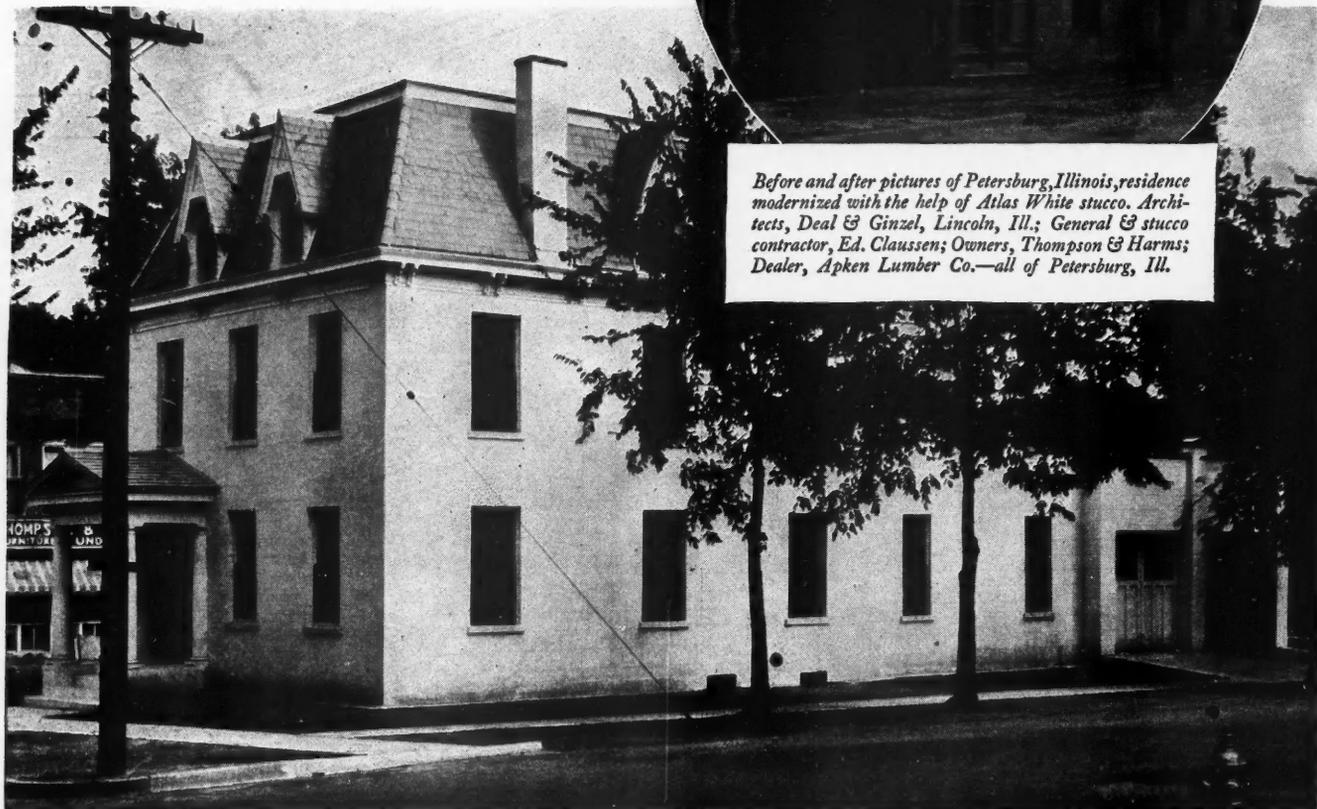
Another question: Why should farmers, and people living in towns and small cities, be taxed to help pay the rent of the slum populations of large cities?

Anyone who answers all these questions to himself honestly will conclude that the Wagner Housing Act is one of the most indefensible experiments in Socialism ever undertaken in this country.

Samuel O. Dunn

SIMMONS-BOARDMAN PUBLISHING CORPORATION: SAMUEL O. DUNN, CHAIRMAN OF THE BOARD; HENRY LEE, PRESIDENT; BERNARD L. JOHNSON, ROBERT H. MORRIS, DELBERT W. SMITH AND ROBERT E. CLEMENT, VICE-PRESIDENTS; ROY V. WRIGHT, SECRETARY; E. T. HOWSON, ASSISTANT SECRETARY; JOHN T. DE MOTT, TREASURER. EXECUTIVE AND EDITORIAL OFFICES: 105 WEST ADAMS STREET, CHICAGO; 30 CHURCH STREET, NEW YORK CITY

How to put Youth in an old-timer



Before and after pictures of Petersburg, Illinois, residence modernized with the help of Atlas White stucco. Architects, Deal & Ginzel, Lincoln, Ill.; General & stucco contractor, Ed. Claussen; Owners, Thompson & Harms; Dealer, Apken Lumber Co.—all of Petersburg, Ill.

- This building is over eighty years old.

See what a little remodeling and exterior stucco of Atlas White portland cement did to it!

In every community there are similar *opportunities* to change unwanted eyesores into modern, income-producing buildings—at moderate cost.

White portland cement stucco is ideal for this type of work, for several reasons:

1. It gives a building a fresh, clean, bright and permanent exterior.

2. It is durable because it is a thin sturdy wall of concrete with the permanence, weather resistance and fire resistance of concrete.

3. It can be applied in any texture and any color.

4. It is economical in first cost and gives the kind of lasting service that endures in any climate.

Universal Atlas Cement Co. (United States Steel Corporation Subsidiary), 208 South LaSalle Street, Chicago.

A FACTORY PREPARED STUCCO IS PREFERABLE



S-10

STUCCO MADE WITH **Atlas White** PORTLAND CEMENT

AMERICAN BUILDER

AND BUILDING AGE

Who Killed Cock Robin?

THE men of the building industry are becoming aroused over the false and misleading "high cost" propaganda that has been widely circulated this summer. They are *fighting back* with facts and figures that give the complete picture of today's favorable home building and home owning costs, and are successfully demonstrating by their efficiency in the market-place and on the job that now is the time to build.

The source of much of the loose talk that has been going around that "prices are too high" for new home building has been identified. It is the same building-money gang that tried to block the passage of the National Housing Act back in '34; they were loaded up with mortgages on old homes and feared the competition of the new. They evidently still have this "banker attitude" in spite of what the past two years have demonstrated as to the benefits to themselves and to all business from the stimulus of the home modernizing and new home building revival.

Still Hostile to New Construction

These same mortgage interests are still hostile to the Federal Housing Administration and its low-rate, long-term home financing plan. They are still minded to stifle the building revival if they can. A typical press release from this source, dated July 23, starts off thus:

"Faced with construction costs which in the last few months have soared close to boom-time levels, disappointed middle-class families from New York to Seattle are postponing or canceling their home building plans * * it is indicated by an inquiry * * a consensus of real estate boards, mortgage loan companies * * in 65 cities." Then follows a long list of gloomy reports.

Other widely circulated speeches and articles for public consumption stress the contention that "high costs" are stifling building."

Up to Building Industry to Correct False Price-Thinking

Alert building men are not willing to permit such propaganda to go unchallenged. Spurred on by the leadership of such articles as "More House Today for the Money" in the July *American Builder* and "Turn the

Tide of Price-Thinking" in August, builders, dealers and manufacturers are rallying to a nation-wide campaign of education in present-day home building values for the general public.

Ohio is in the thick of the fight; and the following letter from the Ohio retail lumber dealers is typical of the way some of the strong building industry groups are responding to the challenge of this situation:

Xenia, Ohio

Editor *American Builder*:

You are certainly to be commended for promoting a nation-wide movement to correct false price-thinking, with reference to today's home building costs.

This has been an especially aggravating issue in Ohio in the past few weeks. The press has been full of misleading editorials and feature stories on the theme of the "exorbitant cost of materials curtailing construction activity."

One group of papers in Ohio has been especially prejudiced and aggressive with this propaganda.

At a recent meeting of metropolitan secretaries of our Association at Cleveland, this was the chief topic of discussion. I am happy to say that we have aroused the Ohio dealers to the importance of organized resistance to these prejudiced and inaccurate articles, and through our clipping bureaus and the assistance of dealers in sending us clippings of all such material that appears in their papers, we have been successful in curbing this trend, and in getting some of our own material into the press.

I know of no industry which is in greater need of persistent "public relations" service in overcoming the stigma of prejudice and misunderstanding, which is a far costlier burden to our industry than the average dealer or manufacturer appreciates.

I am delighted to see that the *American Builder* is concentrating upon the importance of this need.

THE OHIO ASSOCIATION OF RETAIL
LUMBER DEALERS

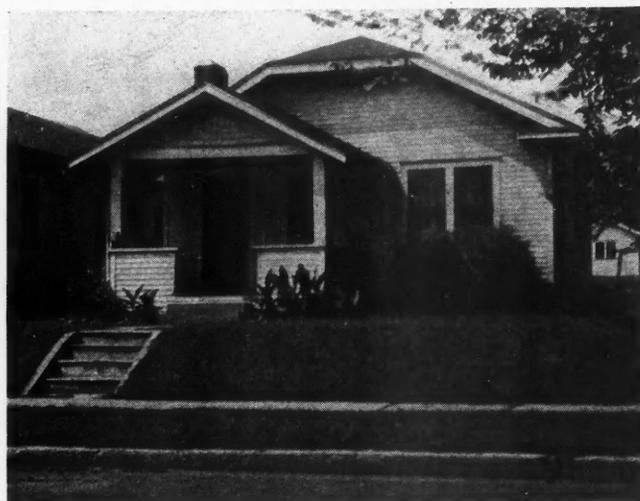
By Findley M. Torrence, Secretary

Likewise from the Illinois Lumber and Material Dealers Association, "Jack" McCarthy, secretary, writing this publication, adds this powerful fact:

"May I suggest that in your writings you stress over and over again the fact that a home may be bought today *without the sin of a second mortgage.*"

Who killed Cock Robin? Well, maybe the old bird is still very much alive.

"Compare These Two Homes"— Is the Challenge of a South Bend Dealer



Built in 1925 for \$5,374



Built in 1937 for \$4,850

A FIGHTING answer to the present "whispering campaign" that home building costs are too high was launched by a prominent South Bend (Ind.) material dealer on Aug. 15, in the form of a full page advertisement in the local Sunday paper, "The South Bend Tribune."

This advertisement is presented in reduced size on the page opposite (the original measures 18 by 23 inches—a smashing ad). It is a LESSON in today's home building costs and values, and is presented here as a suggestion for other builders and dealers in all other communities where this vicious "high cost" propaganda is undermining the building business.

Give the public the real facts, so that prospective home builders can get the whole picture of today's big values and business will go forward, is the philosophy back of this informative advertisement.

Commenting on this newspaper announcement, Mr. R. G. Homan of the Belleville company, which sponsored this page, writes:

"We were prompted to run this ad due to a number of erroneous editorials that have been in the South Bend papers recently ridiculing any construction, stating the price is too high."

Continuing, he states that there has already been a great response to this ad from prospective home builders with many direct replies and a great deal of interest on the part of the public in this comparison of home costs and values as between 1925 and 1937.

Notice that the old fashioned "bungalow" style house built in 1925 and sold, including street assessment, for \$5,374, contained 12,960 cubic feet of space, whereas the modern styled home of today costing \$4,850, or 10 per cent less, contains 20,800 cubic feet, making it 60 per cent larger than the product of a decade ago.

This price and size consideration, however, is not the whole story by any means. Notice the 22 items of comparative specifications. The concrete floor is now laid twice as thick. The chimney flue is 8 x 12 instead of 8 x 8. Steel basement frames and sash admit more daylight. The floor joists are increased in depth and stiffness from the old 2 x 8 to the present

2 x 10. Ceiling joists and rafters are each 2 inches deeper. Seventy per cent of these lumber framing items are now No. 1 quality. Fifteen pound felt has been added under the asphalt shingles. Improved and treated window frames and sash are now utilized. Hardwood trim and oak floors throughout are now standard. Insulation lath is used. A large kitchen cabinet with linoleum top takes the place of the former small kitchen cupboard. Linen closets and guest closets are added. A finished stair is added leading up to two rooms to be finished later. A basement recreation room is now supplied, and the heating plant is a modern 22-inch forced air conditioner instead of the old 18-inch gravity hot air furnace. A two-compartment laundry tub is now supplied, and the bathtub is of the modern recessed type. Twelve openings for convenience outlets were considered enough when wiring the home of 1925; today 28 openings are provided.

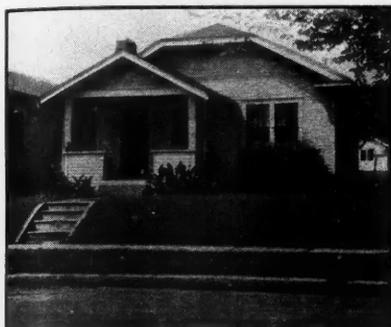
Referring to the labor part of the present home cost situation, this Belleville Lumber & Supply Company announcement presents some astonishing information in view of what is being written and said that is critical of today's wage scales. This announcement states that in 1925 the Belleville organization employed 64 persons, whereas today it employs 208 persons at an average increase of 13¼ per cent in wages per annum. Yet in spite of this increase home building costs, according to this analysis, are 10 per cent less. The answer is the great efficiency of the workmen today in assembling and utilizing on the building site the industry's efficiently produced materials and equipment.

A statement of particular challenge appears toward the bottom of this very informative advertisement. "We furnished material for more homes in South Bend in 1925 than will be constructed in South Bend in 1937, because over 2,000 prospective home purchasers in South Bend have been misinformed as to the cost of a home today."

The same condition exists in many other communities. Similar aggressive use of local newspaper space by enterprising builders and dealers citing comparative facts and figures will correct this misinformation.

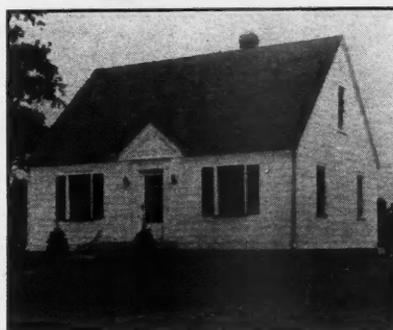
HOME COSTS ARE NOT HIGHER

Based on Facts and Figures



← HOME BUILT 1925

HOME BUILT 1937 →



**COMPARE THE IMPROVEMENTS
MATERIALS AND CONSTRUCTION
IN THE 1937 HOME OVER THE
1925 HOME**

**If You are Paying More
... WHY ...**

Our Prices are the Same to All

All materials for both homes furnished by our own organization.

1925 HOME SOLD FOR **\$4950.00**
PLUS STREET ASSESSMENT **424.00**
OR A TOTAL COST OF **\$5374.00**

1937 HOME BUILT FOR **\$4850.00**
NO ASSESSMENTS **0000.00**
TOTAL COST **\$4850.00**

MATERIALS USED IN 1925

1. Foundation—Cement Blocks.
2. Concrete Floor 2 Inches Thick.
3. Chimney—8 in. x 8 in. Flue.
4. Wood Basement Frames and Sash.
5. Floor Joists—2x8 No. 2 Yellow Pine.
6. Ceiling Joists—2x6 No. 2 Yellow Pine
7. Rafters—2x4 No. 2 Yellow Pine.
8. Asphalt Roof—No Felt.
9. Spruce Siding.
10. Common Constructed Windows and Frames.
11. All Yellow Pine Trim.
12. One Room Oak—Balance Pine.
13. Wood Lath Plaster Base.
14. One 4 ft. x 4 ft. Kitchen Cupboard—2 Doors—No Drawers.
15. No Linen Closet.
16. No Guest Closet.
17. No Second Floor Rooms.
18. No Recreation Room.
19. Furnace—18 in.—"Gravity"—Hot Air.
20. No Laundry Tub.
21. Standard Leg Bath Tub.
22. Electric Wiring—12 Openings.
23. House Contains 12,960 cu. ft.

HOME COST PURCHASER IN 1925 **\$5374.00**

MATERIALS USED IN 1937

1. Foundation—Cement Blocks—Face Brick Above Grade.
2. Concrete Floor 4 in. Thick.
3. Chimney—8 in. x 12 in. Flue.
4. Steel Basement Frames and Sash.
5. Floor Joists—2x10 No. 2 Yellow Pine—70% No. 1 Y. P.
6. Ceiling Joists—2x8 No. 2 Yellow Pine—70% No. 1 Y. P.
7. Rafters—2x6 No. 2 Yellow Pine—70% No. 1 Y. P.
8. Asphalt Roof with 15 lb. Felt.
9. Johns-Manville Asbestos Siding.
10. "Fargo" Narroline Frames and Windows—Treated.
11. New—Narroline Gum Trim.
12. All Oak Floors Except Bath and Kitchen.
13. Johns-Manville Insulation Lath.
14. One 6 ft. x 10 ft. Kitchen Cabinet with Linoleum Top.
15. Linen Closets.
16. Guest Closet.
17. Finished Stair—2 Rooms Unfinished.
18. Reception Room.
19. Premier Forced Air Furnace Conditioner—22 in.
20. Two Compartment Laundry Tub.
21. Modern Recessed Bath Tub.
22. Indirect Wiring with 28 Openings.
23. House Contains 20,800 cu. ft.

HOME COST PURCHASER IN 1937 **\$4850.00**

COMPARE THESE TWO HOMES

No. 1 with No. 1 and No. 2
with No. 2 all the way through
to the Sale Price of each.

These two homes were picked at random.
... The same thing will apply to practically
any home built in 1925, '25, '27, '28, '29 as
compared with a similar home built in 1937.

This organization employed 64 persons in 1925 We now employ 208 with a 13³/₄% increase in wages per person.

WE FURNISHED MATERIAL FOR MORE HOMES IN SOUTH BEND IN 1925 THAN WILL BE CONSTRUCTED IN SOUTH BEND IN 1937.

BECAUSE

OVER 2000 PROSPECTIVE HOME PURCHASERS IN SOUTH BEND HAVE BEEN MISINFORMED AS TO THE COST OF A HOME TODAY.

MAIL THIS COUPON

To The BELLEVILLE LUMBER and SUPPLY Co.,
3922 West Sample St., South Bend, Ind.

FOR EITHER OF THE FOLLOWING FREE

Please Have a Personal Representative Call On Me and Give Me Complete Information on the Building of a Home.

Please Mail Me a Copy of Your Booklet On
"101 IDEAS FOR A HOME."

NAME _____

ADDRESS _____

PHONE _____

Comparing a 1925 home
with the 1937 home is like
comparing a 1925 automobile
with one of today.
There is No Comparison.

Items in the 1937 home
never were in the 1925
home yet the completed
cost of the 1937 home is
much less.

BELLEVILLE LUMBER & SUPPLY CO.

3922 West Sample Street-Phone 3-9401

216-222 East Jefferson Blvd.-Phone 4-2153



Then—1683

Compare These Colonial Homes—

DEVELOPING a distinct architectural style, the early settlers of New England, building after the manner of old England, created homes which from a standpoint of beauty of exterior are as attractive today as they were when built. That is why early New England homes inspire architects from coast to coast to borrow from these early designs.

But it requires more than architectural style to make a house a home. No greater evidence of this fact is required than a comparison of the livability of the Capen house, built in Topsfield in 1683, and the modern New England home based on the same architectural style built in Newton Highlands in 1937.

LIVABILITY OF THE EARLY NEW ENGLAND HOME

HEATING FACILITIES:

Fireplaces only.

COOKING FACILITIES:

Fireplace with trammels, spiders and oven.

FUEL REQUIRED TO ACHIEVE SLIGHT DEGREE OF WINTER COMFORT:

40 to 50 cords of maple and birch.

BATHING FACILITIES:

None.

HOT WATER FACILITIES:

Tea kettles and open pots swung from cranes in the kitchen fireplace.

SANITARY SEWAGE:

None.

AVERAGE WINTER INDOOR TEMPERATURE:

20 to 30 degrees above outdoor temperature during day when fireplaces were in operation. 10 degrees above outdoor temperature at night.

COMPARATIVE COMFORT:

In summer—fair; in winter—almost nil. Rooms drafty and warm only around fireplace when brisk fire was burning. Fresh air largely from down drafts in chimney. Frequently devitalized.



Now—1937

Then and Now—for Livability

LIVABILITY OF 1937 NEW ENGLAND HOME

HEATING FACILITIES:

Modern automatic steel boiler with automatic anthracite stoker encased in dust proof housing.

COOKING FACILITIES:

Modern, labor-saving kitchen. Hot and cold running water. Automatic refrigeration. Automatically controlled gas range.

FUEL REQUIRED TO ACHIEVE FULL DEGREE OF WINTER COMFORT:

Approximately thirteen tons of buckwheat size anthracite, costing less than gas, oil, electricity, or wood.

BATHING FACILITIES:

Modern bathrooms, tiled, with hot water available at all times, winter and summer.

HOT WATER FACILITIES:

Hot water available at all taps all year around, supplied from automatic heating equipment.

SANITARY SEWAGE:

Complete system.

AVERAGE WINTER INDOOR TEMPERATURE:

70 degrees automatically regulated and maintained. With complete control to either above or below 70 degrees as desired.

COMPARATIVE COMFORT:

Ideal all year round. No drafty rooms. No excessive heat or excessive cold at any time. Proper insulation makes for summer comfort. Perfect heating provides all winter comfort.

Higher Than When?

Today's Building Costs Found to be in Line

By WILLIAM F. SEVERN
President, The A. W. Burritt Co.,
Bridgeport, Conn.

ARE lumber prices going any higher? Is it the retailers or wholesalers who are putting the prices up? These questions have often been heard lately.

Perhaps it is natural for the man who is thinking of building or remodeling a home to ask for information regarding the stability of the market he may be about to enter, especially if he has just heard that there have been recent price advances.

Men whose living depends upon the construction industry are asking these questions, too—men who ought to know better BECAUSE . . . these queries evidence lack of thought and lack of knowledge in regard to factors governing price levels. It matters not whether the prices questioned be of building material, food, clothing or manufactured articles.

It is admitted that from all sides complaints and questions do come relative to the present prices of material for home construction of all kinds.

Contractors complain and profess they do not understand.

Prospective home-owners complain and say they will not go ahead as planned, that they will wait for lower prices.

Architects complain because houses and other construction projects exceed in cost the previous estimates they have made, or exceed the cost of a few years ago.

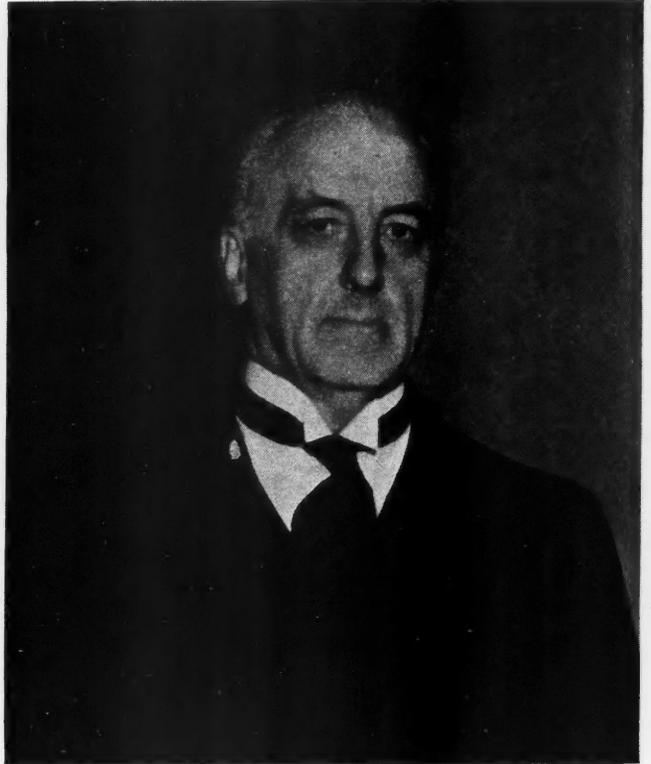
Writers in newspapers and magazines dwell at length on the subject and state that prices or costs of building material will stop a building boom.

What do all these complaints, observations, press articles and talk really mean? Lack of thought. Unwillingness to face the facts. Illogical attitude of desiring cake for oneself but denying it to the other fellow. And why is the term "lumber" used so frequently and often exclusively? Certainly it is a greatly over-worked word.

Except as it may be used as a *symbol* of building material as a *whole* due to the fact that building in this country was originally principally of frame construction (and is still largely so) and due to the fact that in houses, especially, the portion made of lumber and lumber products is the portion most in evidence to the casual glance, there is no justification for talking of building costs so generally in terms of lumber.

In frame house construction where lumber and its kindred products such as sash, doors, millwork, etc., are in greater proportion than in any other form of building construction, it is well known that the proportion such material bears to the total cost, ranges from about 22 percent to 35 percent, depending on the location, type of building and the specifications.

This statement voices an established fact. Numerous dependable and authoritative analyses have been made



WILLIAM F. SEVERN

in all parts of the United States and they all agree in these figures.

What about the increase in cost of the other 65 percent to 78 percent. This is not even inferentially criticising labor costs. Labor rates per hour in building industries do not mean the same as in some other occupations. Irregular working periods, at seemingly high hourly rates, often produce an annual wage no greater than lower hourly rates with regular working periods in some other lines.

But the facts are that increases in labor costs are a large factor in all increases in building costs. And there is relatively little comment made on this fact.

All forms of construction, not only frame buildings, but masonry, steel, cement, buildings, bridges, highways, dams, and everything using labor and material is increasing in cost.

Of course prices are higher. Prices of practically all basic commodities and of most manufactured products, prices of food, and of clothing, are all higher.

But—higher than *what* and higher than *when*?

From a well known Connecticut daily newspaper* published in May, 1937, the following is taken—

"Residential building costs have increased less than 10 per cent during the past year in a majority of the cities in the United States it was indicated in a study just completed by the statistical department of American Radiator Company.

"Figures obtained through the Federal Home Loan Bank board on the cost of an identical six room house in various cities showed 56 cities in which costs were less than 10 per cent higher during the first three months of this year as compared with the first three months of last year and 11 cities in which the increase was more than that.

"Statistics from the United States Bureau of Labor Statistics indicated that the average cost per family of new dwellings was \$4,073 in 1936 as compared with \$3,759 in 1935, an increase of 8.4 per cent.

"Other statistics from the same source showed an increase of 6.5 percent in the costs of building materials between Jan-

(Continued to page 124)

*The Bridgeport Times-Star, May 8, 1937.



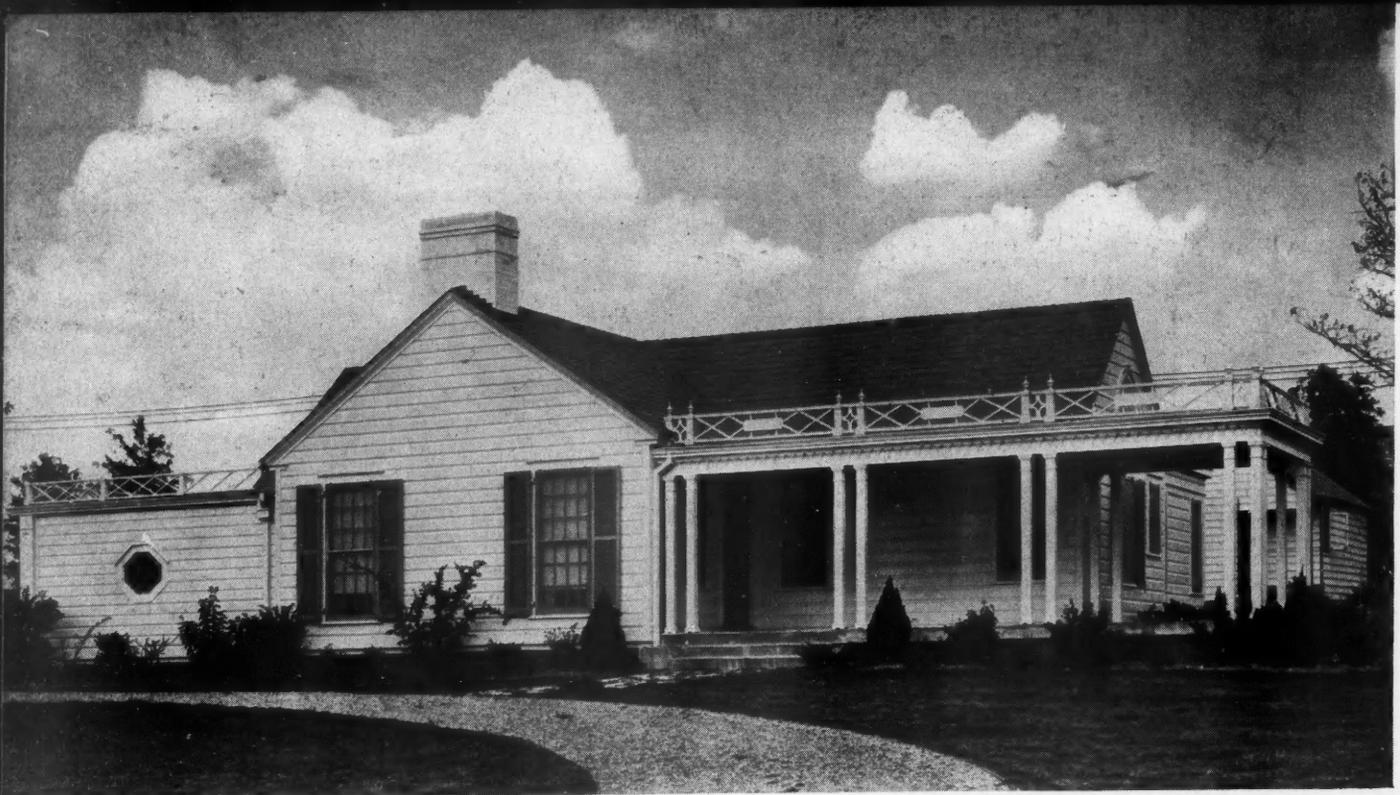
Dining Alcove and, below, Paneled Living Room in Memphis Home

53

New Interest in Model Homes

Beautiful wood paneling demonstrated in Memphis "Hardwood" Home—as pictured here and on next two pages. Twelve intriguing homes presented in this section.





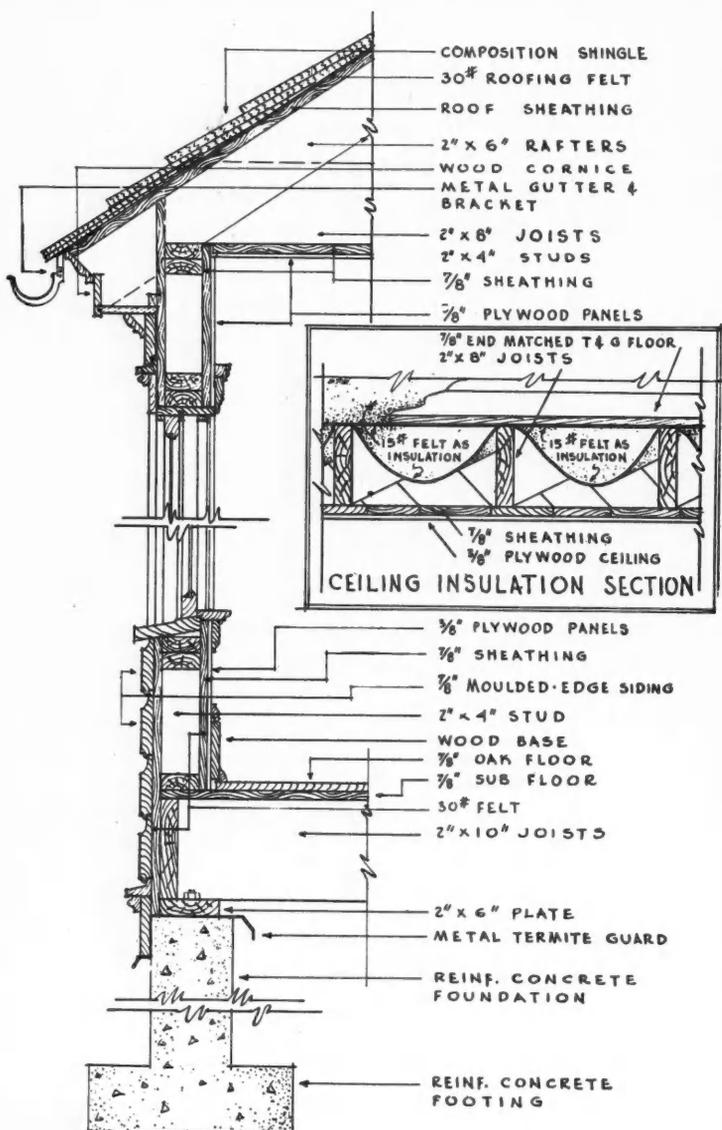
THE HARDWOOD MODEL HOME, Memphis, Tenn.

**Southern Hardwood Producers, Inc.,
Sponsor**

**Geo. Mahan, Jr., and Everett Woods,
Architects**

Robert L. Irwin, Builder

Cost Key is 2.186—234—1585—67—23—29



UNIQUE application of various species of Southern hardwoods for interiors of residences is demonstrated in the Model Home built at No. 100 Devon Way, Hedgemoor Subdivision, in Memphis, Tennessee by the Southern Hardwood Producers, Inc., and opened to the public on August 1.

This attractive home, which has been characterized as "the Hardwood Home," has been built primarily to show the beauty, comfort and permanence of Southern hardwoods for interiors of residences and the different ways in which they may be effectively used.

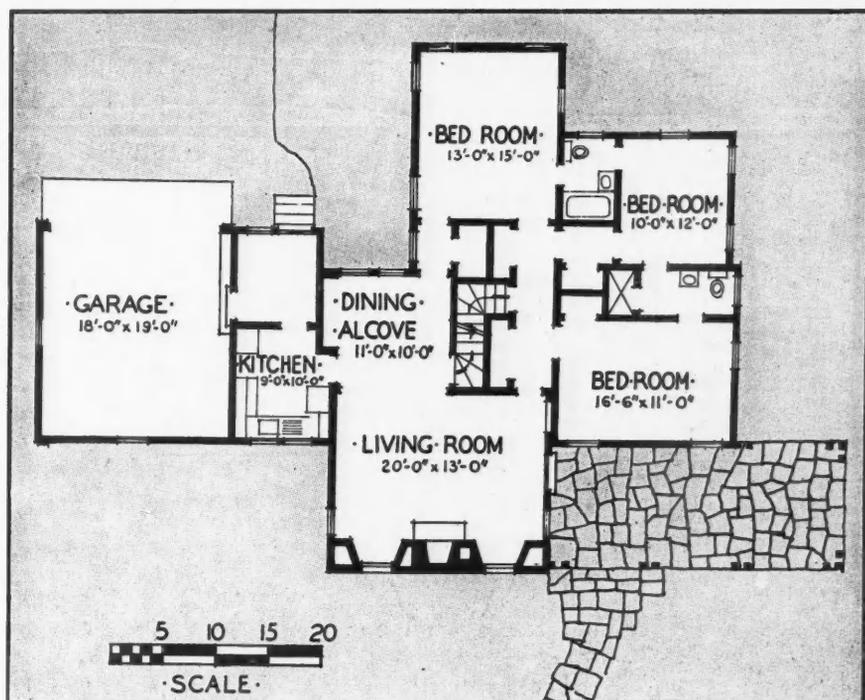
In design the house is a modified Colonial type, modern in both style and arrangement. It features all wood construction for both exterior and interior, but is regarded as of particular importance in showing how the various and different species of Southern hardwoods may be utilized to advantage and with economy to provide attractive interiors for all types of residences. This model home is distinctly "dry-built," the interior walls and ceilings throughout being covered with hardwood plywood in varying pattern designs, some painted and some showing the natural beauty of the wood.

The living room and dining alcove are especially attractive. The living room has walls covered with wide red oak boards laid horizontally, heavy undercut grooves or beads separating each board. All doors and interior trim are of oak and the floor is of quartered white oak in narrow strips. The dining alcove, just off the living room, has walls of ribbon stripe black gum with ash trim.



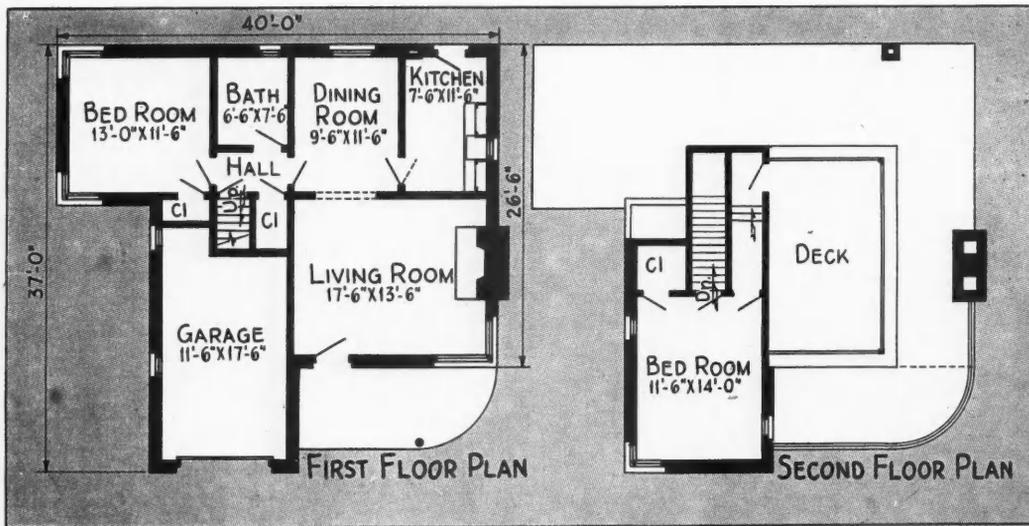
KITCHEN in Hardwood Model was designed to save time and to make the time spent in it a joy and not a burden. It is compact with plenty of cupboard space, two windows over the sink, double drain board, stainless steel back of the stove, and has a hood and exhaust fan that whisks the odors and heat of cooking out of the kitchen. The walls, woodwork and cupboards are of solid southern magnolia, finished natural with heavy varnish, beautiful and easy to keep clean. The ceiling is hardwood plywood enameled white. A decorative stripe of red makes the kitchen almost too good looking for a kitchen. The floor is southern red beech and finished to stand hard usage without wearing off. The workroom adjacent to the kitchen for convenience and efficiency, is likewise finished in magnolia, except the color of the ceiling is a canary yellow. The floor is of the same tough-wearing southern red beech.

FLOORS crafted and donated by the following members of the National Oak Flooring Manufacturers Association, E. L. Bruce Co., Nickey Bros., Inc., DeSoto Hardwood Flooring Co., and Memphis Hardwood Flooring Co. Floors laid and finished by Oscar Cluck. The completion of this model home was made possible through the cooperation of the following firms: Furniture and rugs loaned by Armstrong Furniture Co.; Pictures loaned by Memphis Photo Supply Co., and Porch and lawn furniture loaned by James E. Stark Co. Geo. Mahan, Jr., and Everett Woods, Architects; Robert L. Irwin, Builder; Arnold Bros. & Stubbe, Painting and Decorating; McCrory Electric Co., "Certified" Wiring; Lee Lumber Co., Millwork, Cabinets and Doors; J. P. Jordan Lumber Co., Framing and Siding; Cook & Nichol, Inc., Roofing; W. J. Northcross Mantel & Grate Co., Marble, Tile and Fireplace.



"MODERNISTIC MANOR" FROM OKLAHOMA

J. D. BONENBERGER of Oklahoma City built and sold this modernistic house last year, and it has attracted wide attention. It is a compact inexpensive type of structure with garage at front and an unusual second floor deck with a flat roof. The house has an all-electric kitchen, tile bathroom, steel casement windows with Venetian blinds, laundry space in garage. The Bonenberger Company has been operating in Oklahoma City for more than 18 years, featuring the slogan, "Builders of Better Built Homes."



FRONT COVER HOME

FLOOR plan is compact with very little waste space. There is a bedroom and sun deck upstairs and bedroom and bath on first floor.





FIVE EXTERIOR STYLE VARIATIONS OF HARMON'S "CHATHAM" PLAN

**Built by Harmon Homes, Inc., Chicago, at Colonial Village
Albert Fredric Heino, Chicago, Architect**

Plans and Further Details on the three following pages

BY USING various combinations of materials and styles of design, reversing plans, and relocating entrances so that different elevations face the street, a very limited number of floor plans was necessary to avoid a repetition of similar appearing houses in Harmon's Colonial Village Development, Chicago. Four basic layouts were prepared by Albert Fredric Heino in collaboration with Harmon Company's New York architects.

For each of these plans, four or five exterior treatments were designed. A wide range of materials including stone, brick, siding and shingle allow further variation of appearance through the number of combinations which are possible. As a result there are twenty-seven different exteriors among the thirty-five houses built this year; the few repetitions are not noticeable in going along the street on which most of the houses face. Also the houses are set

back varying distances along a staggered building line to further eliminate the quite frequent monotony found in rows of subdivision houses.

On this and the following three pages the five variations of the Chatham plan are presented. They consist of Colonial type houses which range from Dutch to Early American in style.

The three other basic plans used in the development are known as the Van Boven, the Huguenot and the Roseland. In size they vary from five to six rooms and attached garage, and are built on lots 45 to 60 feet wide, each house being completely landscaped.

In spite of the relatively high building costs of this area, the prices range from \$7,500 for the Roselands to \$10,500 for the Chathams, financed with FHA insured loans amortized over a period of nineteen years.

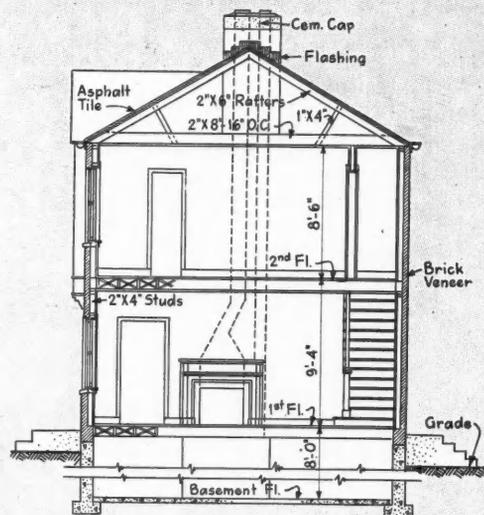


SIX ROOMS AND ATTACHED GARAGE

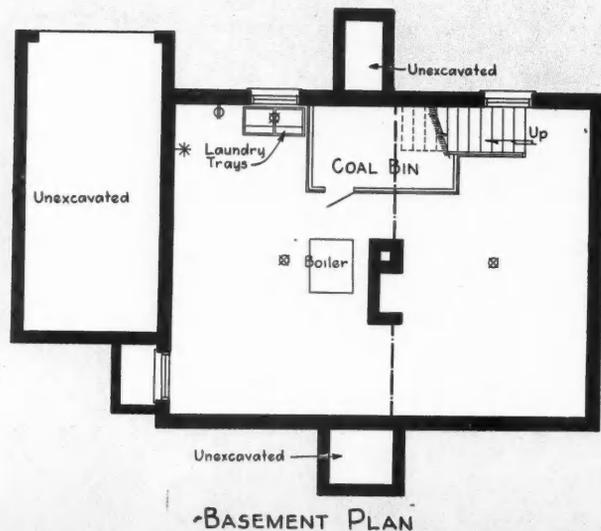
Cost Key is 1.603—130—653—29—23—11

THESE TWO styles of Harmon Colonial Village houses show the Chatham model with exteriors (above) of stone face below and siding on overhanging second floor, and (opposite page) of unpainted common brick combined with siding. The plans have been reversed so that the garage wings are on opposite sides and the overhang treatment is different but there is practically no change in layout which is shown at the right.

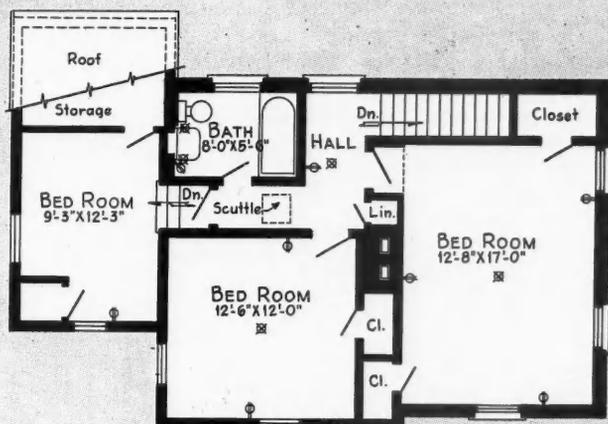
CHATHAM PLANS show a compact arrangement of six rooms and attached garage. A center entrance hallway separates dining and living quarters. Stairs are located along rear wall of living room which also has a wood-burning fireplace. Kitchen has adjoining lavatory, broom closet and built-in cabinets. The third bedroom is over the garage, which as shown in these plans is reached through an L-shaped hall; in the Dutch Colonial style this garage wing is moved to the rear, eliminating this connecting hall. The tub in the tiled bath room is placed in an arched recess. Plumbing fixtures are grouped for economy. Carl C. Anderson and the Gutensky Construction Co., both of Chicago, were general contractors on these houses.



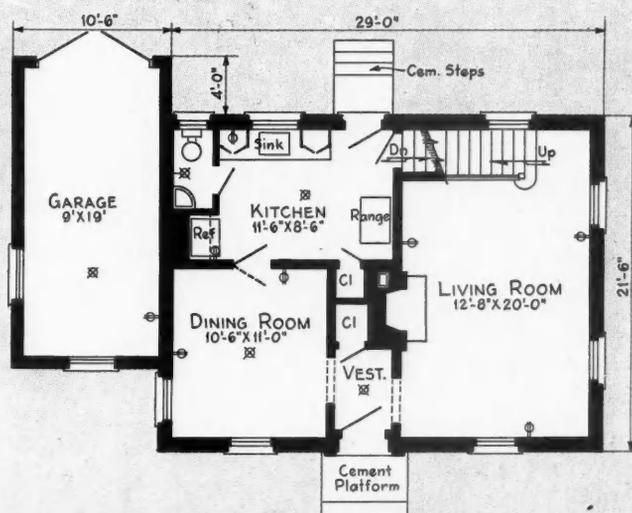
CROSS SECTION



BASEMENT PLAN



SECOND FLOOR PLAN



FIRST FLOOR PLAN

OUTLINE SPECIFICATIONS HARMON COLONIAL HOUSES

FOUNDATION: 12" concrete. 4" concrete floor over cinders.

WALLS: Brick and stone veneer; redwood siding or shingles. Framing, Hines Precision Y.P. Diagonal sheathing.

LATH & PLASTER: 3 coat on wood lath.

INSULATION: 1/2" Balsam-Wool in walls and above ceiling.

ROOF: 3-in-1 asphalt shingles, 15 lb. felt.

SHEET METAL: Copper bearing galvanized iron.

FLOORS: Select red oak.

MILLWORK: Gum trim. Pine doors.

WINDOWS: Double-hung wood sash. Unique sash balances. Galvanized weatherstripping.

WALL FINISH: Wallpaper except 2-coat enamel on walls and ceilings of kitchen and bath. Tile wainscoting in bath. Other ceilings calcimine.

EXTERIOR PAINT: Devco-Raynolds 2-coat white.

HEATING: Sunbeam winter air conditioning, coal-fired. Gas water heater and 30 gal. tank.

PLUMBING: Kohler and Crane fixtures. Galvanized steel water supply lines.

WIRING: Flexible conduit system.

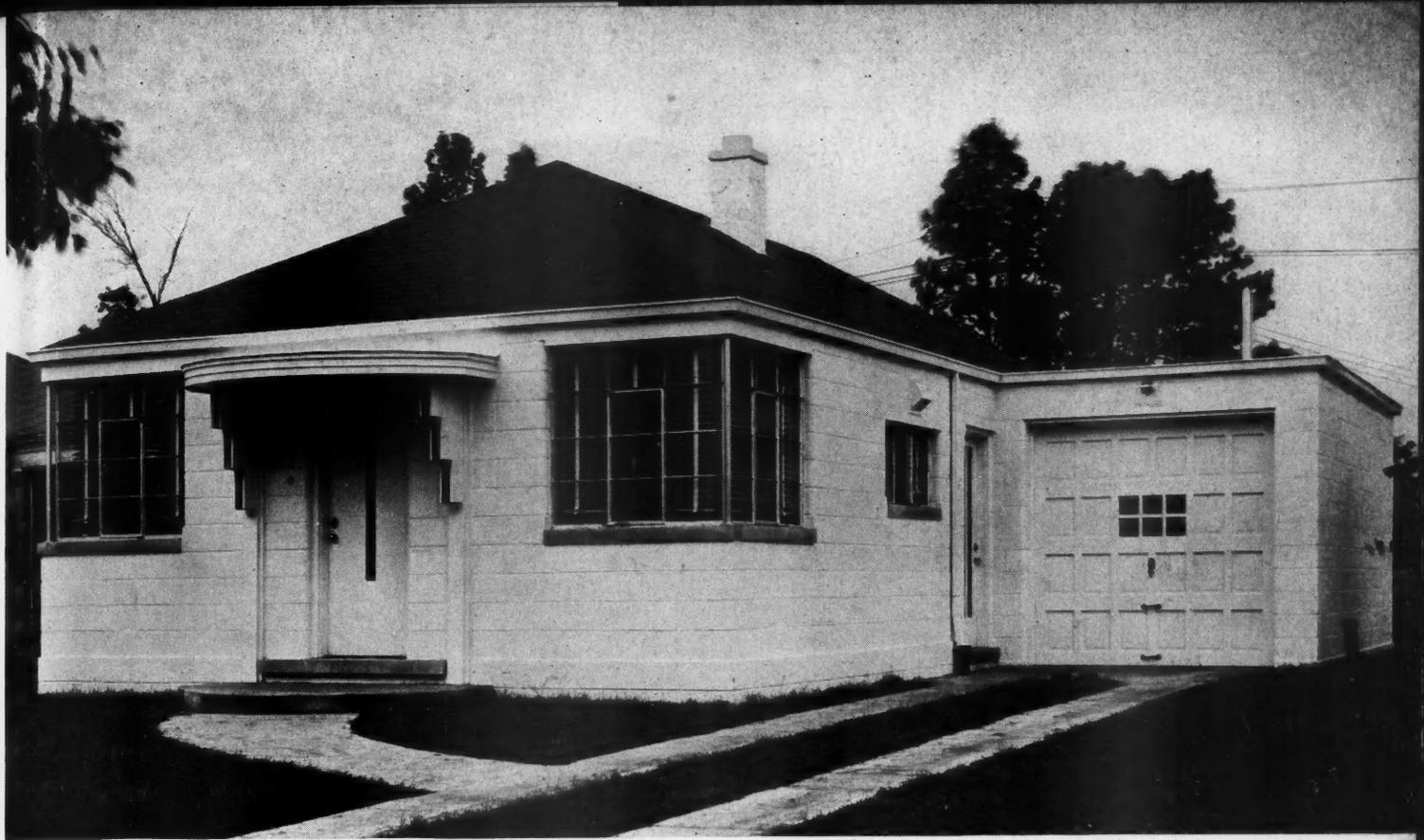


HARMON COLONIALS— DUTCH and AMERICAN

Plans and Details on the three preceding pages

THE DUTCH Colonial variation of Harmon's Chatham plan shown above is probably the most attractive of the five styles in livability and appearance. The garage being to the rear, a porch has been added off the living room. Corner window treatment is effective. The fifth type of Chatham appears below. It has a hip roof both on the main section and garage wing.





NEW STYLE HOME IN DETROIT

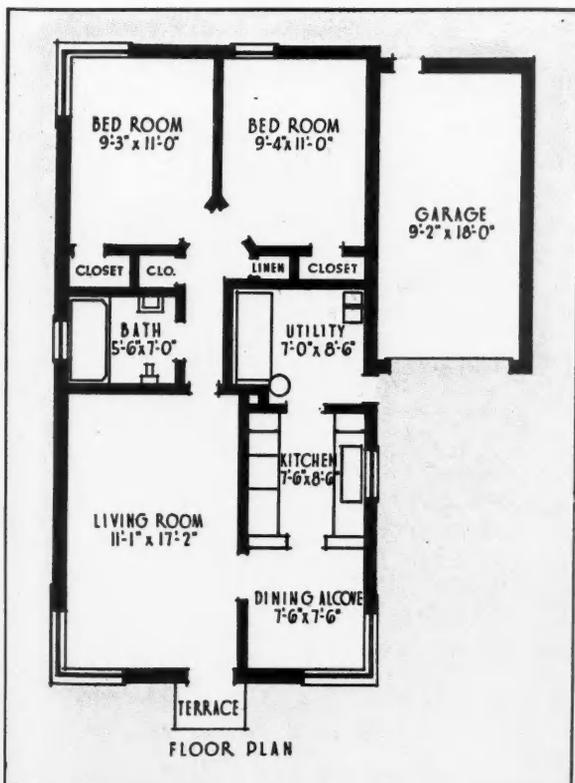
Albert E. Bill, Builder

**This active and progressive operative builder
is finding a ready market for these homes.**

Cost Key is 1.113-140-(800)-(32)-14-11

CONSTRUCTION OUTLINE

Cinder Block painted exterior.
 Bryant Gas Unit Heater.
 Asphalt Shingle roof.
 Overhead door on garage, fireproofed reinforced Concrete floor slab.
 Sleepers in oak floor.
 Plumbing regular Kohler.
 Rockwool over ceiling—15 lb. felt in side walls.
 Overall size 20'8" x 42'—garage 10' x 20'.
 Hardware—nickel on brass.
 Light fixtures—modern type.
 Foundation—poured concrete 3'6" below surface.
 Filled solid with bank sand to floor—to keep out rats, bugs, etc. 2' higher than sidewalk, allows for 12" grade.
 Bathroom—fibre tile with chrome metal corners.
 Plaster regular wall on Rock lath.
 Walls—papered with horizontal pattern.
 Flange roof gutters extending 12" on roof.
 Windows—Fenestra screen type steel casements.
 Bathroom, Kitchen, Dinette floors—Linoleum on cold bases.





FRENCH COLONIAL HOME

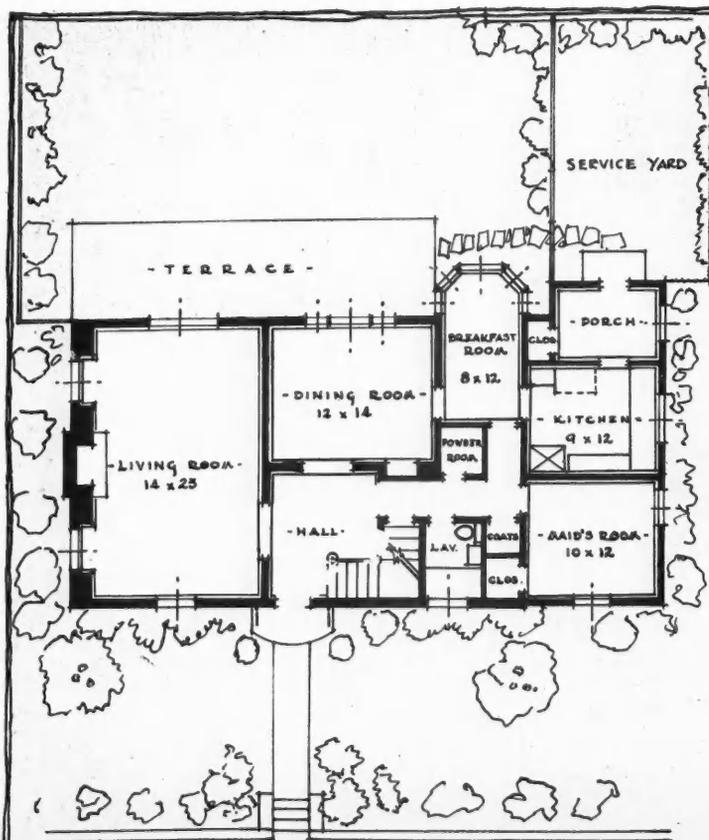
San Marino, Pasadena, Calif.

E. A. Daniell, Builder

Barker Bros., Decorators

Cost Key is 2.247-170-1418-59-26-21

THIS MODEL HOME in French Colonial architecture at San Marino, Pasadena, California, suburb, built by E. A. Daniell, Pasadena, at a cost of \$11,000 and furnished as a demonstration home by Barker Bros., Los Angeles, features brick veneer, stucco and shingles, for exterior construction with sugar pine and Oregon pine for interior details, along with plaster and papered walls. The long living room of this model two-story house crosses one entire end and looks upon a terrace through French doors.



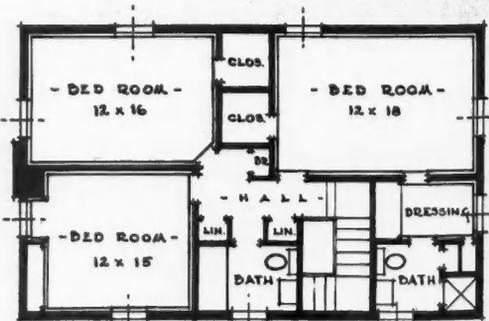
FIRST FLOOR PLAN

~ DEMONSTRATION HOME
~ 2187 ROANOKE RD. SAN MARINO

E. A. DANIELL, BUILDER & CONTR.

40 SOUTH LOS ROBLES
PASADENA, CALIF.

TERRACE 1193



SECOND FLOOR PLAN

CONSTRUCTION DETAILS: Foundation of poured concrete with concrete basement walls and floor. Exterior walls 2 x 4 and 2 x 6 studs, with brick veneer, stucco and shingles. Interior walls, 2 x 4 and 2 x 6 studs, plaster over wood lath—20 ga. 1" wire mesh over all lath. All ceilings are plastered.

FLOOR CONSTRUCTION: 2 x 12 joists on 4 x 6 girders on first floor; 2 x 12 joists for second floor. The roof, frame construction with Royal Western red cedar shingles. Chimney of common brick with terracotta flue lining. Living room fireplace with marble face and hearth, and firebrick firebox. The sheet metal work consists of 26 ga. Toncan metal flashing, gutters and leaders. All exterior walls and ceilings are insulated with 4" Johns-Manville rock wool. Windows, double hung and casement sash are of sugar pine, while the frames are of vertical grained Oregon pine. Blinds throughout are 1 1/8" fixed slats of sugar pine.

INTERIOR CONSTRUCTION: The stairs: oak treads, vertical grained Oregon pine risers and stringers. Rails are wrought iron.

In the living room, dining room, bedrooms and halls, oak flooring is used, while kitchen, breakfast room and service porch, have linoleum with coved base cemented to T and G Oregon pine floors.

Wall coverings: Living room, entry hall and other halls painted. Dining room has wallpaper above a painted plaster wainscot, while all other rooms are papered, except bathrooms which have a tile wainscot.

Woodwork, including trim, shelving and doors are of sugar pine inside, while the exterior is of vertical grained sugar pine.

RIGHT: View of breakfast room, and **BELOW,** of living room in San Marino French Colonial home.





THE DINETTE is a popular feature of this little cottage in the new Long Island project of Franksons Constr. Co. There is a full basement and room for 2 additional bedrooms in the attic.

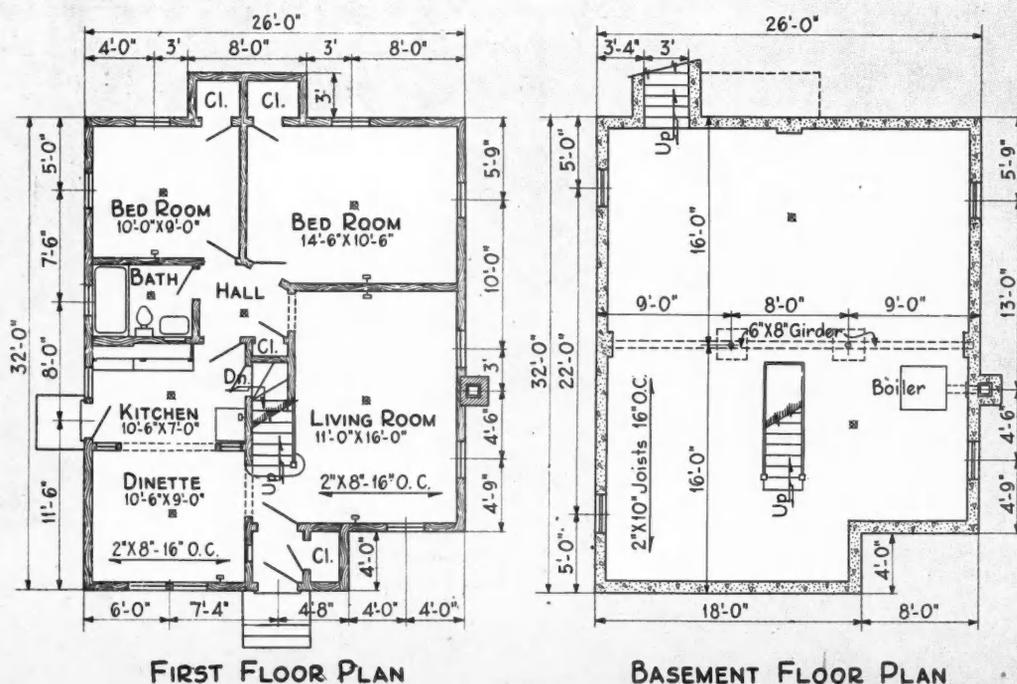
LITTLE BUT LIVABLE

Four and Five-Room Cottages, as Small as 24'-4" x 26'-10", Built by Franksons Construction Co. to Meet Low Cost House Demand

LEONARD FRANK and his sons, who constitute the Franksons Construction Company, developers of Parkside Homes at St. Albans, Long Island, N.Y., are doing their bit to solve the low-cost home problem. They are building and selling four-room-and-bath houses with a floor area of only 24'-4" x 26'-10" and a cubage of 13,000 cu. ft.—yet these little homes are very livable and very attractive.

For buyers with a little more money they have a slightly larger model (illustrated on this page)—26' x 32'—which has two bedrooms downstairs and an attic big enough for two additional bedrooms. This little house has an attractive dinette similar to the one provided in many luxurious city apartments.

Architects Danancher and San Fanandre, of Jamaica, L. I., have done a clever job of working in necessary items in the small cubage allowed. One of these is a good front-



LIVABLE, comfortable rooms are achieved in this floor plan by making every inch of the 26 x 32 ft. floor area work. (Plan is shown reversed to put living room on right side.) There is a good hall closet, attractive dinette, fair-sized bedrooms, and stairways to both cellar and attic. Cost Key is 1.110-122-824-38-17-13

ONLY 13,000 cu. ft. are enclosed in this tiny 4-room cottage with cement-asbestos shingle exterior. Yet it takes care of the essential living requirements of a small family. There is a full basement, ample closets, clever arrangement of rooms.

Cost Key is .816—102—653—30—12—9



hall clothes closet—an item which many low-cost home designers leave out. In the larger type house the living room is 11' x 16', and one of the bedrooms is 14' 6" x 10' 6". There is a compact center hall arrangement with linen closet. The bathroom plumbing backs on the kitchen plumbing—an economical feature.

In the smallest model, of which two exteriors are illustrated, a clever kitchen-basement entrance arrangement has been worked out. The back door is dropped to ground level and enters upon a platform three steps below the kitchen level. This makes it possible to work in the basement stairs with a minimum of floor space. The ceiling height is 8' 4" and the roof pitch is very low, the ridge height being only 7 1/2'. The cubic contents of this model is approximately 13,000 cu. ft.

Although the Franks have gone to great length to pro-

duce a small compact model, they have not stinted on equipment. The houses are insulated and equipped with an oil-burning winter conditioners. Specifications include:

FOUNDATIONS—10" monolithic concrete, with full basements having 4" concrete floors.

INSULATION—Reynolds Metallation on Ecod fabric plaster base.

HEATING—Reynolds air conditioner with oil burner, fan, filter, automatic controls and prefabricated duct system.

COPPER GUTTERS, leaders, valleys and flashing; brass plumbing.

WOOD SIDING or Johns-Manville cedar-grained asbestos shingles.

THICK BUTT ASPHALT SHINGLE ROOFS.

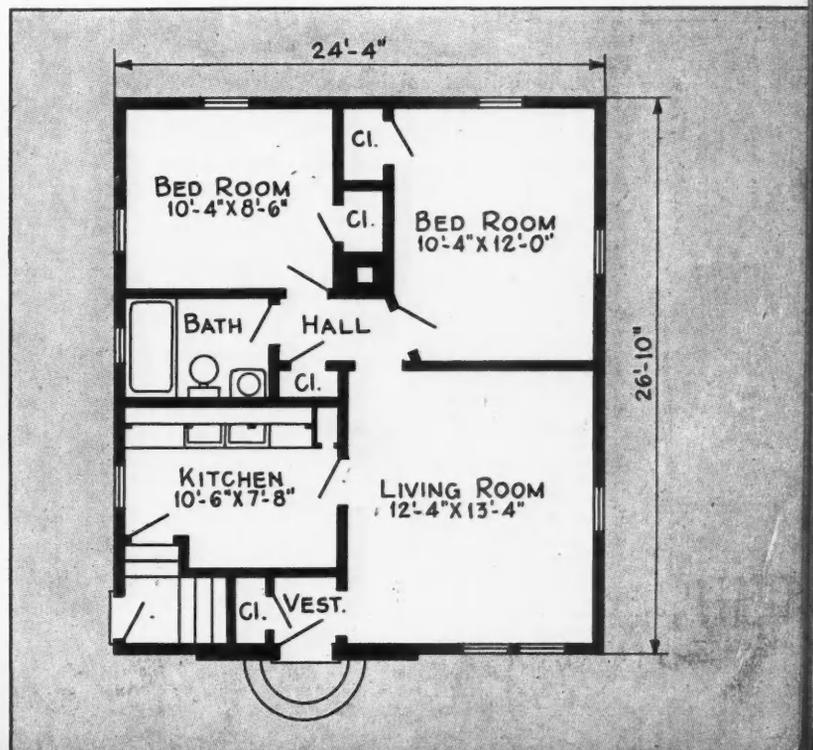
KITCHEN—Linoleum floor, table-top range, built-in kitchen cabinets with linoleum top work area.

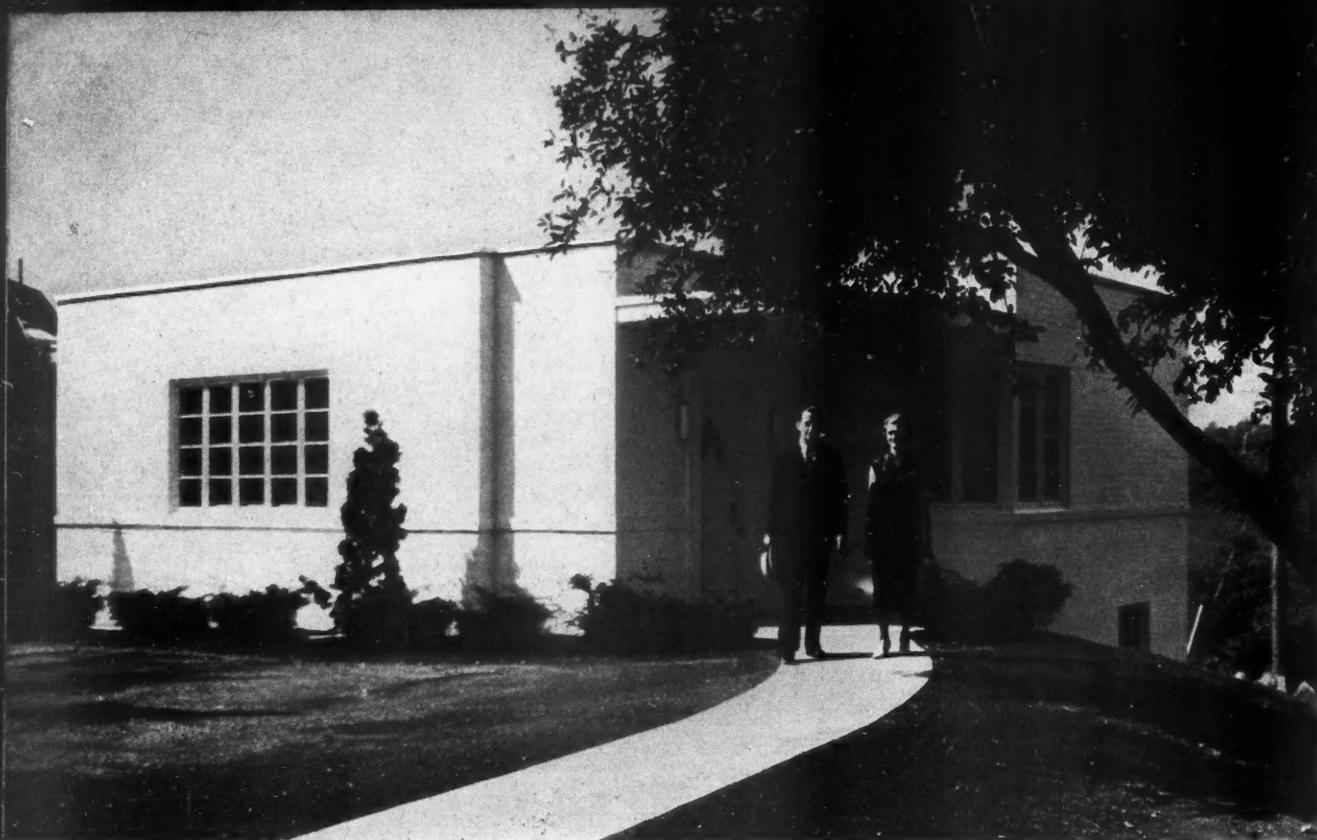
BATHROOM—Travertine tile floors, built-in tub and shower, Venetian medicine cabinet, Standard plumbing fixtures.

Rooms have adequate base plugs, plenty of closets, firestops in every floor. The lot sizes range from 40 x 100 to 60 x 100 ft.



THE ALTERNATE small cottage design above is done in wide siding, with a brick entrance detail. An outstanding feature of the floor plan at right (shown reversed) is the kitchen entrance with grade entrance opening on basement stair.



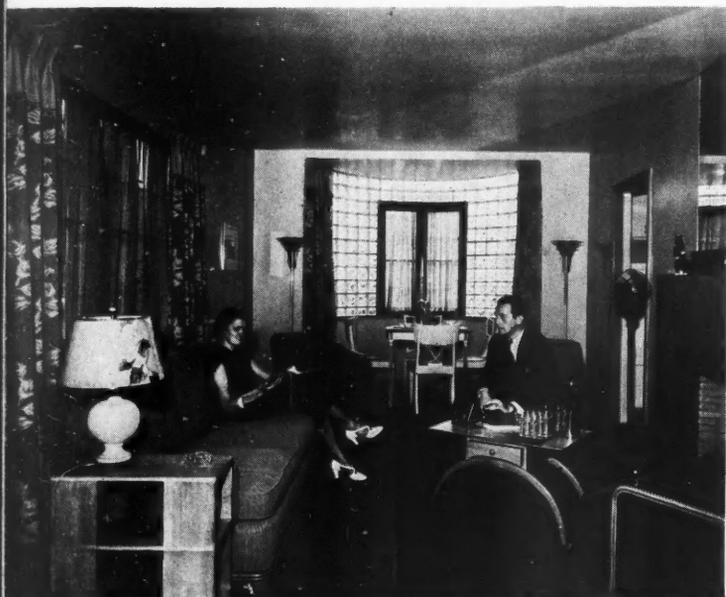


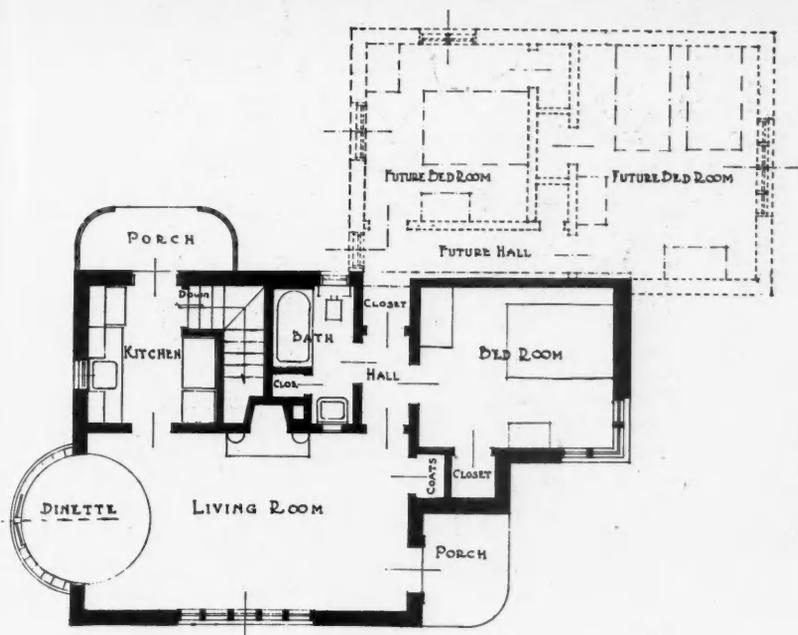
PITTSBURGH "HOME-THAT-GROWS"

Vincent J. Schoeneman, Architect
Albert Fritsch, Builder

DEDICATED to families of moderate income, a four room, white painted brick dwelling has been built near Pittsburgh as an example of low-cost housing constructed of new and modern materials and incorporating complete electrical facilities. Called the "home-that-grows," because the owner would find it easy to add more bedrooms to the rear, or to a second story top. A flat roof, economical in cost, saves space otherwise lost by using the sloping type. It is well insulated to prevent heat loss in winter and heat infiltration during the summer months.

The "home-that-grows" has a Westinghouse electrically planned kitchen and laundry, complete even to an automatic dishwasher. The kitchen has been so designed that the preparation and cooking of foods may be accomplished with a minimum of effort. It is arranged so that work routine in the kitchen follows a logical and progressive order, eliminating unnecessary steps. The work table surface in the kitchen is finished in light blue Micarta, a laminated molded material developed by Westinghouse engineers as a decorative veneer that resists moisture, acids, alkalis and oils.





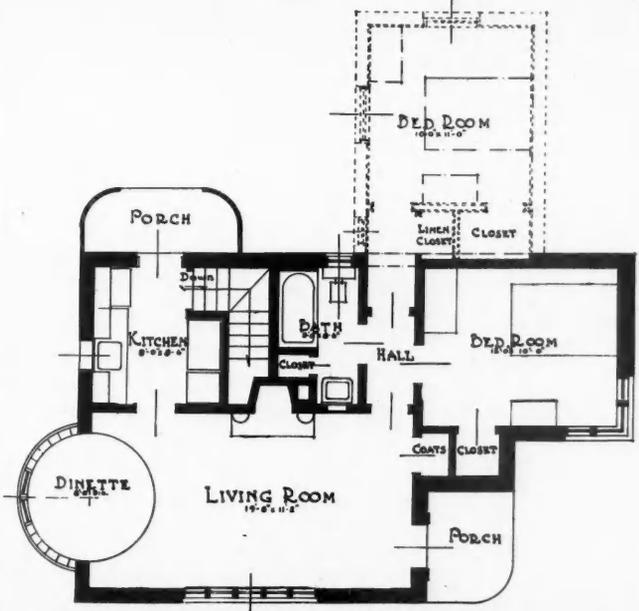
FIRST FLOOR PLAN AS BUILT WITH 2 ROOM FUTURE ADDITION INDICATED

PLANS show house as built and also future extensions.

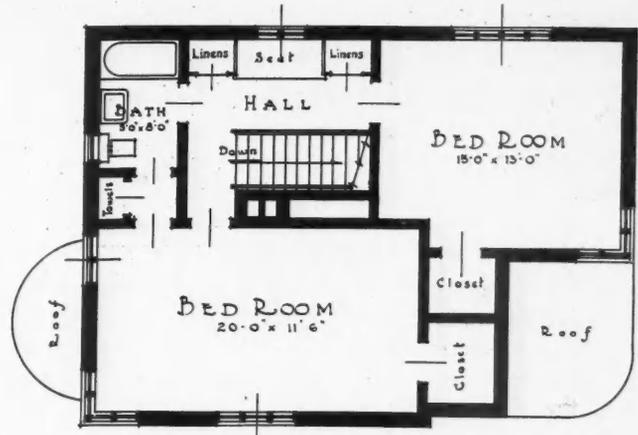
The living room is 20 feet by 11 feet six inches with circular bay at one end, forming a dinette. Glass brick, which admits light, forms the circular walls of the dinette. The fireplace mantel is light green Micarta, adding distinction to the room. The bedroom opening from a hallway connecting it with the bath and living room is provided with spacious wardrobe and luminous indirect lighting. The bathroom walls are cream enamel tile which does not craze, crack or sweat.

The complete electric planned laundry is bright and cheerful, the logical arrangement of the equipment economizes steps and physical fatigue. The recreation room, 19 feet by 8 feet, is directly beneath the living room. It has a wood-burning fireplace, colored cement floor, which may be waxed for dancing.

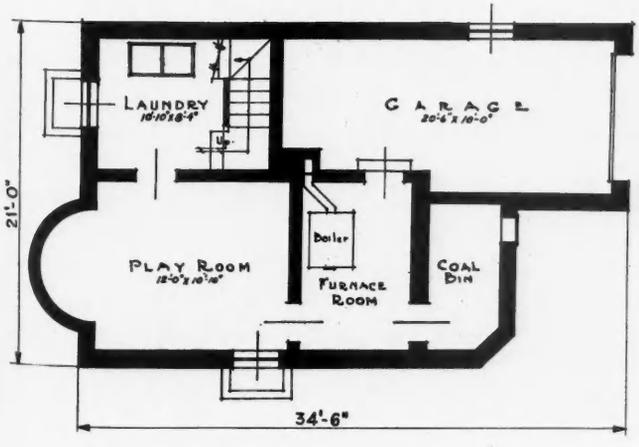
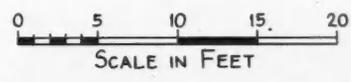
A Nofuze Load Center is installed in the laundry which eliminates the need of replacing fuses when a short circuit or overload occurs in the electrical wiring in the home. The Nofuze load center includes small circuit breakers which automatically trip open under conditions which cause a fuse to "blow."



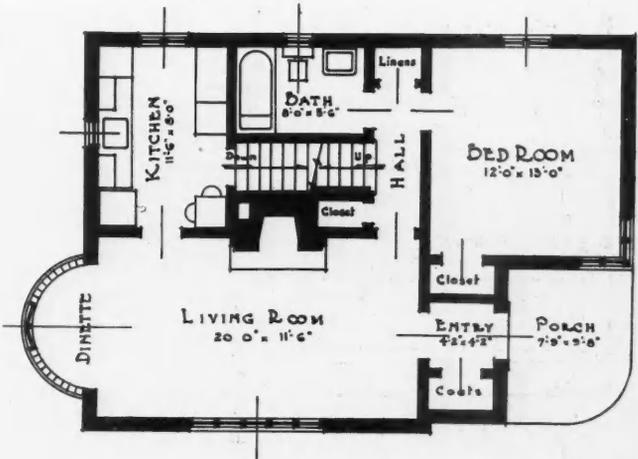
FIRST FLOOR PLAN AS BUILT WITH 1 ROOM FUTURE ADDITION AS INDICATED



FUTURE SECOND FLOOR



BASEMENT PLAN AS BUILT



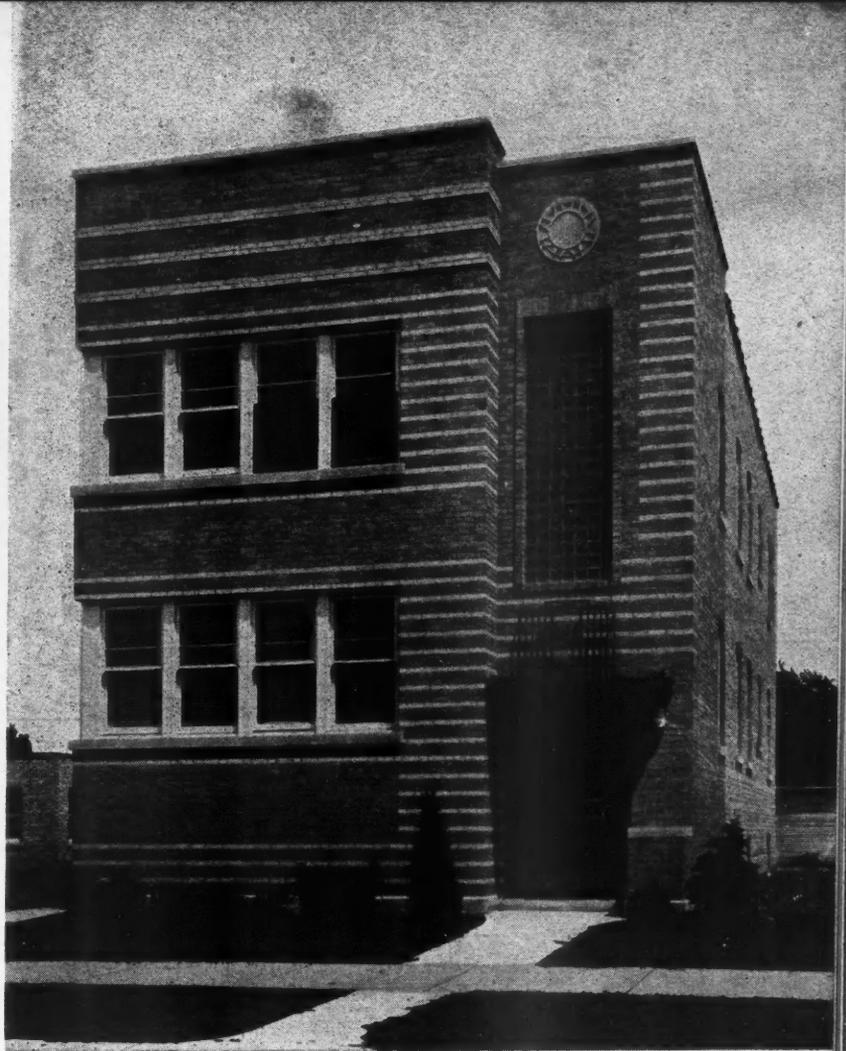
FIRST FLOOR PLAN WIDENED FOR STAIRWAY TO FUTURE SECOND FLOOR

Modern Two-Flat Building Combines New Materials and Advanced Planning

ALTHOUGH an extensive revival of two-flat construction has not yet occurred in most sections of the country, there has been considerable interest shown in those structures of this type which have been built recently. Some of these new structures are found to incorporate many of the same improvements in design and materials which are now found in single-family houses. An outstanding example of 1937 style two-family dwelling is illustrated on this page with plans and details presented on the two pages following.

It was designed and built by Architect B. Albert Comm, of Chicago, who has done considerable work in this field. The front elevation as seen above has been effectively handled in modern styling. Fenestration includes corner window placement in the living rooms and a panel of glass brick to light the stair well. Bands of colored face brick add to the modern decorative treatment which is further carried out by the canopy, flush entrance door and hardware.

The interior presents a definite feeling of spaciousness which was not always characteristic of older buildings of this kind. The circular, dome-ceilinged reception hall opens into a combined living and dining room which has a total length of 36 feet 6 inches. A projecting wing continuing from the mantelpiece screens off one end of this room for dining space. This projection illustrated below



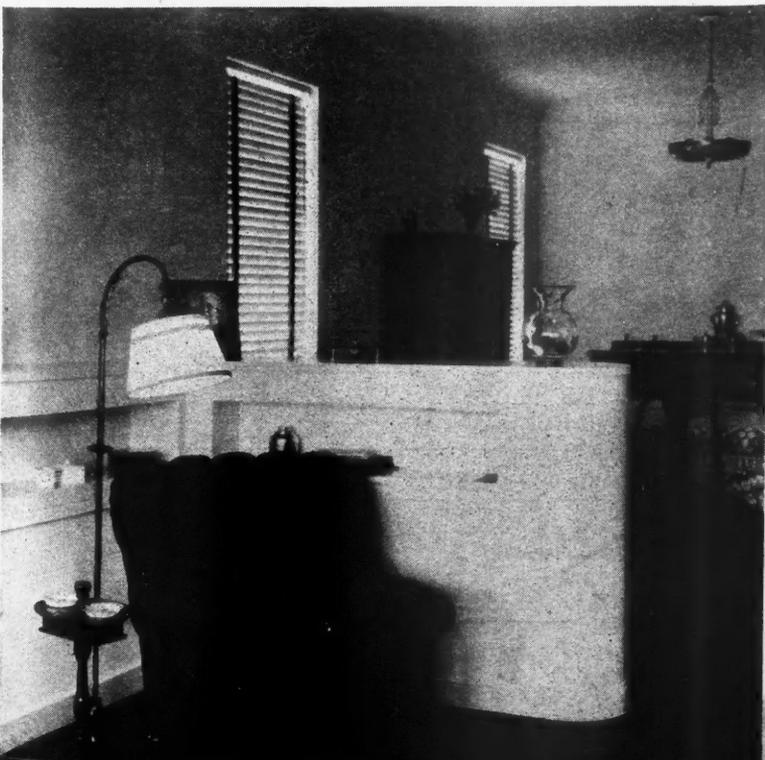
is recessed for book shelves like the fluted mantel. Rounded corners harmonize with the 9-inch plaster cove.

There is ample storage space planned for these units. On each floor there are built-in cabinets and utility closet in the kitchen, a wardrobe and closet in the master bedroom, a closet in the second bedroom, linen and cedar lined closets off the rear hall and a guest closet off the reception hall.

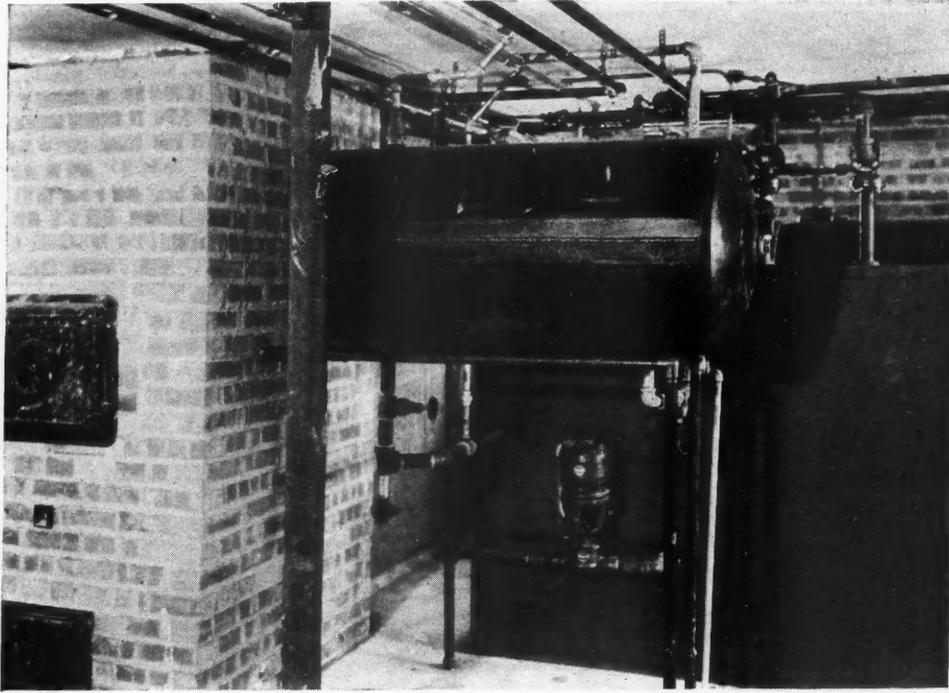
Of particular interest is the manner in which the heating is handled to allow complete flexibility according to the wishes of either tenant. A Gilbarco oil-fired American Radiator boiler supplies hot water under pressure through separate piping to each floor, and is operated by a dual system of Thrush controls. The boiler also furnishes year 'round domestic hot water; a second flue provides for a Kernerator incinerator.

Some of the other equipment used in the building includes American Radiator convectors, Standard plumbing, Lightolier fixtures, Ilg ventilating fan, Elgin cabinets and Schlage hardware. Walls are 12-inch solid brick, insulated with 1-inch Balsam-Wool and finished with 3-coat plaster over U.S.G. Rocklath. Roof is built-up composition type.

The building contains approximately 43,000 cubic feet and was erected at a cost of about 33 cents per cubic foot.



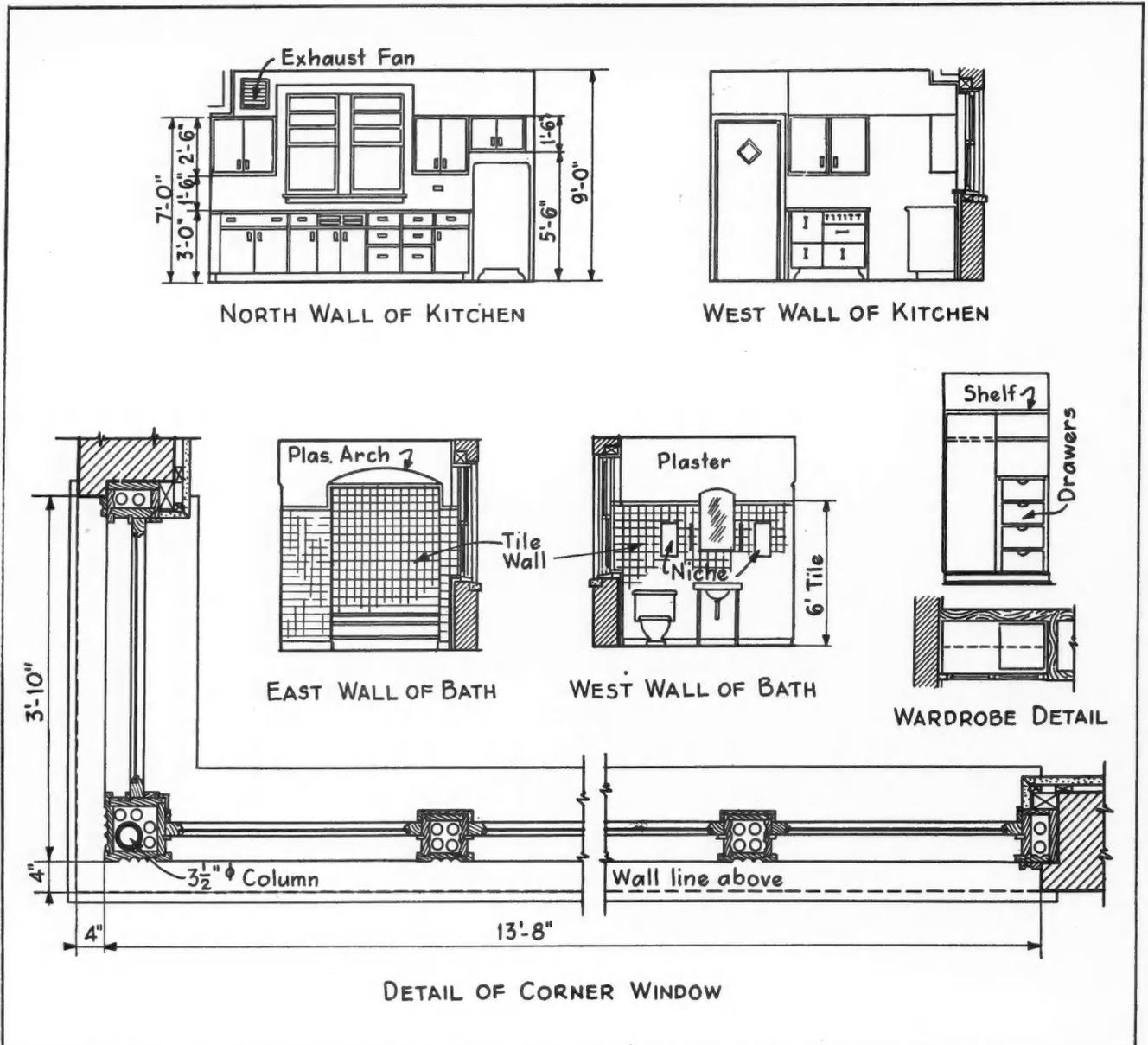
VIEW of the living and dining room in modern two-flat building showing the projecting mantel wing which screens dining space from living end.

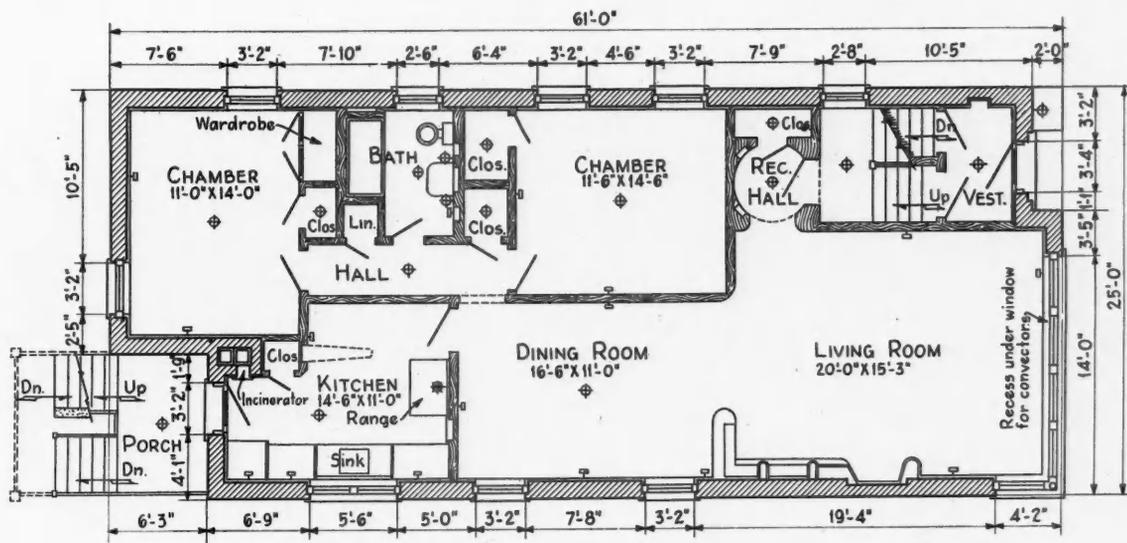


**CONSTRUCTION
DETAILS OF MODERN
TWO-FLAT BUILDING**
B. ALBERT COMM,
ARCHITECT

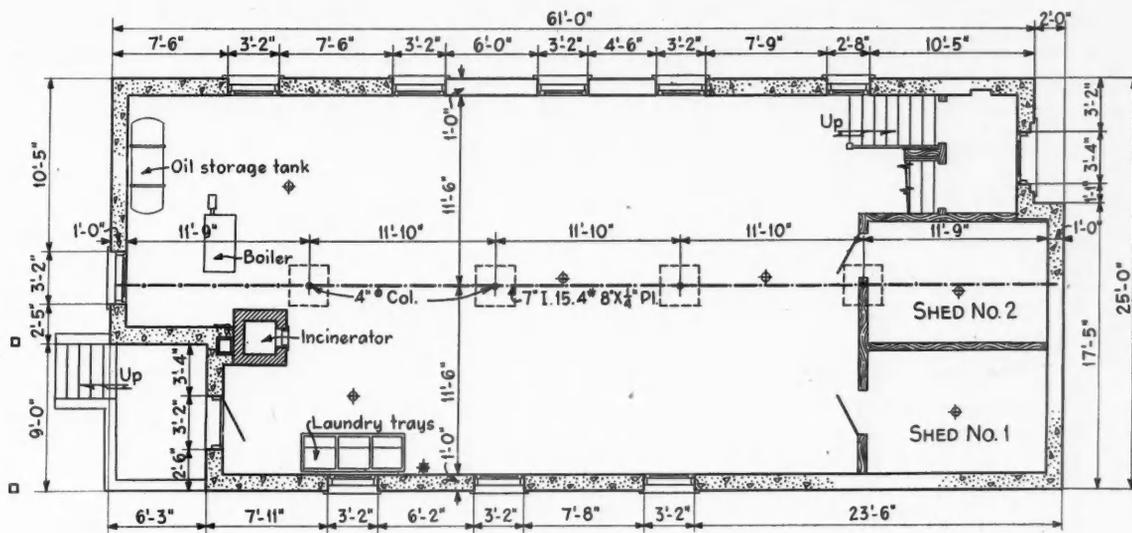
Other details appear on
the preceding page.

VIEW OF HEATING equipment at the left shows part of the enclosed oil-fired boiler with separate supply and return lines for both floors (note small pipe sizes). One of the pressure hot water circulators is seen in the return on this side of the boiler; the second one is similarly placed on the opposite side. The domestic hot water storage tank appears in the foreground and the oil storage tank is located back of the boiler at the right. At the far left is incinerator door and cleanout.

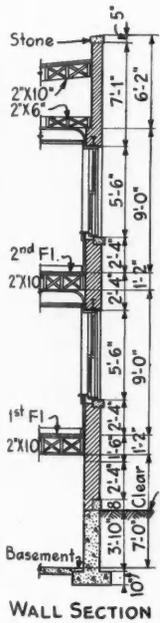




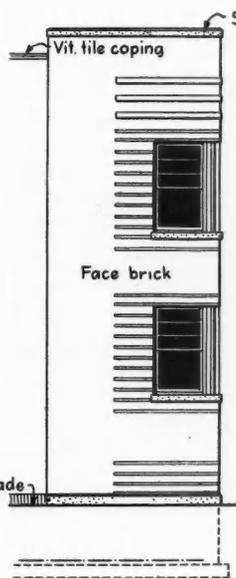
TYPICAL FLOOR PLAN



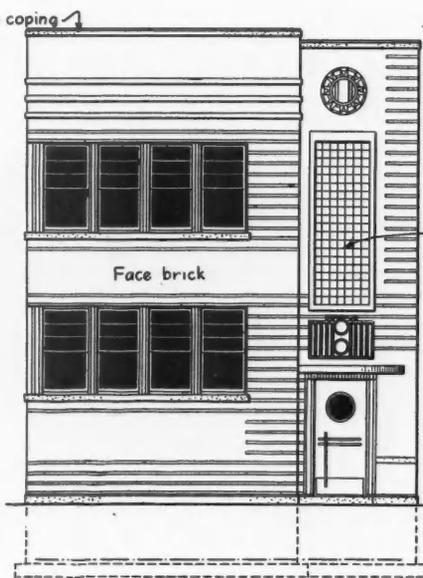
BASEMENT PLAN



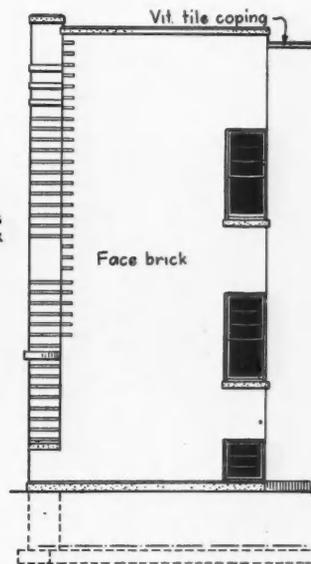
WALL SECTION



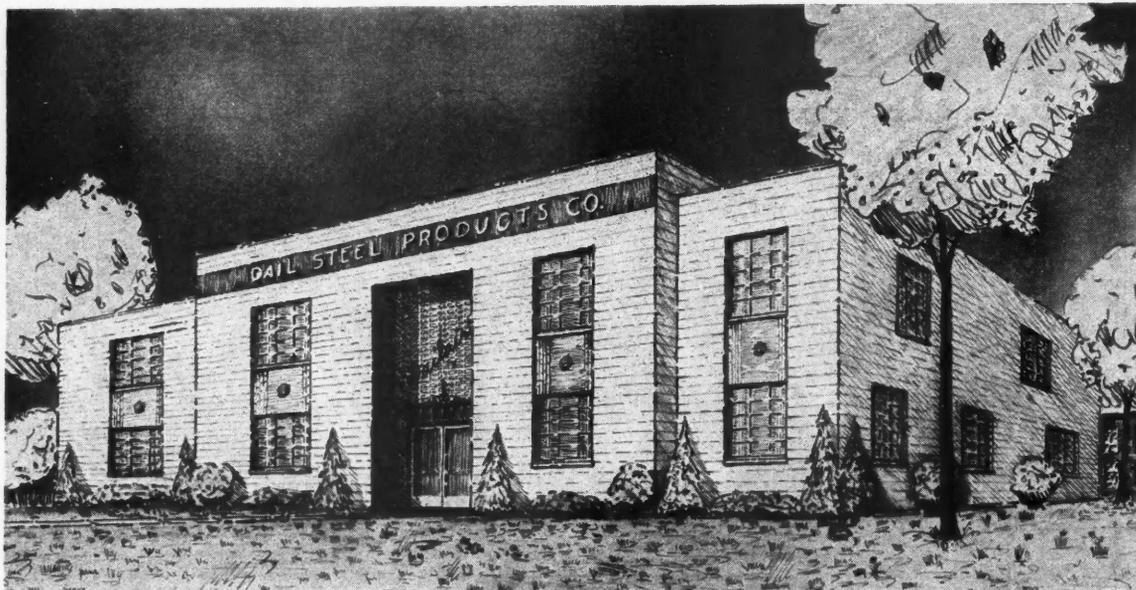
NORTH RETURN



FRONT ELEVATION



SOUTH RETURN



Dail Demonstrates Low Cost of Air Conditioning Commercial Buildings

TO GIVE the industry a working example of present day year 'round air conditioning efficiency, the Dail Steel Products Company of Lansing, Mich., has incorporated one of its systems in the firm's new Administration Building completed the first of the year. The Dailaire plant as installed provides a working demonstration and data based on its operation, as listed in the table below, show some very interesting operating cost figures for comparison with other commercial jobs.

The system was the first to be built under the new technical code adopted by the National Warm Air Heating and Air Conditioning Association, and illustrates the fine progress to be made in this connection. The Dail Administration Building has a cubical content of about 33,000 cubic feet with a 210,000 B.t.u. heat loss. It is equipped with a No. 14B2WYCG Dailaire unit that provides complete year 'round air conditioning in one compact casing. Cooling will be accomplished by deep-

well water taken from the city mains, at approximately 55 degree temperature and passed through the coils, after which it will be piped to the roof for spray cooling, thence to a storage tank and from there to a lawn sprinkling system. The cooling load is estimated at 6 tons refrigeration. Temperature is completely controlled both in summer and winter. Humidity is governed in winter by means of a humidistat operating a solenoid which controls the water sprays in the washer chambers. Dehumidification, in the extent allowable by the 55 degree water, is also regulated by a humidistat.

The estimated cooling cost is \$20.00 per season. The furnace is gas-fired with natural gas of 1080 B.t.u. test. The amazing economy of this system is illustrated by the first month's fuel record, half of which took place while the building was still under construction. The heating cost was \$31.00, or about \$1.00 a day. The water consumption is estimated at 600 gallons per hour, maximum.

The building is of cinder block construction. The interior is finished off with Nu-Wood using walnut baseboards and sills with chrome trims; ceiling is insulated with rock wool. A column of glass brick marks the building entrance, and on the interior floods the accounting office with good working light, as seen on the page opposite. Construction cost was approximately \$15,000; Engineer Bruce F. McLouth of the company designed the building, George Hagamier and Son were the contractors.

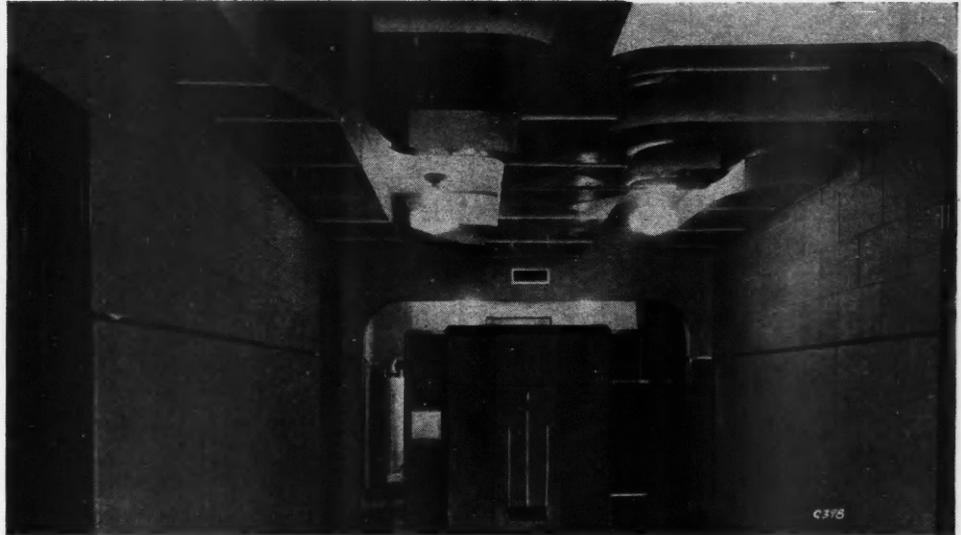
Administration Building Statistics

| | |
|--|---------------------------|
| Cubical Content..... | 33,000 cu. ft. |
| Heat Loss..... | 210,000 B.t.u. |
| Cooling Load..... | 6 tons refrigeration |
| Fuel—Natural Gas..... | 1080 B.t.u. per cu. ft. |
| Cooling Medium—City Water..... | 55° Summer Temperature |
| Estimated Fuel Cost Per Season..... | \$180.00 |
| Actual Fuel Cost, Jan. 1, to Feb. 1, 1937..... | \$31.00 |
| Estimated Water Consumption..... | Max. 600 gallons per hour |
| Estimated Cooling Cost..... | \$20.00 per season |

Building contents: Six large private offices. Engineer's drafting room and spacious school room for engineering. Display room, sales office and accounting office. Auxiliary rooms include two storage rooms, two rest rooms and lobby entrance.

COST DATA TABLE at left gives statistics and conditioning costs for Dail Steel Products Building shown at top of page.

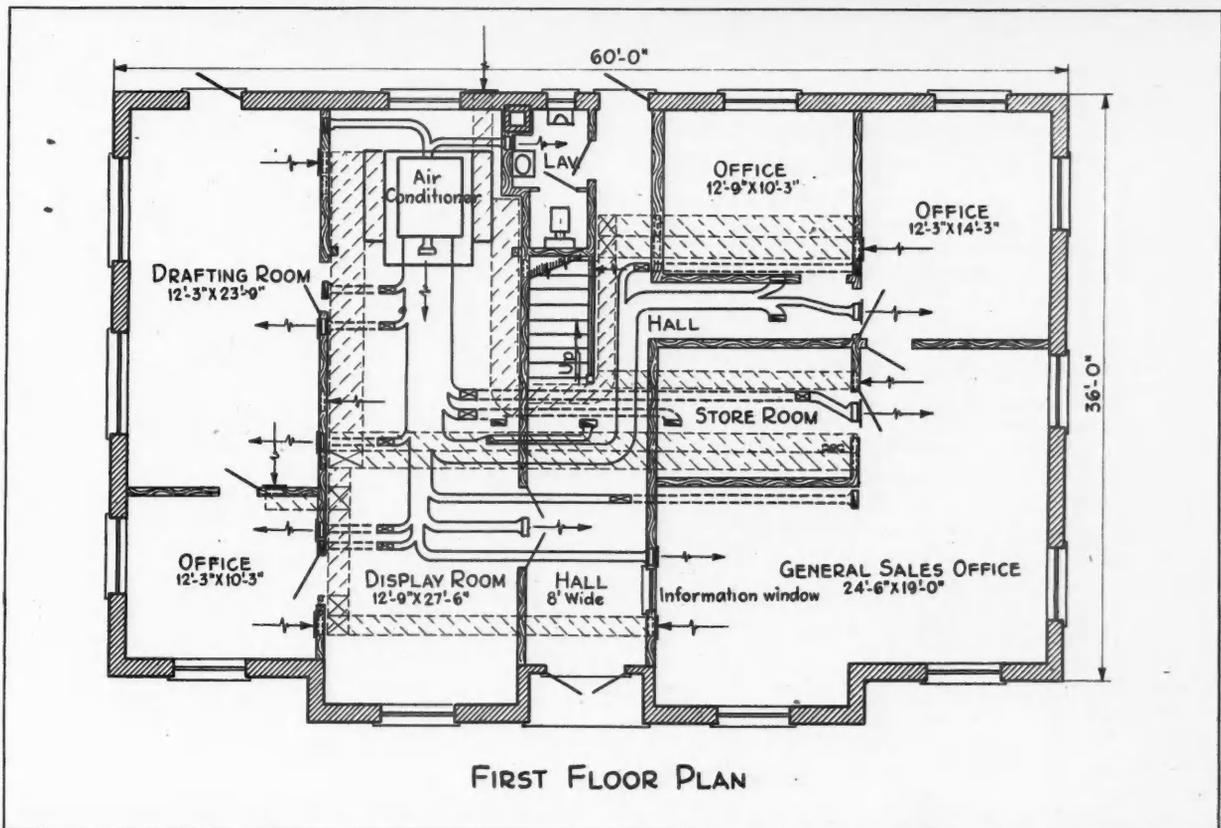
RIGHT: Year 'round conditioner as seen in display room where it provides a working demonstration. Natural gas is used for heating; deep well water is cooling medium.



LARGE GLASS BLOCK panel lights the center portion of the accounting office on the second floor in which the air is conditioned for greater working efficiency.



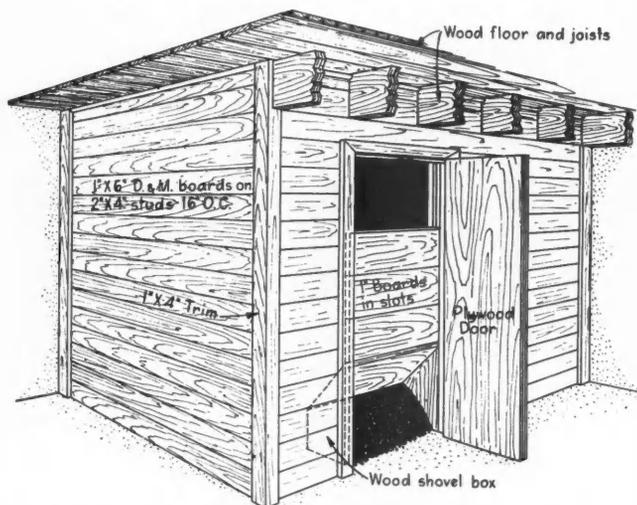
THE PLAN below indicates the location of the unit and ductwork. Return ducts are drawn cross-hatched, supply ducts are shown unshaded.



How to Build Modern Coal Bins

Details and Suggestions for Building Enclosed Fuel Bins Suitable for New Houses or for Modernizing Old Ones

PROPER construction of coal bins is stressed in an educational campaign launched by the National Coal Association, nation-wide organization of bituminous coal operators, with offices in Washington, D. C., and Chicago, Illinois. Its purpose is to bring to the attention of contractor-builders the virtues of bituminous coal as a fuel, and to introduce a new service for the building industry. This service provides residential planning suggestions that demonstrate proper location of driveways, coal bins, and coal heating plants for maximum efficiency and economy of operation, together with details and suggestions for building modern enclosed coal bins from various materials.

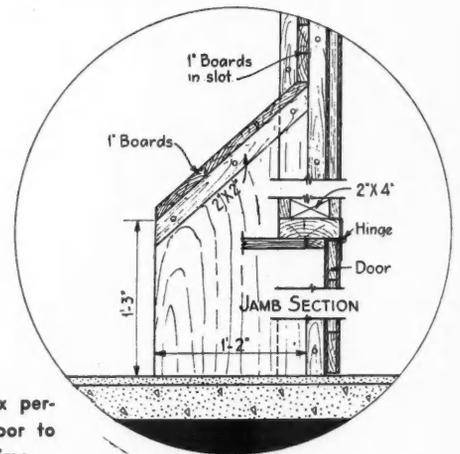


BOTH inside and outside walls of this wood bin are of 1" x 6" D. & M. boards laid horizontally over 2" x 4" studs, 16" O. C.

According to J. P. Williams, Jr., president of the association, it is expected that the new service will prove as popular in its field as is the booklet, "Heat With Bituminous Coal, the Modern Economical Way," issued in June. Four editions of this booklet, totaling 300,000 copies have been called for already, and another edition now is on the press.

Planning suggestions have been collected in a portfolio that includes layouts for both hand-fired and stoker installations. They demonstrate applications of the basic principle of keeping driveway, coal bin, and heating plant as close together as possible. When driveway and bin are separated, coal deliveries may have to be "wheeled" or "toted." Charges for this additional service can be eliminated by proper planning.

Floor plans show various types of bins inside the foundation walls, and others built outside the basement, to provide additional space for recreation or service rooms. The latter bins are filled by gravity, direct from a truck,

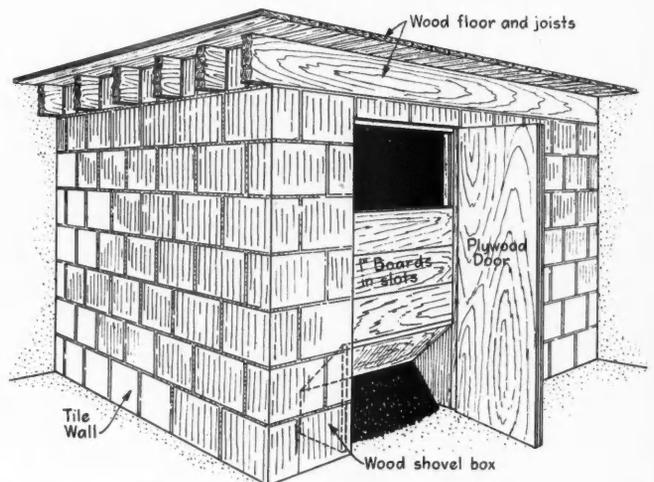


USE of a shovel box permits the coal bin door to be closed at any time.

through a manhole, usually placed in the floor of an attached garage. Built-in coal chutes are recommended for bins that are filled by hand.

Plans also show how heating units can be placed at minimum distance from coal bin doors, and from chimney flues. They show various arrangements of hand-fired coal burning plants, hopper-feed stokers, and a bin-feed stoker with a fuel feed pipe placed below the basement floor level. The bin is built with sloping side walls, so that coal is fed to the stoker as long as there is fuel. Sloping side walls, while desirable, are not essential, as "dead coal" can be used to provide the necessary slope, and also provide a reserve supply in case it is needed.

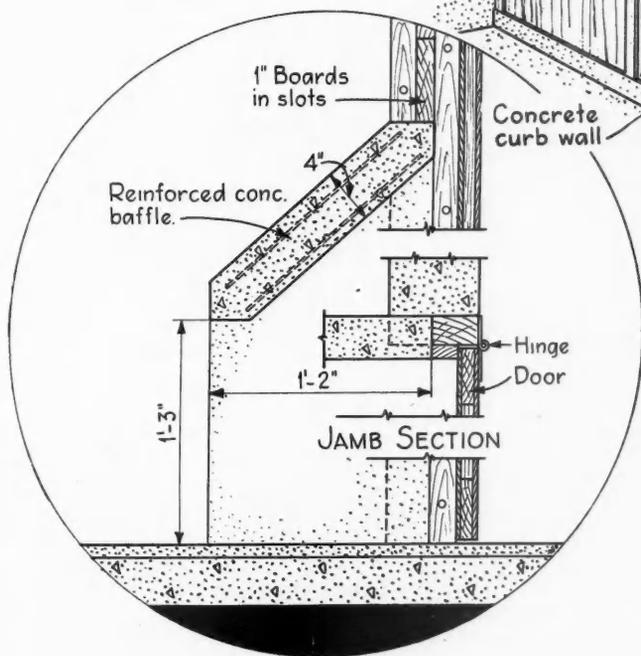
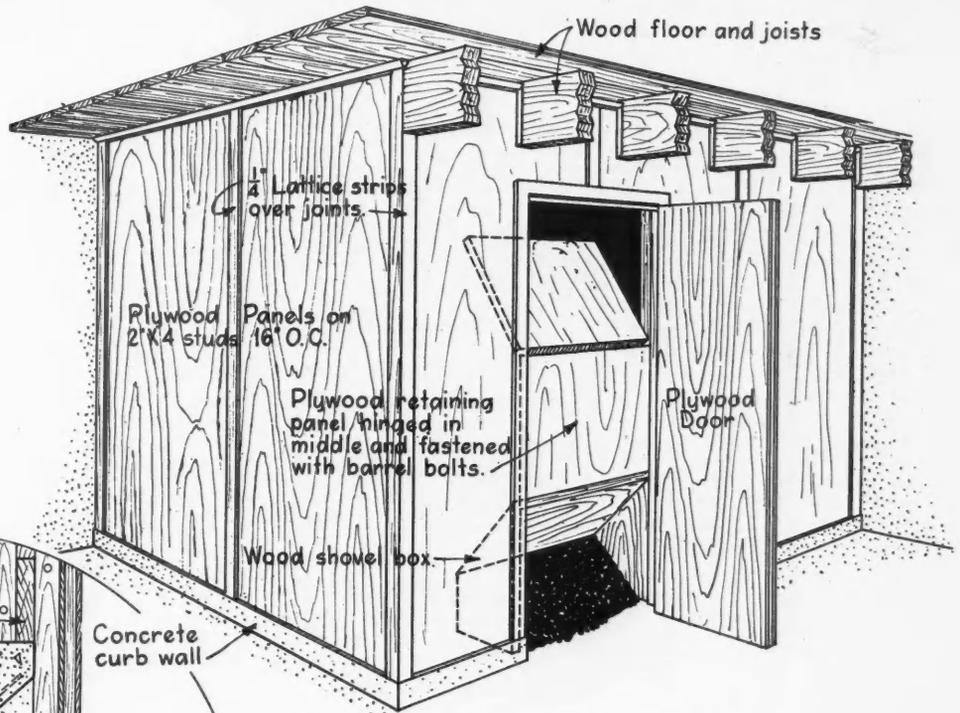
Coal bin details devote considerable attention to access doors, and to various types of retaining panels for the door opening. Bins are equipped with shovel boxes and flush doors. A shovel box can be constructed for any bin. It consists of a sloping baffle set into the door opening, inside the bin. Sides of the box, which is open front and back, rest on the floor. The baffle slopes down from front to back to a point 15 inches above the floor. Coal works into the shovel box opening from inside the bin without



THE bottom course of this hollow tile bin has been imbedded in the concrete floor. The tile can be placed when the floor is finished, or set into a channel.

RIGHT: Plywood bin. The 2" x 4" sill is bolted to a concrete curb wall. Note hinged retaining panel in doorway opening.

BELOW: DETAIL of poured concrete shovel box for concrete bin shown below.



tion, similar to raising the lower end of a wood column on a concrete base above the floor level, keeps moisture out of the lower wall. The inside wall may be lined with $\frac{5}{8}$ " plywood, and the outside wall may be covered with a wall-board grade. Edges of the plywood may be sealed with white lead, applied with a putty knife. The perspective shows side walls slotted at the top so as to make a tight fit with joists. An alternate construction would be to cover the under side of the joists with plywood, joined at the side wall junction with nailing strips. The illustration shows $\frac{1}{4}$ " latic strips applied over outside joints, for appearance sake.

A hollow tile bin is shown with a detail indicating that the bottom course is imbedded $\frac{3}{4}$ " in the concrete floor. The course may be cast into the floor when it is finished, or a 1" board of same width as the tile may be laid on the rough concrete. The board serves as a tile channel, and as a guide to measure thickness of the finish.

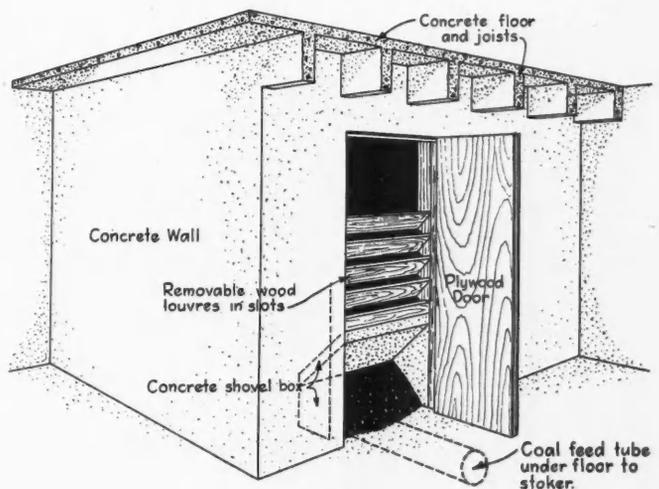
pushing out on to the basement floor. Use of the shovel box permits the bin door to be closed at any time.

Retaining panels for the opening above the shovel box are designed in various ways. The conventional arrangement of 1" boards in vertical slots is shown. One detail shows wood louvres set into slanting slots. Advantages of this method are that louvres can be inserted to the top of the door opening if desired, and that they always reveal how much fuel is in the bin. Another detail shows a plywood retaining panel, hinged in the middle and fastened into the door opening with barrel bolts.

Perspectives illustrate various types of bins. A lumber bin is made with side walls of 1" x 6" D. & M. boards, laid horizontally on 2" x 4" studs, 16" O. C. A 2" x 4" sill is bolted to the floor, and 1" x 4" boards are used for corner trim. Short lengths are fitted between the joists at the top of the bin, and are held in place with nailing strips or quarter round.

A concrete bin is shown with concrete first floor, joists, and poured walls, which may also be made of concrete masonry if desired. The perspective shows a wood door frame and an access door of plywood. A poured concrete shovel box is shown in a separate detail, and a stoker feed tube is indicated below the floor level.

A plywood bin is shown with a 2" x 4" sill bolted to a concrete curb wall $5\frac{1}{2}$ " wide x $3\frac{1}{2}$ " high. This precau-



COAL BIN with poured concrete side walls. Concrete masonry is suggested as an alternate. Note removable wood louvres in the doorway opening, used as a retaining panel.

Brick Laying to Avoid Leaks

By D. E. PARSONS

Chief Masonry Construction Section, U. S. Bureau of Standards

THIS report gives a brief description of an investigation of the permeability of walls of brick masonry when exposed to conditions resembling those produced by wind-driven rains. This investigation was conducted at the National Bureau of Standards in cooperation with four other governmental agencies. The variable factors included three different kinds of bricks, five mortar mixtures, four classes of workmanship, in addition to variations in the thickness and design of the walls. The results indicate that the quality of the workmanship affected the permeability more than any other factor. The best performance was obtained with walls having well-filled mortar joints, built with mortars of good working properties and bricks which either were non-absorptive or were well wetted before laying. This report is presented here through the courtesy of Ralph P. Stoddard, Sec., Brick Manufacturers Assn., Cleveland.—Editor's Note.

THE performance of exterior brick walls of buildings during many years of service shows an enviable record for service for brick masonry. In several of the walls which have leaked during rainstorms, the cause of the moisture penetration can be traced to faulty flashings or other construction details. However, leakage through walls has been sufficiently common to prompt discussions of methods of prevention among persons concerned with building construction. Recently there was a discussion between four men interested in masonry construction. One was a superintendent for a building contractor, one an architect, one the project manager on building construction for a governmental agency, and the fourth a mason contractor. The views of these men were typical of those held by other experts. Each had been in part responsible for structures where the exterior brick walls had not given entirely satisfactory service. Each claimed to know how to prevent moisture penetration in masonry walls, but their remedies were not alike in all particulars, and the experts finally disagreed as to the best methods for preventing the penetration of rain in brick walls.

Similar disagreements between different specification writers prompted some of the governmental agen-

cies to request the National Bureau of Standards to undertake an investigation of the factors affecting the resistance of masonry walls in rain penetration. It was thought that useful specific information would be obtained by building several walls, each of which differed from the rest in one particular only, and then subjecting these specimens to exposures under carefully controlled conditions.

The program sponsored by the governmental agencies called for the construction and testing of 113 walls. Each wall was 50 inches high, 40 inches long and either 4, 8, or 12 inches in thickness. Three different types of bricks were used in constructing the solid walls of brick. One type (Brick A) was a nearly impervious brick, one (Brick B) a brick of medium absorption, and the third (Brick C) one having both a high rate and a high total absorption. Data on the properties of these brick are given in Table 1. Walls, both 8 and 12 inches in thickness of each kind of brick, were constructed, using the mortars 1 to 4 listed in Table 2. With all possible combinations for each of the three

TABLE 1—PROPERTIES OF THE BRICKS

| Properties of brick..... | | Brick | | |
|---|---------------------|-----------------------|-----------------------|-----------|
| Kind of clay..... | | A | B | C |
| Method of Forming..... | | Stiff mud Side cut | Stiff mud Side cut | Dry Press |
| Absorption by submersion, %: | 5 hour cold..... | 0.4 | 7.7 | 15.9 |
| | 48 hour cold..... | 0.6 | 9.1 | 16.8 |
| | 5 hour boiling..... | 1.6 | 11.4 | 18.8 |
| Absorption by 1/2-in. immersion flatwise for 1 min., g per sq. cm. ¹ | | 0.01 | 0.19 | 0.61 |

¹Absorption in grams per brick is about 200 times these values.

TABLE 2—PROPERTIES OF MORTARS

| Mortar Number | Proportions by Volume ¹ | Flow After Suction ² | Compressive strength at 28 da. ³ lb. per sq. in. |
|----------------|------------------------------------|---------------------------------|---|
| 1 | 1:0.25:3 | 86 | 2850 |
| 2 | 1:1:6 | 95 | 640 |
| 3 | 1:2:9 | 97 | 250 |
| 4 ⁴ | 1:1:6 | 95 | 530 |
| 5 | 1:1:6 | 30 | 950 |

¹—Of cement, hydrated lime and sand. The mortars were proportioned by weight to give these ratios by volume, considering that 1 cubic foot of Portland cement weighed 94 pounds, 1 cubic foot of lime weighed 40 pounds and 1 cubic foot of damp, loose sand contained 80 pounds of dry sand.

²—Water retentivity tests by the method of Federal Specification SS-C-181a.

³—2-inch cubes.

⁴—Mortar 4 contained 0.2% of ammonium stearate by weight of cement plus hydrated lime.

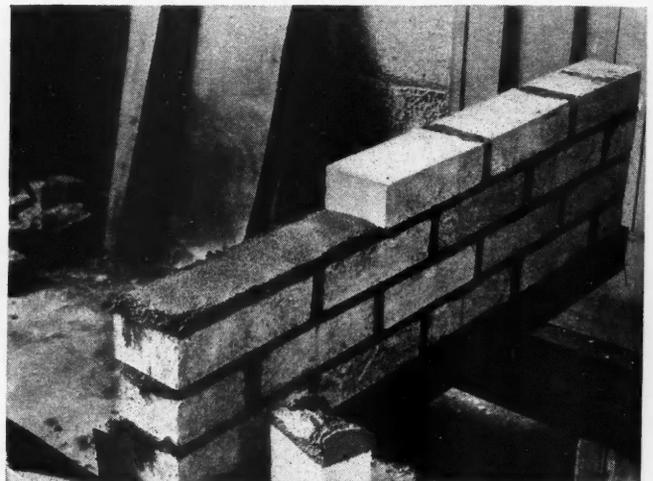


Figure 1—Showing method of making bed joints and of filling vertical joints between stretcher brick

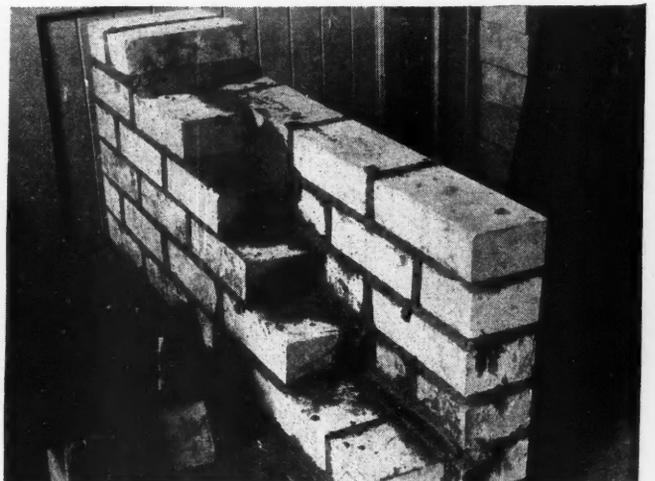


Figure 2—Workmanship A, showing complete filling of joints

kinds of brick, the four mortars and the two wall thicknesses, walls were constructed of each of two classes of workmanship.

In addition to the 48 walls of brick required for the study of the variables, brick, mortar, thickness of wall, and workmanship, a few walls were constructed for the purpose of obtaining information on the effects of the following factors: (1) the quality of the lime in cement-lime mortar; (2) the use of blind headers for two-thirds of the number of bricks in header courses; (3) the use of absorptive brick backing with non-absorptive brick facing; (4) parging on 4-inch walls and (5) two additional variations in workmanship.

The walls were built by a mason contractor who was the lowest bidder on a lump sum contract. Thus there was an incentive for the mason to build the walls as rapidly as possible. For the walls constructed with workmanship A the mason was directed to fill solidly all interior joints and to finish the face joints with a rounded tool. The mortar for the bed joints was spread to a uniform thickness (not furrowed) and the ends of the stretcher bricks and the sides of the header bricks were coated with mortar before laying. The bedding for bricks of the backing was curled against the back of the facing tier to form a cove partially filling the collar joint. The filling of the vertical joints which were not filled completely as the bricks were laid was completed by slushing. Workmanship A is illustrated by figures 1 and 2. For workmanship B, the mason



Figure 3—Workmanship B, showing furrowed bed joints and butting of bricks for head joints

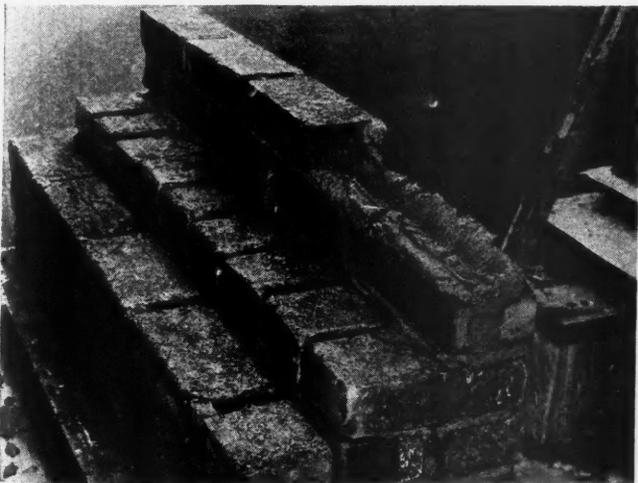


Figure 4—Workmanship B, showing poorly filled joints

was instructed to employ the method which was most economical in labor and materials. The bed joints were furrowed and the vertical joints were filled only in the faces of the walls. Workmanship B is illustrated in figures 3 and 4.

After drying for at least one month, all walls were tested for permeability by at least two, and some by three, methods. In the first test (the capillarity test) they were subjected to water penetrating under the forces of capillarity and of gravity only. Water was applied by means of a spray at the top of the wall, causing a continuous film of water on the exposed face. In the second test (the heavy rain test) water was applied in the same manner, but a pressure difference of 10 pounds per square foot was maintained between the exposed and unexposed faces of the wall. The air pressure against the wall, which was equivalent to that produced by exposure to wind, was maintained by sealing an airtight chamber against one face of the wall. In the third test (the light rain test) the walls were again subjected to an air pressure of 10 pounds per square foot, but the water was applied to the face of the wall by means of atomizers at a rate equivalent to 0.2 inch depth per hour. The rate of application of the water in this test was similar to that produced by rains and winds of moderate intensity during storms which may last for two or three days. Between each test the walls were redried. During the tests observations were made of the time for dampness to penetrate the wall, the time for leakage through the wall (if any) to start, the rate of leakage, and the area of the wall damp 24 hours after the start of the test.

Water penetrated the walls of workmanship B rapidly passing through openings in the joints. The methods of failures of the walls of workmanship A depended upon the type of brick. The walls of the impervious bricks (Brick A) and workmanship A withstood the tests for long periods and when failures occurred they usually consisted of slight damp spots on the mortar joints. Moisture penetrated through the bricks in the other walls. Most of the walls of workmanship A did not leak, whereas all of those with workmanship B leaked. The performance of the walls of workmanship B indicated that the openings in the joints served both as passageways and as reservoirs for water. Apparently the water flowed by gravity into the reservoirs, as water was sometimes exuded in streams from the back of the wall when no pressure was applied to the face. The walls which leaked rapidly in the heavy rain test (the most severe test) usually leaked also in the other tests, but the time for failure was greater.

The results of the tests indicate that it is not difficult to construct walls of brick masonry having a satisfactory resistance to the penetration of rain water. However, the results do not point to any simple cure-all, nor to an effective nostrum. The quality of the workmanship had a far greater effect on the performance of the walls than any other visible factor in the study. The importance of workmanship is illustrated by the fact that the walls of the same dimensions and of the same materials showed the poorest or the best performance depending solely upon the quality of workmanship.

The effect of the workmanship was determined by comparing the performance of walls which were alike in all respects except workmanship. Of these, classes A and B workmanship have been described. With class C workmanship the joints were well filled (as for workmanship A) but the face joints were not tooled.

(Continued to page 132)

BASEMENT BUILT-INS

Suggestions for Some Built-on-the-Job Conveniences for Downstairs Service Rooms that Make Houses More Salable

By **DANA DODGE CORROUGH**

Architect

LAST month's installment of Plan For a Modern Basement told about built-on-the-job conveniences that can be installed in basement recreation rooms of houses to make them more attractive to buyers, and to make better use of additional basement space that has been made available through improved mechanical equipment in residential basements. This article will suggest some built-ins for the heavier side of the basement, the laundry, heater room, and work shop. Some of these proposed built-ins might be included in speculative houses to make them more salable; others might be used as a special appeal to the hobby of an individual owner or prospect; some might logically be placed in the "Shopcrafters' Corner" of *American Builder*, as suggestions suitable for workshops or hobby rooms.

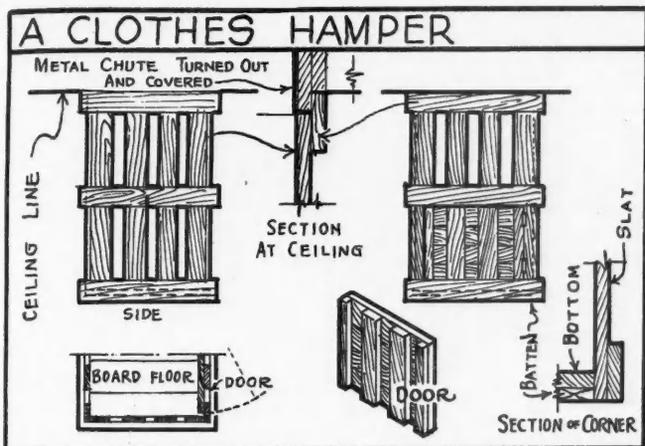
A **WORK BENCH** is a handy item that is needed in any basement. There is hardly an owner who does not at

some time or other delight in puttering around a work bench, or going about the business of building a chest, some home-crafting, or assembling some gadget for use around the house. The bench illustrated is a strong piece of equipment, easily built from ordinary materials. It has been designed for general use, and can be equipped with either carpenter's, blacksmith's, or machinist's vice. Other adjuncts, such as bench stops, a front apron with plugs for supporting large piece of wood in the vice, or other accessories for special jobs can be added without difficulty. Drawers may be added, if desired, or can be included in a separate cabinet. The diagonal braces shown are essential, and it may be advisable to attach the bench to the floor by means of metal angles and expansion bolts. The lower tray indicated by dotted lines on the elevations may be omitted on the grounds that it will be a dust-catcher. The drawing shows how braces and bands can be let into the 4 x 4" legs. The parts can be spiked together, or fastened with screws if a more workmanlike job is desired.

The **TOOL BOARD** behind the bench can be made more useful by adopting a scheme that often is used in shops where tools are taken out and replaced frequently.



BUILT-IN conveniences for basement laundries and hobby rooms often make houses more attractive to prospective buyers.



THIS hamper keeps the basement floor clear by eliminating the need for a basket below the clothes chute.

Losses occur unless there is some plain signal indicating that a certain tool is not in its proper place and should be put back. The board is reinforced with battens on the back, and the whole unit is painted. Tools then are arranged on the board in the most convenient order, and a pencil outline is drawn around each one. These silhouettes are painted in some bright color. Nails, pegs, or sign hangers are driven into the surface of the board so that each tool hangs in place over its corresponding silhouette. In addition to calling attention to missing tools, this method also simplifies their replacement, and provides a definite and orderly arrangement at all times. Arrangement of the board or silhouettes can be changed at will by repainting the surface.

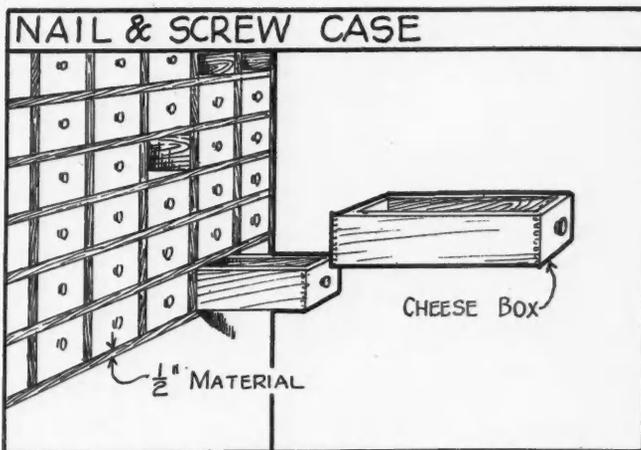
The basement mechanic may need or want a CASE OF SMALL DRAWERS for nails, screws, nuts, bolts, and other miscellaneous hardware. The light, square-end, wooden boxes used for shipping processed cheese to grocers make excellent drawers. A drawer cabinet to hold them is easily built, as shown. Small brass handles can be screwed into the drawer ends for handles. Brass label holders will be handy, but entail more work and add to the cost.

In case a prospective owner is even mildly interested in marksmanship almost nothing will make a house quite so desirable as a BASEMENT RIFLE RANGE. An accompanying illustration shows principal dimensions and proper construction of a pistol range. Dimensions may, of course, be varied to suit individual tastes. A square or rectangular opening is let into the foundation wall and a tunnel is run out into the yard below grade for the desired distance.

The tunnel terminates in a chamber with a covered manhole at the top, and a shallow pit at the bottom. The pit may be filled with sand to receive bullets. A heavy iron plate is set up in the chamber at a 45 degree angle, immediately behind the target, to deflect shots into the sand pit. The trolley shown in the illustration permits ready inspection or replacement of targets without leaving the basement shooting position. In case the trolley is installed, a small plate should be fastened in front of the sheave to prevent damage by bullets.

Amateurs or beginners should fire with muzzles of their weapons inside the tunnel opening to avoid possible danger from ricochet bullets. Experienced marksmen may shoot into the tunnel with the muzzle of their weapons inside a box of insulation board, with an opening front and back, to reduce sound of the shots.

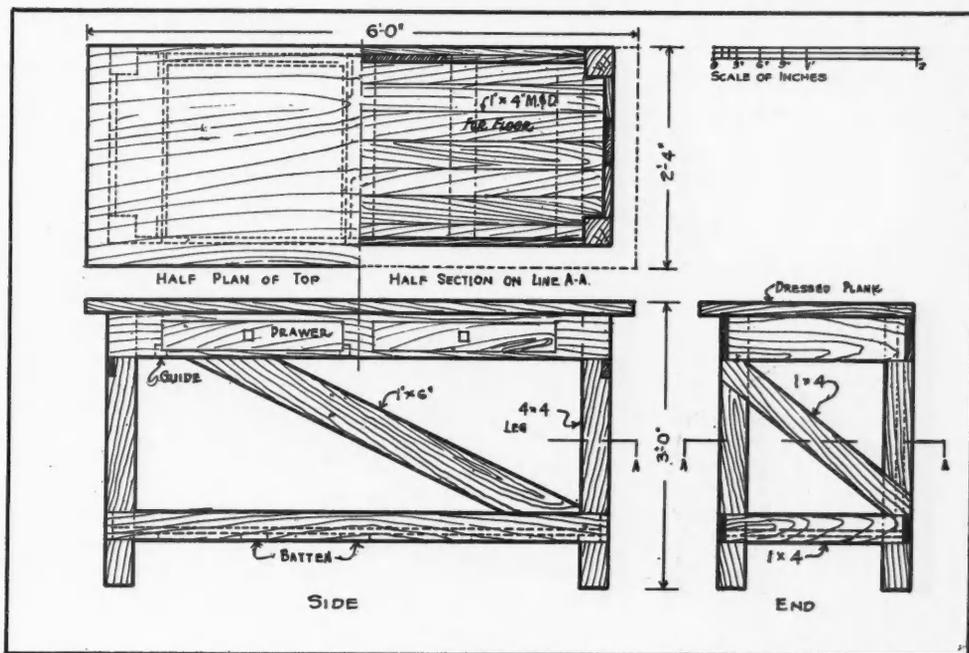
Some families want a room for VEGETABLE STORAGE included in their basements. Properly constructed storage racks will make the room more useful. An accompanying illustration shows a rack for potatoes



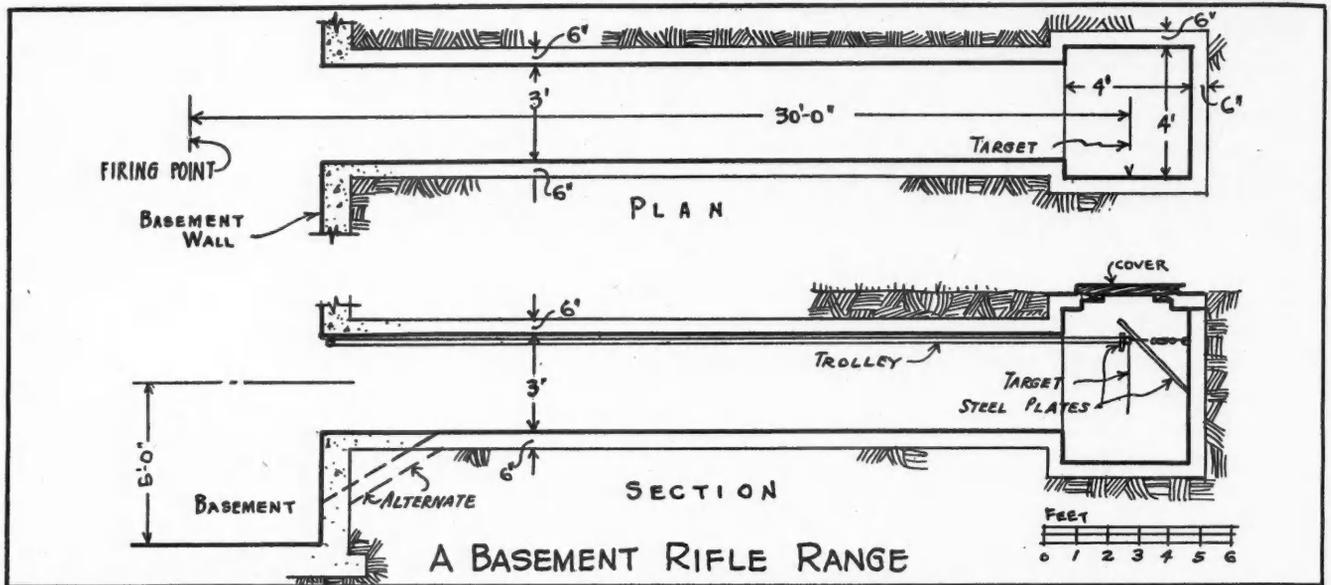
STORAGE cabinet for nails, screws, and miscellaneous hardware, with drawers made from wooden cheese boxes.

built with inverted legs so that it can be piled on others, with space between for the vegetables. This type of rack is recommended by Government agricultural engineers. Celery is stored in deep boxes with slotted sides so that roots can be watered without wetting the tips. Both celery and potatoes should be stored in a dark place.

A detail illustrates parts for a removable LAUNDRY HAMPER that can be attached to the bottom of a laun-



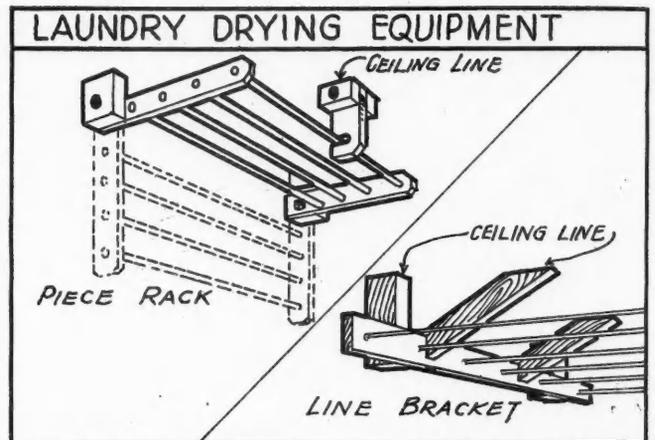
A STURDY work bench has a strong appeal to home mechanics. It can be made from inexpensive materials. Note how diagonal braces are let into the legs.



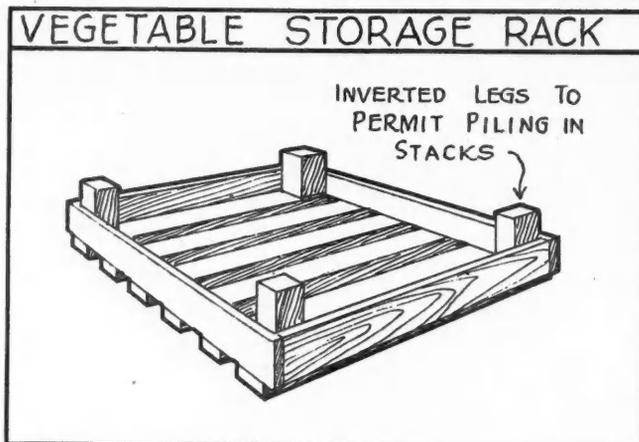
MEN who dream of owning a home often include a basement rifle range. Here is how those dreams can become a reality.

dry chute. The tin lining is turned under and covered to prevent possible damage to clothing. The hamper may be attached to the chute by metal strips and screws, or by hooks and eyes.

CLOTHES DRYING RACKS and brackets for clothes lines will be appreciated by women clients and prospects. The drying rack shown can hang vertically, or can be latched horizontally, as indicated. If the bolts used are drawn tightly enough the rack will stay in any position without support, or a winged nut can be used so it can be tightened at will. In case a cotton line is threaded through the bracket shown, it should be knotted at one end so that slack can be taken up when it stretches. If



RIGHT: This inexpensive vegetable rack for basement storage rooms is made with inverted legs so it can be stacked, and to provide for circulation of air.



ABOVE: Laundry drying rack that can be suspended horizontally by means of a ceiling latch, or can hang vertically. A wing nut will permit the rack to be held at any desired angle.

BELOW: Silhouettes painted on this tool board show what is missing, and assures orderly arrangement of tools at all times.



wire lines are used, small turnbuckles can be inserted at the ends.

A WORK-BENCH STOOL can be made from a keg, with a cushion set into the top. A rope can be passed through two holes and knotted on the inside to form a handle. Holes cut into the side, near the floor, will form heel rests, and will make the stool more comfortable when used for a long time. The heel holes will be fairly large, and will cut through more than one stave, so a stiffener should be screwed in above or below the openings.

For homes where coal is used as fuel, a series of sloping, removable slats may be inserted into slots in the frame of the coal bin door. The slats can be removed one at a time, either top or bottom, regardless of the amount of coal in the bin. They permit easy access when the supply of coal runs low, and show how much is on hand.

SHOPCRAFTER'S Corner

Things To Build for Profit or Pleasure

How To Build Double Bunks

MANY summer homes and lakeside cottages either have already been completed this year or are in the last stages of construction. The next step is to furnish and equip these vacation homes and one of the major problems is that of providing sufficient sleeping accommodations.

One of the simplest and most popular types of bed for the camp or cottage is the double bunk because of the space-saving feature and the added charm of rustic appearance. If built similar to those on this page, the cost is quite small.

As seen in the illustration, one end of a small room 6½ feet wide was ideal for this purpose. A corner post and end rails will be needed where the walls do not form the ends of the bunks.

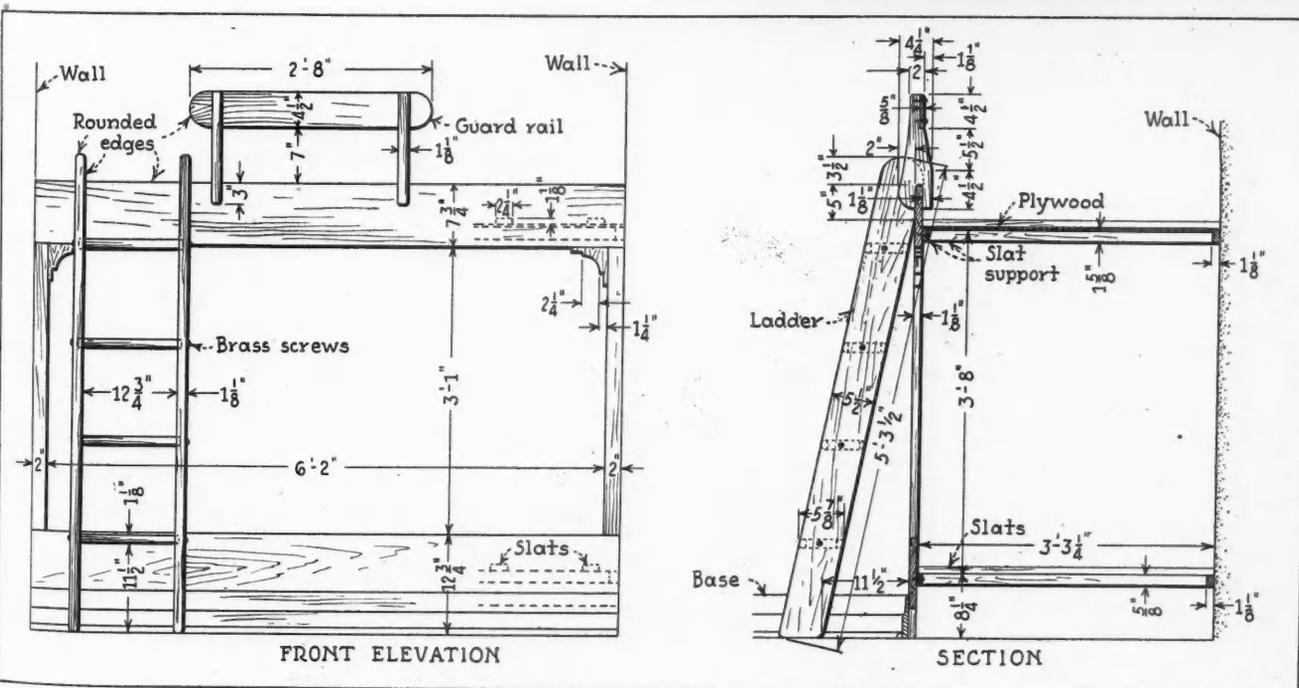
The guard rail and ladder should be removable to allow easier bedmaking. Rounded corners and a natural finish on the stock, which can be pine, maple, redwood, etc., add to the rustic appearance. A plywood panel under upper bunk acts as a dust stop and conceals springs from below.

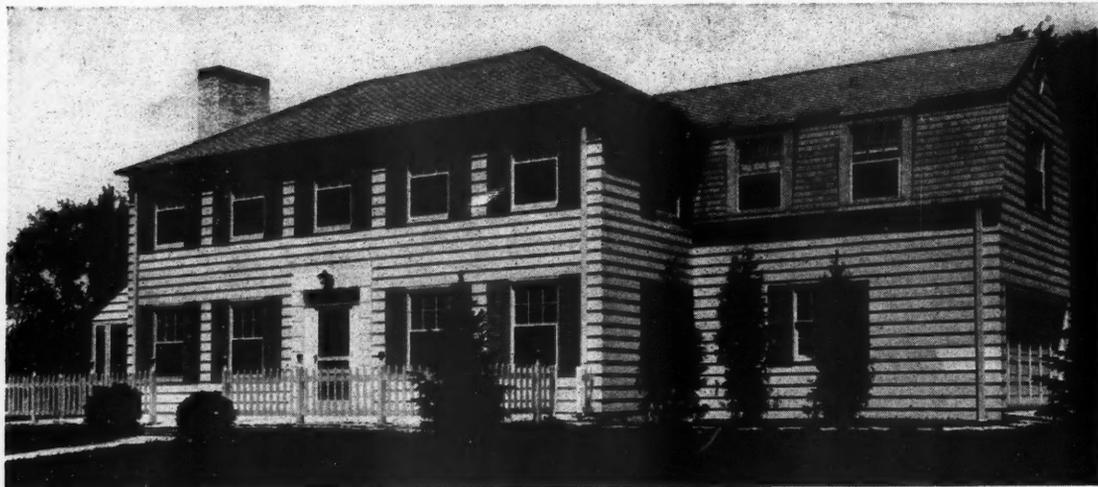


RIGHT: View looking into bunk-room arrangement of built-in sleeping quarters. Construction is detailed below. Bunks were designed by E. L. Danielson of American Builder staff, and built into his lakeside year-round home.

BILL OF MATERIAL

- 2 pcs, Front Rails, 1½" x 7¾" x 6'-6"
- 2 pcs, Side Supports, 1½" x 2" x 3'-1"
- 2 pcs, Corner Brackets, 1½" x 5" x 5"
- 3 pcs, Slat Supports, 1½" x 1½" x 6'-6"
- 14 pcs, Slats, 1½" x 2¼" x 3'-3¼"
- 1 pc, ¼" Plywood Bottom, 3'-3¼" x 6'-6"
- 2 pcs, Ladder Rails, 1½" x 5½" x 5'-3½"
- 4 pcs, Ladder Steps, 1½" x 5⅞" x 13¾"
- 2 pcs, Guard Brackets, 1½" x 4¼" x 1'-3"
- 1 pc, Guard Rail, 5⁄8" x 4½" x 2'-8"





LEFT: A well planned house with combination room, built for sale this year in Highland Park, Ill., by the Tecumseh Co., Chicago. Samuel A. Marx, Chicago, architect.

BELOW: Upper plan, combination study, breakfast nook or guest room. Lower plan, double bath layout with connecting shower.

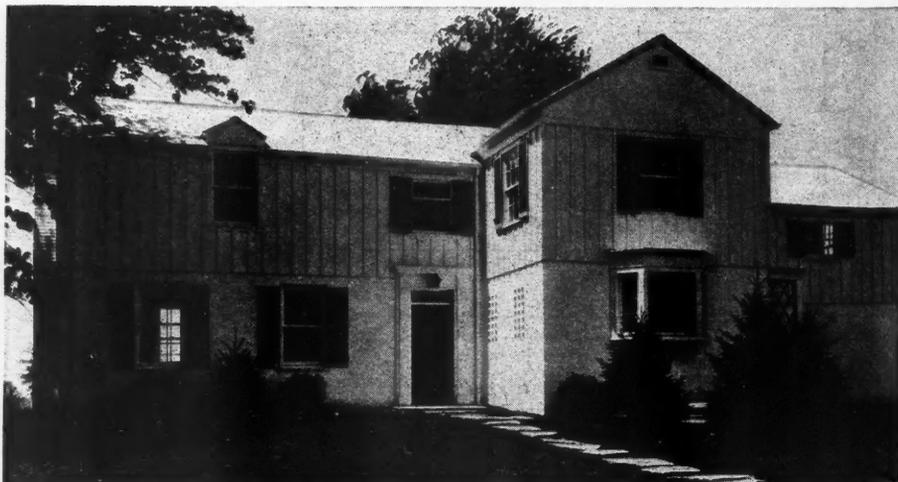
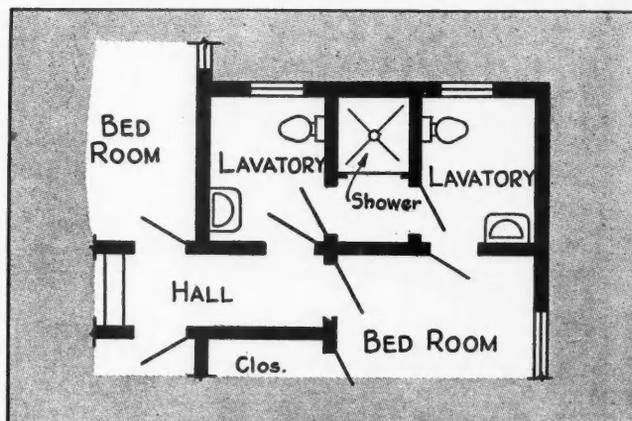
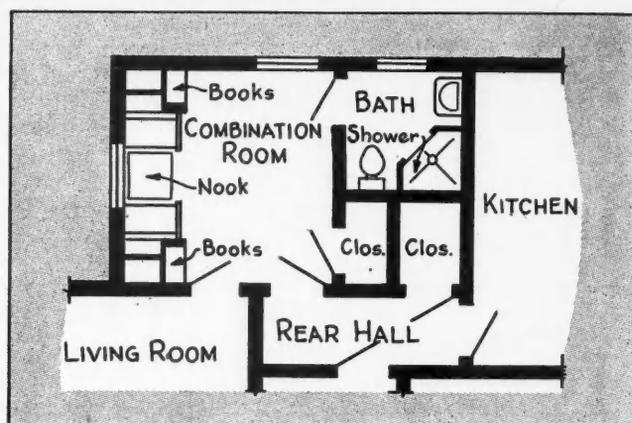
Chicago Builder Gets Added Space Utility with Cabinet Showers

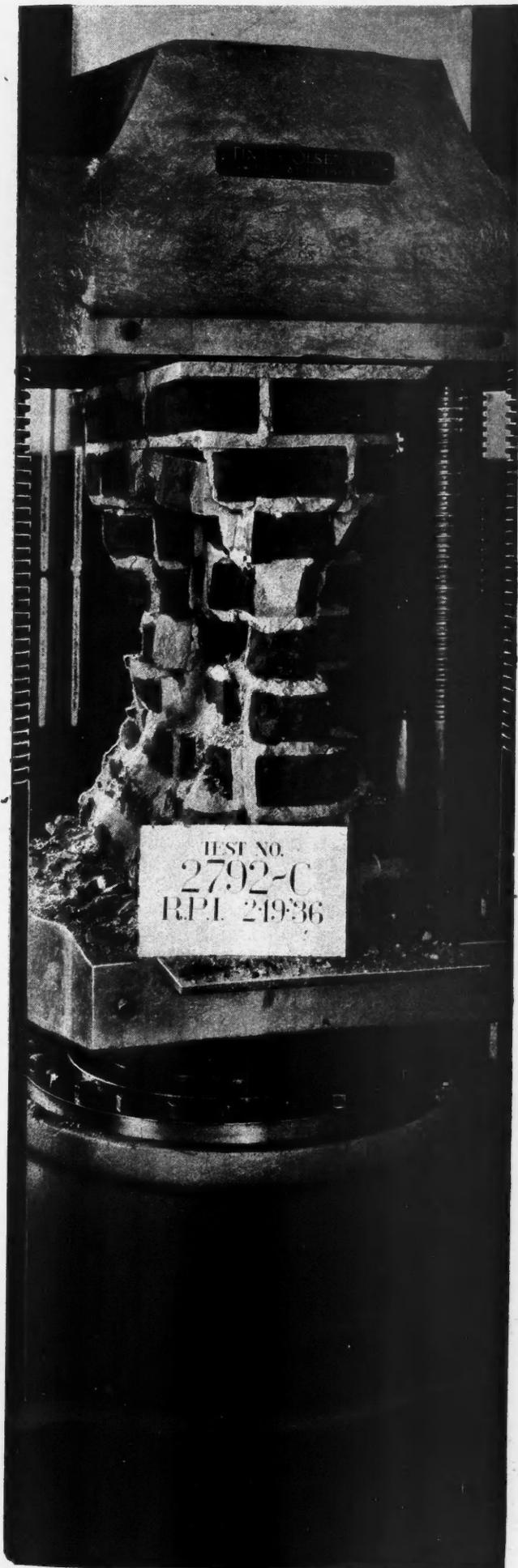
ECONOMY in floor area planning through multiple use of space is a practical method of either increasing home value or reducing the cost of construction. Several very clever and practical ideas along those lines have been worked out by A. I. Jordan in the houses built by his concern, the Tecumseh Company of Chicago. Mr. Jordan operates in the North Shore suburbs and builds both on contract or for sale, most of his houses being in the larger size and higher price ranges.

In this year's houses, unusual arrangements with shower cabinets have been among the highlights of Tecumseh houses, two of which are shown on this page. The house above contains nine good sized rooms including five bedrooms with four baths and a double attached garage. There is a combination room on the first floor which serves several purposes; the upper plan at the right shows the layout of this space and its relation to the adjoining rooms. Being off the living room and connected to the kitchen by the rear hall, it makes a convenient study or breakfast room. When equipped with special convertible nook equipment similar to a Pullman section, the seats can be made into a single bed for extra guest accommodation, and a closet and bath have been planned for this purpose. This bath is very compact and is equipped with a Weisway corner entrance cabinet shower to reduce floor area.

The house at the right is located in the same neighborhood as the one above, and here again a clever space economy has been included. The lower plan shows how Mr. Jordan has arranged the double bath facilities for one wing of the house. The less frequently used shower, which in this house is a Weisway recessed cabinet type fixture, serves two lavatories through a small connecting passageway. Access is from the hall or the bedroom.

RIGHT: Another Tecumseh house which features economical double bath layout.



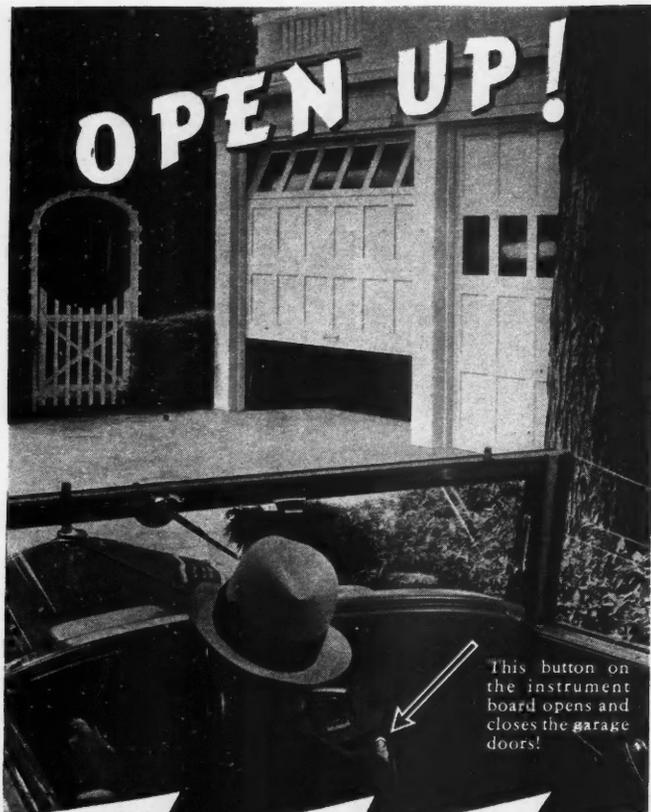


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• This unique RADIO Control permits the driver of a car to open and close his garage doors without getting out of his seat and WITHOUT STOPPING THE CAR IN THE DRIVEWAY, thus affording the maximum in convenience and safety for the modern automobile owner.

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• Contrary to first impressions, no "electric eye" is used. The RADIO Control is *selective* (because each installation has an individual tuned frequency) and can be operated *only* by the car driver (which is not the case with the "electric eye" or driveway plate). In this way, *privacy* is assured.

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• The possibility of mechanical or electrical failure has been reduced to a minimum in the more than ten years we have been manufacturing and installing this exclusive RADIO Control. The selective feature also prevents accidental operation by vibration, lightning flashes, or other electrical causes.

Ask for a Demonstration



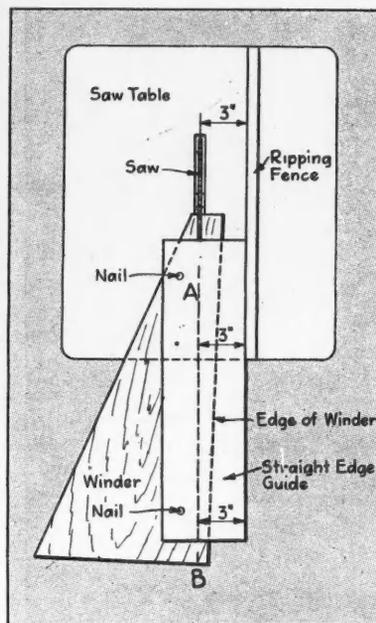
BARBER-COLMAN COMPANY • ROCKFORD, ILLINOIS

PRACTICAL JOB POINTERS

A READERS' EXCHANGE of tested ideas and methods, taken from their own building experience. Two dollars or a year's subscription to American Builder is paid for each item when published. State business connection or trade.

Cutting Winders

THE diagram below shows my method of sawing out winders for a stairway. Dotted line AB is the place to be sawed. Use a straightedge 6" wide or wide enough so the nails will not hit the saw blade; set the saw so it will just saw about 1/16" more than the thickness of the winder. Several small straightedges may be made of different lengths. They will be found useful whenever the sawing line is not parallel with either edge of the board to be sawed.—HAROLD T. WARD, Building Contractor, Emmetsburg, Ia.



STRAIGHTEDGE guide and ripping fence simplify sawing winders when line is not parallel with either edge.

Simple Tool Identification

ONE of the greatest banes of carpenters and contractors is lost tools. As everyone knows, tools are expensive and it is extremely aggravating to lose them. If carpenters would paint the handle of every tool in their kit with one particular color, the loss would be greatly lessened.

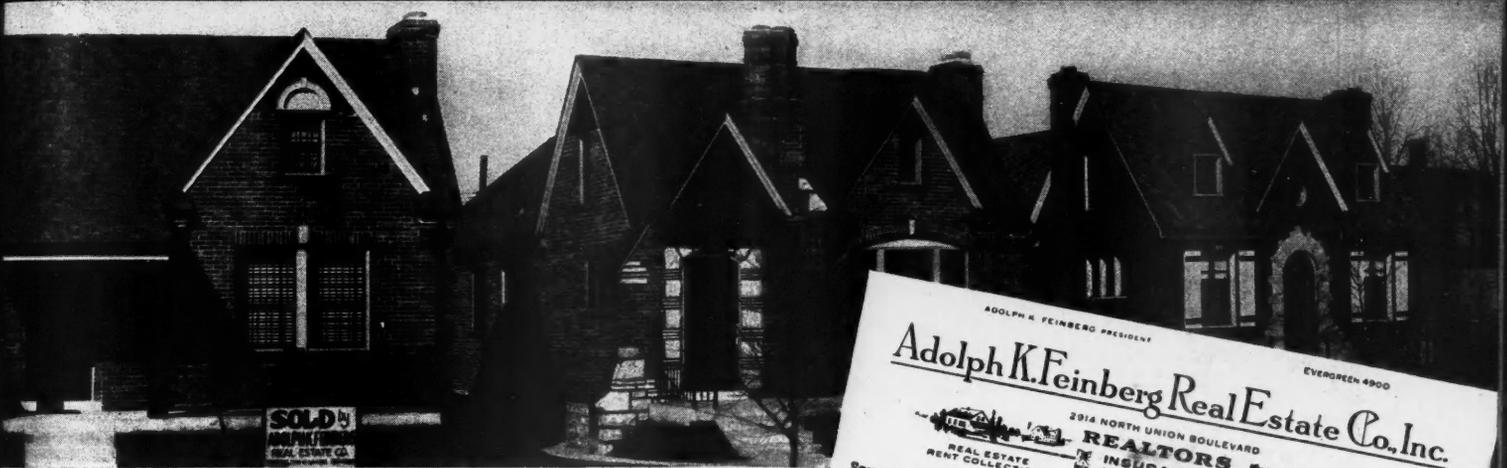
Frequently a carpenter on a job lends his tools to other carpenters. Chisels, planes, squares, etc., all look considerably like similar tools. That is, tools are standardized to such an extent that Bill Smith's plane looks just the same as John Brown's plane. Frequently these tools through accident, rather than lack of honesty, I am glad to say, are loaned and not returned. Now if they were painted one particular color, and one of these tools appeared in another carpenter's box at the close of the day he would know who was the owner and be reminded to return it.

I painted the handles of all my tools with jade green paint. The men on the job know that any tool with a jade green enamel handle belongs to me. It is convenient in gathering the tools at night. A painted handle shows up better than an unpainted handle when partly covered with shavings.

Contractors might paint the handles of their shovels and picks the same way. My experience has been that it is a very worth while investment.—ROGER C. DICKEY, Nashua, N.H.

SOLD

"In building any of our future properties, we are going to specify Square D Multi-Breakers"



**A SOLD sign for each home!
This letter proves the sales
appeal of the
SQUARE D MULTI-BREAKER**

● The quick sale of properties is the objective of the successful Realtor or Building Contractor. The letter at the right is conclusive proof that the Square D Multi-breaker does help to sell homes.

Home buyers want the "full comfort" of adequate electric service and that means fuseless circuit protection—the elimination of the nuisance of blown fuses and fuse replacement.

The Square D Multi-breaker gives safer circuit protection and operates like a light switch—by a flip of a finger. It can be installed at any convenient point in the house—or one on each floor. It is not costly.

Talk with your electrical contractor about it. Have him include it in his next wiring layout. Square D electrical equipment is available through electrical wholesalers everywhere.

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St. Louis, Mo. July 1, 1937.

Gentlemen:

On August 11, 1936 we broke ground for fifteen new homes in the Northwest district of the City of St. Louis. I am happy to tell you that before these homes were built we decided to change the electrical specifications, which we did without any trouble at all and installed modern Square D Multi-breakers instead of using old-fashioned fuse-boxes and fuse-plugs.

Thus far, we have sold fourteen of the fifteen houses, and have had wonderful compliments and comments on this type of home convenience, eliminating troubles of having fuses blown out and the inconvenience when use of electricity was needed, sometimes necessitating a long trip to a hardware store which was not convenient to a residential district.

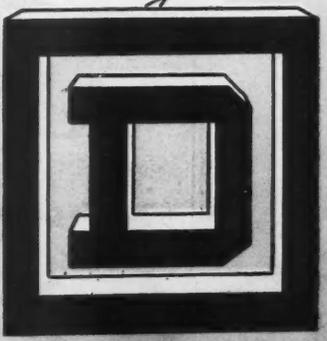
The purchasers of these homes are more than delighted, and have many words of praise for this new convenience. In building any of our future properties, we are going to specify Square D Multi-Breakers, and can recommend them highly to any one wishing something that will give them great satisfaction.

Very truly yours,
ADOLPH K. FEINBERG REAL ESTATE CO., Inc.
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ARCHITECTS AND BUILDERS will find the many services of Anthracite Industries, Inc., of practical help on home heating problems.

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To help you with specific cases, Anthracite Industries, Inc., maintains an extensive field organization of trained heating men. Available to you, through them, is the accumulated experience of the Anthracite industry.

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● Consult us freely, at any time, on any problem affecting Anthracite heating. You incur no obligation whatever.

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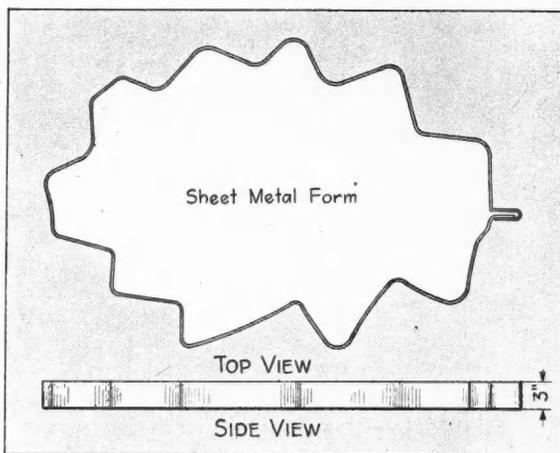
THE SOLID FUEL FOR SOLID COMFORT

Making Artificial Flagstones

THE sketch shows a method of making concrete stepping-stones which resemble natural stones, since it often happens that when one is making a batch of concrete, there is a small amount left over and stepping-stones may be made for future use.

The form is made by taking a strip of sheet metal about two inches in width and perhaps thirty inches long and bending it into the irregular form shown here. This can be easily done by driving two strong nails into a board and bending it between them. Care must be taken to bend it so that when the ends are locked together by the simple means shown, the whole will sit flat on a board which forms the bottom of the mold.

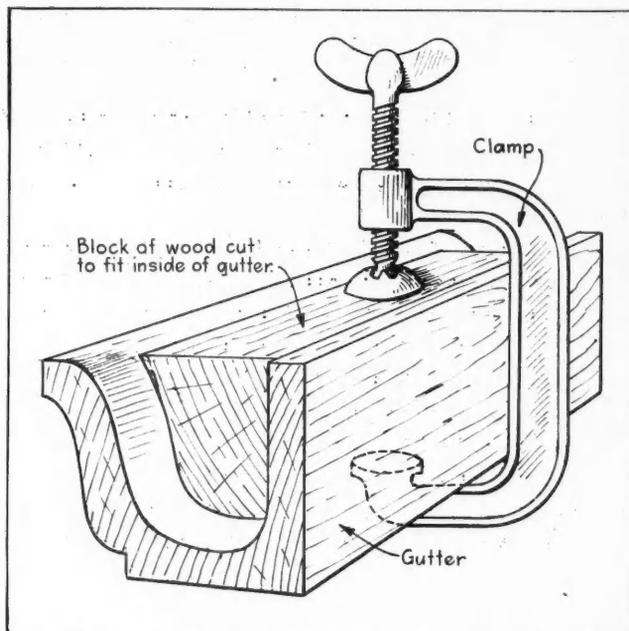
The advantage of this form is that by distorting its shape after making one stone, the next will be of a very different shape, and so on. By making two or three forms the variety can be greatly increased.—W. E. MOREY, Terre Haute, Ind.



SIMPLE metal form for making concrete flagstones.

Boring Pipe Holes in Wood Gutter

I AM sending you a sketch of the method I use when boring a hole in wood gutter for conductor pipe. I take a piece of wood (something about 12" long) the size of the inside of the gutter. Hold it up to the end of the gutter and mark the half circle on the end of it. Hew this off till it fits the bottom of the gutter. Clamp this tight to the inside of the gutter; turn gutter over and bore the hole. By this means, I can bore the hole all the way through; otherwise, when the screw comes through in the middle, the boring stops and the hole is not finished.—HALLOCK B. MASON, Duncan Falls, O.



SHAPED wood block allows boring clean holes in gutter.

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AUTOMATIC ANTHRACITE HEATING AND
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Automatic Anthracite heating permits wide latitude in decorating and utilizing the basement as a game room, den, workshop, or place to entertain.

(SEE ADVERTISEMENT ON OPPOSITE PAGE)

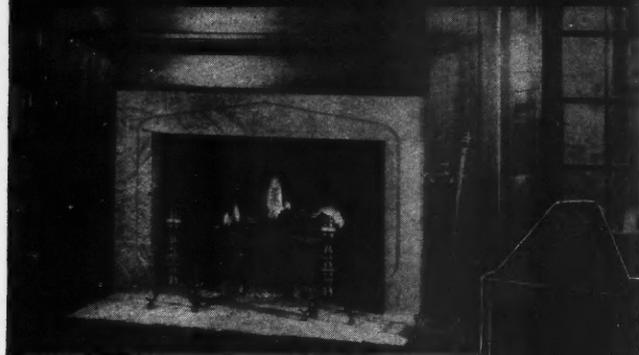
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ANTHRACITE
COAL

This seal appears on Anthracite Equipment only after it has passed the most rigid tests in the heating field.



THE SOLID FUEL FOR SOLID COMFORT

EASIER to BUILD
Helps Sell the
House, too



The
HEATILATOR
FIREPLACE

Builders have found that the Heatilator Fireplace makes a strong appeal to prospects: because it actually circulates heat—warms every corner of the room and even adjoining rooms. Because it cuts fuel bills, eliminates the waste of furnace fires on cool spring and fall days.

Your prospects want the advantages of the Heatilator. Years of national advertising have made it famous—thousands in use in homes and camps everywhere have made it popular and proved its value.

Will Not Smoke . . .

The Heatilator is a double-walled steel heating chamber around which any style fireplace can be built. It provides a correctly proportioned form for the masonry, assuring smokeless operation and proper draft. More—it saves materials and labor for the builder. The fire-box, damper, smoke-dome and down-draft shelf are all built-in parts—all properly placed, ready to install.

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Address.....

City.....

State.....

Heatilator Fireplace

Housing - Slum Clearance Act
Provides Huge Loan Fund

THE Wagner-Steagall Housing and Slum Clearance Bill which puts Uncle Sam into the housing business for (at least) 60 years was finally passed on Aug. 21 as the closing "must-legislation" act of the congressional session just terminated. First introduced by Senator Wagner of New York in the previous session, this measure was bitterly contested, and in the form finally enacted bore little resemblance to its original content. While under debate in the Senate the bill was referred to by its opponents as one "to eliminate slums and provide fine homes, with the government subsidizing the rent, for the Democrat voters of New York City"; and it was this line of attack that greatly cut down the scope and coverage of the measure as finally enacted.

Essentially the Act is one to loan federal funds to local Public Housing Agencies for the construction and operation of large scale housing units. A fund of \$526,000,000 is made available for this purpose during the next two years.

The Act is to be administered by a new corporation within the Department of the Interior and under the general supervision of the Secretary, to be known as the United States Housing Authority, with powers vested in an Administrator to be appointed by the President and to hold office for 5 years at \$10,000 per year.

Branch Offices in Every State

The principal office of the Authority will be in Washington with branch offices scattered widely over the country. It is the intent of the Act that its benefits shall flow to every state; and to assure this Congress wrote into the law that no state could receive more than 10 per cent of the total funds.

Under the Act, provision is made for long-term low-interest loans, grants and rent subsidies to "Public Housing Agencies" for "low rent housing." Paragraph 11, Section 2, defines such agencies:

"(11) The term 'public housing Agency' means any State, county, municipality, or other governmental entity or public body (excluding the Authority), which is authorized to engage in the development or administration of low-rent housing or slum clearance.

"(12) The term 'State' includes the States of the Union, the District of Columbia, and the Territories, dependencies, and possessions of the United States."

Other key expressions in the Act are defined thus:

"(1) The term 'low-rent housing' means decent, safe, and sanitary dwellings within the financial reach of families of low income, and developed and administered to promote serviceability, efficiency, economy, and stability, and embraces all necessary appurtenances thereto. The dwellings in low-rent housing as defined in this Act shall be available solely for families whose net income at the time of admission does not exceed five times the rental (including the value or cost to them of heat, light, water, and cooking fuel) of the dwellings to be furnished such families, except that in the case of families with three or more minor dependents, such ratio shall not exceed six to one.

"(2) The term 'families of low income' means families who are in the lowest income group and who cannot afford to pay enough to cause private enterprise in their locality or metropolitan area to build an adequate supply of decent, safe, and sanitary dwellings for their use.

"(3) The term 'slum' means any area where dwellings predominate which, by reason of dilapidation, overcrowding, faulty arrangement or design, lack of ventilation, light or sanitation facilities, or any combination of these factors, are detrimental to safety, health, or morals.

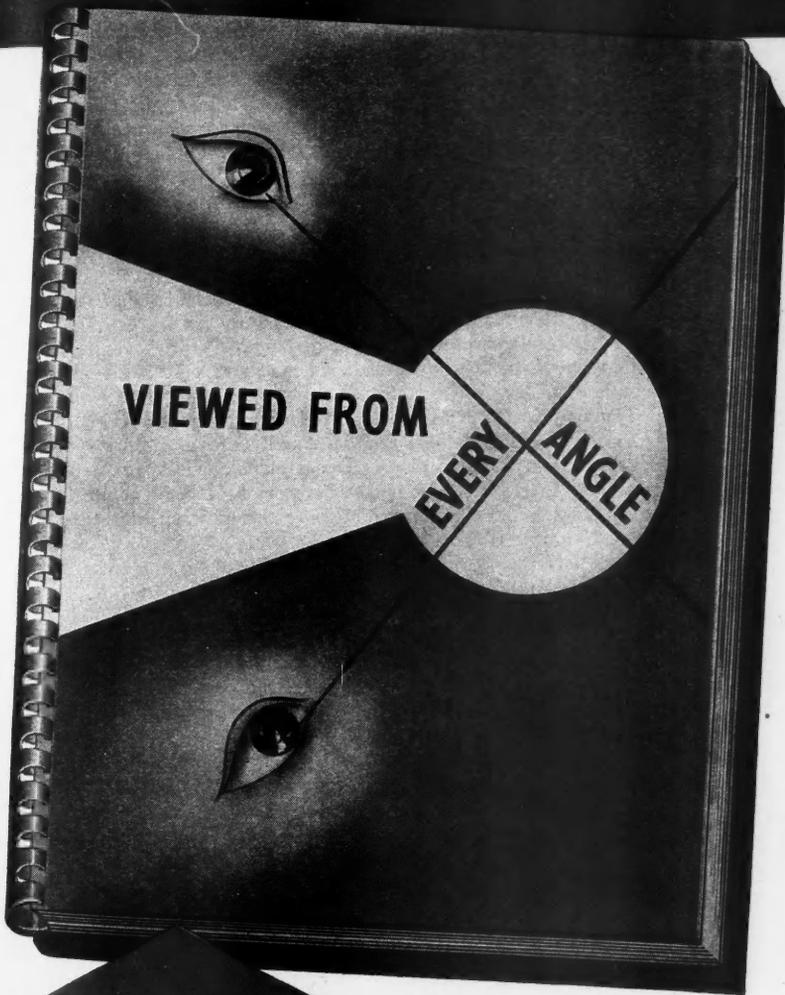
"(4) The term 'slum clearance' means the demolition and removal of buildings from any slum area.

"(5) The term 'development' means any or all undertakings necessary for planning, financing (including payment of carrying charges), land acquisition, demolition, construction, or equipment, in connection with a low-rent housing or slum-clearance project, but not beyond the point of physical completion. Construction activity in connection with a low-rent-housing project may be confined to the reconstruction, remodeling, or repair of existing buildings."

(Continued to page 92)

HOFFMAN EXPLODES MISAKEN THEORIES

...PROVES LUXURIOUS AIR-CONDITIONED
RADIATOR HEAT IS LESS EXPENSIVE!



PRIZE HOME SELECTED BY NATIONAL ASSOCIATION OF REAL ESTATE BOARDS AND M'CALL'S MAGAZINE USED AS TYPICAL CASE FOR SURVEY OF HEATING COST

Here are eye-opening facts for everyone concerned with specifying or installing residential heating systems! Your ideas of cost and desirability will be completely revamped by this revealing comparison of radiator and non-radiator heat.

The findings of a thorough investigation of heating methods have been applied to the "Home-of-the-Month," selected for its excellence of design by the National Association of Real Estate Boards and McCall's Magazine. Grateful acknowledgment is made to these two organizations.

This survey reveals indisputable facts of greatest value to the home designer and builder. Never before have these basic truths been worked out and presented in such comprehensive and convincing form. Viewed from every angle, they establish radiator heat as the soundest investment the home builder can make.

HOFFMAN

SPECIALTY CO. INC.
WATERBURY, CONN.

The Quality Line of  Heating Specialties.



Hoffman Products are sold everywhere by Leading Wholesalers of Heating and Plumbing Equipment

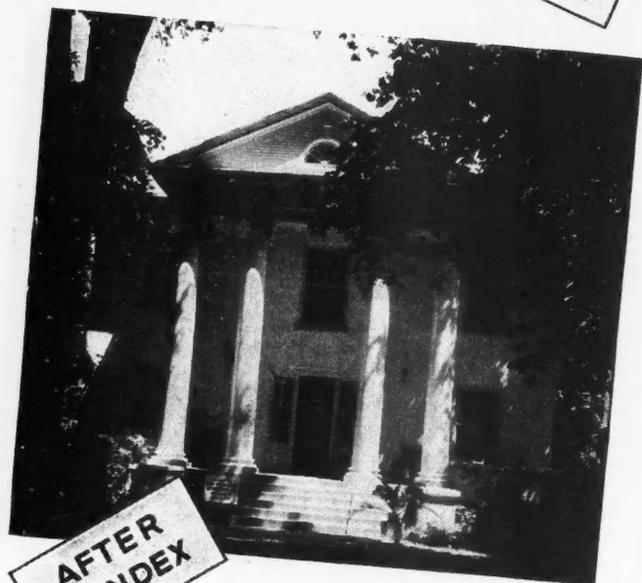
FREE

WHILE THEY LAST!
SEND COUPON TODAY

HOFFMAN SPECIALTY CO. Inc.
Dept. BA-9, Waterbury, Conn.

Send me a copy of your free book "Viewed from Every Angle."

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Address _____
City _____ State _____



THESE "before and after" photographs of a colonial type Middle-Western home, (reproduced from Reardon's advertisement in *Better Homes & Gardens* for September) show the beautiful effect produced on time-stained stucco with white Bondex—the waterproof cement paint. This new beauty is more than "skin-deep", for Bondex bonds with the surface, making it waterproof and weather-proof.

Many illustrations and interesting facts in the latest Bondex booklet — Send for it today.

THE REARDON COMPANY
ST. LOUIS CHICAGO LOS ANGELES

Reardon's BONDEX
WATERPROOF CEMENT PAINT

Wagner Bill

(Continued from page 90)

30 States Now Eligible

At the present time only 30 states have made their counties and municipalities eligible for these housing loans by passing the needed state legislation. Howard A. Gray, director of the Public Works Administration housing program, explained in a memo to the press on Aug. 23 that benefits can be extended only in states which have laws authorizing creation of municipal or other housing authorities.

The 18 states without such legislation, he said, are: Arizona, California, Georgia, Idaho, Iowa, Kansas, Maine, Minnesota, Mississippi, Missouri, Nevada, New Hampshire, New Mexico, Oklahoma, Utah, Virginia, Washington, and Wyoming.

These states probably will not become eligible before 1939, unless they call special sessions of their legislatures to pass essential laws. The law making bodies of most of them do not meet again in regular session until 1939.

The housing laws in many of the states were enacted this year, Mr. Gray said, at the suggestion of the Interior department and in anticipation of the new program.

The department has pending before it now 62 applications from 28 states for PWA housing projects. These applications have been approved by Secretary Ickes, but abandoned because of lack of funds. In addition the department has 312 applications not yet acted upon.

Such projects, it was explained, will have priority over other applications, providing the cities involved establish housing authorities and make formal application for loans.

The director explained that the new program, which the Interior department will supervise through the National Housing Authority, is a decentralized one. Housing authorities—legal entities separate from the states, counties and municipalities—will do the building with a 90 per cent federal loan and a 10 per cent local contribution.

The principal function of the federal agency, Mr. Gray said, is to approve applications for loans and see that the projects are developed according to plans. Department officials signified their readiness to start the program as soon as President Roosevelt issues an executive order establishing the national authority and appointing its Administrator.

Wrangle over High Cost

Debate in the Senate on the Wagner Bill revealed a strong sentiment of protest against the extremely high cost of the "low cost" housing projects that the federal government has been experimenting with during the past three years under the PWA program.

Amendments were introduced by Senators Byrd of Virginia, Walsh of Massachusetts and Tydings of Maryland that resulted in a drastic limitation of construction costs under this Act. As finally passed it eliminated the \$25,000,000 appropriation originally proposed for demonstration projects and limited the benefits to the lowest income group. Construction costs are limited to \$4,000 per family unit and \$1,000 per room, exclusive of cost of the land and cost of the slum elimination. (Senator Wagner publicly expressed the opinion that the latter amendment would kill the bill.)

For cities of 500,000 and over the limitation is \$5,000 per family unit and \$1,250 per room.

An amendment added to the bill provides for mandatory slum elimination by the addition of the words, "unless the project includes the elimination by demolition, condemnation, and effective closing, or the compulsory repair or improvement of unsafe or insanitary dwellings situated in the locality or metropolitan area, substantially equal in number to the number of newly constructed dwelling units provided by the project."

Another amendment inserted was, "No part of the fund herein provided shall be made available for any project unless and until the State, city, county, or other political subdivision in which such project is situated shall have contributed or agreed to contribute 10 per cent of the sum granted or loaned hereunder and 20 per cent of the rental subsidy herein provided." Another restricting amendment was to the effect that no state can apply for more than 10 per cent of the funds.

Amendments were passed removing from the bill the very dangerous provisions with reference to Consumers' Housing societies

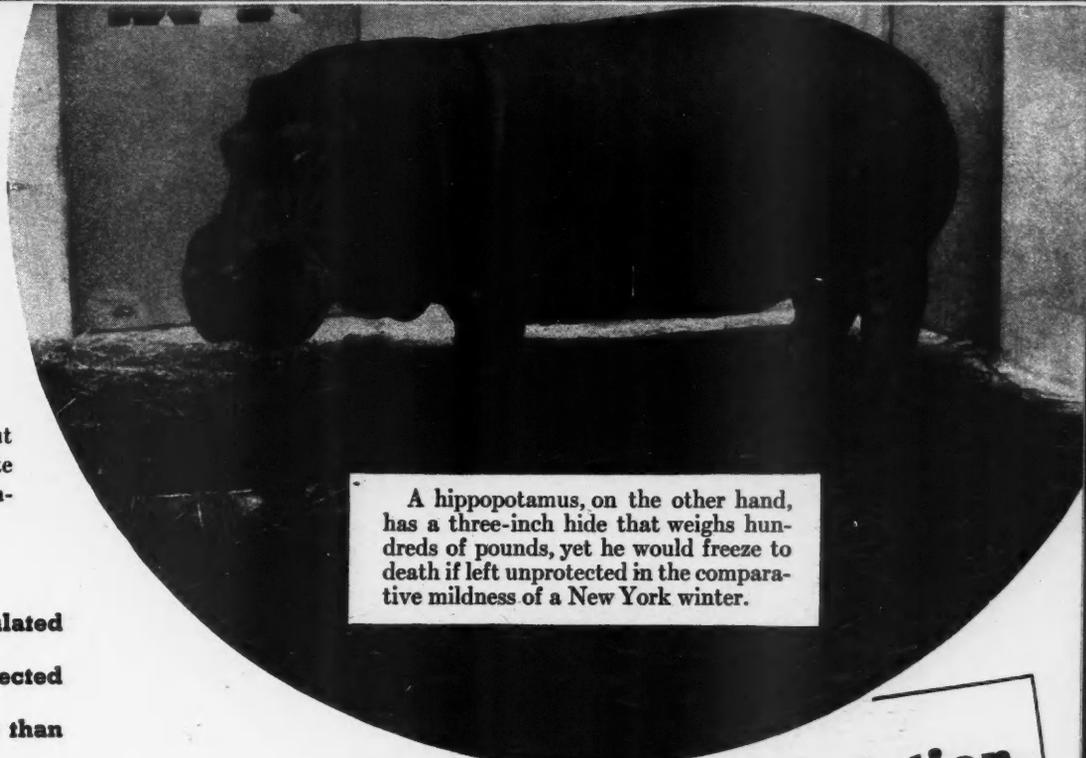
(Continued to page 94)

INCHES of HIDE or 9 OUNCES of FEATHERS WHICH MAKES THE BETTER INSULATION?



The feathers of an eider duck weigh but a few ounces, yet they insulate his delicate body so effectively that he can thrive in temperatures of 30 degrees below zero.

In a like manner a frame house insulated with one-inch Kimsul is better protected against winter cold and summer heat than a massive concrete fort with walls four feet two-inches thick.

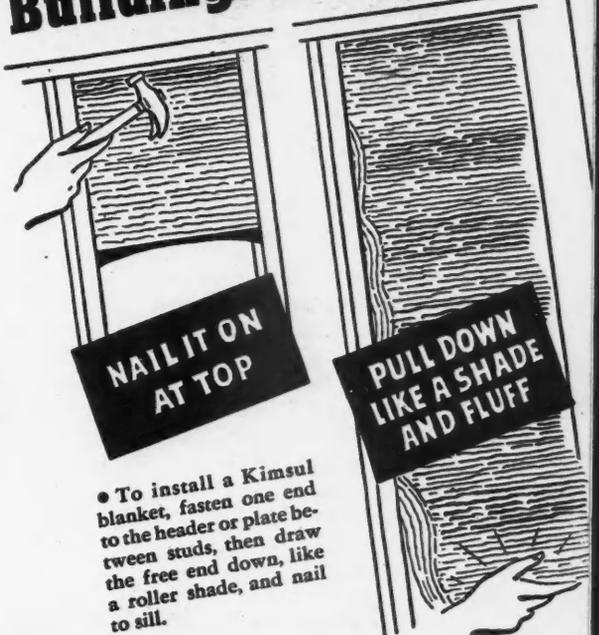


A hippopotamus, on the other hand, has a three-inch hide that weighs hundreds of pounds, yet he would freeze to death if left unprotected in the comparative mildness of a New York winter.

Most Important Development in Building Insulation

To anyone who specifies, installs, or buys insulation—the development of Kimsul is of first importance. Because Kimsul is not just another insulant. Designed to overcome the disadvantages of most other types, it actually is the most practical as well as one of the most effective of materials! For while it is second to none in thermal efficiency; has permanence, resistance to fire, moisture and vermin . . . *it also cuts installation and handling costs to a new low.*

This saving is accomplished by an ingenious manufacturing process through which Kimsul comes compressed to such a degree that 24 full sized blankets are packed in a container only 16" x 20" x 24". At time of installation these 24 blankets can be quickly and easily expanded to provide 250 square feet of snug insulation by the method pictured at the right.



NAIL IT ON AT TOP

PULL DOWN LIKE A SHADE AND FLUFF

• To install a Kimsul blanket, fasten one end to the header or plate between studs, then draw the free end down, like a roller shade, and nail to sill.

KIMSUL

A Unique Expanding Blanket

BUILDING INSULATION

The fuel savings effected by Kimsul's extra efficiency added to the installation economies made possible by its unique design makes Kimsul so superior on the basis of any price comparison that you should get all the facts about it without delay. Use this coupon.

KIMBERLY-CLARK CORPORATION, Neenah, Wisconsin

A. B. 9

Name _____

Address _____

City _____ State _____



If she likes the kitchen
YOUR HOUSE IS HALF SOLD



This kitchen has real sales appeal. The beautiful floor is Armstrong's Linoleum with black border and cove base.

Give your kitchens extra appeal with floors of Armstrong's Linoleum

YOUR houses will be easier to sell when the kitchen linoleum is Armstrong's. Here's why: Armstrong's Linoleum has been nationally advertised—in the magazines your prospects read—for more than twenty years. To the people who buy your houses, the name Armstrong means "the tops" in linoleum. When you tell them, "This is Armstrong's Linoleum," you cash in on the good will that our advertising is creating in *Saturday Evening Post*, *Time*, *Ladies' Home Journal*, *American Home*, *Life*, *Better Homes & Gardens*, *Good Housekeeping*, *House Beautiful*, *House & Garden*, *Town & Country*, *Woman's Home Companion* and *Country Life*.

Even in a home selling for \$2,500, you can afford to use Armstrong's Linoleum. Maybe not the heaviest grades, but in the durable Standard Gauge that will give your customer years of service. From the 200 new patterns, you can easily select a floor for any color scheme.

In our color-illustrated book, "Floors That Keep Homes in Fashion," you will find clever ideas for using linoleum in kitchens, baths, and other rooms. Send ten cents now for your copy. Armstrong Cork Products Company, Building Materials Division, 1218 State Street, Lancaster, Pa.



ARMSTRONG'S *Linoleum*
and RESILIENT TILE FLOORS
LINOTILE · ACCOTILE · CORK TILE · RUBBER TILE · LINOWALL · ACOUSTICAL CEILINGS

Wagner Bill

(Continued from page 92)

and limited-dividend corporations. These were all taken out from the Senate Bill and the benefits of the bill confined strictly to public agencies. Minor amendments added provide: that the loans shall bear interest at a rate not less than the going Federal rate at the time the loan is made, plus one-half of 1 per cent; that no expenditure, grant or loan, or contract for the expenditure, grant or loan of funds under the act shall be undertaken by the Authority except with the approval of the President.

Uncle Sam's Experience in the Cost of Housing

In connection with the heated debate as to cost limitation of housing to be financed under this Act, a summary was presented of the cost of the several housing projects which the federal government has sponsored during the past few years. This summary appears in the Congressional Record as follows:

Low-cost-housing developments in various parts of the United States
COMPLETED PROJECTS

| City | Name | Rooms | Cost |
|----------------------|------------------------------|-------|---------|
| Atlanta, Ga. | Techwood Homes | 2,124 | \$1,027 |
| Do. | University Homes | 2,343 | 961 |
| Atlantic City, N. J. | Stanley S. Holmes Village | 928 | 1,371 |
| Buffalo, N. Y. | Kenfield | 2,756 | 1,581 |
| Charleston, S. C. | Meeting Street Manor (white) | 700 | 1,793 |
| Do. | Cooper River Court (colored) | | |
| Cleveland, Ohio. | Cedar-Central Apartments | 2,296 | 1,221 |
| Do. | Outhwaite Homes | 2,166 | 1,295 |
| Columbia, S. C. | University Terrace | 415 | 1,508 |
| Dallas, Tex. | Cedar Springs Place | 598 | 1,615 |
| Indianapolis, Ind. | Lockefield Garden Apartments | 2,538 | 1,131 |
| Jacksonville, Fla. | Durkeeville | 701 | 1,301 |
| Miami, Fla. | Liberty Square | 860 | 1,066 |
| Milwaukee, Wis. | Parklawn | 2,018 | 1,197 |
| Montgomery, Ala. | Riverside Heights | 324 | 1,210 |
| Do. | Wm. B. Paterson Courts | 524 | 872 |
| New York City, N. Y. | Harlem River Houses | 1,940 | 1,577 |
| Oklahoma City, Okla. | Will Rogers Courts | 1,232 | 1,563 |
| Stamford, Conn. | Fairfield Court | 499 | 1,601 |

PROJECTS UNDER CONSTRUCTION

| | | | |
|----------------------|----------|-------|---------|
| Birmingham, Ala. | H 2902 | 1,588 | \$1,300 |
| Boston, Mass. | H 3302 | 3,860 | 1,534 |
| Cambridge, Mass. | H 8501 | 1,172 | 1,359 |
| Camden, N. J. | H 6002 | 1,852 | 1,666 |
| Chicago, Ill. | H 1401 | 2,501 | 1,715 |
| Do. | H 1405 | 1,070 | 1,534 |
| Do. | H 1406 | 3,254 | 1,621 |
| Do. | H 1408 | 1,733 | 1,659 |
| Cincinnati, Ohio. | H 1801 | 3,362 | 1,615 |
| Cleveland, Ohio. | H 1003 | 2,311 | 1,418 |
| Detroit, Mich. | H 1201 | 2,360 | 1,588 |
| Do. | H 1205 | 2,827 | 1,532 |
| Enid, Okla. | H 5401 | 311 | 1,695 |
| Evansville, Ind. | H 3801 | 563 | 1,334 |
| Lackawanna, N. Y. | H 6202 | 1,126 | 1,368 |
| Lexington, Ky. | H 5103 | 947 | 1,756 |
| Louisville, Ky. | H 2502 | 797 | 1,543 |
| Do. | H 2503 | 407 | 1,698 |
| Memphis, Tenn. | H 3401 | 2,004 | 1,466 |
| Do. | H 3403 | 1,574 | 1,727 |
| Minneapolis, Minn. | H 4201 | 1,708 | 1,810 |
| Nashville, Tenn. | H 2101 | 1,045 | 1,691 |
| Do. | H 2102 | 1,261 | 1,369 |
| New York City, N. Y. | H 1301 | 5,688 | 1,686 |
| Omaha, Nebr. | H 2001 | 1,114 | 1,480 |
| Philadelphia, Pa. | H 3001-C | 999 | 1,951 |
| Schenectady, N. Y. | H 5801 | 717 | 1,781 |
| Toledo, Ohio. | H 2601 | 907 | 1,749 |
| Washington, D. C. | H 1706-A | 903 | 1,948 |
| Wayne, Pa. | H 9001 | 168 | 1,774 |

Average cost per room—completed projects.....\$1,290
Average cost per room—projects under construction.....1,537

¹Estimated.

Cost does not include land.

* * *

So. Pine Calls Wage and Hour Meeting

REPRESENTATIVES of all groups of business men who have co-operated in the recent educational campaign on proposed federal wage and hour legislation, are invited to participate in a mass meeting called by the Southern Pine Industry Committee, to be held in New Orleans on Friday, Sept. 10. The call states that the federal wages and hours legislation, which failed of action at the last session of Congress, will be one of the first measures to be considered at the next session in January.

The announced purpose of the mass meeting is to review the situation affecting the subject of federal wage and hour legislation, and to discuss such action as the business, agricultural, manufacturing and other interests may deem necessary for the future with respect to this legislation.

LIFE LONG PIPING

NO CONSTANT CARE •
NO REPLACEMENTS •

● The modern home really centers around on efficient plumbing and heating conducting system. The convenience of any home, in fact, its very livability absolutely depends on it—without it the most modern bathroom, kitchen and laundry fixtures cannot render that peak of efficient service that was intended to go hand in hand with their handsome appearance. Heating units cannot attain their maximum efficiency with a conducting system that restricts flow, clogs and corrodes.

You can confidently install STREAMLINE Copper Pipe, connected with modern STREAMLINE Solder Fittings, and know that you will have a permanently reliable conducting system that assures efficient service from up-to-the-minute fixtures and radiating units, year in and year out.

STREAMLINE Copper Pipe and Fittings are not expensive, even in first cost. This revolutionary and modern STREAMLINE Fitting has made possible a non-rusting, non-clogging system that can be installed at little, if any more than corrodible materials. There will be no future repair bills—no constant care—no replacements.

Standardize on STREAMLINE. It will relieve you of come-backs, arguments and dissatisfaction. You will find it a most effective sales feature in profitable disposal of property.

Send for our Home Owners' book.
It gives you the complete story.

STREAMLINE
PIPE AND FITTINGS DIVISION
MUELLER BRASS CO.
PORT HURON, MICHIGAN

STREAMLINE
TRADE MARK REG. U. S. PAT. OFFICE
COPPER PIPE AND FITTINGS





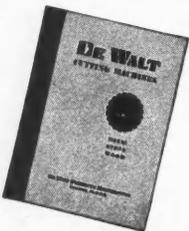
The *NEW* "GN" DE WALT designed especially for Building Contractors

Hundreds of builders and contractors have told our engineers exactly the kind of all-purpose wood-working tool *they wanted*. We designed the new "GN" model to their order—and yours.

In the "GN" De Walt, first of all, **PORTABILITY** was stressed so that this machine could be taken right to every job for greater time and labor saving. Next, we have emphasized the very minimum power consumption adequate for your needs in making all cuts on the job. And finally, we've built a reasonably priced model that has all the flexibility and accuracy of the heavier DE WALTs.

Below are illustrated a few of the more important cuts that the "GN" De Walt is quickly set to make. Can you afford to be without it?

WRITE OR WIRE for illustrated folder with specifications, prices, etc. Or better still, say when and where you would like this "GN" model demonstrated. We'll bring it to your present job without obligation. Address DE WALT PRODUCTS CORPORATION, 306 Fountain Avenue, Lancaster, Pennsylvania.



DE WALT WOODWORKER

It talks through its teeth



News of the Month

Building Activities and Meetings

July Residential Volume Lower Than June But Ahead of Same Period in 1936

THE July total for all classes of construction amounted to \$321,602,700 in the 37 eastern states, topping the previous high figure of the recovery reported in June of this year in the amount of \$317,842,100 and representing an increase of 8 per cent over the total of \$294,734,500 reported in July, 1936, according to figures of F. W. Dodge Corporation.

Of the July, 1937, volume, \$81,046,000 was for residential building, \$138,063,500 for non-residential building, and \$102,493,200 for civil engineering projects, i.e., public works and public utilities. The residential total compares with \$71,993,700 for July, 1936, and \$93,078,100 for June of this year. The July, 1937, non-residential total was about 44 per cent greater than the total for July of last year and exceeded the June, 1937, total of \$124,837,000 by about 10 per cent. Civil engineering projects started in July fell materially below the figure of \$126,615,600 shown for a year ago and were only little better than the total of \$99,927,000 shown for June of this year.

For the first seven months of 1937 the total volume of construction undertaken in the 37 eastern states reached \$1,815,253,900; this was an increase of 19 per cent over the total of \$1,532,075,300 for the corresponding seven months of last year. Of the 1937 cumulative volume residential building amounted to \$597,452,500; for the corresponding period of 1936 residential building totaled \$406,838,300.

HOLC Prepares Revised "Spec" Booklet

THE Home Owners' Loan Corporation has just made public a revised list of Master Specifications of construction which may offer a pattern for private industry to follow. This list will be used to help solve the vast problem of keeping 1,000,000 homes, on which it holds mortgages, in good repair, and is in the form of a conveniently sized booklet for the use of contractors employed by the Corporation. It is intended to insure the best standards of materials and workmanship.

HOLC further states in the announcement: "Because of the necessity of adapting the Master Specifications to all the varying conditions met with in reconditioning HOLC properties, they are applicable for general use. Instead of laying down highly specialized definitions for a limited class of projects, they formulated general rules that should be a basis for judgment on all types of projects.

"Although general in intent, the Master Specifications cover the erection of most of the structural elements of building: chimneys, downspouts, joists, foundations, and even deal with such specialized problems as termite control, landscape work, terrazzo, tile and marble application.

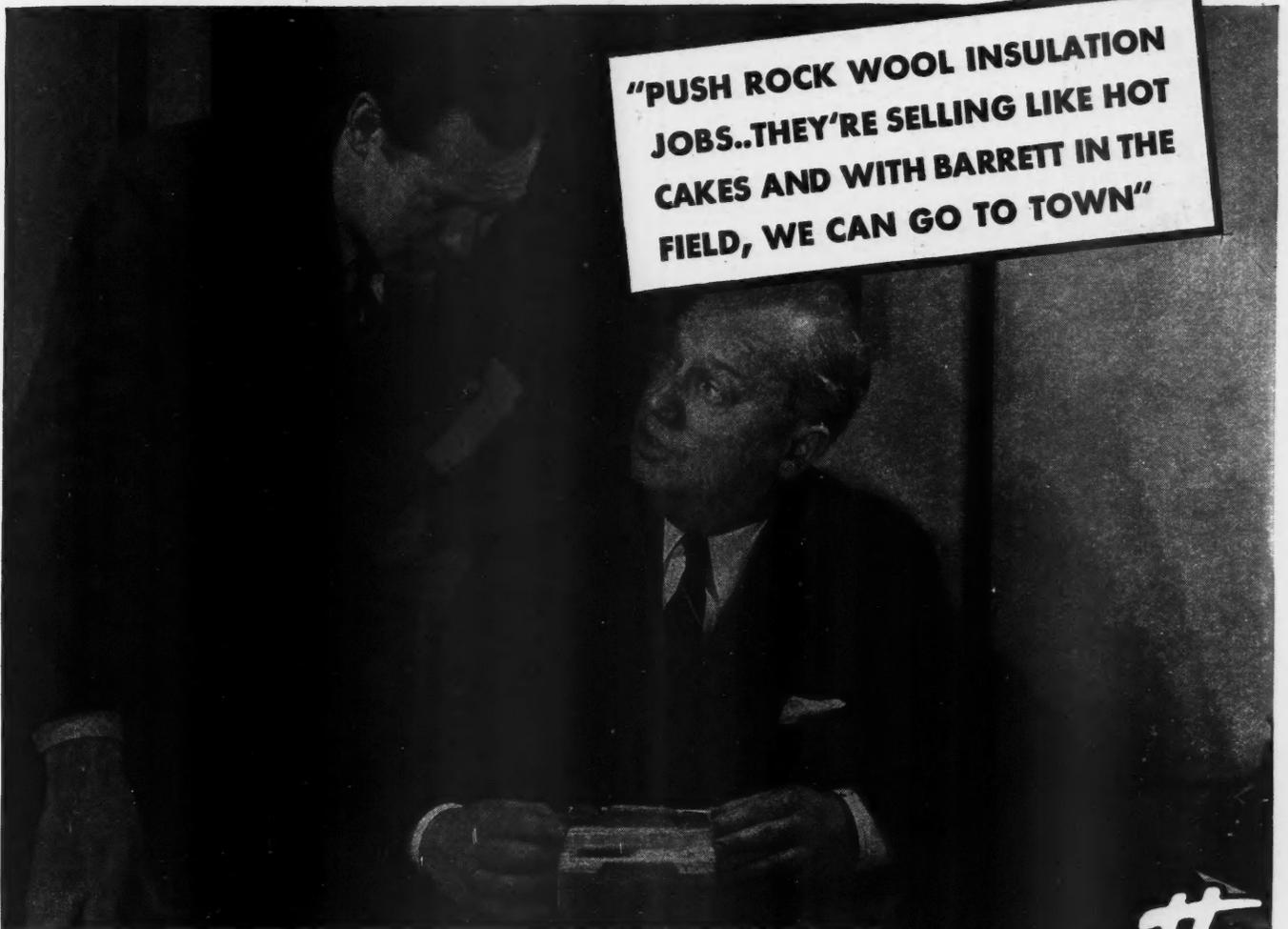
"It is recognized, however, that this booklet of specifications is only a first step towards the eventual standardization of practices and co-ordination of the construction industry."

Flintkote Announces Asbestos Products Line

THE Flintkote Company announced its new complete line of asbestos-cement roofing and siding products to the building material and supply trade Aug. 12, in a combination introductory brochure and price list. These new materials are also being manufactured under the Beckman-Dawson and Richardson brand name (subsidiaries of Flintkote) in new modern plants erected for this purpose by Flintkote last year.

The new Flintkote asbestos line includes five major siding items, two types of roofing shingles, and two hip and ridge materials. The sidings, grouped under the trade name "Woodgrain," include two sizes of the popular wavy butt line shingles to be known as "Waveline," a staggered butt shingle called "Shake," a Top Lap siding shingle and a Wide Space siding shingle. All these siding items are attractively wood textured and are available in white, silver gray, green, and brown.

Make Sure-Fire Profits with BARRETT ROCK WOOL



Products sell faster when they have the power of the name "Barrett" behind them. It's a name that architects, engineers, contractors and the public all accept. They know it means *tops* in quality and value.

Today the Barrett name is behind a new product, one of the most demanded items in the whole field of building materials—Rock Wool. Think of all the home and building owners who are trying to cut down on fuel consumption and are insisting on greater summer comfort! Think of all the new air-conditioned homes that need Barrett Rock Wool insulation! Make this great demand pay you your full share of profits! Cash in on the Barrett name! Write today for details!

COMPLETE LINE . . . ALL TYPES
BLOWING FIBER . . . BATTS . . . LOOSE WOOL

Send for samples and the complete story of Barrett Rock Wool—why it offers you great opportunities for big profits. Mail the coupon today.

GET ALL THE FACTS . . .
SEND COUPON TODAY!



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Avenue, Chicago, Ill., Birmingham, Ala.
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Send for details about Barrett Rock Wool.

Company Name.....

Individual.....

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

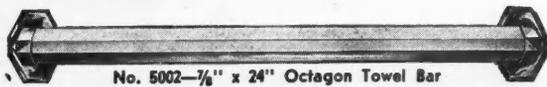
NOW MORE THAN EVER, IT'S **BARRETT** "BETWEEN THE WORLD AND THE WEATHER SINCE 1854"

MIAMI ACCESSORIES



Glorifying the AMERICAN BATHROOM

These attractive Accessories are a companion line to the famous Miami Bathroom Cabinets. They add new usefulness and beauty to the bathroom. Forged brass base; thick nickel coating; hard chromium covering. Resist wear—retain brilliance. A complete line—recessed or projection types—a few models shown below.



No. 5002— $\frac{7}{8}$ " x 24" Octagon Towel Bar



No. 6002—Paper Holder — Chrome Roller



No. 6001—Tumbler Holder



No. 6004 — Soap and Grab Bar



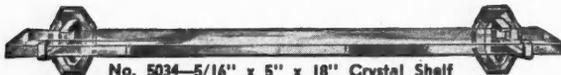
No. 5011 — Double Robe Hook



No. 5010 — Single Robe Hook

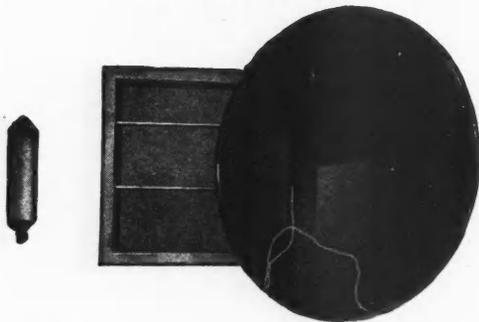


No. 5009 — Tooth-Brush Holder



No. 5034— $\frac{5}{16}$ " x 5" x 18" Crystal Shelf

The MODERNE BATHROOM CABINET



The Moderne combines the utility of a regular cabinet with the beauty of a circular mirror.

Modern, attractive bathrooms help sell houses —write for catalog and complete details.

SEE OUR CATALOG IN SWEET'S

MIAMI CABINET DIVISION
THE PHILIP CAREY COMPANY
MIDDLETOWN, OHIO

Improved Standards in New York City Code

ONE of the requirements of the recently enacted building code of New York City is that a person filing plans for any work affecting public health or safety also file an affidavit of an architect or engineer stating that the plans as filed comply with the code, except as specifically noted. Another section requires a similar affidavit from an architect, engineer, superintendent or foreman of construction, who has supervised the work of construction, that the structure has been built in accordance with the approved plans; this affidavit must accompany application for a certificate of occupancy. If such procedure had been required heretofore, the likelihood of a disaster like the collapse of the Moshulu Parkway apartment building last year would have been extremely unlikely. The new code becomes effective Jan. 1, 1938.

Another provision permits the use of a number of recent developments in the building field, such as welding, in place of riveting, in steel construction. As welding is a noiseless operation, it is now possible to eliminate the din of the pneumatic riveter in New York City.

Armstrong to Continue Finance Plan

ARMSTRONG Cork Company has announced the continuance of the company's Finance Plan. Many contractors have made active use of the plan during the past year. Results have shown clearly that a simple, convenient way to finance purchases of Armstrong materials out of income is very desirable. With certain changes, the plan will be continued through the credit facilities of the Armstrong Finance Corporation.

Celotex Announces Eastern Executive Staff

THE Celotex Corporation has announced the appointment of executive personnel who will operate the recently acquired plant at Metuchen, N.J.; Mr. Arthur Landis, former vice-president of the Auburn Automobile Company, who joined The Celotex Corporation staff a year ago, has been appointed eastern operating manager in charge of Works Operations of the Metuchen and Marietta Divisions. Mr. Landis has been active investigating the possible development of new products to be manufactured at these plants. He will headquarter at Metuchen.

Operating under Harold Knapp, vice-president and general sales manager, will be George E. Swenson, who has been appointed manager of sales, Metuchen Division, and Paul D. Close, assistant manager. Both will headquarter at The Celotex Corporation's New York office.

Solid Fuel Water Heater Sales Increase

REPORTS from manufacturers of tank-type water heaters for solid fuels and particularly anthracite fuel show a decided increase in production. Credit is due largely to the newspaper advertising campaign of Anthracite Industries, Inc., which is bringing to the attention of the public the low cost of hot water by this method, and to the combined efforts of coal dealers and heating contractors who have found new sources of profit through mutual co-operation.

Union Life Buys Falkland Mortgage

PURCHASE of the original \$840,000 mortgage on the large scale housing development known as Falkland Properties, Inc., Silver Spring, Md., by the Union Central Life Insurance Company of Cincinnati, has been confirmed by the RFC Mortgage Company, holders of the mortgage, according to a statement by the Federal Housing Administration. The life insurance company purchased the mortgage at a one per cent premium.

Whitman Recommends Steel Ceiling

OF interest to builders who install metal ceiling is the recent recommendation of Roger B. Whitman in his newspaper column, "First Aid to the Ailing House." A question to him was worded as follows:

"In many parts of my cellar the plaster ceiling has fallen and the lath is exposed. I am told that a metal ceiling, to be nailed

(Continued to page 102)

and the "Choosy" Home Seeker

Some of the 88 Charming Homes Featured

Five-room Cape Cod Cottage, well proportioned, carefully planned . . . Sturdy Colonial with outline specifications . . . Fire-Safe Bungalow . . . Triple-Insulated Compact Colonial . . .

Five-room Cottage for sloping site . . . White painted brick Country Homestead in provincial style . . . Virginia Lee Modified Normandy Cottage . . . A bunch of Kelvinator "Package Homes" . . .

French Provincial Charm . . . Texas "Apartment Type" Home built to sell for \$1,900 . . . Birmingham Steel Clad Home, with Bill of Materials . . . Gross-Morton Low Cost Bungalows . . .

Test Houses at Purdue, with outline specifications for first five . . . Some General Electric Prize Homes . . . Kalamazoo's Home of Tomorrow . . . Buffalo Frameless Steel Home . . . Concrete "Efficiency Home" at Cleveland . . . The \$15,000 Prize Westchester Model Home . . .

Attractive English Style House . . . 6-room Colonial for Country . . . Rambling Colonial in Brick . . . The ever-charming Monterey Type . . . Riviera House at Miami Beach . . . Florida Directoire . . .

Spanish Home Design . . . Early American Cottage of big value . . . Money-saving 4-room, bath and attached Garage . . . Home in Two Steps . . .

NEW IDEAS Forecasting Style Trends in Every Part of the Home

Impressive Archways . . . Curved Stairs . . . Spacious Halls . . . Paneled Rooms . . . Recreation Rooms . . . Living Rooms for widely divergent tastes . . . Entrancing Entrances . . . Many out-of-the-ordinary Fire Places . . . All Electric and Streamlined Kitchens . . . Bathrooms of irresistible attractiveness . . . Cozy Dinettes . . . Built-in Bookcases, Bars and Kitchen Storage Space . . . Reposeful Bedrooms . . . Bay Windows . . . Dovecote and Overhung Gables . . . Corner Windows . . . Knotty Wood Finishes . . . Interior Wall Paneling . . . Colorful Details of all sorts for adding to Home Popularity . . . Early American Details in a Modern Bungalow . . . "Housewife's Planning Room".

"American Builder Guide to Better Homes" is

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with a \$2 for 1 yr., \$3 for 2 yrs. or \$4 for 3 yrs.
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Get YOUR copy by using the form above.

**Tear Off—
Mail Today!**

AMERICAN BUILDER, New _____
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New York.

For the enclosed \$_____ enter my
subscription for 1 year, \$2 _____
2 years, \$3 _____ 3 years, \$4 _____

**And include AT NO EXTRA COST
a copy of "AMERICAN BUILDER
GUIDE TO BETTER HOMES."**

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*This offer good only in United States,
Possessions and Canada*

9-37

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If you wish to become a subscriber, or your present subscription is due for renewal, there is special urgency for prompt action, so that you be sure not to miss the October number. For this issue will be the

STARTING OF A CRUSADE

1. To turn the tide of unsound and unfair thinking about today's Home costs.
2. To spread the truth about Home Building costs.
3. To demonstrate conclusively that MORE HOME can be had for the money than in 1929.

The entire issue will be dedicated to the thesis that as a result of decreased land costs, lower long-term financing, and far-reaching technical improvements in products and methods that go into the new home, the completed home of today is not only vastly superior to that of 1926 or 1929, but on the average **COSTS MUCH LESS.**

This will be shown in 16 ringing, challenging feature articles—in Charts—in Comparative Tables—in selected Home Designs dramatizing it all—extended Surveys and Analyses—How-to-Do-It discussions of the new ways resourceful builders are finding to cut costs. It will be encyclopedic—factual—of supreme permanent reference value.

Get your copy and the Plan Book with it, at no extra cost, by using the form above. The number will be in great demand and the printing will be soon used up. So again we say,

HURRY!

Send for fully illustrated Booklet—FREE



WINDOWS IN BRONZE OR ALUMINUM

Weathertight • Rustproof • Rattleproof



PERMATITE
WINDOWS



YOU KNOW your prospects want fine windows in bronze or aluminum — if they can afford them. Now you can give them this luxury — plus amazing efficiency — at a price that is lower than ever before.

Permatite Windows — casement or double hung — are made in a quality of materials and workmanship, formerly available only in America's finest monumental buildings.

Beauty? Yes — but the efficiency of Permatite Windows will appeal to even your hardest prospect. The new, metal weatherstripping — built to last a lifetime — forms a virtually airtight seal. It keeps out moisture, dust and dirt, prevents annoying rattles — and saves fuel. These patented windows are suitable for insulated and air-conditioned buildings.

Permatite Windows are easy to operate. There is no warping, no sticking, no rusting. No painting is required. They are easy to handle and to install.

Fully illustrated literature is yours for the asking. It will pay you to investigate. Send in the coupon today.

PERMATITE WINDOWS

Bronze or Aluminum • Casement or Double Hung



GENERAL BRONZE CORPORATION
34-19 Tenth Street, Long Island City, N.Y.

Send us FREE illustrated literature on Permatite Windows.

Name _____

Address _____

(Continued from page 98)

over the bare places and the old plaster that remains, will be cheaper than new plastering. What do you think about it?"

In reply, Mr. Whitman stated: "Metal would be excellent for that purpose, and cheaper than plastering. The job will be much cleaner, and the old plaster will be secured against falling. Had I that condition, I should use metal."

Wagner, Hardware Pioneer, Dies

ADAM WAGNER, 66, president of the Wagner Manufacturing Company, Cedar Falls, Iowa, died on Aug. 11 at his home, following a lengthy illness.

Mr. Wagner's rise to the head of a company which conducts a world-wide business started with his career as a clerk in a retail hardware store. The Wagner Manufacturing Company was started in November, 1902, by Adam Wagner with his brother, George H. Wagner, and W. H. Merner. Adam Wagner was named president when it was incorporated in 1904, an office which he held until his death.

Teachout Company Reorganized

CLEVELAND'S pioneer millwork and lumber concern, the Teachout Co., has lately been reorganized and relieved by court order from the conditions of Section 77B of the Recovery Act, which status it assumed last November.

The reorganization gives it a new president, E. J. Schroeter, former head of the Macoustic Engineering Co., which he organized and operated for ten years, selling it to National Gypsum interests. David Teachout, former president, is now a resident of California. Fred Eisele has been elected vice president and treasurer, and L. J. Randall, secretary. The Teachout Co. was founded by Abram Teachout in 1873 as a millwork concern and it later added the function of dealing in lumber, roofing, insulation and allied products at its two Cleveland plants. It operates a Buffalo plant for millwork only.

Ransome Appoints New Representatives

THE Ransome Concrete Machinery Co., Dunellen, N.J., has recently appointed the following new representatives:

Manufacturers Supply Co., 711 Blount Bldg., Pensacola, Fla.; Meriwether Supply Corp., 1312 Jordan St., Shreveport, La.; Smoot Machinery Co., 46-50 West Fourth South St., Salt Lake City, Utah; Mine & Smelter Supply Co., El Paso, Tex.; Dominion Distributors Co., Mitchell Bldg., St. John's, Newfoundland.

Bruce Convention To Be Held Aboard Ship

A FLOATING convention, to be held on Lake Michigan, is the unusual get-together which E. L. Bruce Co. has arranged for its officials, flooring and lumber sales representatives, and licensees of its Terminix Division. The entire steamship North American has been chartered for a convention cruise to last two days and three nights, and over 400 Bruce and Terminix men are expected to be on board when the boat leaves Chicago Labor Day night. The steamer will travel the length of Lake Michigan, with a stopover at Mackinac Island.

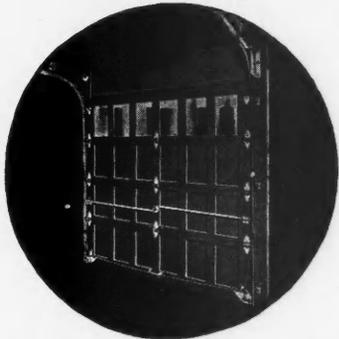
In addition to thorough discussion of the company's products and policies, a great deal of time will be spent by the Bruce group in the study of how sales representatives can be of greater help to the retail dealer. Various dealer helps and promotion will be taken up and plans for a broad advertising campaign for 1938 will be discussed.

Chain Belt Completes New Factory

CHAIN Belt Company, of Milwaukee, has just completed the erection of a new building at its West Milwaukee works to house an enlarged machine shop and the West Milwaukee offices. All machining operations, with the exception of those in connection with chain and sprocket wheels, are being moved from the Milwaukee works to the new building at West Milwaukee. Thus this department, which machines all the parts used in concrete mixers, speed prime pumps, Moto-Mixers and Pumpcretes, will be located close to the construction equipment plant, where all these units are assembled.

THE
"OVERHEAD DOOR"
 WITH
Salt Spray Steel
 TRACKS AND HARDWARE
TESTED
 BY A STANDARD SALT SPRAY TEST
 ——— ADAPTABLE ———

HOME GARAGES
 PUBLIC GARAGES
 WAREHOUSES DOORS
 FACTORIES DOORS



GREASING STATIONS
 FIRE STATIONS
 BOAT WELLS
 SIMILAR BUILDINGS

A MILLION USERS THE BEST RECOMMENDATION

Backed By
 A NATION-WIDE, SALES-INSTALLATION SERVICE

**OVERHEAD DOOR CORPORATION
 HARTFORD CITY, INDIANA U. S. A.**

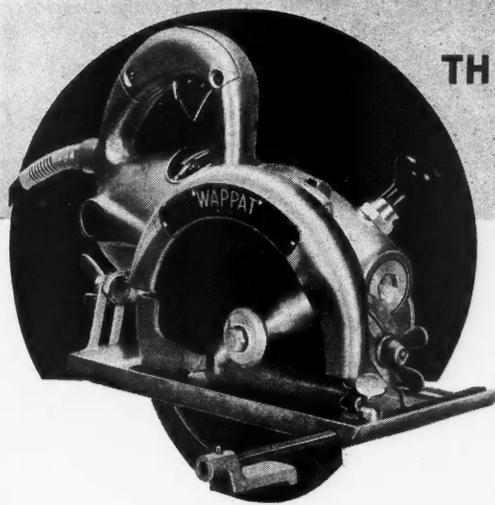
CLIP THIS COUPON and MAIL NOW!

MADE IN ANY SIZE FOR ANY OPENING.
 ELECTRIC OR HAND OPERATION.
 Please send me literature and full information regarding your product.
 I am interested in doors for the particular purpose as checked

Name _____
 Address _____
 City _____ State _____

Mail to: OVERHEAD DOOR CORPORATION, Hartford City, Indiana, U. S. A.

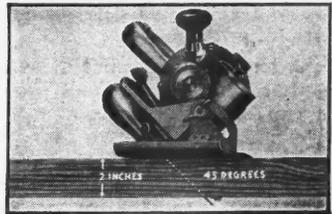
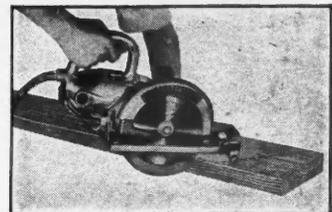
PRIVATE GARAGE
 PUBLIC GARAGE
 WAREHOUSE
 GREASING STATION
 WOOD DOORS
 STEEL DOORS
 FACTORY DOORS
 OTHER BUILDINGS
 ELECTRIC OPERATORS
 AB-9-37



THE *New* **MODEL 1-A WAPPAT**
 PORTABLE ELECTRIC
HANDSAW \$105

Built for house framing . . . to the specifications of carpenter-contractors. Bevel cuts jack rafters from full 2" lumber—for any pitch roof. Saves hours on every job.

- 1** Light. Weighs but 18 pounds. Balanced for true one-hand operation. Take it wherever you need it. Trims wall and roof sheathing already in place. Your men will use it in preference to hand saws.
- 2** Price. An exceptionally low price for a WAPPAT heavy duty saw. Pays for itself on two houses of average size. Saves hundreds of dollars during the many years it will serve you.
- 3** No Sawdust. One of its most important exclusive features. No sawdust in operator's eyes . . . no sawdust covering up the cutting line. A major improvement.
- 4** Safe. Equipped with the WAPPAT patented spring-operated telescoping safety guard . . . The only guard that gives complete protection without interfering with the operation of the saw.
- 5** Accurate. Follows cutting line perfectly because you can see the line at the blade. Graduated quadrant for bevel adjustments.
- 6** High Quality. Built to WAPPAT standards of excellence. Overpowered, fast cutting, long lasting, trouble free.



TRY IT ON YOUR JOB FREE!

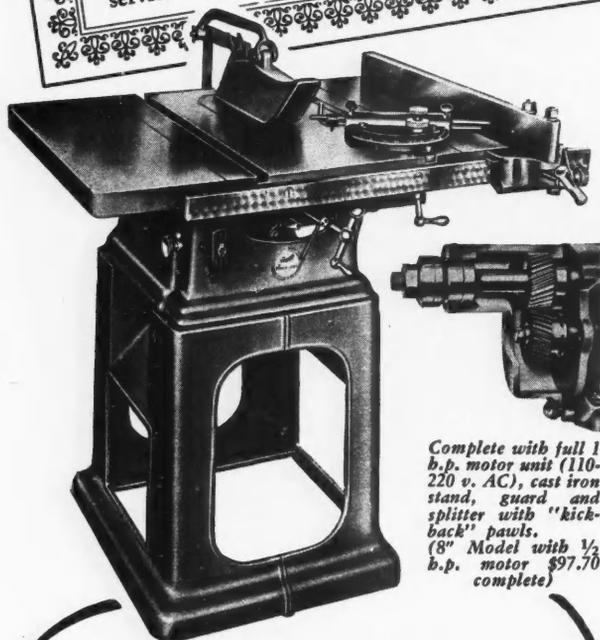
WAPPAT

INCORPORATED
PORTABLE ELECTRIC TOOLS
7567 Meade St., Pittsburgh, Pa.
 DIVISION OF SIMONDS SAW AND STEEL CO.

Without Obligation
 Arrange free demonstration
 Send additional information
 on WAPPAT Model 1-A Electric Handsaw

Name _____
 Street _____
 City _____ State _____

IMPORTANT! Walker-Turner Co., Inc., offer this tool as proof that precision power tools can be built at a low price. Because we build small power tools only—because we have spent years in intensive small tool research, engineering, and production,—you can safely buy this low-priced tool and expect a full measure of accuracy and long service.

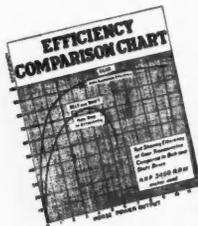


Complete with full 1 h.p. motor unit (110-220 v. AC), cast iron stand, guard and splitter with "kick-back" pawls. (8" Model with 1/2 h.p. motor \$97.70 complete)

DIRECT MOTOR DRIVE SAVES 40% POWER LOSS

On This Walker-Turner 10" Tilting Arbor Saw

\$139.50



2 1/2 TIMES ITS RATED HORSEPOWER was developed by a test motor used with the new Walker-Turner Direct Drive, whereas the same motor, belt-driven, would stall shortly after developing its rated horsepower. Here's a circular saw that's not under-powered!

WORK IS ALWAYS HORIZONTAL on the level table. The tilting arbor and blade give you any angle cut you want through large or unwieldy pieces of stock.

Don't let a belt-and-pulley drive waste a large part of the power on your circular saw! This new Walker-Turner tool gives you the non-stalling, driving power of a direct motor connection, plus all of the advantages of a tilting arbor. Blade tilts to 45°. Full 3" depth of cut. Table 27" x 20", may be extended to 27" x 36"; plenty of room in front of the blade. Many other quality features worth your close examination. Write today for free catalog describing this and other Walker-Turner Engineered Power Tools. Walker-Turner Co., Inc., 1097 Berckman St., Plainfield, N. J.

WALKER-TURNER
Engineered **POWER TOOLS**

Manufacturers Are Meeting Demands for Improved Products

Trend Toward More House for the Money is Furthered by Better Building Materials

STANDARD SANITARY Mfg. Co. found that its 60-inch Hostess Sink, with double drainboards and 4 drawer steel cabinet, was so well adapted to certain needs of the industry that it has decided to comply with the demand for 42-inch models—a Hostess Sink with double drainboard on left or right side, and a Hostess Sink with double sink compartment. They are specifically designed to fit with other standard size wall cabinets. It is the right height and width.

The single drainboard models make possible much of the convenience of the larger Hostess yet provide this modern unit for smaller kitchens.

The double compartment Hostess is especially desirable for the long, unobstructed countertop working space, a prominent feature of many modern kitchens. This model has no drainboard as the extra sink well makes a most efficient draining place. With the washed dishes stacked in the extra sink well they can be freely and thoroughly sprayed without splashing over the rim, as both sink wells are eight inches deep.

The new models like the original double drainboard model Hostess have the handy shelf, the swinging spout with transfer valve, the spray hose, convenient yet out of the way, the roomy cabinet beneath, the 4-inch back, to fit under the low window, 8-inch deep sink compartments.

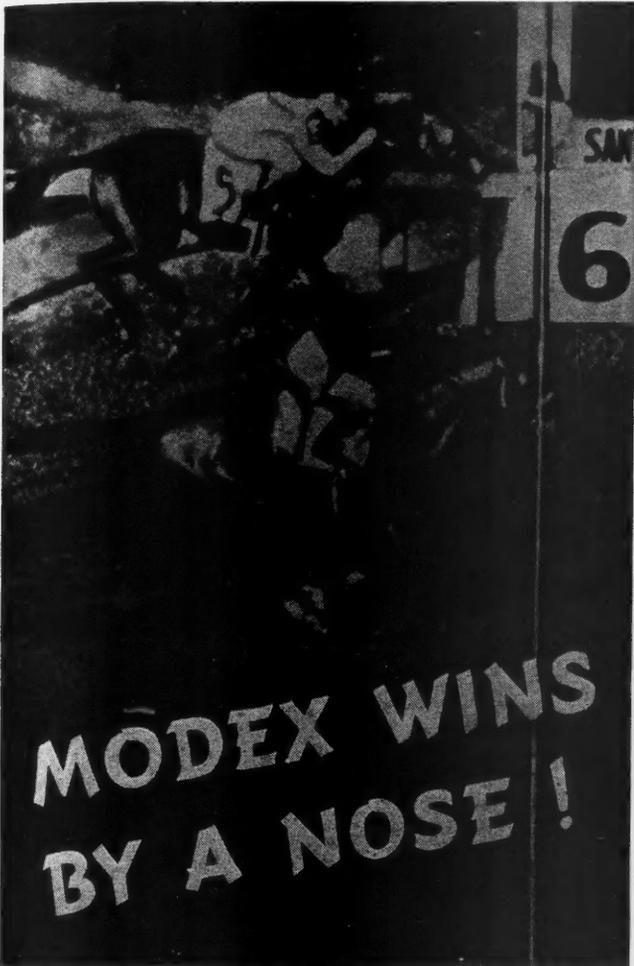


NEW Hostess model double compartment sink.

DISHWASHERS AND SINKS with many added features and improved operating efficiency forming a new complete line have been announced by General Electric Company, Nela Park, Cleveland, Ohio.

New dishwasher features include simplified operation with a detergent cup, and an improved two handle control, streamlined

(Continued to page 106)



**MODEX WINS
BY A NOSE!**

WIDE WORLD PHOTO

Absence of Unpleasant Odor Appeals to Food Distributor

For a casein paint on which to standardize for stores and warehouses, a leading food distributor selected Modex — the modern casein paint in powder form — because it had no disagreeable odor.

Another reason which helped him decide was, of course, economy. Modex is 25% to 40% cheaper per job than paste casein paints.

Write for Descriptive Literature

THE REARDON COMPANY

ST. LOUIS

CHICAGO

LOS ANGELES

116

Modex

THE MODERN CASEIN PAINT
IN POWDER FORM



Every House Deserves The BEST SASH CORD

To equip the houses you may be planning, building or renovating with Samson Spot Sash Cord, is to insure the installation of the best sash cord you can use. It will justify your confidence in its better and longer service. It will sustain your good judgment in the minds of those for whom you build, by protecting them from the expense and annoyance so frequently occasioned by cheap cord failure.

Samson Spot Sash Cord is made of extra quality, fine, three-ply yarn, firmly braided, smoothly finished. It is guaranteed to be free from the imperfections of braid and finish which cause cheap cord to wear out so quickly. It is made in one quality which can always be identified by the Colored Spots—our trade-mark.

**SAMSON CORDAGE WORKS
BOSTON, MASSACHUSETTS**



**SAMSON
SPOT**
sash cord

\$4,650.00
ERECTS THIS HOUSE ON YOUR LOT
 Down Payment About \$900.00
 Balance Like Rent

Full Basement
 Living Room 16' x 20' 6"
 Three Large Bedrooms
 Kitchen, Bath and Lavatory
 Lenox Furnace
 Beautifully Decorated
 Ample Closets
 Hot Water
 Insulated
 Oak Floors
 Linoleum in Service
 Numerous Electric Outlets



PREFABRICATED

Syracuse Better Homes, Inc.
 712 Hills Bldg. Telephone 2-0871
 Lots at Reasonable Prices

This Advertisement
SOLD \$75,000
of new HOMES

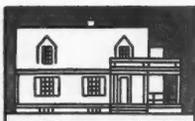
Although low-cost houses were featured, this advertisement also produced two big jobs — \$30,000 to \$40,000 homes!



The explanation is found in Precision-Built

Methods — whereby a 7-room house with full basement, qualified for FHA Mortgage, can be completely built in 30 days, for less than \$4,500.

Through the use of Homasote in Big Sheets (up to 8' x 14'), you save approximately one-third of the wall and partition costs. You have no wall joints to fit, no waiting for plaster to dry. Precision-Built framing



methods save an additional 8%. Precision-Built Homes do not sacrifice quality for price. They utilize the best in construction principles and building materials. Every home is doubly insulated, livable, attractive, economical to maintain. The price range opens up big, new markets for you. We supply

a simplified method of planning for Precision-



Built construction, which you can use for homes of any size or price. Act today, if you are interested in a franchise. Send in the coupon to secure fully illustrated literature.

WEATHERPROOF
HOMASOTE
INSULATING
AND BUILDING BOARD

HOMASOTE COMPANY, TRENTON, NEW JERSEY

- Send FREE folder on Precision-Built Homes
- Send details of your franchise
- We enclose \$10.00 for book in blue-print form — on SIMPLIFIED METHOD OF PLANNING — including special architectural scale 16

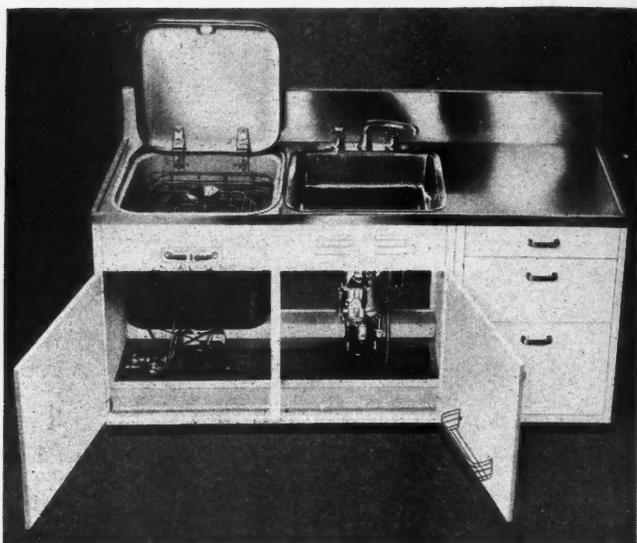
Name _____

Address _____

(Continued from page 104)

cabinets with kick space and back splash, and an improved cover gasket of a grease resistant rubber-substitute. The detergent cup, mounted in the hinged center section of the top tray, is designed so that the detergent placed in the cup while loading the dishes will be washed into the solution only in the power-washing operation after the initial spray has been completed. Vented hinges tighten to hold the cover upright, and a recessed handle gives an additional smooth work surface. Cabinets are finished in white glyptal-baked enamel. Trays will hold eighty dishes of all sizes and shapes, including glassware, and silverware. They are designed to take pots and pans as well. Operation costs less than a cent a day.

The G-E Dishwasher unit complete may be purchased separately or installed in a dishwasher cabinet, or in a General Electric sink which includes a G-E Disposall. The cover, hinged to the tub rather than the cabinet, comes in porcelain, monel metal, or stainless steel. This allows the same efficient simplified mechanism to be installed in any combination of sinks and work tops.



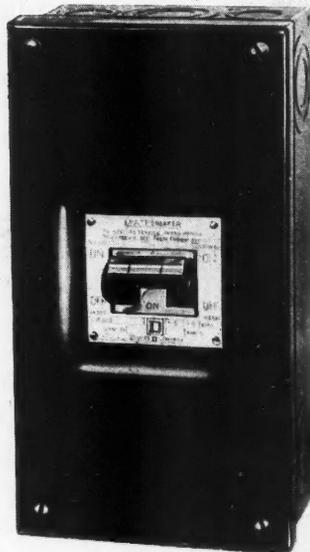
G-E Dishwasher and Disposall with Whitehead monel metal sink.

* * *

A CIRCUIT BREAKER to meet the demand for a smaller, more compact device for service entrance, range or hot water heater circuits and general purpose use, has been announced by the Square D Company, Detroit, as an addition to its line of low cost non-industrial units. The new design is known as the Type "M" Multi-breaker to distinguish it from the present line of Multi-breaker service and load centers.

The new line is available in 2 and 3-wire solid neutral with either grounded or insulated neutrals, for 115, 115/230 volts A.C. service. The capacities include 15, 20, 25, 35 and 50 ampere. The tripping action of the 3-wire devices is individual, but the operating handles may be tied together if desired.

The box size is only 9 1/4 x 5 x 3 inches and may be had for either flush or surface mounting. The unit block is secured by two quickly removed screws to facilitate wiring.



SQUARE D type "M" Multi-breaker service center.



Beauty and Distinction Built in — AT LITTLE ADDED COST

FOR little more than the cost of common softwoods, you may finish your buildings in rich, tropical hardwood.

The moderate price of Philippine Mahogany, the most economical of the luxurious tropical hardwoods, makes this possible.

By using Philippine Mahogany instead of ordinary softwood for trim in the average dwelling, you add only \$75 to \$100 to the cost. But you increase the value of the residence by a much larger amount.

Philippine Mahogany is world-famed for its striking beauty of grain and figure. It has an air of luxury for which the owner would gladly pay a premium if it were necessary to do so in order to obtain the rich effects which come with the well-planned use of Philippine Mahogany.



Used for mantel and trim of the fireplace. Beautiful and economical Philippine Mahogany lends itself perfectly to the craftsmanship of the wood worker.

Philippine Mahogany

MOST ECONOMICAL OF THE LUXURIOUS TROPICAL HARDWOODS

PHILIPPINE MAHOGANY MFRS. IMPORT ASSOCIATION, INC.
111 West Seventh Street, Los Angeles, California.
Please send descriptive literature.



Name.....
Address.....
City..... State.....



SPEAKMAN DIAMOND-LINE FIXTURES *add Beauty and Salability to any house . . AT LOW COST*

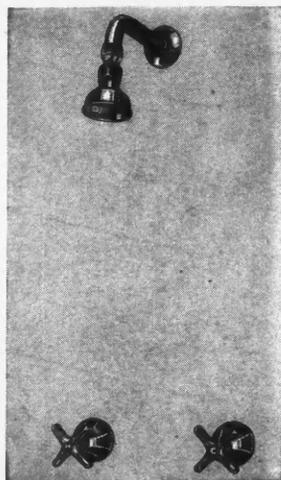


Here in the Speakman Diamond Line, you have the ideal combination for building sales—good-looking, efficient Speakman fixtures...at a price that makes it absurd to consider others.

Your customers appreciate the reputation of Speakman for quality showers and fixtures. National advertising in leading home publications is daily giving added acceptance to houses furnished with Speakman fixtures.

In the Diamond Line, you have sink, tub and shower fixtures that add extra beauty to the modern bathroom. Their graceful, pleasing lines plus their easy-to-keep-clean, high lustre chromium finish, are quick to appeal to the modern housewife. And their trouble-free, efficient operation wins the approval of every man.

Let us send you literature covering the Diamond Line and other Speakman showers and fixtures. In the complete Speakman line, with its wide price range, you have a choice of many types and trim to please every taste, to fit every price home and to give the comfort and efficient service your buyer expects. Mail the coupon today for full information.



SPEAKMAN

SHOWERS • SHOWER HEADS • BATH FIXTURES • SI-FLO (SILENT) FLUSH VALVES
LAVATORY FIXTURES • SINK FIXTURES • INSTITUTIONAL AND INDUSTRIAL FIXTURES

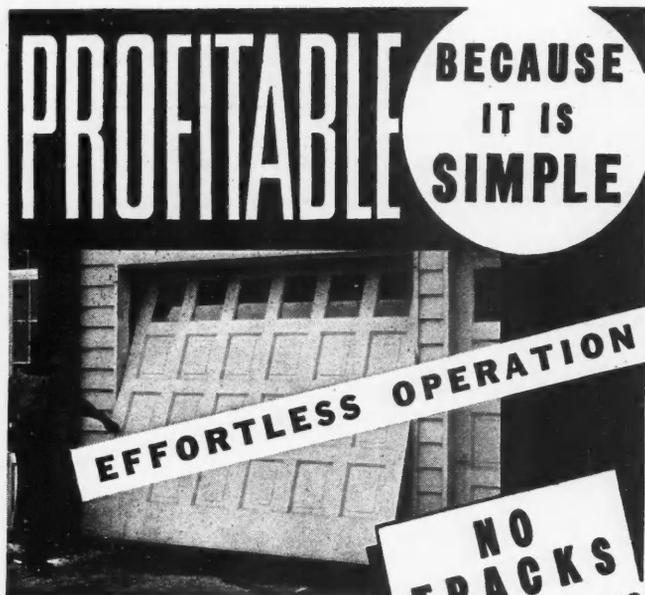
SHOWERS AND FIXTURES

SPEAKMAN COMPANY, DEPT. A2, Wilmington, Delaware

Send FREE fully illustrated literature on:

- Showers for Tubs and Stalls
- Bath and Lavatory Fixtures
- Modern Sink Fixtures
- Si-Flo Flush Valves

Name.....
Address.....
City..... State.....



GOOD PROFIT ON LABOR

Only a few hours are required to make the average installation of "Over-the-Top" Door Equipment. This allows good profit on labor—especially where a flat price is charged for the complete job.

STILL FURTHER PROFITS . . .

come from additional sales made through recommendations from pleased customers—and from other repairs or remodeling which often accompany "Over-the-Top" installations.

THE PUBLIC IS "SOLD" . . .

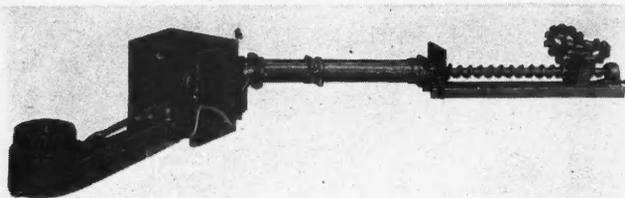
on over head doors—especially "Over-the-Top"—because of its moderate cost and extremely easy operation. Many builders made good money on this work right through the "depression." Think it over. See your dealer regarding "Over-the-Top" equipment—or write.

FRANTZ MFG. CO.
Sterling, Illinois



IRON FIREMAN Manufacturing Company, Cleveland, is offering a new "worm that turns" as optional equipment on the fall line of Coal-Flow stokers, so that it is possible to use much more space for recreational purposes with this new swiveled worm feed unit.

The swiveled feed unit permits location of the coal bin anywhere within 180 degrees of the front of the furnace, feeds the fuel automatically to the fire through a worm conduit. Location of the bin in an out-of-the-way spot is possible, and if utilities are grouped, much more space is available for playrooms.



SWIVELED worm feed unit for Iron Fireman stokers.

* * *

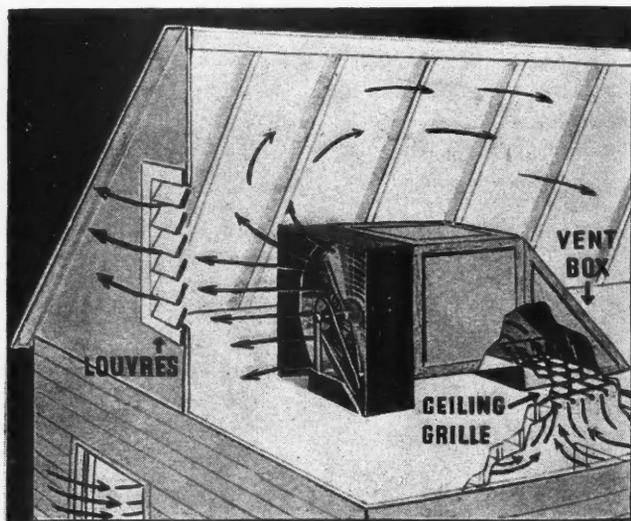
FAN COOLERS are being introduced by the Burnham Boiler Corporation of Irvington, N.Y. They are made in a complete equipment package for attic cooling of residences and also as a high efficiency portable unit designed for offices, hotels, etc.

For attic cooling, the fan draws warm air through grille in upper story hall and forces it out of attic louvre. The heavy warm air accumulated in the house is replaced by the cooler air from outside, resulting in a reduction of 8 to 10 degrees.

Attic Cooler Package includes vent box with flame-proof trap door, ropes, pulleys and automatic fan switch. Vent box is made in panels of special sound-absorbing acoustical board set in slotted wooden frame panels, which allows for expansion and contraction without causing loosening of joints.

Vent box trap door is built of flame-proof material. It is equipped with fusible link; shuts tight in case of fire and at same time automatically stops fan. When fan is not running shutter closes grille opening, stopping back drafts from attic. The trap door is linked with the switch to start and stop fan; starts fan when open, stops it when closed. All wiring is in attic.

Special Package Equipment is made for use on flat roofs, when fan and vent box are placed on roof outside. The fan comes in 3 sizes—30-inch, 7000 CFM; 39-inch, 10,000 CFM; 45-inch, 14,000 CFM.



INSTALLATION of Burnham fan cooler in attic.

* * *

A new rotary **ROOF VENTILATOR** for industrial and commercial building application has been announced by the Swartwout Company of Cleveland. In basic principle it is the same as

(Continued to page 110)



*TO keep your family comfortable and healthy right through the winter, you need a plentiful supply of B.T.U.'s such as you get with Ballard . . . B.T.U.'s of course are basal thermal (or heat) units—the engineers' standard of heat measurement. And Ballard is the oil burner that supplies you with *more* B.T.U.'s for every dollar spent in heating.

The Ballard Combustion Head permits an adjustable firing rate to meet the exact requirements of each individual installation, and a combustion efficiency exceeding most oil burners—therefore, *More B.T.U.'s.*

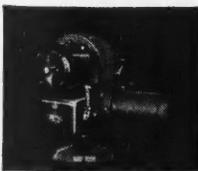
Another outstanding advantage of Ballard is that less service is needed. It's a precision machine that's "tops" in quality.

Ballard has an extra heavy, longer-life motor . . . a quiet, dependable oil pump . . . a Radio Interference Eliminator that is efficient and reliable . . .

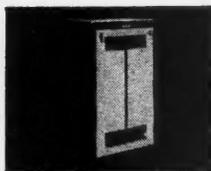
and a special Oil Filter that insures clean oil and dependable performance.

Most important of all, Ballard is backed by the experience of the greatest institution in the field of oil-burning and air-conditioning.

Ballard Oil Burners come in a variety of models to meet the needs of every home. You can get Ballard alone or as part of one of the Ballard oil-fired Boiler Units or the Ballard Air Conditioning Units described below. Mail coupon for complete information.



BALLARD OIL BURNER. Unexcelled in efficiency, dependability and economical operation. The Ballard Oil Burner is obtainable in 5 models.



BALLARD AUTOMATIC BOILER UNIT. Efficient, compact and handsome. 8 models to meet heating requirements of every home.



BALLARD CONDITIONED WARM AIR UNIT. Heats, cleans, humidifies and circulates a steady flow of healthfully conditioned air. 3 models.

MAIL THIS COUPON TODAY

BALLARD OIL BURNER DIVISION,
Gilbert & Barker Mfg. Co.,
Springfield, Mass.

K1002

Please send me your free booklet on Ballard Oil Heating.

Name _____
Address _____

Give Owners the Extra Safety of One-Hour Fire-Protection — at Low Cost



Perforated Rocklath being applied to studs — goes up quickly, easily



Red Top Plaster being applied to Perforated Rocklath

Plaster penetrates holes — gets strong grip on back of lath

Specify—
PERFORATED ROCKLATH
THE FIREPROOF LATH

■ In thousands of homes, in hundreds of cities, Perforated Rocklath* has proved itself a success. In addition, fire and water tests conducted at the Bureau of Standards proved that a Perforated Rocklath partition, plastered with one-half inch of gypsum plaster, *qualified for a one-hour fire rating.* No wonder builders and architects everywhere are turning to Perforated Rocklath for better walls at low cost. Its extra protection against fire, extra strength and rigidity, and extra resistance to cracking, all add up to *extra owner satisfaction.*

Perforated Rocklath is a sturdy, non-warping *fireproof* gypsum lath, perforated with circular holes spaced at regular intervals. When plaster is applied, it penetrates the perforations and "keys" at the back, providing a "mechanical" grip in addition to the strong *natural* bond of plaster to the surface of the lath. It is this double bond that gives a finished Perforated Rocklath job its extra strength—and gives you extra assurance against plaster cracks.

Use Perforated Rocklath and Red Top* Plaster on your present work. USG dealers everywhere carry these products in stock.

These Products Used Together Make Attractive, Economical Interiors

PERFORATED ROCKLATH—the Fireproof Lath—plastered with **RED TOP GYPSUM PLASTERS**—fireproof—durable
TEXTONE*—for attractive textured surfaces of enduring charm
TEXOLITE*—the new principle paint for distinctive color schemes

*Registered Trade-marks

FOR YOUR PROTECTION, USG PRODUCTS BEAR THIS TRADE-MARK IDENTIFICATION



Send For New Perforated Rocklath Folder



UNITED STATES GYPSUM COMPANY
Dept. J-9, 300 West Adams Street, Chicago, Illinois
Please send me your new folder on USG Perforated Rocklath.

Name _____
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UNITED STATES GYPSUM COMPANY

MAIL TODAY FILL OUT OR CLIP TO YOUR LETTERHEAD

CLEVELAND STEEL PRODUCTS CORPORATION
 Toridheet Division
 7306 W. Madison Ave., Cleveland, Ohio

"Please supply information on the Toridheet franchise"

Name _____
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This Coupon MEANS SOMETHING to Aggressive Dealers

The sale of Toridheet oil-burning heating and air conditioning furnaces, and Toridheet oil-burner boiler units, for new homes is a market of vast opportunity.

The sale of Toridheet burners to convert obsolete heating systems to automatic oil heat, in millions of established homes, is a waiting market of unlimited possibilities.

Every home that has running water is a prospect for the Toridheet oil-burning automatic water heater.

The design of these Toridheet products has been perfected and simplified to permit efficient installation by workmen untrained in burner operation. To sell the entire installation keeps all profits in your hands.

The Toridheet franchise is a highly profitable connection. It may be available in your area. If interested act quickly. Mail this coupon today!

CLEVELAND STEEL PRODUCTS CORPORATION
 TORIDHEET DIVISION, CLEVELAND, OHIO



TORIDHEET

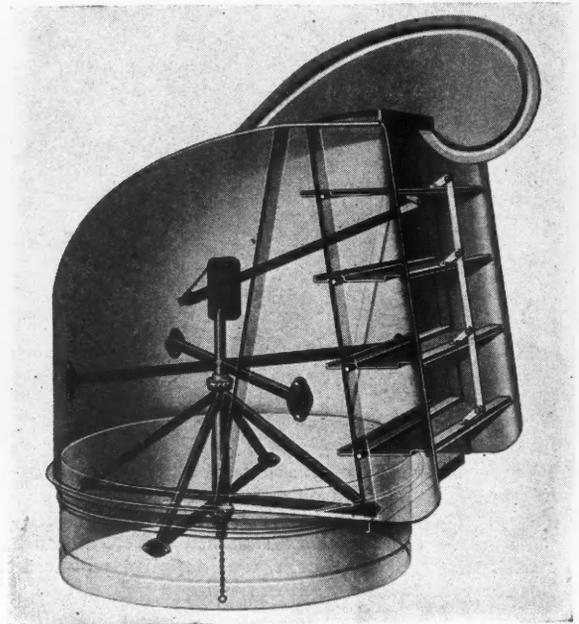
OIL BURNERS...OIL BURNER BOILERS
 AIR CONDITIONING FURNACES
 WATER HEATERS

(Continued from page 108)

the original Swartwout Rotary, but in detail construction offers many improved features of recent development.

Foremost of these is the new stainless steel, fully enclosed, dust-tight, oil-less ball bearings on which the head turns with the wind. Interior construction is of streamlined steel tubing welded into a one-piece head frame of greater strength and minimum friction resistance. The body is designed along modern lines, resulting in a low pleasing appearance with a slightly increased area in the discharge opening. Greater capacity per size is secured in addition to extra strong and substantial construction.

The new rotary is made in sizes from 12 to 72 inches throat diameter and is especially adaptable to general industrial and commercial building ventilation as well as for removal of smoke, fumes, excessive heat, moisture and similar substances.



PHANTOM VIEW of improved rotary roof ventilator.

* * *

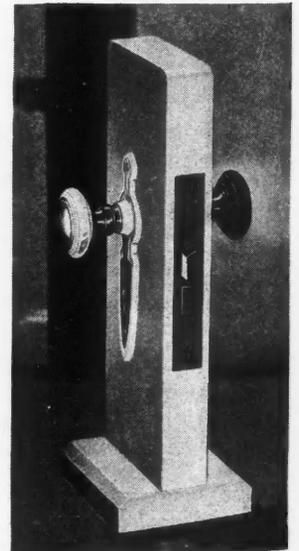
New Patrician **PLASTELLE BUILDERS' HARDWARE**, introduced by Lockwood Hardware Mfg. Company, Fitchburg, Mass., features the color accent. In place of the ordinary metal or glass knobs and bases, the home builder can now take full advantage of color in these important details.

In the Patrician line, the knob body is a solid ring of molded Tenite, accurately fitted to the metal shank, and having a metal inset top. One feature of this design is that it's interchangeable, for the plastic knob is secured to the shank and top by means of a hidden screw. Thus it is possible to change the color of the knob to meet the needs of the decorative scheme.

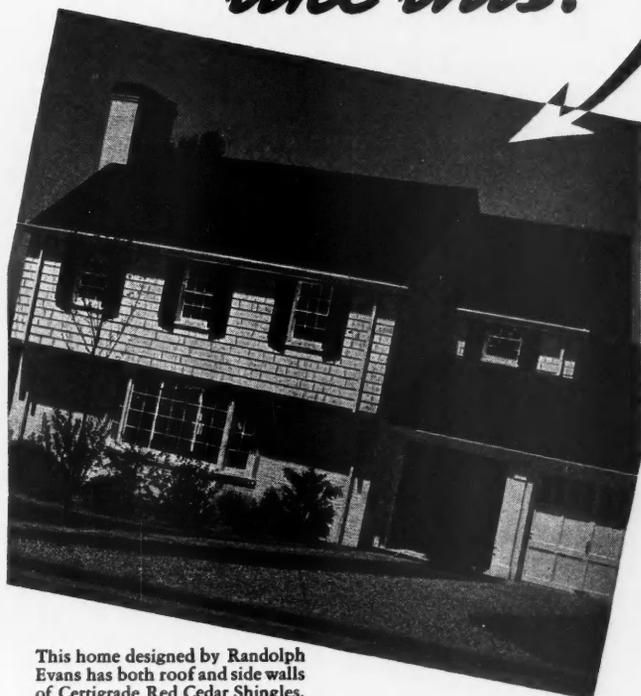
A further innovation is offered in the new Plastelle escutcheons or bases of molded Tenite with metal inset. They carry the color scheme of the knob into the door.

Patrician Plastelle is available in black, ivory, green, orchid, yellow, delphinium blue, and Chinese red. These colors do not fade. The material is resistant to perspiration and will not crack or craze. It can be wiped clean with a damp cloth.

PATRICIAN colored hardware of molded Tenite composition.



**YOUR PROSPECTS CAN
READILY FINANCE HOMES**
like this!



This home designed by Randolph Evans has both roof and side walls of Certigrade Red Cedar Shingles.

HOME LOAN organizations like well-designed homes using Certigrade Red Cedar Shingles on roofs and side walls. Millions of dollars have been loaned on such homes. A Certigrade shingled home will be unusually free from repair or upkeep expense during the life of an average long-term loan. There's no possibility of damage from hail, rains or high winds. Certigrade shingled homes depreciate slowly—and that means higher equity value.

The low original cost of Certigrade Shingles will allow you to put more into other features of the home. Their high insulation value means substantial fuel savings—money that can be used in reducing the loan. If resale should ever be necessary, the lasting beauty, smart styling and broad appeal of Certigrade Shingles assures a quick turnover.

FREE: "The Certigrade Handbook"—96 pages of valuable shingle information that will answer all your roof and side wall questions, help you build homes that sell fast. Write today: Red Cedar Shingle Bureau, Dept. AA-937, Seattle; Canadian office, Vancouver, B. C.

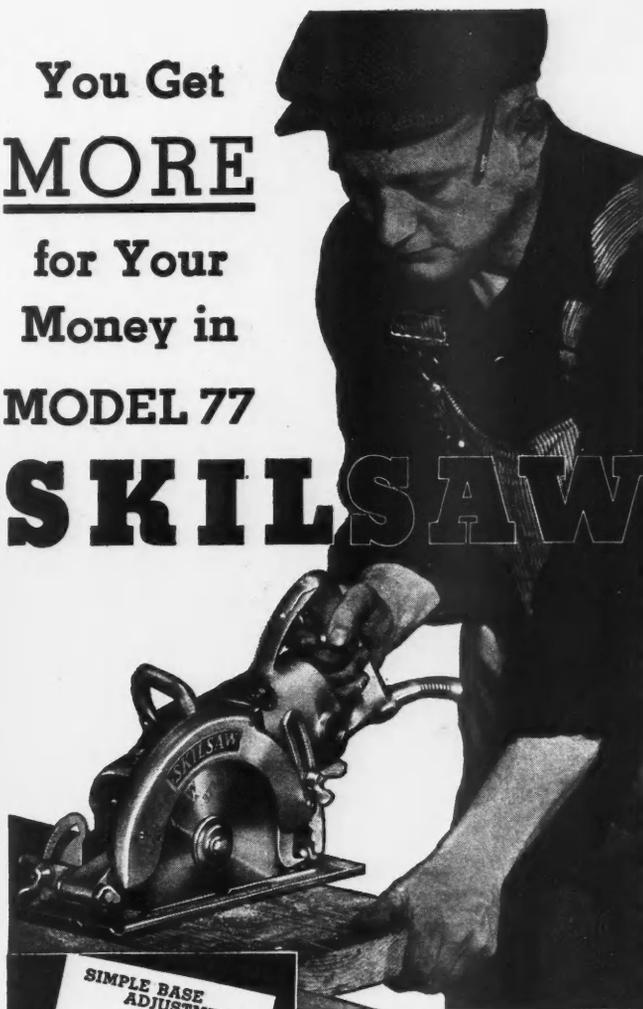
Look for this label



You Get
MORE

for Your
Money in
MODEL 77

SKILSAW



WE designed SKILSAW Model 77 especially for carpenter-builders and contractors—to give them a tool that can do most of the sawing on a construction job . . . easily, quickly and economically. Into it we have put everything we have learned in the 17 years since the first portable electric handsaw was introduced by us!

SKILSAW Model 77 gives you the most for your money! It is more powerful and more efficient—it provides quicker adjustment for depth or bevel cutting. It is a time-saver and a profit maker on the first job . . . and all your jobs for years to come!

● One of the greatest combinations of engineering and mechanical refinements ever offered in an electric handsaw. 7 inch blade. Only 18 inches long, weighs **\$105** only 15 lbs. **ONLY**

Ask Your Hardware Dealer for a Demonstration and Write for Our New Catalog

SKILSAW, INC.
3314 Elston Avenue, Chicago

214 East 40th Street, New York
52 Brookline Avenue, Boston
1429 Spring Garden, Philadelphia
312 Omar Avenue, Los Angeles
2065 Webster Street, Oakland



A Problem in Addition

● THE importance of adding beauty to practical design is easily solved in the matter of floors IF you specify Azrock Tile, the modern mastic tile floor covering. Azrock is manufactured in a rainbow array of beautiful colors, both plain and marbled, and in a number of different sizes, encouraging the creation of distinctive and artistic floors.

And it is as practical as it is beautiful, giving a long life of faithful, durable service under even the hardest usage. Azrock is fire-resistant, moisture-proof, sanitary, easily cleaned and maintained and costs no more to install than many ordinary floor coverings. With Azrock, you add beauty to economy and durability . . . and the result is satisfaction.

*Write to Uvalde Rock Asphalt Co.,
San Antonio, Tex., for name of your
nearest distributing contractor.*



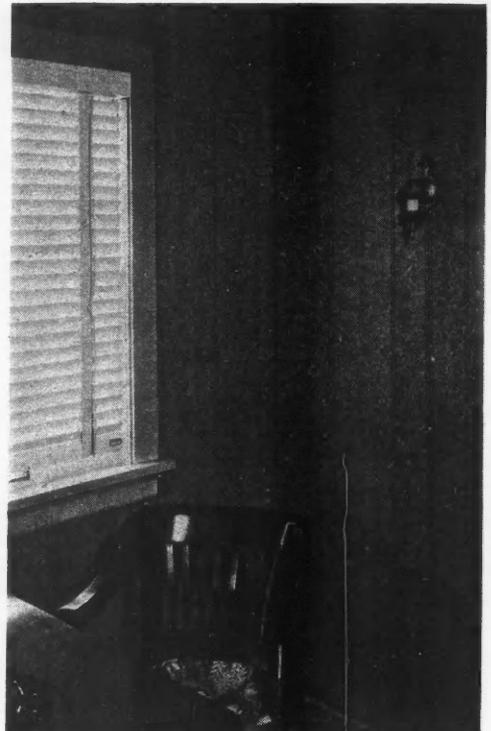
**OTHER AZROCK PRODUCTS:
AZROCK INDUSTRIAL TILE -- AZROCK PLANKTILE**

New Wall and Floor Finishes

KRAFTWOOD, the latest product of the M & M Woodworking Co. of Portland, Ore., offers new opportunities for distinctive wall paneling. The new material is a processed soft plywood capable of a wide variety of uses.

The board is gaining popularity as interior paneling, remodeling attics, basements, and redecorating home libraries, dens, kitchens, etc. It is easy to install and makes possible an excellent finish job with concealed joints due to its grooved design and rabbeted edges. The wood is very popular as an economical yet rich-appearing paneling for offices and stores. It has a smooth hard finish which resists stains and is easy to clean and polish.

The new material is produced by first processing ordinary plywood to supplant the original grain with another. A filler is applied over the surface of the board to fill the new grain cuts, following which the entire board is painted in a chosen color. The filler is then brushed out of the cuts and a paint of another color applied partially filling the cuts. This is then wiped off the surface before being allowed to completely dry, leaving a colored board with a distinct fleck to give the grain effect.



KRAFTWOOD
paneling used
as interior finish
in an office.

* * *

A NON-SKID FINISH for floors that is applied like a wax—looks like a wax—dries within a few minutes and will resist boiling water and highballs, has been perfected by The Warren Refining & Chemical Co., Cleveland, Ohio. The new product is called Warcote and has successfully passed several safety tests made by a nationally known insurance company.

* * *

THE A. C. HORN Company of Long Island City, N.Y., has recently announced a new varnish, called Hornspar Super Varnish, fortified with Bakelite resin. The varnish has been developed for practically every purpose both indoors and outdoors, and offers maximum resistance to hot oil, boiling water, dilute alkaline solutions, salt water, alcohol, scratching and scuffing. A special can which is new to the paint and varnish industry has been adopted. This can holds one gallon and instead of being the usual rectangular design it is cylindrical. It has a handle on the top and a spout for easy pouring.



SUPER varnish for interior and exterior use.



FOLLOW

National for automatic heating

Step the National way for automatic heating boilers and units. National builds a full line of cast iron or steel boilers for stoker, for oil or for gas firing. Get the details. Ask any National Wholesaler to explain just what we mean by "full" line, ask him to show you the new stoker fired National *Multi-finger* Heat Extractor boiler with its heat grasping fingers. Follow its beautiful streamlines. Or investigate the many features of the complete National Boiler Burner Units or National Gas Boilers. As an engineer, check up on the simplicity and efficiency of National Boilers and units for automatic heating. As a merchandiser of construction, see the value and beauty they add to your work. To get the whole story just

CALL IN THE NEAREST
NATIONAL RADIATOR WHOLESALER

NATIONAL
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Are you **BUILDING**
CRACKS in your
client's homes?



ANY builder would rise up in righteous wrath on such an accusation.

— But houses are being built with brick veneer directly over wood sheathing and insulation in spite of the fact that every builder knows that moisture passes through *both* brick and insulation!

When it costs so little more to have fine damp-proof, waterproof, windproof, airtight construction, why not have it?

Sisalkraft over sheathing, between floors, under roofs means a watertight, damp-proof seal that prevents air infiltration and brings comfort to your client's home.

It's the skin of the building. Let us send you a generous sample and prove its quality to yourself!

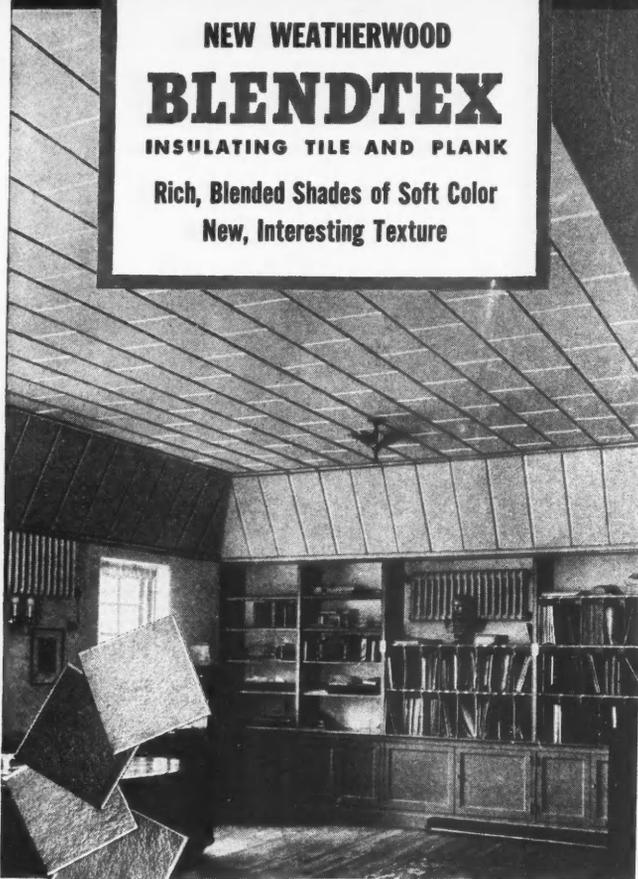
THE SISALKRAFT CO.

203-b W. Wacker Drive Chicago, Illinois

SISALKRAFT

**DECORATE — INSULATE —
QUIET SOUND AT ONE TIME**
With This One Material

NEW WEATHERWOOD
BLENDTEX
INSULATING TILE AND PLANK
Rich, Blended Shades of Soft Color
New, Interesting Texture



Almost unlimited possibilities for design are found in the NEW Weatherwood BLENDTEX

■ Build new value into old homes—add extra value to new homes—with this new interior finish that not only decorates, but insulates and quiets sound. With Weatherwood* BLENDTEX you can quickly create rooms of soft, dignified beauty. Equally suited to homes, schools, churches, theatres, auditoriums, restaurants, stores, offices.



Showing easy application of BLENDTEX Tile to ceilings, using adhesive.



BLENDTEX Plank is quickly, easily applied to both new and old walls.

Read These Eight BLENDTEX Advantages

1. Blended shades of harmonious colors combine with a new interesting texture to add charm and dignity to the interior.
2. Improves acoustics and quiets sound — at the same time insulates against heat and cold.
3. Durable—Special treatment of surface increases resistance to wear—helps preserve and prolong the richness and freshness of colors and texture.
4. Integral colors go clear through the material—not merely a surface application.
5. Predecorated surface saves both time and cost of painting.
6. Adaptable—the wide variety of shapes and sizes gives unlimited scope to expression of individual taste in design.
7. Quickly, easily applied to both new and old walls and ceilings, goes right over old walls.
8. Economical—a popular-priced material. With all its advantages, BLENDTEX costs no more than ordinary insulating tile and plank.

*Registered Trade-mark

SEND COUPON FOR FULL INFORMATION

UNITED STATES GYPSUM CO.
300 W. Adams Street, Chicago, Ill.

Please send, without obligation, full information on the new Weatherwood BLENDTEX.

Name.....
Address.....
City..... State.....

UNITED STATES GYPSUM COMPANY



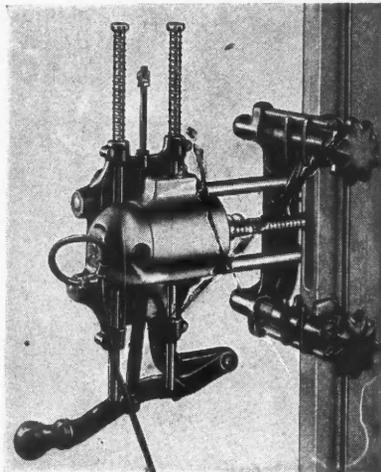
AB-9

Contractor's Equipment

THE R. L. CARTER Division, New Britain, Conn., manufacturers of motor-driven woodworking tools, has a new portable tool for cutting lock mortises on doors automatically without effort or hand finishing. A high speed of 18,000 RPM assures accurate, clean, smooth cuts. The 1 horse power motor permits the cutter to do the work rather than the operator.

It has an automatic feed which gives a uniform load stroke. Its light weight of 28 pounds makes it as easy to handle as a portable machine.

Adjustments for the length, width and depth of the mortise can be made easily and quickly on the exterior.

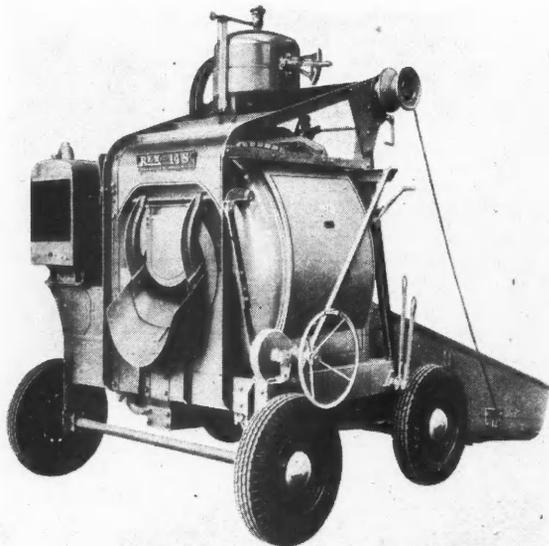


PORTABLE lock mortiser in operation.

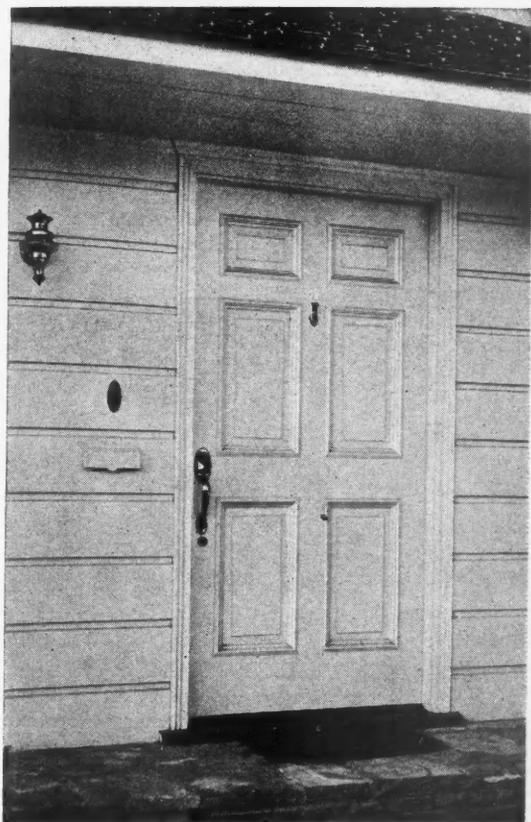
* * *

CHAIN BELT COMPANY of Milwaukee announces a new streamlined 14-S Mixer. This machine incorporates faster charging and discharging, lighter and stronger frame, new accurate water control, and increased engine power into a machine that is radically different from the old machine. Its appearance and fully enclosed working parts are completely in line with its new modern compact design.

Charging is made faster by the use of a Shimmy Skip which, together with the streamlined shape of the Skip, discharges the batch into the drum with a free, fast sliding action. The drum with its "up-and-over" mixing action and oversize buckets has one-piece construction with the pressed steel drum heads welded integral with the center sheet. Discharging through the extra large drum opening onto the stream-lined chute, the drum is completely cleaned in seven seconds. The new Rex water system with the new vertical measuring tank and non-by-pass free way valve is unusually accurate and allows no water to dribble into the drum. Mounted on a rigid steel frame, the mixer is supported from the axles by strong coil springs at each wheel and has automotive type steering. It is furnished in four wheel end or side discharge types with pneumatic, solid rubber, or steel tires and its new power plant is a 25 horsepower radiator cooled gasoline engine. The Rex batch-motor and centrifugal water pump are optional equipment.



REX streamlined 14-S mixer.



THE WESTERN PINES*
are growing . . . in popularity!

No amount of advertising will sell a poor product. But put advertising behind a product as fine as the Western Pines . . . and watch it go!

These famous softwoods, nationally advertised and widely used, are winning new friends every day—among home-building prospects and contractors.

Take advantage of this trend to Western Pines. Show your clients where they can use these Pines in homes—for paneling, siding, trim and for sash and doors. Western Pines will help sell a job and keep it sold. Get your copy of our FREE book of interesting and helpful building ideas. MAIL THE COUPON BELOW.



***Idaho White Pine *Ponderosa Pine**
***Sugar Pine**
These Are The Western Pines

Western Pine Association,
Dept. 45-B, Yeon Bldg.,
Portland, Oregon

Send me—FREE—and without obligation, your book "Western Pine Camera Views."

Name

Street

City State

NEW!
BEVERAGE BASE
— ANOTHER USEFUL
KITCHEN MAID UNIT

★ Kitchen Maid Cabinetry offers an unusually wide choice of standard units especially designed to fulfill vital kitchen functions. Units for linen, trays, wet towels, soiled linen, vegetables, flour, beverages, brooms. Drawers or bins for cutlery, soap and sink supplies. Modern open corner shelves and bases. And others which make kitchen planning easier, and simplify kitchen work.

Remember too that Kitchen Maid Cabinetry, of sturdy wood construction, is easy to install, flexible, and dependable. Units and shelves are completely sealed. Design is simple and modern. Enamel finish is sprayed on at factory—in choice of 12 attractive colors. Catalog in SWEETS. Planning Dept. available.

THE KITCHEN MAID CORPORATION, ANDREWS, INDIANA



The Kitchen Maid Corp., 709 Snowden Street, Andrews, Indiana
Send new catalog and latest details on standard unit Kitchen Cabinetry.

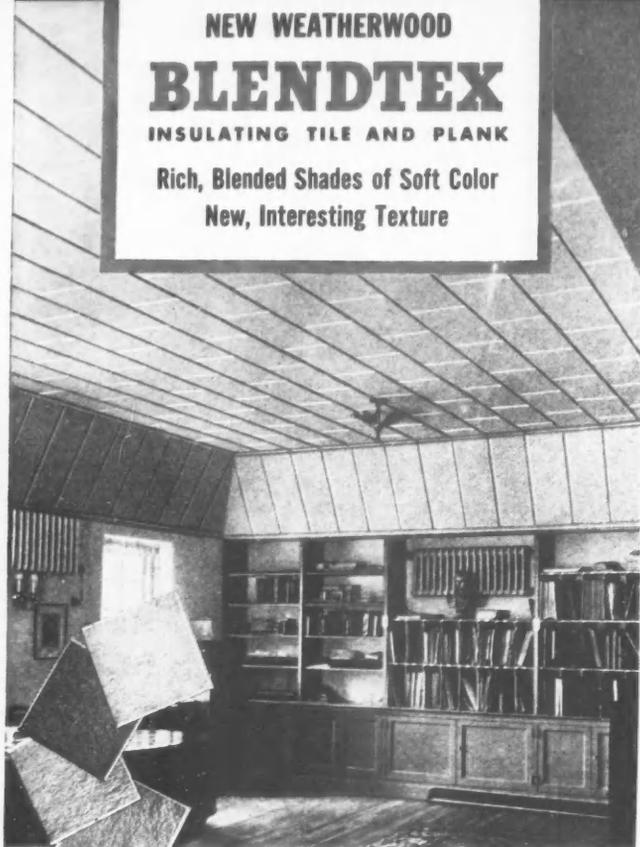
NAME

ADDRESS

Architect Builder Owner Dealer

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QUIET SOUND AT ONE TIME**
With This One Material

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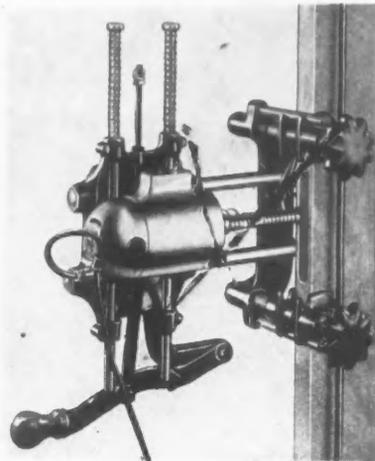


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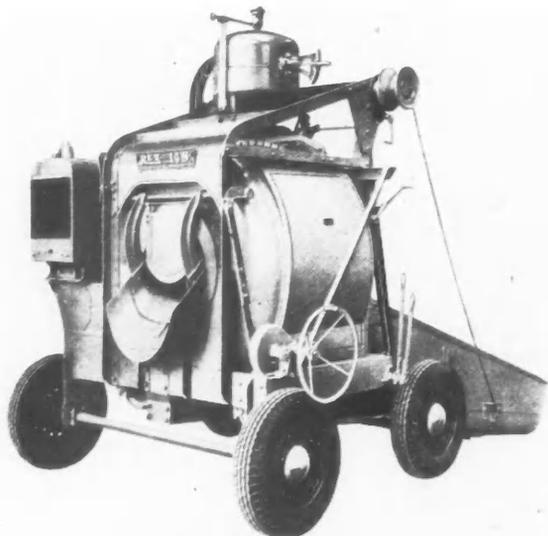


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The Kitchen Maid Corp., 709 Snowden Street, Andrews, Indiana
Send new catalog and latest details on standard unit Kitchen Cabinetry.

NAME _____

ADDRESS _____

Architect Builder Owner Dealer



HOW satisfactory it is to be able to get from one reliable source your every need in air conditioning and warm air heating equipment!

Moncrief makes winter air conditioners for burning either gas, oil or coal—Cast and Steel furnaces for burning coal—Gas furnaces—any size and any type for every home heating need.

For forty years Moncrief has been making quality home heating equipment, at prices that give builders and owners big values.

A Moncrief dealer in your city will quote you lowest prices for quality made Moncrief air conditioners and furnaces.

Moncrief Engineers are glad to help you estimate and lay out plans, without obligation.

Write for new descriptive literature.

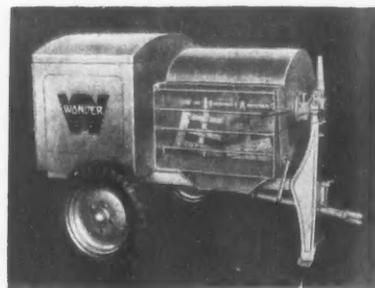
**The New Aristocrat
Oil Fire Air
Conditioner**



THE HENRY FURNACE & FOUNDRY CO.
3479 E. 49 ST. • CLEVELAND, OHIO

THE NEW WONDER plaster and mortar mixer has been designed by the Construction Machinery Co., Waterloo, Iowa, as a less expensive machine to handle the ordinary run of jobs. The Wonder, which comes mounted on two rubber-tired wheels complete with $3\frac{1}{2}$ H.P. Stover engine, features the following:

Streamlined, welded steel one-piece trailer frame with disappearing towing tongue; cantilever springs, Timken bearing wheels; ample six cubic foot drum, all steel, welded; triple mixing hoes, adjustable blades; self-aligning hoe shaft bearings, semi-metallic self-lubricating packing; multiple V-belt drive, with simple clutch throw-out; convenient friction brake for holding drum in position, also positive drum stop.



WONDER plaster and mortar mixer.

* * *

KNICKERBOCKER TRAILER MIXER, a new "tub type" concrete mixer with a capacity of $3\frac{1}{2}$ cubic feet of mixed concrete, is being manufactured by The Knickerbocker Company, Jackson, Mich. The mixing drum is built for long, hard usage. To the one-piece, cast, semi-steel drum bottom is riveted a 6-inch heavy steel band to which is riveted the drum cone, reinforced around the top with a steel tire. Four mixing blades function in such a manner as continually to throw the material back for remixing.

Bearing details have had special attention, as experience has shown that mixers of this type are peculiarly susceptible to bearing troubles. The drum shaft is 20 inches long, revolves with the drum, is held in position by a large nut and has two long bronze bearings, one at the top and one at the bottom of the yoke. Total bearing area is 5 inches, with large lubricant

chamber between the two bearings. A Timken thrust bearing takes up the thrust of loaded drum and is completely sealed from water and grit. All bearings have Dot lubrication. The machine is furnished with gasoline engine or electric motor and with steel or rubber tires.



TUB type mixer.

* * *

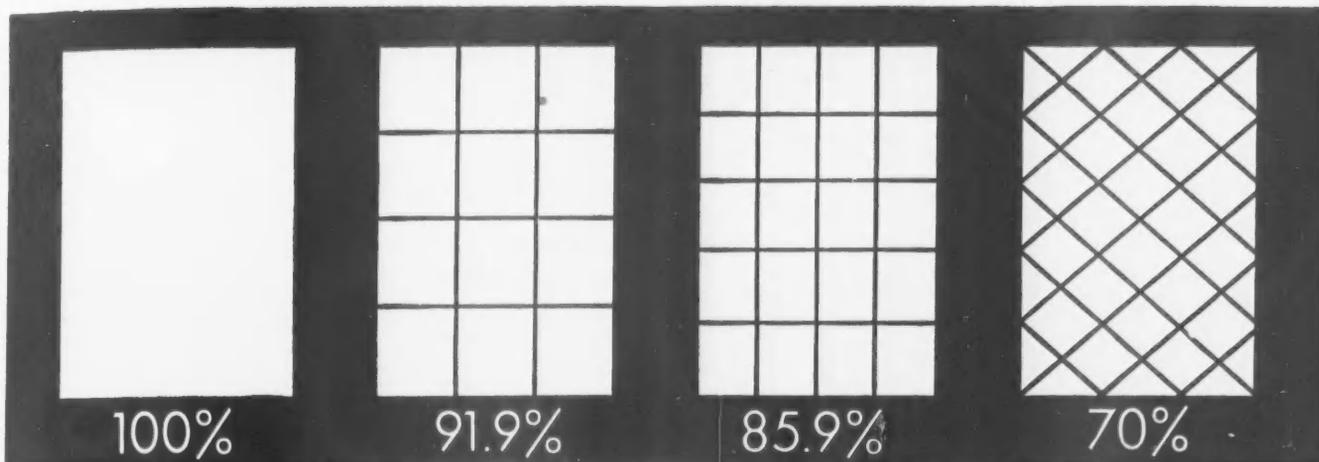
THE STERLING MACHINERY CORP., of Kansas City, Mo., has announced the "Feather-Weight" self-priming pump. This small pump is light yet dependable, and can be carried to otherwise inaccessible places, as it weighs only 60 pounds complete. It eliminates costly setting up of big pumps simply to take care of small jobs; it is economical, running eight to twelve hours on one gallon of gasoline; heavy duty vertical four cycle engine and sturdy pump assure long life and satisfactory performance; there is 100 per cent automatic priming.

Specifications include trash type impeller, wear-resisting replaceable volute and impeller, improved grease seal, ball bearing construction, built-in suction check valve.



FEATHER-WEIGHT self-priming pump.

8.1% TO 30% MORE LIGHT TRANSMITTED THROUGH SINGLE PANE WINDOWS



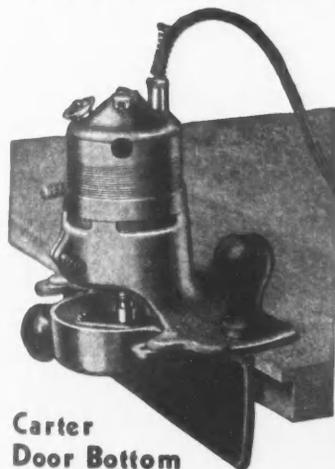
LIGHT—The trend in the ultra-modern building is for the use of more glass to give more light. The above illustrations represent the approximate percentages of light transmitted by four types of windows. Single panes transmit more light and more health rays . . . consider the use of larger panes.

VISION—There is no question but that the undivided window permits better vision. It gives a clear unobstructed view and glazed with CLEARLITE "A" Quality Glass . . . is easy on the eyes. Specify CLEARLITE and larger lights of this fine glass. Send for folder "SINGLE PANE WINDOWS Versus Windows Divided into small panes."

FOURCO GLASS CO., General Offices, CLARKSBURGH, W. VA
Branch Sales Offices: NEW YORK • CHICAGO • FT. SMITH, ARK.

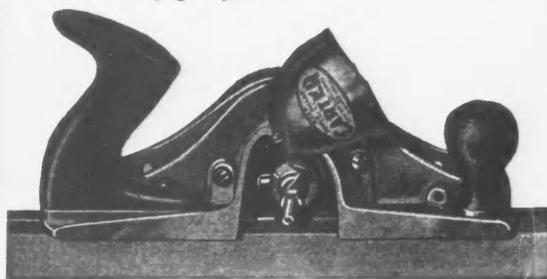
MORE GLASS—MORE LIGHT AND BETTER VISION

HANDLE MORE JOBS . . . MAKE MORE PER JOB WITH CARTER ELECTRIC WEATHERSTRIP TOOLS



Carter Door Bottom Weatherstrip Groover

Grooves or rabbets door bottoms. Using a 3" saw, it cuts from 1/2" to 1 1/8" deep and is adjustable from flush to 3/4" from surface of door. Full 3/8 H.P. Universal motor with ball bearings turns up to 18,000 R.P.M.



Carter Electric Weatherstrip Groover

Plows grooves in sash, doors, and transoms. Full 3/8 H.P. Universal motor assures smooth, quick, finished work. Grinding wheel attachment, standard equipment, permits resharpening of cutters on the job. Chip guard protects operator and keeps chips from spreading.



Carter Electric Kerfing Machine

With one stroke of the hand, it completes a kerfing cut. Assures smooth, accurate work. 18,000 R.P.M. direct to the saw. With kerfing base removed and cutters applied, it will do corner rounding, chamfering, and beading. Do more profitable weatherstripping jobs with these money-making tools. Send for complete illustrated folder.

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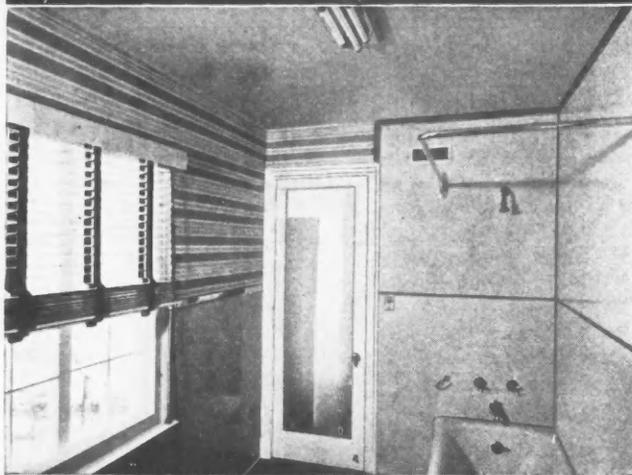
The Stanley Works,

New Britain, Conn.



• Genuine MASONITE has already sold itself to millions of people. They see it everywhere today. And they know that you are specifying THE BEST when you include it in your plans for their homes, offices or stores. No explanations are necessary.

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THE WONDER WOOD OF A THOUSAND USES
A MISSISSIPPI PRODUCT
SOLD BY LUMBER DEALERS EVERYWHERE



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LETTERS from Readers on All Subjects

Facts, opinions and advice
welcomed here

Probably from Our Oldest Subscriber

West Acton, Mass.

To the Editor:

I commenced taking the building magazine "Building Age," then known as "Carpentry and Building" in April 1884, and have taken it continuously since (although it changed its name two or three times) until the *American Builder* publication took it over.

I also subscribed for the first Radford building magazine, the "American Carpenter & Builder," later shortened to *American Builder*, and it has been on my desk every month without a break since it started in April, 1905.

In the meanwhile I have also taken "Eastern States Building Developer," "Home Building," the "National Builder," etc., until some other of your magazines took them over or you stopped their publication. I have worked at carpentering 60 years, 52 of them as a builder and contractor.

I have now retired but still I must have your building magazine on my desk, as always. I shall be pleased to receive a copy of "American Builder Guide to Better Homes" and will have a lot of pleasure looking it through (not once but many times).

John S. Hoar, Contractor and Builder.

Editor's Note: We are proud of Mr. Hoar's loyal support and interest through all these years. Can any other reader show as long a record?

Sees No Chance of Price Reductions

Chicago, Ill.

To the Editor:

Thanks for the August edition of your publication, which contains the article, "Turn the Tide of Price Thinking." This is a very fine article, and I wish to commend you upon the many good thoughts which you injected.

If everyone in the building industry would get the story across that there will be no noticeable reduction in the price of building products for the next year, it will go far to encourage residential construction and modernization work.

THE CENTRAL SUPPLY ASSOCIATION,
By W. E. McCollum, Secy.

We Are Covering Every Newspaper

Lebanon, Ky.

To the Editor:

Please accept my thanks for the splendid work you are doing and planning to correct the false impression now prevalent as to the High Cost of Building.

Naturally we, of the Lumber Dealers Association, have been painfully aware of this propaganda that has been circulated since the first of the year. At our recent meeting in Washington this subject came in for quite a bit of discussion, but nothing definite was done at that time about it. One reason for this inactivity was that we, as an association, did not wish to "stick our neck out" publicly on this. Rather we have been working towards offsetting this unfair publicity by having it come out in the newspapers from other sources.

I read your July issue with a great deal of interest, and compliment you on it.

You ask for suggestions: The question that has bothered us is, how to reach the buying public with this information? Your seventy thousand copies will go to the dealers and contractors; and if the newspaper publishers could be induced to use this copy, then I think you have something to start on.

I repeat that we will be only too glad to render any assistance we can to you, and I am sure that every lumber dealer in the

(Continued to page 120)



Speedmatic

the electric handsaw for saving time and money on every job. SPEEDMATIC Saw, with its guaranteed cutting speed, all around ruggedness and perfect balance makes it in reality a one-hand saw. Finger-tip adjustment for depth and bevel cutting . . . safe and easy to operate. Built in three sizes.

(We also manufacture a complete line of floor sanding equipment.) Write for your free copy of "Building Equipment Catalog." It shows how others are cutting sawing costs and saving time in house building.



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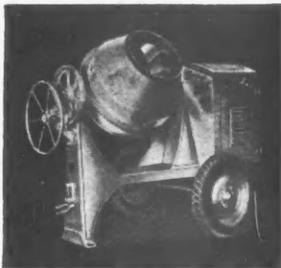
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**f. o. b. Factory
 With Pneumatics!**

This new Wonder is a big money-maker for the plaster and mason contractor. Up to the minute in every detail. Pneumatic tires—triple mixing hoes—Timken bearing wheels. A great value!

Unbeatable Equipment Values!

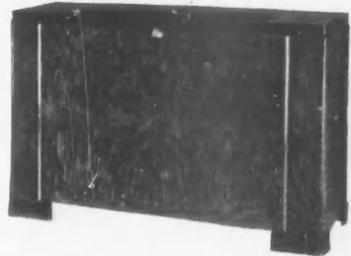
Get catalog and prices on the most outstanding line in the country. New CMC Mixers all sizes—Wonder Tilters (See illustration of Streamlined 3½), Dumpover Pneumatic Carts, Hoists, Pumps, Saw Rigs, Wheelbarrows. Write today.



Wonder 3½ New "Standard" Model—leader in the most complete array of half-bag trailers in the field.

CONSTRUCTION MACHINERY COMPANY
 WATERLOO, IOWA

Hank



**Tells How
 To Make**

Here's all there is to it. Use it in place of a radiator. It heats, filters, cleans the air and circulates it. Automatic too.

Air Conditioning Cost Less



Now I ain't no Ad. writer feller. But my skin's so full of itches to get a crack at the high cost of air conditioning, and as how there ain't no sense to it, am bustin' out in print. There ain't no sense to the high cost of air conditioning systems, because there's so durn need-

less much to 'em.

Cellar full of a heating contraption, with a blower and filter, hooked up to a lot of ducts making tinsmithing necessary. Holes to cut in floors and walls, grilles and registers—enough to drive a man to drink.

Of course it costs money, all that tryin' so hard to do something the hardest way, when there's an easier way. All you need is to put a Burnham Conditioner in place of a radiator, in one or more rooms. Takes up 'bout the same room as a radiator. Hooks up same way. No tearing out. No ducts. No nuthin' else. The Burnham Conditioner will do everything the high-cost ones will, and costs a lot less to do it. And it can be installed quickly by any of your own men.

Send for printin' about it. Get wise as how to make more, and do less, to do it.

Hank Hinder

BURNHAM BOILER CORPORATION

Manufacturers of Heating Equipment Since 1873

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Burnham Boilers

NEW MATERIAL HELPS GET JOBS LIKE THIS



LEFT: Main floor of Ivey Department Store Asheville, N. C. with cream Temlok De Luxe Tile on the walls.

BELOW: Another interior in the Ivey Department Store. Architect, E. Paul Behler & Associates, Inc., New York and Baltimore.



TEMLOK DE LUXE offers insulation plus FACTORY-APPLIED COLOR

YOU'LL find extra help in getting profitable new jobs when you use Temlok De Luxe Interior Finishes. This unique material does three jobs at one cost—it decorates, quiets noise, and insulates at the same time! For Armstrong's Temlok De Luxe offers a smooth-surface, insulating fibreboard, factory-finished in ash, coral, cream, green, walnut, and white—at no extra cost.

Temlok De Luxe is an efficient insulating material, supplied in

boards, planks, panels, and tiles. It is easily cemented in place with Armstrong's Temlok Adhesives, and as soon as it is installed the job is done, no additional painting or finishing is required. And with the added advantage of factory-applied color, Temlok De Luxe has won instant approval in all sections of the country. Get the complete story of Temlok De Luxe, Temlok Insulating Board and Insulating Lath.  Mail the coupon now!

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ARMSTRONG CORK PRODUCTS COMPANY
Building Materials Division
1006 Concord Street, Lancaster, Pa.

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Street.....
City and State.....

Armstrong's
TEMLOK INSULATION
DE LUXE BOARD
INTERIOR FINISHES LATH · SHEATHING

LETTERS DEPT.

(Continued from page 118)

country will extend to you his heartfelt thanks for undertaking this program in his interest.
NATIONAL RETAIL LUMBER DEALERS ASSOCIATION,
By Don Campbell, President.

Wants Wood Steaming and Bending Rules

Cottage Grove, Ore.

To the Editor:

I am finding your magazine more interesting and more valuable than ever. Whenever anyone comes to me with a new job I generally have the answer, having either read of it in the *American Builder*, or at least having seen something that tipped off the solution. However, there is one phase of building on which I have, so far, been unable to get practical information. That is the steaming and bending of wood.

How long should woods of various kinds and thicknesses be steamed for best results in bending? What ratio should exist between thickness of stock and radius of bend? I notice that stock bent too sharply loses the smoothness of curve that is so desirable.

Can you give data on gluing up laminated stock to get very sharp curves? How long should steamed stock remain in the form after bending? If you could turn one of your experts loose on this subject, I'm sure it would enlighten a great many of us.

I've been interested in the basementless house ballyhoo. Tell 'em they can save some more money by leaving out the windows, or the roof, or neglecting to paint. Or if they are building to save money, just don't build and *they can save it all!* But if they are after the maximum of comfort and convenience for the money, a good basement will return more results for the money spent than any other part of the house. But a poor basement is "something else again." Let's not talk about it.

OWEN MOORE.

Plans School for Yard Men

Santa Ana, Calif.

We have thought for a long time of the need of some kind of school to improve ourselves and employees in the performance of our jobs as estimators, shipping clerks, salesmen, executives, yard and mill workmen.

We are starting a class in the fundamentals of wood-working with the local high school shop instructor as our teacher. We plan to have a class in mechanical drawing and plan reading to start within the month.

We have a hazy notion about a general class to start in the fall which will take as its outline of study the progressive steps in the construction of a house, beginning with plans and orientation and carrying through to the point where the dray company begins to move in the furniture.

You must have considerable data in your files that would be of interest to us in outlining our curriculum.

Would it be possible for you to furnish us 2,000 reprints of your article, "Common Sense in Kitchen Planning" in your June issue? If so, what would they cost? Or would you rather furnish us with prints and have us do our own printing? We would use this material in an envelope of miscellaneous information which we are advertising as a free gift to consumers.

BARR LUMBER COMPANY,
By Wilbur Barr, Treas.

Working for Contractors' License Law

Detroit, Mich.

To the Editor:

I wish to compliment you on one of your editorials in a recent issue of the *American Builder* and agree 100 per cent something should be done to license building contractors in a district such as Detroit, that building contractors' activities may be regulated and owners receive more than a mere shell for their money.

The FHA has corrected this shoddy building to some extent but the jerry builder is still opposing as he will not co-operate

(Continued to page 122)

2nd Edition

CARPENTRY AND JOINERY WORK

By NELSON L. BURBANK

Formerly Instructor, Building Vocational High School, Cincinnati, Ohio

This text and reference book presents the latest principles of dwelling construction, together with the related studies of drawing, mathematics, English composition, civics, and first aid. The text is thoroughly illustrated with photographs and detail drawings, many of which have appeared in "American Builder and Building Age."

"It covers all the details of house construction, showing the correct methods of framing, building partitions, doors, windows, cornices, etc. While offered as a book for the student or for a carpenter's apprentice, it deals with the subject so completely that it should be of value to the young architect."—*Architectural Forum*.

CHAPTER HEADINGS

Tools and Equipment—Tool Boxes—House Plans—Excavations—Foundation Forms—Foundations—Sills—Girders—Floor Joists—Sub-Flooring—Outside Framed Walls—Inside Framed Walls—Plumbing Framed Work—Sheathing Walls—Ceiling Joists—Roof Framing—Roof Sheathing—Cornices—Roofing—Porch and Bay Framing—Exterior Wall Covering—Interior Wall Covering—Stairs—Interior Trim—Windows—Doors—Hardware—Closets and Shelving—Finish Flooring—Finishing.

280 pages, illustrated, 8½ x 11 inches, cloth binding, \$3.00

Money Back is Not Satisfactory

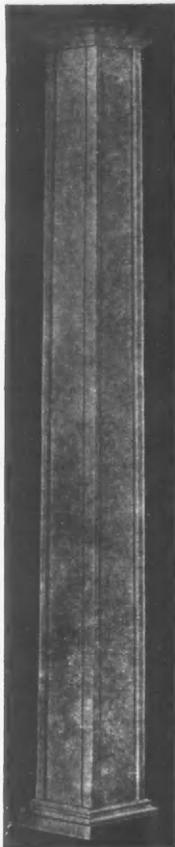
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Plan Protection for the Entrance. Unprotected entrances are a source of discomfort to the home owner. Complete the homes you build by adding a porch or entrance shelter.

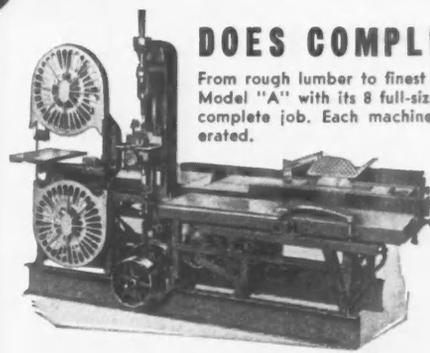
Our line of stock columns are obtainable in a wide range of sizes suitable for nearly every requirement. Ask your dealer to show you SAMSON COLUMNS. Note their sturdy construction and graceful design. If your dealer does not carry SAMSON COLUMNS, write us. We will mail you illustrated literature.

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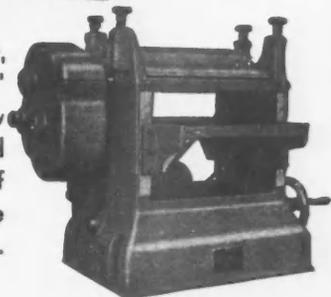
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MODEL "A" PLANING MILL SPECIAL

Rip and cross-cut saw, 22" band saw, 12" jointer, tenoner, hollow chisel, mortiser and borer, swing cut off saw, reversible spindle shaper and sand disc.



12" BENCH PLANER

Planes material up to 12" wide x 4" thick. Maximum cut 1/8". Takes pieces as short as 6" and as thin as 1/16". Bearings highgrade New Departure ball bearings. Chip breaker and pressure bar completely guard the head and feed rolls. Power: 1/2 to 2 H.P. Weight 300 lbs.



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This is a comparatively small item in the total cost of the new homes

you are building. Yet it immediately catches the eye of every woman. And when they are shown how easily it operates and how *quietly*, they are more anxious than ever to have a "Buffalo" Kitchen Ventilating Fan in their new modern home.

Fan comes complete with wall box and full instructions for quick and easy installation.

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Certified BY THOUSANDS OF
LEADING CONTRACTORS • BACKED
BY OVER 40 YEARS EXPERIENCE

A machine that has become the talk of the world. Its new features are revolutionizing the floor sanding trade. Compare its cost cutting results—check its amazing capacity for finest quality work at high speed and you will agree that the toughest and biggest jobs can be handled with ease, leaving a large margin for EXTRA BIG PROFITS and more jobs. Roughs out old and new floors, sanding right up to the quarter-round, picking up all dirt and dust and leaving a ballroom finish on any floor. Pays for itself out of savings in time, labor, and materials.

The perfectly balanced high-speed sanding drum covered with soft resilient rubber, *automatically* conforms to all floor irregularities. Ball bearing equipped throughout. Full V-belt drive. Interchange throw switch for either 110 or 220 volts. Many machines cost more, but none is so efficient, so free from repairs, so certain of high speed results.



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 Also Tell Me How I can own it. Interested in Time Payments.

NAME

ADDRESS

CITY STATE

LETTERS DEPT.

(Continued from page 120)

with the inspection department.

As a member of the 1933 and 1934 legislature, I introduced and fought for the passing of a similar bill which in the closing days of the session was defeated in the senate.

If there is anything I can do to help in getting such a bill passed, it would be a pleasure.

CARL W. BISCHOFF, Builder.

Termite Damage

Edwardsville, Ill.

To the Editor:

I am now completing a job of remodeling our Edwardsville High School and gymnasium which was damaged \$4500, traced to fungus, termites, faulty design and criminal neglect (carelessness in construction when building was first erected).

I expect to have a display of the termite damage done in and around Edwardsville, Ill. This display will consist of actual material taken from homes, schools and other buildings; also pictures of destruction by termites, some of which were taken 14 to 18 feet deep in ground.

If you are interested in this display, write me at once and I will list the name of your representative and then I will notify when the display is on. This will be worth your consideration for so many mistakes have been made in buildings that could be corrected before blueprints are made from tracings, or corrected during construction, thereby saving many dollars, worry and good will between building owner and contractor. Many jobs have turned out differently, and usually the general contractor is the goat.

SCHOOL JOB—I will mention a few details that were corrected after the buildings had been completed ten years ago.

All grounds (plaster grounds) baseboard and shoe mouldings were removed from all brick walls. This material was a total loss; there was nothing left but the varnished or painted surface—780 linear feet of base completely destroyed by termites.

Fourteen hundred board feet of concrete forms were removed from foundation of gymnasium and approximately 2000 board feet of forms left in because we had no place for excavation. This was all treated in ground with 75 gallons of chemicals.

All shower bath rooms were damaged, and repaired and treated.

Windows in basement not set in place properly, causing leaks below window sill and letting rain water into brick foundation, causing plaster inside building to break away from brick walls and leaving a place for termites to nest between plaster and brick walls.

If there was an ounce of termites in these two buildings, there were 25 pounds.

A. L. LOGAN,

Building Contractor.

Housing Display for India

Multan, (Punjab), India

To the Editor:

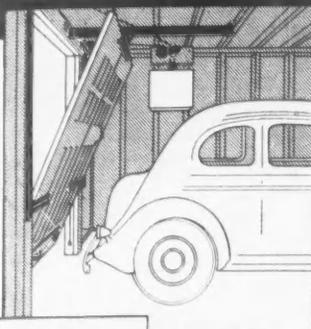
We are contemplating organizing a housing and town planning exhibition sometime in May, next, and we have been in touch with some institutions in India and in England, most of which have responded graciously by sending us plans and other literature. We approach you with the request to help us in every possible way by sending us plans, sketches, charts and other pictorial literature, and also other literature pertaining to various scenes and places. We would further request you to put us in touch with other institutions that can help us in this line. If you can put us in touch and recommend us to some of the important firms as given in "Selected Catalogs" at the end of each issue of *American Builder*, we think this will help us a lot.

Thank you in anticipation of the trouble you are likely to take for us.

S. N. MEHTA & CO.,

Commission Agents, Property Dealers, Advertising Agents, Information Suppliers, etc.

ALLITH

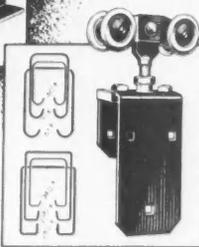


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"Push-Over"
GARAGE DOOR
HARDWARE**

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Priced to reach the big low-price market that no overhead type door hardware could reach before. Yet the "50-50" is ALLITH quality in every detail . . . simple, reliable, smooth in operation. Full details are given in the ALLITH catalog, which shows hardware for doors of every type . . . sliding, overhead, around-a-corner or folding-sliding.

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STEEL MEASURING TAPES

Easy to read.

easy to clean, and the crack-proof white surface protects the steel from rust. Ask your dealer, or write for a complete catalog.




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NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO DETROIT MONTREAL

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Latest high speed model of world's most popular mixer. Built for faster hauls, higher production, longer life than ever before. Get new Catalog and prices, all sizes.

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SPEED KING 76-105 NON-TILT TRAILERS



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Make Big Money
NOW**

Uncle Sam will help you make money if you are ready.

Billions of dollars are being used to make jobs and the Home Building Program offers the biggest chance to make money carpenters have ever known. Are YOU Ready? Can you remodel from start to finish—do you know the tricks of estimating, laying out, etc.? Here's your chance to get these facts—quickly—easily, without study or work—just put your finger on what you want to know instantly. Don't miss the building boom.

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Privilege of consulting experts of million-dollar American Technical Society on any building problem for one year without extra charge, if you mail coupon immediately.

American Technical Society,
Drexel Ave., at 58th St., Dept. G633, Chicago, Ill.

I would like to look at the five books described above. I will pay the few cents delivery charges only and will examine them thoroughly and return them in ten days unless I like them in which case I will send you \$2.00 and after that \$3.00 per month until the total price of only \$19.80 is paid. You are also to send me your book "Blueprint Reading," and consulting membership certificate without extra charge.

Name

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Attach letter stating age, employer's name and address and that of at least one business man as a reference.



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SUPER-Harbord

GUARANTEED AGAINST PLY SEPARATION

Higher than When?

(Continued from page 52)

uary, 1936 and January, 1937, and an increase of 15.1 percent in labor costs for building, based on individual contracts.

"Rents, according to statistics from the National Industrial Conference Board increased 11.2 percent from January, 1936 to January, 1937, based on 1923 index of 100 which showed rents at 73.9 in 1936 and at 82.2 in January of 1937, with a further increase of 2.4 to 84.6 during February and March of this year.

"Figures from the United States Bureau of Labor Statistics based on a 1921 index of costs of residential buildings erected, show that the average cost of residential building for 1936 was lower than for any year from 1923 to 1931, inclusive. Costs on this index were:

| | | | |
|------|-------|------|-------|
| 1921 | 100.0 | 1929 | 115.7 |
| 1922 | 101.5 | 1930 | 111.1 |
| 1923 | 104.6 | 1931 | 107.0 |
| 1924 | 110.3 | 1932 | 93.9 |
| 1925 | 113.1 | 1933 | 88.5 |
| 1926 | 112.0 | 1934 | 85.7 |
| 1927 | 112.7 | 1935 | 95.2 |
| 1928 | 111.7 | 1936 | 103.2 |

From the Clients' Service Bulletin, Milwaukee, Wisconsin, dated August 1, 1934—

INDEX NUMBERS
of
The American Appraisal Company
Illustrating Construction Cost Trends
Compared with 1913 Costs

| Year | Range (Depending on the Composition, location, and exact date) | Average |
|-------------|--|---------|
| 1913 | — | 100 |
| 1926 | 173-245 | 206 |
| 1927 | 174-245 | 206 |
| 1928 | 174-245 | 205 |
| 1929 | 175-244 | 206 |
| 1930 | 157-245 | 199 |
| 1931 | 140-227 | 171 |
| 1932 | 121-194 | 151 |
| 1933 | 117-183 | 146 |
| April, 1934 | 136-187 | 157 |
| May, 1934 | 136-187 | 158 |
| June, 1934 | 136-187 | 158 |

Average Construction Commodity Costs
1913 = 100

| | Apr., 1934 | May, 1934 | June, 1934 |
|--------------|------------|-----------|------------|
| Labor | 169 | 169 | 169 |
| Lumber | 169 | 169 | 169 |
| Common Brick | 179 | 180 | 180 |
| Steel | 124 | 127 | 127 |
| Cement | 161 | 161 | 161 |

Human memory is short. Generally a decade will compass the basis of comparisons made by the average man. Rarely does one go beyond two decades.

So when we hear "prices are up" and "prices are higher," we may well ask "up from what" and "higher than when."

Are they up from or higher than the 1920-5 or from the depression period 1931-36?

Except in the case of an absolute monopoly in a given commodity prices reflect in general, the times. With this in mind no one can claim any monopoly exists in the many and various species of lumber and other building materials. They are obtained in all sections of this country from thousands of producers and comprise highly competitive products.

Prices range from ruinously low in depression periods to seemingly high in good times; from production at a loss, low wages, bankruptcies, etc., in bad times to good and even high wages and a fair profit in good times.

What is a high price and what is a low price?

It is not fixed, but rather is constantly on the move.

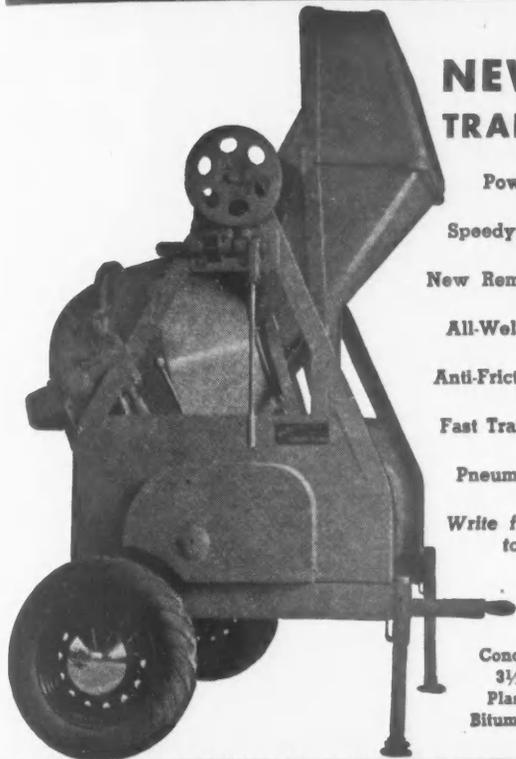
Stability in price—or a reasonable price level sufficient to pay good wages and return a fair profit, is the ideal condition.

But industry has not learned how to attain such an ideal.

What are some of the many factors entering into price and how do they operate?

(Continued to page 126)

KWIK-MIX



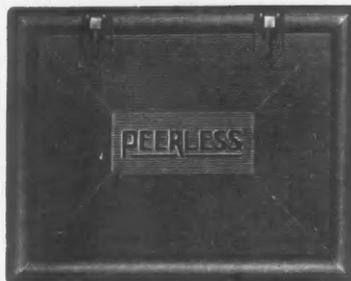
NEW 5-S TRAIL-MIX

- Power Tilt
- Speedy Discharge
- New Remixing Action
- All-Welded Frame
- Anti-Friction Bearings
- Fast Trailing Speed
- Pneumatic Tires
- Write for bulletin today.

Concrete Mixers
3 1/4-S to 10-S
Plaster Mixers
Bituminous Mixers

KWIK-MIX CONCRETE MIXER CO.
PORT WASHINGTON . . . WISCONSIN

PEERLESS



COAL WINDOWS

"For Convenience and Safety"

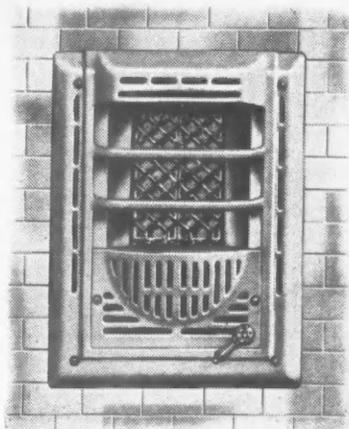
Door and frame of heavy-gauge steel. Malleable iron hinges, brass hinge pins, body of steel, rigid in construction. Finished in black Japan.

GAS HEATERS

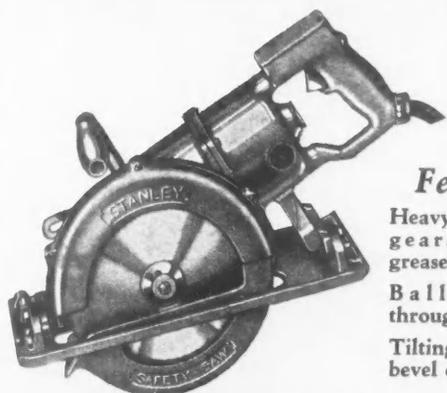
"For Quick Clean Heat"

These gas-fired Wall Heaters are ideal for baths and other small rooms—easy to install—no floor space required. Available in white, and wide range of colored Porcelain Enamel Finishes. Economical in operation—Highest efficiency guaranteed.

Write for complete descriptive literature on the above mentioned building specialties.



PEERLESS MANUFACTURING CORP.
1400 West Ormsby Ave. Louisville, Kentucky



Features:

- Heavy oversize worm gears in sealed grease chamber.
- Ball bearings throughout.
- Tilting base permits bevel cuts up to 45°.

NEW POWER BALANCE SAFETY !

The new Stanley W-9 Electric Saw is a well balanced, fast-cutting, powerful tool that will speed up work on any construction job. Heavy duty motor assures fast work even at the full 3" depth of cut. It has a tilting base which permits accurate bevel cuts up to 45° through rough 2" lumber. Careful design gives housing ruggedness and balance that make it easy to handle in any position. Sturdy

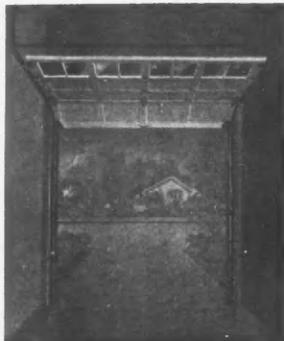
throughout, without an extra ounce of weight.

Like all Stanley Electric Saws, this tool has unusual safety advantages, resulting from the guard which covers the blade at all times, without interfering with the operation of the saw. Ask your distributor for free demonstration, or write for literature. Stanley Electric Tool Division, The Stanley Works, New Britain, Conn.

STANLEY ELECTRIC TOOLS
"COST LESS PER YEAR"

WAGNER OVERHEAD DOORS

Builders prefer them because of ease of installation. Owners prefer them because of their smooth performance.



WAGNER GLIDEOVER

Furnished complete with doors and hardware. Hand or electric operated. The "Glide-over" represents perfection in modern overhead door features. Easy opening—easy closing—weathertite.

WAGNER CANOPY

Converts old doors (one—two or more sections) into modern overheads. Also provides an economical one-piece door for new structures. Easy to install—weathertite—smooth operating. Write today for literature on Wagner Overhead Doors and Hardware.



WAGNER MFG. COMPANY
DEPT. AB, CEDAR FALLS, IOWA



Here's the Window Frame with Those Patented Malta Features that Make It Really "SUPREME"

BUILDING supply dealers and contractors looking for window frames that do not rattle, sag, leak, stick or jam will find Malta "Supreme" the answer—

Because of these exclusive (patented) features: (1) Three Way Jamb Clamp; (2) Three Width Jamb; (3) Permanent Water-tight Sill Joints and Sill Supports.

Malta "Supreme" Frames— noted for high quality—are ideal for all types construction; reduce installation cost; easy to install; economical to own; stock sash sizes; made of selected Idaho White Pine or Ponderosa.

Dealers: Write **TODAY** for fact filled literature, showing way to profits with Malta "Supreme" Frames thru our projected dealership proposition. (Needed information also available to contractors.)



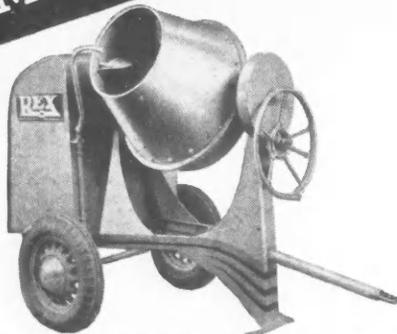
The Malta Trade Mark Means Master Craftsmanship.

THE "SUPREME" FRAME WITH METAL WEATHER-STRIPPING

Shown above is a Malta "Supreme" Frame installation fitted with Self-Adjusting Bronze Weather-Stripping—for perfect performance in all seasons and climates. We furnish all stripping to fit.

THE MALTA MFG. CO. MALTA OHIO

A MONEY-MAKER ON SMALL JOBS —



AND A LOW COST "ODD JOBBER" ON LARGER PROJECTS

● Here's the Tilter that will bring the profits from small jobs. It is lighter and tougher—travels easier and smoother, yet stands up longer under the toughest working conditions. As an additional mixer on larger construction projects, one man can spot it anywhere on the job and handle the production of high-quality concrete on all of the odd pours quickly, and with greater economy for you. Write for our 1937 Tilter Bulletin!

CHAIN BELT COMPANY, 1621 West Bruce Street, Milwaukee, Wis



Higher Than When?

(Continued from page 124)

First and most important is labor. In the final analysis what we term "material" is actually principally labor in some form or other. Often one concern's finished product is the next man's raw material. Let us follow thru on some items with which most people are slightly familiar.

In a market near New York a building material dealer sells to a builder a common grade of yellow pine known as roofers. It is produced principally in the South Atlantic states. Let us say it retails, delivered by truck to a building site, at \$38.00 per thousand feet board measure. What proportion of this is *not* labor. Let us work backwards. First the trucking to job—labor driving the truck, labor loading the truck, labor servicing the truck, labor manufacturing the truck, labor producing all the raw and fabricated material used in manufacturing the truck, labor in producing the gas and oil in propelling the truck and in producing the equipment used in producing the gas and oil, labor in distributing the gas and oil, labor in selling the roofers, tallying the outward load, billing to customer and collecting from customer, labor piling the roofers when received, labor unloading from car or boat, labor purchasing from the mill, labor in transporting from mill by boat or railroad, labor building the railroad, labor building the railroad cars, roadbed, rails, switches, signals, managing and operating the railroads, labor dressing the lumber at the mill, labor producing the machinery to dress the lumber, labor sawing the logs—labor producing the material, steel, belting, etc., of which the saw mill is built, labor cutting down the trees and hauling the logs to the mill, labor producing the logging equipment, etc., used in logging, labor cruising the timberland, clearing the land, building roads out of the forests, labor producing the shelter, food, clothes, and other necessities for all the labor used in all the processes listed plus labor of administering the town, county, state and federal governments and collection of the taxes of all these agencies.

And this is not all—there is also the labor of educating the children of the laborers and healing the sick laborers and burying the dead.

Now when you get back to the actual standing timber, which has to pay a tax to the town or county or state, what proportion of the \$38.00 sale price is material and what proportion is labor?

Well, depending on the accessibility of the standing timber to transportation facilities and upon the growth and quality and upon the demand, the actual raw material may range from 50c to \$4.00 per thousand feet and some of *that* really reverts back to labor in some form.

This may seem somewhat far fetched but—it is not.

Trace any commodity you choose. You will get practically the same result.

Material is labor—Transportation is labor—Profit is labor—wages in excess of cost of living is profit, whether it be the man paid by the hour or the business man paid by the sales realization for his merchandise or product in excess of the total cost to him of such product.

Taxes is labor used by Governmental agencies of all kinds in public interest.

Generally when labor is well paid—material prices in all stages of processing, delivery, etc., are higher in cost.

(Continued to page 128)



*Sell More Houses
with Walls that Spell
Charm and Security*

Concrete masonry—portland cement
paint—any color, texture and pattern
buyer wants

Concrete's place as the fastest grow-
ing kind of home construction has
been earned by giving buyers what
they want—warm beauty, economy,
firesafety, permanence and low up-
keep. National advertising is bringing
thousands of inquiries every week to
builders featuring modern concrete
construction.

PORTLAND CEMENT ASSOCIATION
Dept. 9-3, 33 West Grand Avenue, Chicago, Ill.



STYLE 20-S



STYLE 90-S



STYLE 70-S

WILLIS SKYLIGHTS

Builders of today never underestimate the necessity of proper lighting and ventilation. WILLIS SKYLIGHTS have established a reputation of dependability. Made in all styles and sizes for all types of building—

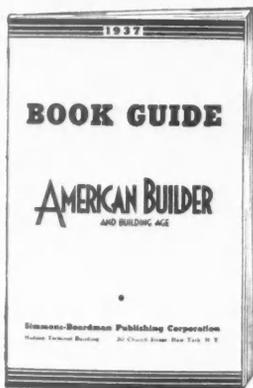
Write for our skylight catalog.

**WILLIS
MANUFACTURING
COMPANY**

Galesburg, Illinois

"Standard Products" for
Almost Half a Century

Estimating Books



This new Free Book Guide describes them all so that you can easily select the best one for your particular needs.



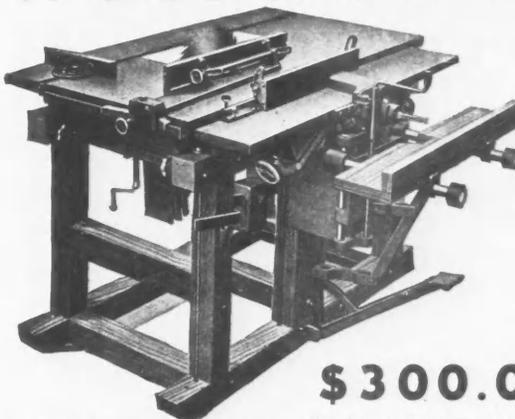
This Book Guide will give you just the information you want on the latest estimating books. There are 12 house estimating books and several books covering special fields such as concrete, electric wiring, plumbing, painting and sheet metal work. Ten real estate appraising books are described. Estimating blank forms, booklets and stock specification sheets are listed. The estimator will also find helpful handbooks, and 450 other books for Builders.



BOOK SERVICE DEPARTMENT

American Builder and Building Age
36 CHURCH STREET NEW YORK, N. Y.

Monarch WOODWORKER



\$300.00

PORTABLE COMPLETE

f.o.b. Hackettstown, N.J.

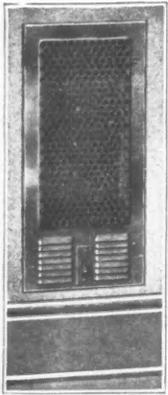
(gasoline or electric motor, band saw and mortising attachment extra)

Use it for ripping, cutting-off, mitering, dadoing, gaining, grooving, rabbetting, tenoning, jointing, planing, boring, matching, moulding, sanding, and mortising.

Send for Complete Catalog of Woodworking Machinery

AMERICAN SAW MILL MACHINERY CO.

Makers of Woodworking and Saw-Mill Machinery
60 MAIN STREET HACKETTSTOWN, N. J.



ELECTRIC QUIKHETER

Quick, Clean, Safe
ECONOMICAL

To add comfort and promote health by eliminating that chilly feeling in bathrooms, children's bedrooms, dressing rooms, etc. — on days when it doesn't pay to have the regular heating plant in operation — install the  Quikheter, flush type. It furnishes quick, safe, clean, economical heat by taking *cool air from the floor* and moving it up through and out of the heating chamber with a *velocity* necessary to circulate the warmed air *throughout* the room.

Furnished in small sizes of 1000, 1250, and 1500 watts, and large sizes of 1500, 2000, and 3000 watts capacity.

Frank Adam
— ELECTRIC COMPANY —
ST. LOUIS



Supply Your Territory
With Brick and Dunstone

Actual operating DUNBRIK plants show remarkably low production costs. The performance of the Dunn Automatic Machine has astounded the trade and industry. Yet the investment required is only a fraction of what would be necessary in any other machine of equal capacity.

YOU DOMINATE THE MARKET. Your ability to make common and face brick in any color or texture, combined with your low cost, gives you the whip-hand over competition. DUNSTONE, a double and triple unit permitting Hollow Ashlar Construction at cost of frame, gives you another added advantage. Get the facts about this great opportunity for your territory. Learn about the records made by other manufacturers. Write for "4 Keys to Manufacturing Success." It may mean manufacturing independence for you.

W. E. DUNN Mfg. Co.
450 West 24th St., Holland, Mich.



Higher Than When?

(Continued from page 126)

When labor is poorly paid, the opposite holds good. Granting that the cost of competitive basic material, is the sum total of the labor producing, transporting, fabricating, distributing, etc., what are some of the other factors affecting the cost, both natural and artificial?

Among the natural might be listed supply, demand, efficiency in production, fabrication, and distribution.

Among the artificial might be listed tariffs, taxes, speculation and stoppage of production and distribution by strike, flood, drought, etc.

Any of these factors can operate in combination or separately and affect specific commodities or practically all commodities.

From all this it can be seen that the great problem of economics is to facilitate an equitable exchange of labor for labor, by use of the medium of material and services produced by labor. This problem has never been solved. It is difficult for some labor to buy with their product, the products they desire that are produced by other labor.

And this fact brings us back to the costs of building.

What can the ordinary concern do about it? Average concerns are such small factors in this whole crazy quilt of price movement.

They do not control the cost of the actual raw material and after all what a small item raw material is . . . amazingly small when you consider the ratio of 50c or even \$4.00 compared to \$38.00.

Building material merchants do not control the various costs of manufacture, transportation and distribution prior to actually receiving the merchandise. These are all items beyond their control.

They must pay for what they buy or go out of business—bankrupt failures.

They must warehouse the stock, provide facilities and labor for sale and distribution of it. They must, and usually want to pay the best wages they can. They have to pay the taxes the Government imposes and must also exercise judgment and diligence in granting credit and collecting for what is sold by them to contractors, home owners and industrial plants.

To continue in business, building material dealers must do all these things and must earn, over the years as a whole, a fair profit to enable them to replace worn out plants and equipment, to provide working capital without which no business can continue to exist and to pay the many and varied taxes of all kinds and amounts, increasing rapidly as a result of our political philosophies.

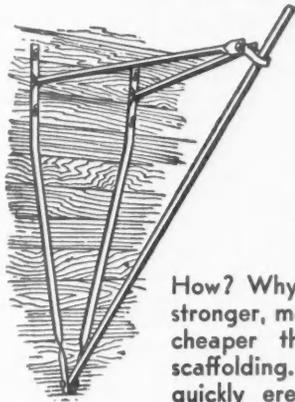
Has the average concern been doing more than this? Have they by any means at their command, been able to amass large profits. The answer is no. Facts everywhere prove such to be the true answer.

During the depression, it was impossible to operate at any profit. The losses were serious, more in amount than can be made up in many years of times such as the present. It would have been impossible to continue on such a basis. No one would want many years of such hopeless, discouraging conditions.

Conditions at present do not yield the measure of profit prevailing from 1920 to 1930. The costs of doing business are higher than in 1920 to 1930. On a rising market with so many complications as are currently existing, it is more than ever difficult to realize a proper profit mark-up. Prices to consumers have not ad-

(Continued to page 130)

Reliable Scaffold Brackets



**SAVE
YOU
MONEY**

How? Why? Because they are stronger, more dependable and cheaper than costly wooden scaffolding. Because they are quickly erected, quickly taken down. Because you can use them on wood or stucco. No wonder they soon pay for themselves. Thousands of builders have used them for years.

Let us prove their value. Send for catalog—then ask us to ship first pair C.O.D. for your inspection and trial.

Reliable Jack Company, 1401 West Second St., Dayton, Ohio

RELIABLE
SCAFFOLDING BRACKETS

EXCLUSIVE TERRITORIAL RIGHTS NOW OPEN

For Mortarless Concrete Blocks

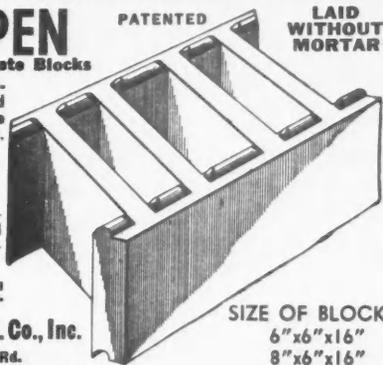
Vertical, reinforced, concrete columns, spaced every 24" on center are poured within the wall.

**Build for a Century
Not for a Decade**

Mortarless Masonry Construction is unequalled for economy and permanency.

Write for catalog and full particulars of our machines.

Mortarless Tile Mach. Co., Inc.
2220 San Fernando Rd.
Los Angeles, California



SIZE OF BLOCKS
6"x6"x16"
8"x6"x16"
12"x6"x16"



THE EAGLE-PICHER LEAD COMPANY • CINCINNATI

WINDOWS that SWELL and STICK!

WOOD LIFE treatment prevents this . . . the windows don't shrink or swell . . . nor do they develop Blue Stain.

*Get Full Information
on Wood Life!*

Ask your jobber or write us direct. We will be glad to point out specific advantages.

TREATED WOOD IS BETTER!

PROTECTION PRODUCTS MFG. CO. Detroit, Michigan



Install MASTER METAL WEATHERSTRIPS

On thousands of homes throughout the country, Master Weatherstrips have proven a most satisfactory and economical method of making windows and doors weathertight. Practical, rust-proof equipment for any kind of window or door, wood or metal.

Sold and installed by reliable dealers and contractors in over 300 cities of the U. S. and Canada.

DEALERS WANTED—Many territories still available in all parts of the country. Write for complete information.

**WRITE TODAY
FOR ILLUSTRATED
CATALOG AND
PRICE LIST**

MASTER METAL STRIP SERVICE 1720 N. KILBOURN AVENUE
CHICAGO, ILLINOIS

For Lasting Value . . .

EDWARDS

"REO"

CLUSTER SHINGLES

"Can't Be Beat"

Many a Reo Steel Cluster Shingle Roof that was installed as many as 40 years ago is still giving perfect service. Heavily galvanized with high grade zinc spelter Reo Shingles withstand all extremes of weather.

Properly grounded, they protect from lightning. Fire cannot burn them; water can't get through their interlocking joints. Very rigid. Cannot rattle.

- Reo Cluster Shingles lift the roofing business out of the rut of profitless competition. Write for Roofing Catalog 92. ●

THE EDWARDS MANUFACTURING CO.

542-562 Eggleston Ave.

Cincinnati, Ohio



Install Tile-Tex



for
**LASTING
BEAUTY AT
LOW COST**

Flexible
WALL TILE

Tile-Tex Decorative Wall Tile is easily applied in old or new buildings. Made in a wide range of colors and gives a permanent wall of lasting beauty at low cost. Ideal for Bathrooms, Kitchens, Stores, Barber Shops, Beauty Shops, Public Buildings, Restaurants, Bars and Lobbies.

Tile-Tex is a unit-laid wall tile that will not craze, crack, warp or mar. Can be applied right over plaster walls or wall board.

Write us today stating whether you are interested in a dealer proposition or if you want information for prospective home builders. Free literature will be sent promptly.

THE TILE-TEX COMPANY

1229 McKinley Avenue

Chicago Heights, Illinois

Decorative WALL TILE
TILE-TEX
Resilient FLOOR TILE

Higher Than When?

(Continued from page 128)

vanced as rapidly or to the extent that most manufacturers or wholesale prices have.

Building material dealers, as a whole, have nothing to apologize for.

All of these considerations are very real. They can not be miraculously brushed aside by housing shortage ballyhoo, easy money for borrowing, and other foolish artificial stimulation. And the same reasoning applies to business concerns. Debts must be paid. Depression scars must be healed. Capital must be replenished. Conditions must become stabilized and courage re-established before capital investment is made.

Except as financed by the Federal Government thru its relief program and by its borrowing to do so, States, and Cities and Towns, must also gradually dig their way out from under their load of indebtedness and relief burdens before undertaking civic expansion.

Philanthropic institutions cannot build needed churches, schools and hospitals, until people in general are again prosperous and financially able to contribute funds for such purposes.

Can all this be done by low costs—meaning in its final analysis, low wages. The depression proved that it could not be done except in rare cases.

History will show you that most capital investment—most industrial expansion—has taken place at the higher levels of cost.

True it is, one hears of a buyers strike. It comes from all sides. It must be expected when, emerging from the most serious depression we have ever known, so many national and world wide influences are tending to a dislocation of the orderly processes of rejuvenation. Of necessity, things are out of balance. It takes time for adjustment. The point for all to remember, is that prices are the result of wages. Good wages produce higher prices than low wages.

A too rapid increase in costs of building surely will slow down building activity—will stop a boom.

Fine—a building boom is the worst thing that could happen.

There are not enough skilled mechanics in the building trades to do the work of a boom—there is a shortage even for ordinary need now.

Building Booms means an unhealthy speculative development—artificial values—and eventually the inevitable collapse.

Stable price and wage levels, yielding a fair profit and building held at a normal replacement rate to care for obsolescence and increase in population, seems to be the ideal.

Whether such a level be higher or lower than at some period of the past seems to be relatively immaterial.

The really important point is its relation to other values; when labor in other lines can exchange their labor on a fair basis for labor represented in buildings.

It may be that building is not too high but that other labor is too low.

And after all, although the automobile is pointed to with great pride as the great achievement of mass production, pound for pound of fabricated material, a house costs less. The comparison will apply with equal force to other mass produced articles such as electric refrigerators, radios and oil burners.

One really cannot and should not compare a house, good for from 50 to 200 years use, with an automobile, or some similar article. There is no real basis of comparison between two such units.

Now what does this add up to. Prices are higher—yes

(Continued to page 132)



SEND FOR NEW CATALOG
 Descriptive of **Empire Automatic Hinge**
GARAGE HARDWARE!

THIS unusual and distinctive line is fully described and illustrated in our latest bulletin. It will be to your advantage to become familiar with this trackless hardware which is creating a sensation in the building field.

THE EMPIRE PLOW CO., CLEVELAND, OHIO
 Established 1840

"BRADLEY BRAND"
the standard of comparison
 in **HARDWOOD FLOORING**
OAK - - - - - BEECH



AT YOUR DEALERS

BRADLEY LUMBER SALES CO.
 WARREN ARKANSAS

MAKE EXTRA PROFITS ON

DENNIS
 DOUBLE CUSHION

BRONZE WEATHER STRIPS

Easily Installed Without Removing Sash or Doors!

Now you can make quick, new profits by selling genuine Dennis Double Cushion Spring Bronze Weather Strips for modernizing jobs and new homes. The easiest to install—comes attached to new parting stop. Patented "S" fold gives double spring action. Prevents cold air leaks. Makes snug weatherproof seal conforming to all warping, shrinkage and expansion of sash and doors. Endorsed by architects and builders for saving fuel. Ask your jobber or write for new 1937 Weather Strip Catalog.

W. J. DENNIS & CO.
 2110-20 WEST LAKE ST. CHICAGO



STEEL IN STOCK

● Steel of every kind, in all shapes and sizes, is carried in Ryerson stocks ready for Immediate Shipment. Unusual facilities for cutting, handling and shipping assure accuracy, dependability and speed. When you need steel draw on the nearest Ryerson plant.

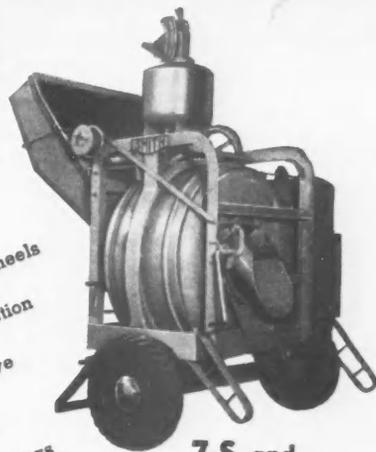
PRODUCTS INCLUDE:
 Bars • Sheets • Plates • Shafting • Stainless
 Screw Stock • Alloy Steels • Tool Steels
 Structural • Welding Rod • Tubing, Etc.

Write for the Ryerson Stock List

RYERSON
 Joseph T. Ryerson & Son, Inc., Chicago, Milwaukee,
 St. Louis, Detroit, Cleveland, Cincinnati,
 Buffalo, Philadelphia, Boston, Jersey City

TRAIL-SMITH

Here's a handy 2-wheel trailer-type mixer quickly portable from job to job. Low, lightweight, compact, easy to "spot". Move it fast — move it often.



7-S and 10-S

- End Loading
- End Discharge
- Roller Bearing Disc Wheels
- Enclosed Gear Reduction
- Multiple V-belt Drive
- Pneumatic Tires
- Anti-Friction Bearings
- Spring-Mounted Axle
- Automatic Skip Vibrator
- Vertical Syphon-type Water Tank



Write for Literature.

THE T. L. SMITH COMPANY
 2849 N. 32nd St., Milwaukee, Wis.

SMITH MIXERS
 THE BOULDER DAM MIXERS

23 YEARS of CARE-FREE SERVICE!

1914
 "I find that your 'Trouble Saver' Scaffold brackets are the best I have ever seen and used for quick work and safety. I am sure if other Contractors knew what they were they would surely use them."
 W. G. ZWAGA,
 Cont. and Bldr.,
 Rochester, N. Y.

1937
 "I bought from you in the year 1914, a quantity of 'Trouble Savers' which I have used continuously since that time. The dependable service which they have given has paid many times over the purchase price."
 W. G. ZWAGA,
 Cont. and Bldr.,
 Rochester, N. Y.

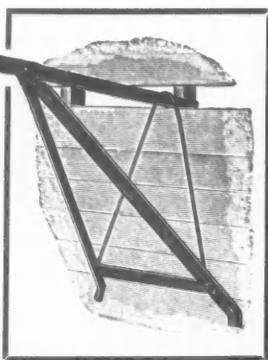
Cut Your Costs and Save
 Time With

"TROUBLE SAVERS"

The "Trouble Saver" line includes Stud-
 ding Brackets, Nail Attached Brackets,
 Adjustable Trestles, Ladder Jacks, Roof
 Brackets. Compact! Quickly erected!
 Safe! Economical!

Write for Catalog and Prices

**The STEEL SCAFFOLDING
 COMPANY** 402 E. MISSOURI ST.
 EVANSVILLE, IND.



Higher Than When?

(Continued from page 130)

—they are higher than depression prices. Do people want the depression prices and other conditions back? Prices right now are lower than pre-depression period 1920-1930 averages.

And prices of most other commodities are also higher—much more so than building material.

Lumber is still, in most every instance, the cheapest material that can be used to accomplish any specific objective for which it can be utilized.

Quality of merchandise considered, building material prices compare favorably in all sections of the country with other things. In some places, due to principally a local cut-throat competition, prices are somewhat lower—but where cut-throat competition exists—substitutions of shoddy merchandise are generally found. In the final analysis, one generally gets what they pay for. Buy quality goods—and when possible buy grade marked goods.

Prices are fair in the building material business. Goods are of a competitive type—not only from the standpoint of distribution but also from the angle of basic material and fabrication. None are monopolistically controlled. Lumber dealers are endeavoring adequately to compensate their employees; they are trying efficiently to serve the public and they are having a difficult job to make a fair profit. The principal factors producing higher levels of price are general and world wide and beyond their control.

Brick Laying to Avoid Leaks

(Continued from page 77)

With class D workmanship the interior joints were not filled (as for workmanship B) but the face joints were tooled. The best performance was obtained when the interior joints were well filled and the face joints were tooled (workmanship A). However, as the permeability with workmanship C was less than with D and was greatest with B, the data show that the filling of the interior joints was of greater benefit than the tooling of the face joints.

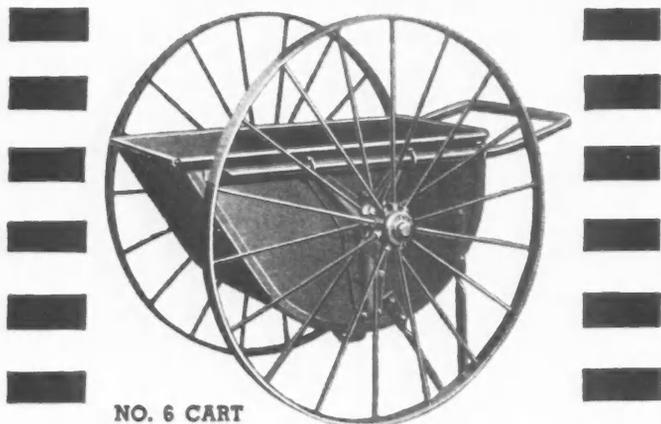
There was not an important difference in the performances of walls which were alike except as to the kind of mortar used, provided the mortar was a mixture containing a plastic lime. Mortars 1 to 4, table 2, containing different proportions of lime, were considered by the masons to be of equally satisfactory workability. Each had a water retentivity exceeding 85 per cent. Walls constructed with the 1:1:6 mortar containing non-plastic lime (mortar 5), showed significantly inferior performance to similar walls constructed with the other four mortars. These results indicate that the permeability of the masonry was not a function of the amount of lime or cement in cement-lime mortars, but was primarily dependent upon the water retentivity or some other measure of the working qualities of the mortar. As all walls of workmanship B showed a poor performance in the permeability tests, it was evident that good workmanship was not attained unless the masons were careful to fill the joints, regardless of the working qualities of the mortars used. None of the mortars flowed unaided into the open spaces in the joints.

The best performance was shown by the walls of workmanship A and the impervious bricks, a. The performance of the walls of workmanship B was not

(Continued to page 134)

Sterling CONCRETE CARTS

PLAIN OR ROLLER BEARINGS



NO. 6 CART

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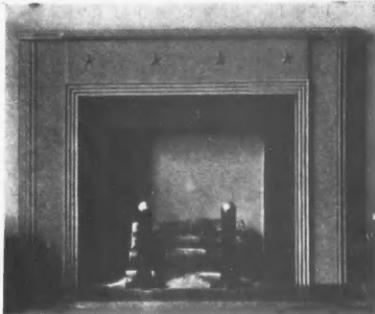
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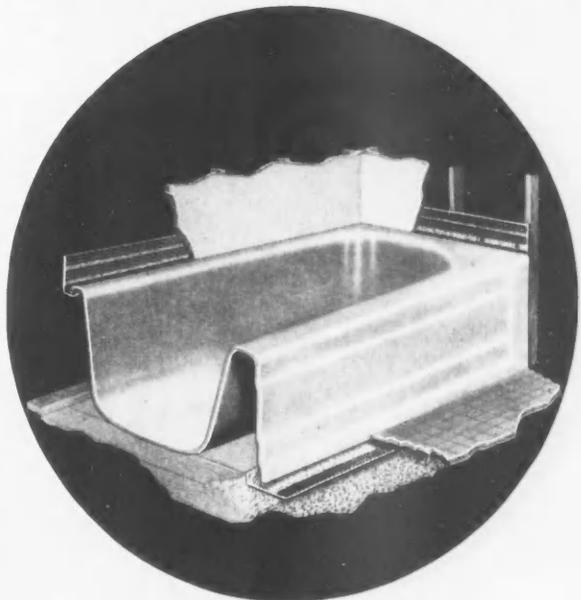
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Brick Laying to Avoid Leaks

(Continued from page 132)

affected greatly by the type of brick but was slightly better for the more absorptive bricks than for bricks a. The data shows that wetting the highly absorptive bricks before laying reduced the permeability of the walls, and that the more thoroughly the bricks were wetted, the less permeable the walls. Walls faced with the dense brick (brick a) and backed with the highly absorbent bricks (bricks c) showed somewhat superior performances to the walls composed entirely of either of these types of brick. Omission of two-thirds of the header bricks did not affect significantly the performance of the walls. Walls of workmanship A, 4 inches in thickness and parged on the back with mortar, withstood the permeability tests about as well on the average as 8 inch walls of workmanship A.

Most of the comparisons of the performances of the walls are based upon the results obtained in the heavy rain test. This test was severe, especially for the walls which showed no failures during the first few minutes of the tests. But it was not unduly severe for the walls which leaked within the first five minutes, as wind velocities of 40 miles per hour accompanied by enough rain to cause run-off from the surface of the walls are common for this length of time. Usually, however, the combination of high winds and rainfall is of short duration. During prolonged storms both the wind and the rain usually are intermittent. Records show, also, that the average wind velocity and intensity of rainfall tend to become less the greater the duration of the storm. It may be concluded, therefore, that the walls which did not leak during the first few minutes were better than they appear to be from the results of the tests, but those which failed quickly were as poor in resistance to rain as was indicated by their performance in the tests.

The question may arise as to the severity of the tests with respect to the amount of water applied to the wall. An intensity of rainfall average 0.05 inch per hour, lasting two or three days, is not unusual. With such a typical rain the amount of water striking a vertical surface in a 3-day period may total about 7 inches, with a wind velocity of 10 miles per hour, 14 inches with a velocity of 20 miles per hour and 28 inches with a velocity of 40 miles per hour. As the moisture capacity of a solid brick wall 8 inches thick will rarely exceed the amount of water equivalent to a 3-inch depth over its surface, it is clear that the amount of water which may strike the vertical would be more than sufficient to saturate the wall.

By far the most important conclusion to be derived from the results of the investigation is that the permeability of the brick walls depended almost wholly upon the quality of workmanship. Walls having interior joints well filled with mortar usually gave excellent performances in the permeability tests. The tooling of the surface joints also was helpful. The plastering of mortar on the back of 4-inch walls resulted in masonry of high resistance to rain penetration. The plaster seemingly afforded a barrier to the rapid penetration of water. Essential aids in obtaining walls resistant to moisture penetration were: the wetting of absorbent bricks before laying, the use of mortars of moderate or high water-retaining capacity and the use of bricks of high absorption as backing for bricks of low absorption. These aids were not of significant value, however, unless accompanied by a careful filling of the mortar joints.

SELECTED CATALOGS

**For the Service of Builders,
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The publications listed below may be obtained without charge either by using the coupon, listing the numbers desired and mailing to American Builder, 105 West Adams Street, Chicago, or by applying on your business stationery to the manufacturers direct, in which case kindly mention this publication. Either the titles or the numbers may be used in ordering. This list is an editorial feature for convenience of our readers.

BUILDING MATERIALS

341—New Goodrich Catalog on Rubber Tile Flooring—A 12-page catalog in full color illustrates typical designs using rubber tile flooring, and gives many suggestions for the proper use of rubber flooring for the home and in non-residential buildings.—Mechanical Rubber Goods Division, B. F. GOODRICH CO., Akron, O.

342—Monel Tie Wire—Basic data regarding Monel non-rusting tie-wire for attaching metal lath for brick ties, concrete anchors, tile roof anchors, etc., are presented in an illustrated four-page data sheet. Monel tie-wire is a rust-proof, non-ferrous, soft annealed wire containing approximately two-thirds nickel and one-third copper. Its toughness, high tensile strength and pliability render it suitable for use under all conditions where tie-wire is a necessary structural item.—THE INTERNATIONAL NICKEL CO., Inc., 67 Wall St., New York City.

343—Willis E-Zie Lift Doors—Garage door hardware for either old or new doors, with detailed instructions for installing, is featured in a combined broadside and wall hanger prepared by—WILLIS MANUFACTURING CO., Inc., Galesburg, Ill.

344—Pozzolith—“Less Water Yet More Placeability” is an illustrated handbook of 20 pages discussing the use of Pozzolith in the concrete mix to provide a more placeable mix with much less water. Architects, engineers and contractors will be interested in this discussion of the water cement ratio and the result is greater strength and workability through the use of Pozzolith with less water.—THE MASTER BUILDERS CO., Cleveland, O.

345—For Non-Shrinking Mortar—A new 4-page data sheet presents Truscon Mor-

tite, a new ingredient for shrink-proof, waterproof, better working mortar. “Better mortar with less water” eliminates shrinkage, crazing, hair checks. Illustrations show examples of work; test results and recommended mixtures are given.—TRUSCON LABORATORIES, Detroit, Mich.

346—Steel Floors for Homes—“When Your Dream House Comes True” is a 16-page brochure illustrating the Robertson steel floor units for home construction. Photographs show fine homes from New York to California built with these Robertson steel floor units. Construction details and design data are included. The higher resale value of houses containing these sturdy floors is emphasized.—H. H. ROBERTSON CO., Pittsburgh, Pa.

347—Steel Reinforcing—“Code of Standard Practice and Specifications for Placing Reinforcement” is a 14-page handbook prepared by the Concrete Reinforcing Steel Institute. The several types of steel reinforcing are illustrated, and much useful data on spans, spacings and other recommended details makes this subject clear. The names and addresses of all the members of the Institute are included.—CONCRETE REINFORCING STEEL INSTITUTE, 201 N. Wells St., Chicago.

348—Metal Mouldings—Full information regarding the Ames mouldings which are offered in 150 styles of metal covered and solid metal mouldings in bright and dull chrome, copper, brass, bronze, aluminum and stainless steel is available in catalog No. 9.—AMES METAL MOULDING CO., Inc., 219 E. 144th St., New York City.

349—Factory-Finished Oak Floors—A new illustrated folder, “Plain Answers to Your Natural Questions Concerning Cromar Floors” presents in very attractively illustrated form complete information re-

garding this factory-finished flooring which is laid and used the same day.—THE CROMAR CO., Williamsport, Pa.

HOME EQUIPMENT

350—Briggs Beautyware—“Better Plumbing Fixtures for Better Homes” is a new complete catalog of the Briggs formed metal plumbing fixtures, 48 pages and covers, in stapled loose-leaf portfolio form. Each item in this extensive line is beautifully illustrated, and complete dimensions are given on accompanying line drawings for roughing in the measurements and for guidance in installing these fixtures. This is a reference book of value to every builder, architect, dealer.—BRIGGS MANUFACTURING CO. Plumbing Ware Div., Detroit, Mich.

351—Standard Plumbing Ware—“Plan Beauty for Your Home,” a 32-page and cover booklet, is the latest edition of the consumer’s catalog known throughout the trade as the “Standard” Home Book. It is in full color, completely new in illustration and text matter. The Neo-Angle bath and Hostess sink are especially featured. Cabinet sinks and cabinet lavatories, Comrade lavatory with center set fitting, and the new Compton close-coupled closet are among the many fixtures shown. STANDARD SANITARY MFG. CO., Pittsburgh, Pa.

352—Bathroom Cabinets—“National Cabinets and Other Sheet Metal Products” is a new 16-page stapled loose-leaf portfolio presenting large illustrations and complete description of the extensive National line of medicine cabinets, mirrors and household specialties offered by—NATIONAL METAL PRODUCTS CO., Waterloo, Iowa.

353—Dailaire for the Moderate Priced Home—“Smashing High Building Costs” is the timely message contained in the new 4-page folder presenting the Dailaire Pacemaker model No. 116, a complete automatic oil or gas fired air conditioning unit. Details of construction and complete description are presented.—DAIL STEEL PRODUCTS CO., Lansing, Mich.

354—Cooling Without Refrigeration Equipment—“Carrier Air Conditioning at the Mere Cost of Water” is a striking broadside introducing two new pieces of Carrier equipment—a floor model and a ceiling model—which have coils cooled by running water and they in turn cool the air as it passes through. Wherever cool tap or well water is available, this equipment cools, dehumidifies and circulates refreshing air.—CARRIER CORP., Newark, N. J.

American Builder,
105 W. Adams St.,
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(September, 1937)

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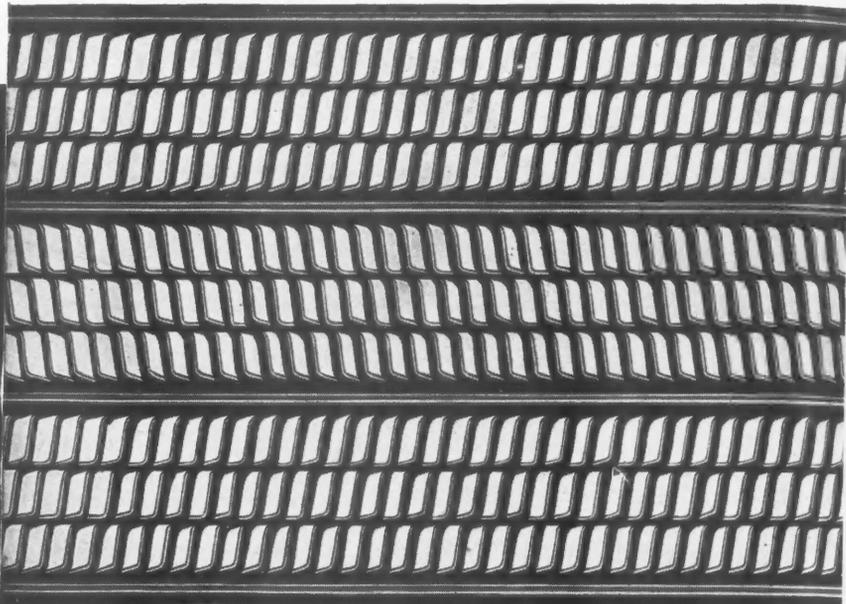
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