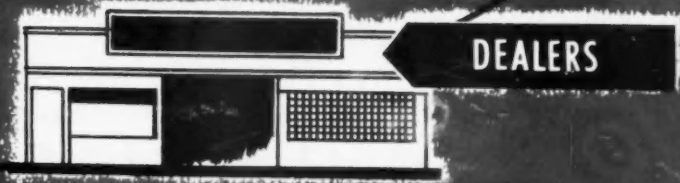
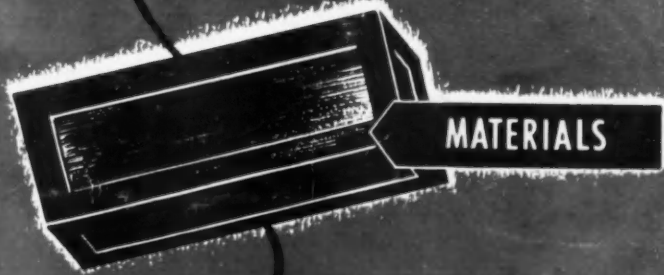
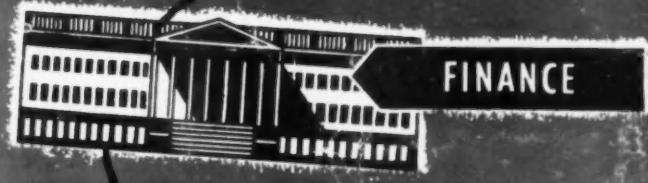
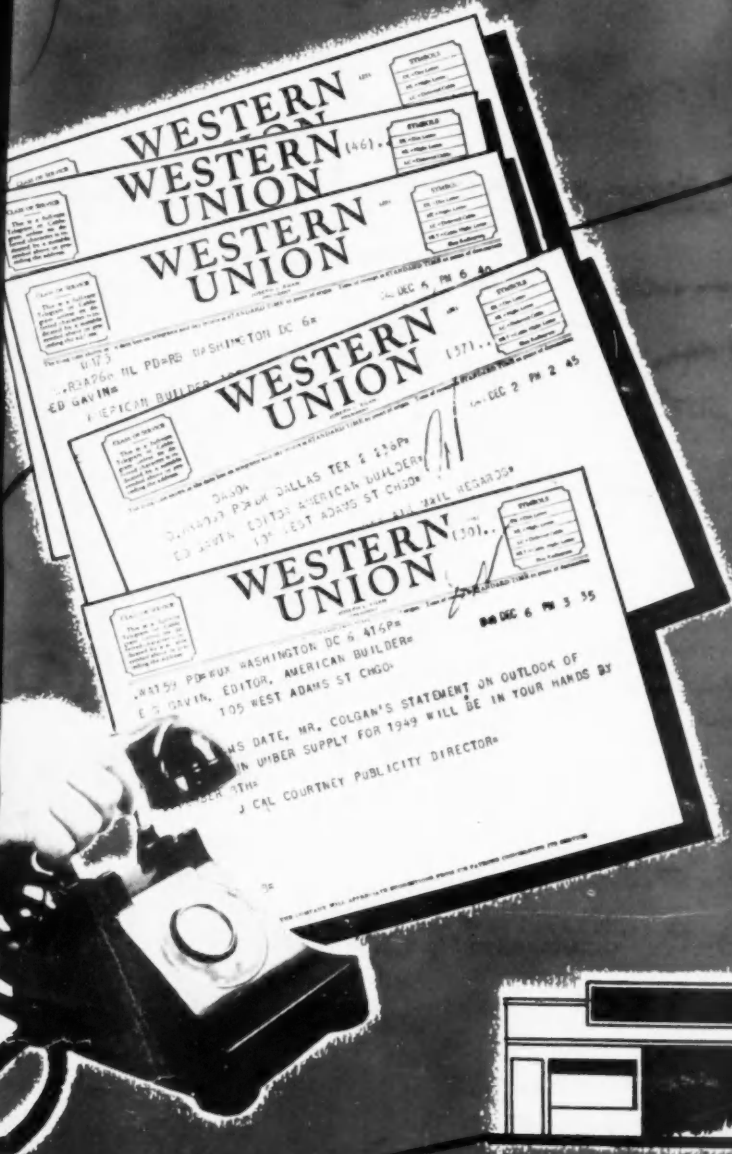


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AMERICAN BUILDER

JANUARY 1949
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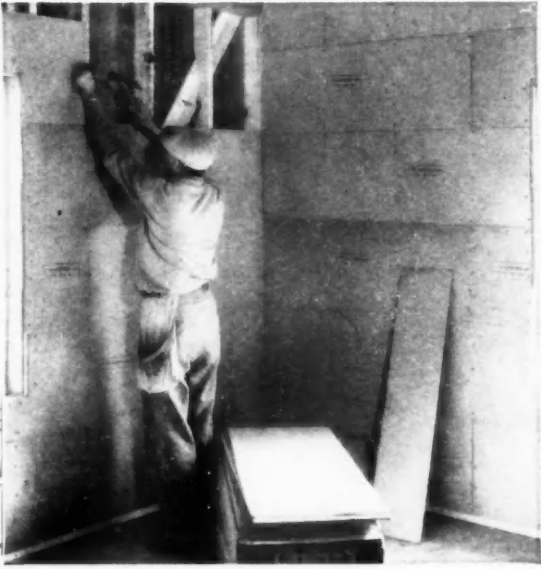
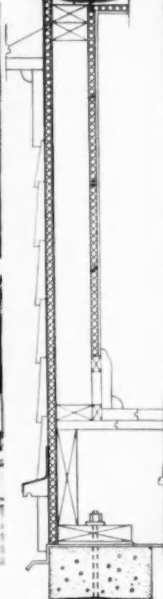
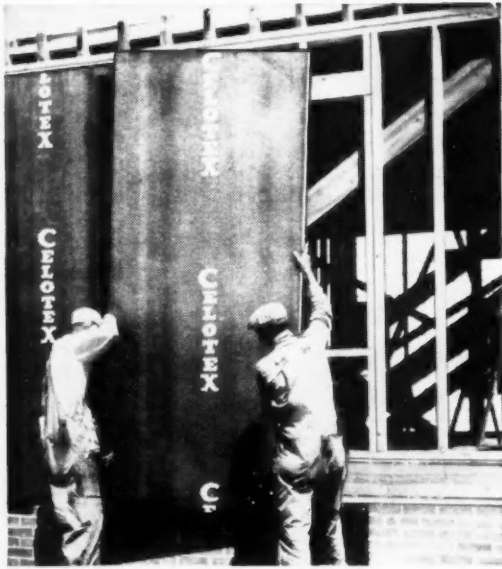
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BUILDING PAPER



What's ahead for building in 1949?
Read what the leaders say

✓ R v. 711 Jan. - June 1949

A STANDARD FOR GOOD WALL CONSTRUCTION



CELOTEX SHEATHING

PLUS

CELOTEX INSULATING LATH

Here's the combination that cuts costs for you . . . that gives the home buyer more for his money . . . that your workmen like to put up: (1) *Celotex Insulating Sheathing* — big lightweight, asphalt-coated boards that go up *fast*, saving time and money; (2) *Celotex Insulating Lath* — strong, lightweight plaster base — easy to handle, cut, and apply. And this is the only combination that gives you *all these exclusive selling features*:

- EXTRA INSULATION VALUE — A double layer of heat-stopping Celotex cane fibre insulation board.
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- PROTECTION AGAINST DRY ROT AND TERMITES — by the patented Ferox treatment, exclusive with Celotex Cane Fibre Products.

CELOTEX INSULATING SHEATHING—Sizes—Big Board—4 ft. wide x 8, 9, 10 and 12 ft. long, 25/32 in. thick. Center Matched—2 ft. wide x 8 ft. long x 25/32 in. thick. T. & G. on long edges.

CELOTEX INSULATING LATH—Size 18" x 48" x 1/2" and 1" thick.

THE CELOTEX CORPORATION,
CHICAGO 3, ILLINOIS

CELO, CEMESTO, and FLEXCELL
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CELOTEX TRIPLE SEALED ASPHALT SHINGLES AND ROLL ROOFING
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The "INSIDE" STORY of a MODERN WINDOW

Folks in the market for homes these days demand modern conveniences. That goes for windows as well as other things. Windows that won't stick—won't warp or swell out of shape. Windows that they can wash and screen and storm-sash—all from *inside*.

Beautiful Fenestra* Residence Steel Casements are as modern and easy to operate as the latest home appliance. A twirl of the geared Roto-Adjuster and the swing leaves reach for the breeze. The Fenestra way is the economical way to add sales appeal to your homes.

Standardization streamlines Fenestra production—permits the low cost and high quality that are Fenestra's trademark.

Frame and sash are factory-assembled, Bonderized, prime-painted, then baked. Hardware, supplied with each unit, is attached quickly and easily.

Fenestra's full line provides a right window for every need—even special uses such as over the sink or buffet. For full information on types and sizes, see your nearest Fenestra dealer, or write to Detroit Steel Products Company, Dept. AB-1, 2260 E. Grand Blvd., Detroit 11, Mich.

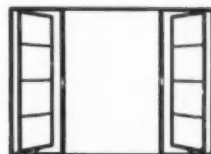
*The latest in steel windows, doors, panels
N. A. H. B. Show . . . Booths 21 and 22*

WHICH IS THE RIGHT WINDOW TO USE?

For maximum economy
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Meets most residential needs. For all general locations. One swing leaf provides 50% opening.



For maximum ventilation—Type 2424.
Provides 100% opening. Costs more than Type 2414N because it has two ventilators with Roto-Adjusters.



For maximum view—Type 4424.
Picture window, plus ventilation.
Fenestra's many types and sizes provide a *right* window for every need in the home.

Fenestra



RESIDENCE STEEL CASEMENTS

EYES ON UPSON!



The Upson Company in 1949 will begin one of the biggest promotion programs in its history with 122,000,000 advertisements in consumer magazines. And millions of advertisements to the trade.

Millions of home builders are going to be reading about the practical advantage of Upson Strong-Bilt Panels, Upson Dubl-Thik Fibre-Tile, and Upson Kuver-Krak Panels.

You are going to have a new and increasing acceptance and demand for these products. For good advertising not only creates business. It directs business, too! Be ready! Plan to get your share of this increased business. It belongs to you. Let us help you.



Easily Identified By the Famous BLUE Center

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AMERICAN BUILDER

Founded—1879

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with any setting

● Right with traditional, right with ultra-modern—the broad Crane line has a style for every taste.

Right for price, too—Crane offers a choice for every building budget.

And right with *your customers and prospects*—that's been proved time and again in nation-wide surveys.

So you're always right in choosing Crane. Kitchen sinks, bathroom and laundry fixtures—all share the same high quality. All boast the new *Dial-ese* faucets that turn on and off at a finger's touch.

Again in heating, the Crane line is complete. It provides every requirement for all home systems... warm air, hot water, or steam... coal, coke, oil, or gas.

See your Sweet's Builders' File for selections from the Crane line. Remember that not all fixtures are immediately available to all areas—check your plans early with your Crane branch or wholesaler.



NO SPACE LOST... in this kitchen every detail works to conserve space, from the double-basin Kitchen Pride Sink to the novel telescoping table.

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VALVES • FITTINGS • PIPE

Publisher's Page



Stand for Principle—or Compromise?

EVERY SANE human being who becomes adult lives more or less consciously throughout his adult life in accordance with a philosophy of life. At one extreme is the criminal whose philosophy is entirely selfish and inspires him to try, by the use of dishonesty, cunning, force—or all of them—to live on the fruits of others' labor. At the other extreme is the saint whose philosophy of life is entirely unselfish and inspires him or her to devote the fruits of his or her labors almost entirely to the welfare of others.

Midway between these extremes are those who regard their philosophy as one of "enlightened self-interest." They try to get and keep all the good things of life, but only by their own hard work and thrift. They believe they steer about midway between the dishonesty, cunning and force of the criminal, and the complete selflessness of the saint.

"Enlightened self-interest" is supposed to be the driving force of progressive private enterprise. The word "enlightened" as thus used implies that men of intelligence engaged in private enterprise do not for their own benefit do things injurious to the economy as a whole because they know that anything done by themselves or anybody else which will be inimical to the economy as a whole will also, sooner or later, and probably sooner rather than later, prove injurious to those

who do it as well as to everybody else.

Unfortunately, while men in business always are motivated by self-interest, it is not by any means always self-interest that is truly enlightened. The two greatest dangers to the system of private enterprise are resort to monopoly practices by business men and labor unions, and the adoption of socialistic policies by government. Both impair the free and equal competition necessary to the efficient functioning of private enterprise. Probably there are more men who yield to the temptation to engage in monopolistic practices than there are who yield to the temptation to support the socialistic policies which they believe will benefit them; but the modern trend toward state socialism in this and almost every other country is due largely to the support of socialistic policies by business men. Virtually all business men are opposed to socialistic policies *in principle*; but the number who "rise above principle" to further their supposed self-interest is appallingly large.

Great Britain is affording us a warning example of the hazards business men incur when they resort to monopoly practices in their own supposed selfish interest and fail resolutely to oppose all socialistic policies. Great Britain originated modern capitalism and spread it throughout the world. In due

course, however, her business men decided they could make larger profits by establishing cartels in important industries than by competing. Their monopolistic practices not only reduced the driving force and progressiveness of business management, but provided the Labor party with a powerful argument for socializing the economy. Hence, capitalism apparently is on its death-bed in the country of its birth.

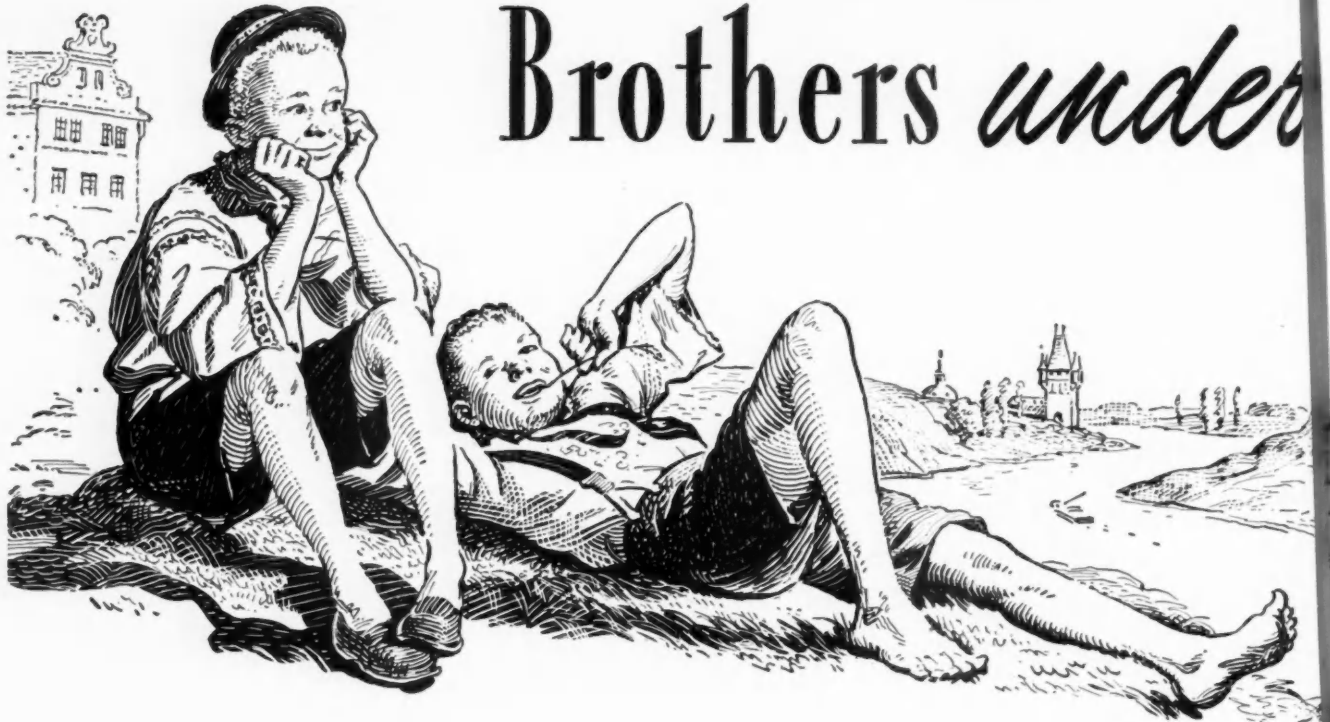
Men in the building industry are now confronted, as business men are so often, with the question whether they shall compromise, or stand fast for principle—i.e., whether they shall accept some socialized housing on the theory that it is inevitable anyway and that they can derive profit from constructing or furnishing materials for it, or whether they shall oppose all government spending on and subsidization of housing and help educate the American people on the dangers of compromising on the issue of free private enterprise versus socialism.

As long as so many business men who profess belief in private enterprise show willingness to compromise in favor of socialistic policies that they believe will benefit *them* it will continue to be as difficult as it was in the last political campaign to get men with political followings to stand up and fight for private enterprise.

Samuel O. Dunn,

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Brothers under

This is the story of two brothers. It has its beginning in a Northern province of Czechoslovakia. Two small boys were sprawled on the banks of the broad Elbe River. This afternoon was not unlike many others. For often they sat by the river and talked, sometimes until sundown.

"I'm going to be rich when I grow up," Karol would vow. "I'll own much land . . . and everyone will point to me and say, 'There is Karol Mahacek. He is the richest man in all Czechoslovakia.'"

Then Jan would watch for that familiar look of determination he had seen so many times on his brother's face. He would see his dark eyes growing larger and brighter, shining already with the happiness the future promised. And he would nod at his brother. Yes, Jan thought, Karol is smart. Yes, Karol will be rich some day.

But Jan, too, had dreams . . . dreams he dare not even tell. For Karol would surely think them strange. So he said nothing. He just sat there and looked out into the horizon. Somewhere beyond the Elbe there was an ocean . . . and beyond that? Well, some day he would know.

Old Eduard Mahacek considered his sons—what the future held for them. He even prophesied it many times.

"Jan is a dreamer. He is the one with imagination, but he is not as ambitious as Karol."

Yes, even at an early age, Karol was marked for success.

As for Jan, well, maybe it was an accident that he happened to be on the village dock when a river boat stopped for cargo. Maybe it was fate when on an impulse he took a job on the boat and found his way to the sea, to a different way of life—for Jan came to America.

It wasn't easy for him, at first, this new world. He used to write home about the strange American ways. Yet, there was always something wonderful to tell. He was making progress. He had a good job—good pay.

But Karol's letters were different—filled with uncertainty. He couldn't save to buy the land he promised himself he'd one day own.

What does the story of these two brothers mean—and why are their lives so different today? For Jan Mahacek faces the future with confidence—owns his own home—a car—his family is well fed, well clothed.

While Karol is a man without hope—his family ill clothed, ill fed—no home of their own.

The answer is simple, for both are *symbols* of America and Europe. Actually, there is no difference in the people here and there. **We are all brothers under the skin.** Like Jan and Karol, we are Czechs, or we're English, French, German, Spanish, Finnish, Norwegian, Polish, Italian . . . just as people are there. We are the same people, with the same blood, the same native ability. But there is *one* essential difference . . .

Let the Skin

Here in America, we have the opportunity—the privilege to use to the fullest our native ability.

Much has been said about the production genius of America. And who will deny it? But that power to produce far beyond the record of any nation on earth would never have blossomed into its present greatness if the individual in America had not had the chance to expand his individual talents to produce. Yes, here in America, all have been free to express themselves, to use and to develop talent and ability. This freedom to grow and build for the future isn't something to be considered lightly. It is something that all of us must guard, even with life itself.

Yet, in the abundance that surrounds us, we sometimes forget. We forget that with all this comes an obligation—an obligation to WORK. For, if we do not work to preserve it, we do not deserve it. This great productive power of America grew because of work, became the great thing it is because men bent to the task to accomplish an end.

Today, there are forces at work to hold back the high productive ability of America. A false creed is abroad. Some put it this way—"Hold back effort—do only an average job—regulate things." It all has a familiar ring—it is a creed of trading individual opportunity for false promises of future security.

Here at Ceco, we do not accept this creed of leveling of effort, for we believe in full opportunity for the individual. We know what all-out unharnessed production can accomplish. In this past year, for example, we have seen the building industry, unhampered by fewer controls, roll up one of the most impressive records in the history of the industry. Ceco salutes construction men

for the job they are doing. Their accomplishments represent the American way of doing things, and we believe in the American way to solve our problems, to provide a more abundant life, to curtail shortages, to drive down prices.

Yes, the way to do this is to work. ALL must work MORE—not be content to be average. Management must work at managing. Labor must work to produce—give a full day's work for a full day's pay. We must constantly produce, create more things instead of less, reduce overall costs per unit—justify high wages. The will to work can drive down costs and prices, drive up production which labor and management both need to stay prosperous.

We believe in the right of each man to work for greater opportunity. We believe in the individual's pride in his work and we believe in the importance of the individual's contribution to the task as a whole. We believe in a "two-way traffic" in ideas on how to do the job better. In four years, Ceco has had over 3200 suggestions from shop and office on how to improve product and service.

In all aspects of Ceco's work, we strive for meticulous attention to the little things, because we believe no product is better than the perfection of the smallest detail.

We like to sum it all up in an ideal which best describes the way Ceco and all of its people work in seeking production excellence . . .

"NO TASK IS TOO SMALL,
NONE TOO LARGE.
TO RECEIVE EXACTING CARE
IN ALL
ENGINEERING EXCELLENCE
IS THE CECO CREED."



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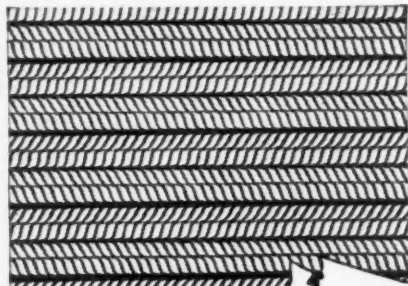
MASONITE CORPORATION
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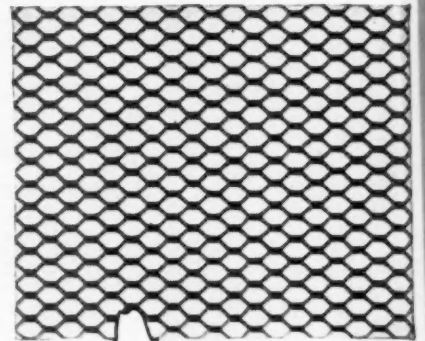
Herringbone Doublemesh Lath



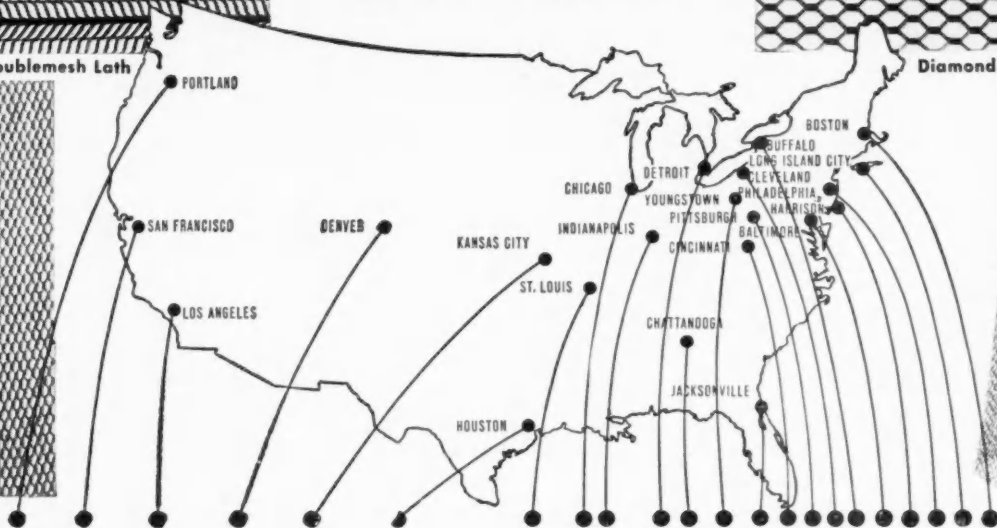
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**TRUSCON WAREHOUSES
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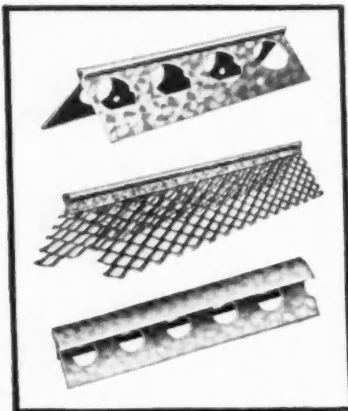


Diamond Lath



Cornerite

TRUSCON METAL LATH and ACCESSORIES



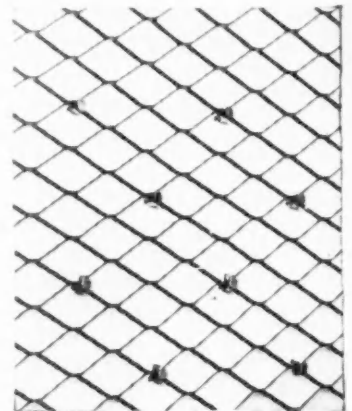
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Molds
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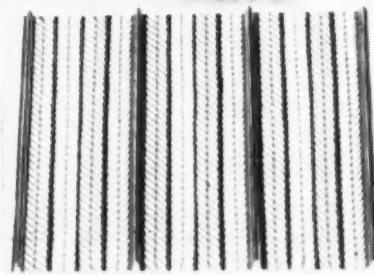
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All Truscon metal lath products are manufactured in accordance with U. S. Dept. of Commerce, Simplified Practice Recommendation R344.

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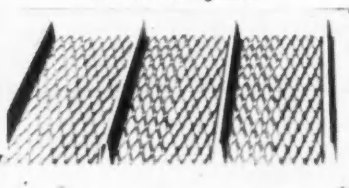


Stucco Mesh



3/8-in. Ribplex Lath

Self-Sentering Lath



**TRUSCON
STEEL COMPANY**

YOUNGSTOWN 1, OHIO

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Use Flintkote Thikbuts for re-roofing, remodeling or new construction. You'll find a bonus of Homeowners' satisfaction in every dollar's worth of their famous double feature value.

We'll be glad to give you complete information on any Flintkote Building Material. Write: THE FLINTKOTE COMPANY, Building Materials Div., 30 Rockefeller Plaza, New York 20, N. Y. Offices in Principal Cities.

FLINTKOTE MAKES A COMPLETE LINE OF BUILDING MATERIALS . . . Asbestos-Cement Shingles and Sidings • Asphalt Coatings • Asphalt Shingles and Sidings • Building Papers • Decorative Insulation Board • Fiberglas* Insulating Wool • Hot and Cold Built-Up Roofings • Insulated Sidings • Roll Roofings and Sidings • Structural Insulation Board. (*TM Reg. U. S. Pat. Off. Mfg. by Owens-Corning Fiberglas Corp.)



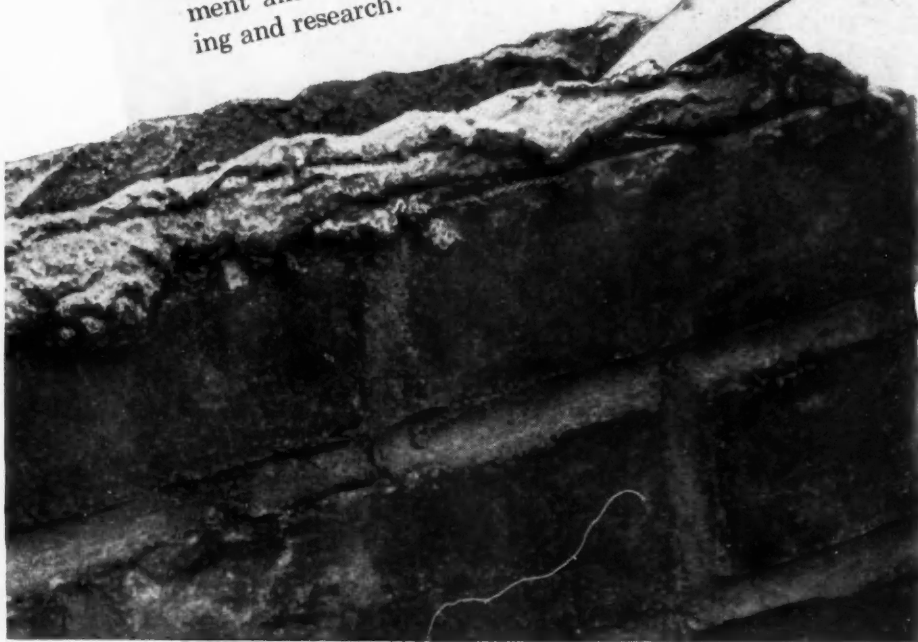
FLINTKOTE

the extra years of service at no cost!

"ATLAS MORTAR CEMENT has proved entirely satisfactory in every way. The masons like it. It not only carries sand well but is workable under the trowel, and we can put all our joints just where we want them. None of the joints show shrinkage marks."
 — Frank Crawford, Enid, Oklahoma

From all over the country, similar reports come in attesting to the advantages of Atlas Mortar Cement. Contractors and masons agree that it rates high—not just in some essentials, but in all desirable characteristics. They like the smooth, even way Atlas Mortar Cement handles, spreads and trowels. Its excellent plasticity helps them to produce a fast, workmanlike job.

Also, Atlas Mortar Cement rates high in yield, in water retention, durability, color, strength, and low volume change. It complies with Federal and ASTM specifications for masonry cement and is backed by years of testing and research.



Send for descriptive circular. Write to Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Bldg., New York 17, N. Y.

OFFICES: Albany • Birmingham • Boston
 Chicago • Dayton • Des Moines • Kansas
 City • Minneapolis • New York • Philadelphia • Pittsburgh • St. Louis • Waco

AB-MC-15

SKILLED HANDS PREFER

ATLAS MORTAR CEMENT

THE SATIN OF MASONRY CEMENTS



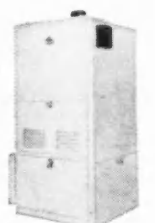
"THE THEATRE GUILD ON THE AIR" — Sponsored by U. S. Steel Subsidiaries — Sunday Evenings — ABC Network

Modern Building calls for

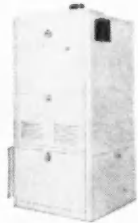
MODERN HEATING

and that calls for

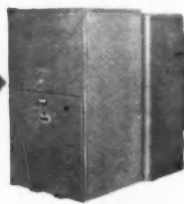
Coro-aire



Model 85-S-HB



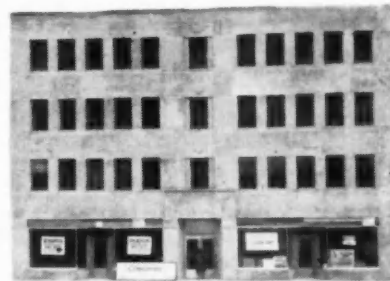
Model 70-S-HB



Model 85-D



Model 85-G



NEW IDEA IN INSTITUTIONAL HEATING

Individual suites in Cleveland's new Physicians and Surgeons Building are heated by Cor-o-aire — reducing maintenance costs for building management. Direct efficiency and individualized temperature control benefits the tenants. They have the plus advantages of Cor-o-aire's greater comfort and extreme low cost of operation.

HERE'S ADDED SALES APPEAL FOR YOUR NEW DWELLINGS

New home buyers are alert to new home comforts. That's why Cor-o-aire in all new dwellings you build—apartments or single residences—is a big factor in faster turn-over of new building. With every Cor-o-aire model you install, a spectacular sales story of modern heating *helps you sell*. You can provide automatic winter air conditioning units that assure lasting convenience, unparalleled modern performance to the user. People want more for their money. You gain profit and prestige.

AMAZING HEAT EXCHANGER

Homes are heated in severest climates for as little as \$5.50 per month by Cor-o-aire. There is nothing in the heating market to match the economy of these fine units. The patented cast iron, Cor-o-aire Venturi-Tube Heat Exchanger offers five times the usual heat radiating surface.

ECONOMY SALES FEATURE

Smart builders show customers how Cor-o-aire savings on heating bills can help make home payments. This economy is important in today's market. Don't pass up this added sales appeal—include Cor-o-aire in your plans. Don't let competition pass you by—be first to benefit from Cor-o-aire's aid to new home selling. For new ideas, tested use of Cor-o-aire, and the best paying proposition in heating, write today.

THE COR-O-AIRE HEATER CORPORATION

Cleveland 15, Ohio

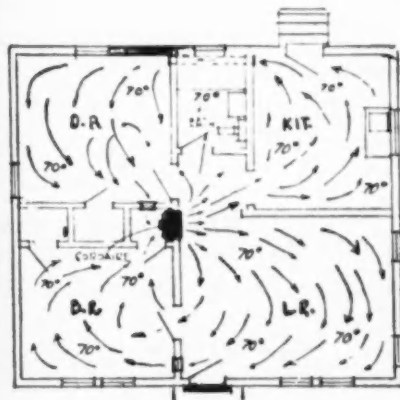


COR-O-AIRE



JUST RIGHT FOR TODAY'S POPULAR SIZE HOUSE

The efficiency, compact design and super economy is a natural for the home of today. Plan with Cor-o-aire and you've planned an added sales feature in the home you build.



WINTER WEATHER CREATES INCREASED DEMAND FOR COBURN #500 SWING-OVER HARDWARE SET



OTHER WICKWIRE SPENCER PRODUCTS FOR THE BUILDING INDUSTRY

CLINTON WELDED WIRE FABRIC—For every type of concrete reinforcement.

REALOCK FENCE—Chain Link Fence for industrial plants, institutions, residences.

CLINTON BRAND HARDWARE CLOTH—In standard meshes and widths.

PERFECTION DOOR SPRINGS—Unequaled for toughness, durability and resistance to rust.

WICKWIRE WIRE ROPE—In all sizes and constructions for every need.

Car owners with old-fashioned swinging garage doors, who have had to shovel snow before getting their cars out, are good prospects for the Coburn #500 Swing-Over Hardware Set. For with this set the old doors can easily be remodeled into smooth operating overhead doors.

The Coburn #500 Set is adaptable to practically all types of garages. It doesn't interfere with usable floor space. Perfect counterbalance assures effortless operation. Coburn #500 is economical too, for even though it is high in quality, its cost is in the lowest price field.

Write today for catalog showing full line of hardware for garage and barn sliding doors. Other Coburn Products include fire door hardware, overhead trolleys and conveying systems for carrying loads up to 3,000 lbs.

WICKWIRE SPENCER STEEL
A DIVISION OF
AMERICAN WIRE FABRICS CORPORATION
A SUBSIDIARY OF



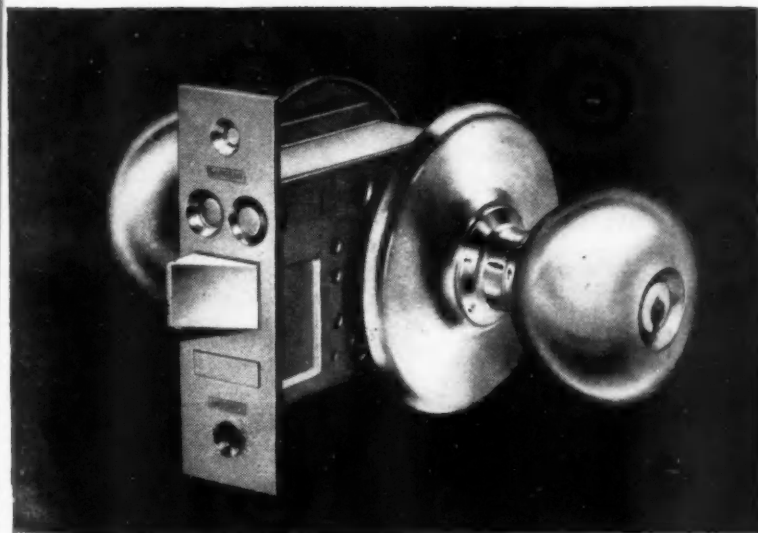
500 FIFTH AVENUE • NEW YORK 18, N. Y.

Boston • Buffalo • Chicago • Denver • Ft. Worth • Philadelphia • Pacific Coast Subsidiary—The California Wire Cloth Corp., Oakland 6, Cal.

Quality costs less

now

Now you can put a LUXURY lock in every home at a price so modest your customers won't believe it possible. This is the same type of sturdy, durable lock formerly used only in the most expensive public buildings and offices...



INTEGRA/LOCK
PRECISION BUILD

A cylinder lock of the finest quality

By applying streamlined production to modern engineering design, the Sargent IntegraLock can now be sold at a price well in line with the price of the usual

front door handle set. The IntegraLock is a far better lock—has a harmonizing beauty of design, new conveniences in use and greater security. Write for catalog pages and descriptive folders for your customers.

Sargent & Company

New Haven New York Chicago

the sign of a good home

AMERICAN-Standard

FIRST IN HEATING...

FIRST IN PLUMBING



INSTALLED HERE

AMERICAN-Standard

First in heating ... first in plumbing

... and here's why it will pay you to feature these quality products

■ An American-Standard "INSTALLED HERE" sign prominently posted on the job tells everyone who passes that you're a stickler for quality . . . that only the *best* is good enough for the homes you build or remodel.

When you choose American-Standard Heating Equipment and Plumbing Fixtures for the buildings you're constructing you have the widest range of styles, types and sizes to select from. And you can be sure of unvarying quality—whether the installation is for a single or a multiple unit project.

For full information about the complete line, contact your Heating and Plumbing Contractor. **American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pennsylvania.**

NATIONALLY ADVERTISED

American-Standard Heating Equipment and Plumbing Fixtures are backed by an extensive advertising and merchandising program. Full-color, full-page ads in leading national consumer magazines and hard-hitting pages in important institutional and trade journals carry the story of American-Standard to millions.



WIDE ACCEPTANCE

More American homes have heating and plumbing by American-Standard than by any other single company.

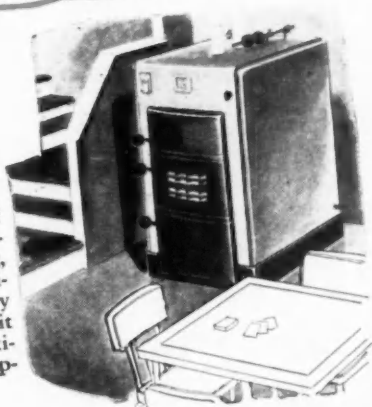


QUALITY PLUMBING

Every product in the long American-Standard line of plumbing fixtures is designed and constructed for beauty, serviceability and durability. American-Standard quality is recognized as second to none!

FINEST HEATING

American-Standard Heating Equipment covers every type of heating—radiator heating, warm air heating, and winter air conditioning—and for every kind of fuel. Each unit is engineered for maximum efficiency and operating economy.

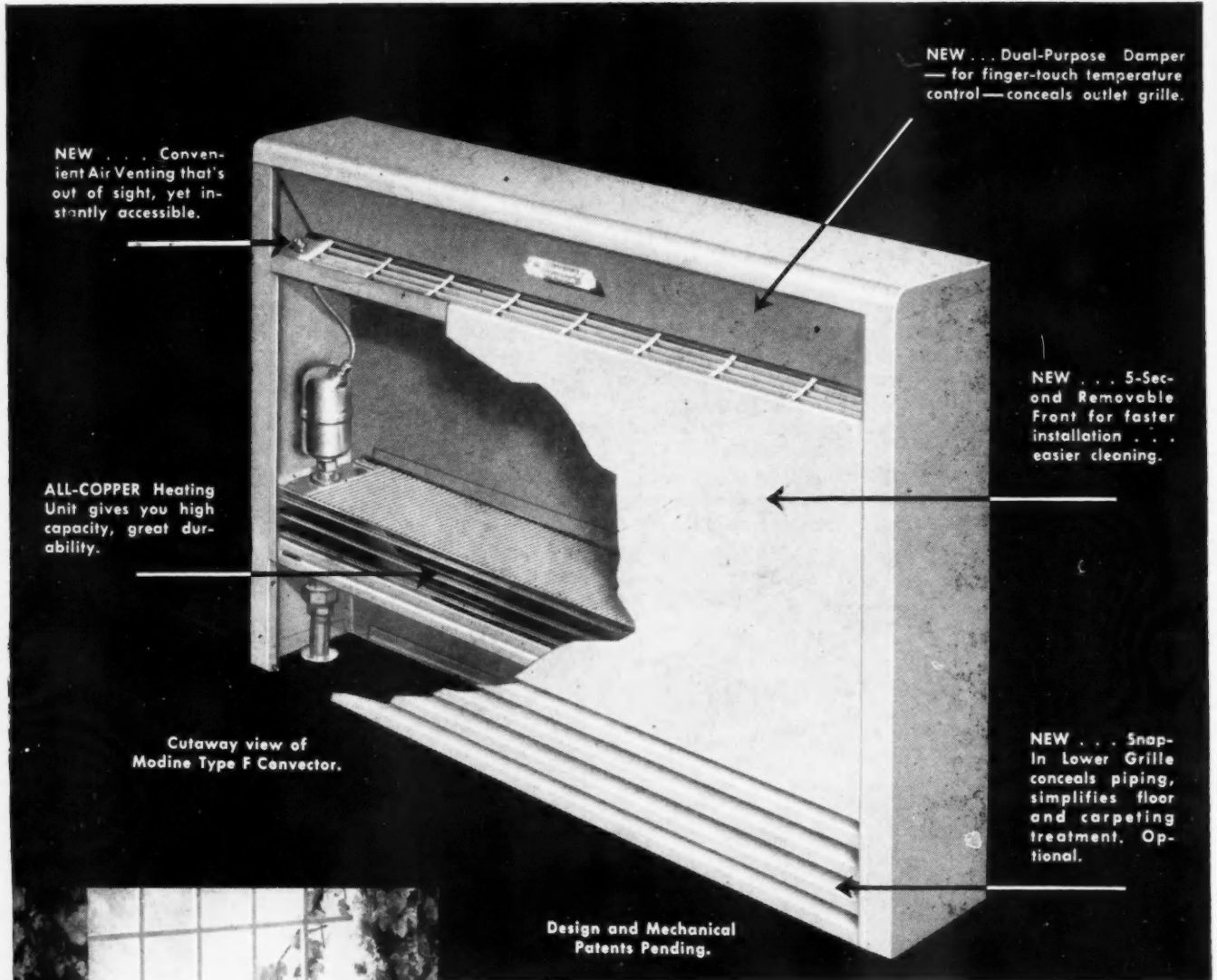


Look for this Mark of Merit

Serving home and industry

AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TONAWANDA IRON

NEW Features meet REAL Beauty in the NEW *Modine* CONVECTOR



NEW . . . Convenient Air Venting that's out of sight, yet instantly accessible.

NEW . . . Dual-Purpose Damper — for finger-touch temperature control—conceals outlet grille.

ALL-COPPER Heating Unit gives you high capacity, great durability.

NEW . . . 5-Second Removable Front for faster installation . . . easier cleaning.

Cutaway view of Modine Type F Convector.

NEW . . . Snap-In Lower Grille conceals piping, simplifies floor and carpeting treatment. Optional.

Design and Mechanical Patents Pending.



EXCLUSIVE New Features Simplify Installation Increase Operating Convenience . . . Add to Appearance

Biggest news in convector radiation history—that's the new Modine Convector. Its entirely-new installation, control and maintenance features make it the *better* way to heat the modern apartment, new home, school, office or hospital. Choose from four types, many sizes, for one- and two-pipe steam and hot water systems. For the full story, call your Modine Representative. He's listed in the "Where-to-Buy-it" section of your phone book. Or write direct. Modine Manufacturing Company, 1501 Dekoven Avenue, Racine, Wisconsin.

Functionally styled, the new Modine Type F Convector (shown at right fully recessed) adds beauty to rooms, eliminates recessing problems common to conventional convectors. What's more, it's ideal for free-standing installation, too.

Modine CONVECTORS



KEEP OWNERS SOLD ON YOUR HOUSES

by installing

American KITCHENS

Complete with this Amazing New **DISPOSER**



Now—a disposer that won't jam! Patented knee-action pulverizer arms pivot in center... making jamming impossible!

Close-up of pulverizer arms, showing simplicity of design. Sawtooth hammers grind fast and thoroughly!



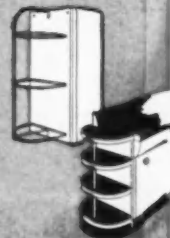
Heavy ribbed construction, motor overload protector and permanently sealed bearings assure lifetime, trouble-free operation.

New American Kitchens ventilator. Mounts directly above range, regardless of range location.



New American Kitchens Serv-Cart. Fits under counter when not in use. Removable tray top.

Deluxe What-Not shelves give smart finish to ends of runs of base and wall cabinets.



AT LAST! A PERFECTED GARBAGE DISPOSER TO GIVE YOUR HOUSES THAT FINAL "DE LUXE" TOUCH THAT "WINS THEM OVER!"

Give the owners of your houses an extra their neighbors don't have—a new American Kitchens Disposer—and they'll praise you all over town as the most progressive man in your line!

Yes, women who own American Kitchens Disposers *talk* about them—rave about how wonderful they are! Because this amazing *new* type of disposer quickly liquefies even hardest bones... and positively can't jam nor

clog—even if metal is dropped in—thanks to the center pivot of the patented knee-action pulverizer arms!

The new American Kitchens Disposer is safe, odorless, sanitary—competitively priced, easy to install, easy to service. See it at your nearest American Kitchens dealer or distributor.

FREE! Architects-Builders File... gives blueprints of outstanding kitchen treatments, equipment specifications, etc. Ask your nearest American Kitchens supplier. If you don't know his name, write us today.

YOUR EYES WILL POP AT THE BUILDERS SHOW!

You'll see the greatest merchandising display ever produced when you visit the February Chicago Show. It's really *amazing!* So be sure to visit Booth Number 184 on the mezzanine at the Stevens Hotel and see it in action!

AMERICAN CENTRAL

Division—AVCO Manufacturing Corporation
Connersville, Ind.



MacKie and Kamrath, architects, Houston, Texas

TELEPHONE RACEWAYS IN THE MODERN MANOR

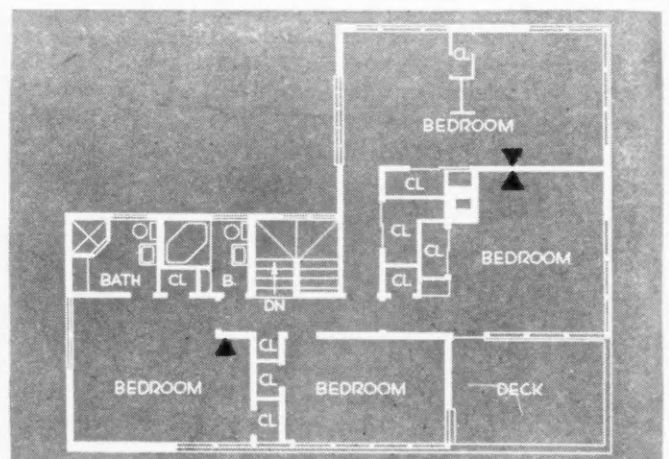
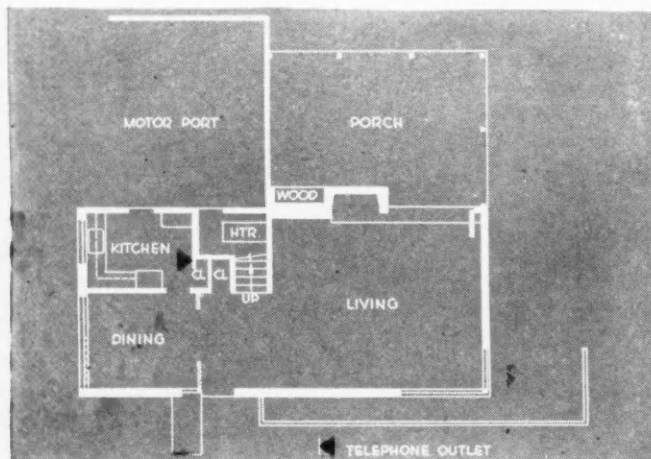
Today good building practice calls for built-in telephone raceways. They assure the owner against exposed telephone wires on walls and woodwork. They provide him with *planned* telephone facilities.

Raceways are easy and inexpensive to install during construction. A few short pieces of pipe or tubing will carry the wires within

the walls to neat, built-in telephone outlets.

For homes of any size, your Bell Telephone Company will be glad to help you plan modern convenient telephone arrangements. Call your Telephone Business Office and ask for "Architects and Builders Service."

BELL TELEPHONE SYSTEM



CLIPPER MASONRY SAWS *Speed Production* WORK LIKE MAGIC ON EVERY JOB!

The hardest masonry materials sliced in two quickly and easily. Users everywhere acclaim Savings.

YES, the Value of Clipper is proven daily throughout the country. Whether your job is large or small makes no difference. You'll find Clippers just as Efficient on Skyscraper Jobs as when cutting Brick and Marble for Fireplace Trim. Clipper's excel in Simplicity, Flexibility, and Portability.



Here's the 1949 Model "HD" Clipper (cuts wet or dry!) with "Adjust-A-Cut" Control. You'll be amazed when you see it perform. Straight cuts, angles, notches so fast and easy. Yes, this new Clipper has many advanced features together with those which Clipper originated to make efficient masonry cutting possible.

What's the Clipper Cutting Principle?



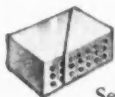
Why Strain?



You Can Zip Thru

Ever try to tear a telephone book in two? The full thickness is a real strain, but when you take a series of easy to handle sections—you can zip thru. That's the story behind the original Clipper Cutting Principle. Less arc of contact means faster cutting action.

You Can Cut ANY Masonry Material



Glazed Brick Tile
cut in 19 Seconds

Sewer Pipe
cut in 14 seconds



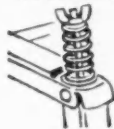
Concrete Blocks
cut in 21 Seconds

Natural Stone
cut in 11 Seconds



Glass Blocks
cut in 8 Seconds

Clipper Automatic Pressure Control



Here's a Patented Clipper feature that's no secret. Users everywhere know it's smooth, automatic action that speeds cuts and makes possible Clipper's guarantee of Longer Blade Life.

Clipper Snap-on Blade Cover

It let's you cut wet without getting wet. An outstanding Clipper safety feature for both Wet and Dry cutting.



Nine Clipper Models to select from . . . Priced from \$195 Clipper Masonry Saws are sold direct from Clipper Factory Branches conveniently located from COAST to COAST to serve you.

Write for literature . . . Today!

When you think of
MASONRY CUTTING . . .
Remember **Clipper**
---And when you think of
CLIPPER MASONRY SAWS
Remember "Every Clipper for
more than 10 YEARS has been
Shipped on *FREE TRIAL*"

* CLIPPER GUARANTEES
To provide the Fastest
Cuts—at the Lowest Cost
—with the Greatest Ease
Anytime -- Anywhere

THE CLIPPER MANUFACTURING CO.
2800 WARWICK • KANSAS CITY, MO.
Factory Branches
PHILADELPHIA ST. LOUIS CLEVELAND AUSTIN, TEX. SAN FRANCISCO

NEW SURVEY SHOWS . . .

BUILDERS AND CONTRACTORS LIKE

KeymeshREINFORCING FOR STUCCO
AND OVERCOATINGFor these **GOOD CONSTRUCTION** reasons—

● Builders and Contractors interviewed from coast to coast agree that Keymesh reinforcing for stucco and overcoating insures better stucco construction—stronger, more durable walls. They like the open mesh design of Keymesh, a design that permits deep embedment of each steel wire in the "scratch" coat of stucco. They place a high value on the fact that Keymesh is galvanized for lasting rust-resistance, and believe that Keymesh gives a better "key", a better bond and stronger reinforcement.

The same survey also shows a strong trend toward the use of more stucco

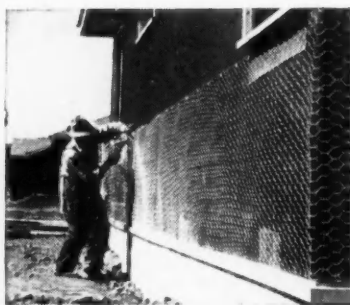
Builders appreciate modern methods of construction, using steel-reinforced Portland Cement, to insure permanent crack-resistance. They report that more of their customers ask for stucco; that architects are specifying it more often. And, home owners are favorable toward stucco, particularly

those now living in stucco homes and planning to build. They like stucco's beauty and low maintenance cost.

**Try KEYMESH Reinforcing
On Your Next Stucco Job**

For new homes or remodeling, stucco offers the practical answer to beauty, strength, economy and ease of maintenance. Reinforce your next stucco job with Keymesh—your lathers and plasterers will like Keymesh—and you will find that it speeds construction, helps to reduce your costs. Keymesh is available for immediate delivery through your dealer.

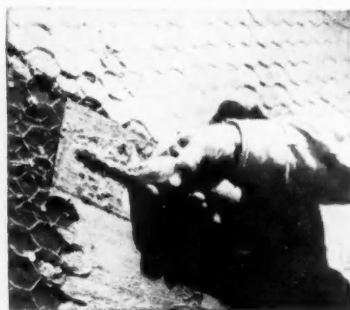
● Keymesh is shipped in rolls 150' long by 3' wide. For stucco and overcoating, use Keymesh 1½" hexagon mesh, 17-gauge steel wire, or 1" hexagon mesh, 18-gauge steel wire. Both are galvanized.



Lathers like Keymesh because it's easy to handle, unrolls flat and remains flat—no bumps or bulges. Keymesh forms well around corners and its smooth surface doesn't cut hands.

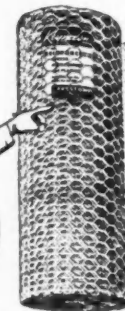


Actual wall sample shows why Keymesh insures stronger stucco. The open mesh design is the right size for easy troweling and the right size for good holding power. Keymesh furring nails firmly position each steel wire deep in the scratch coat. Note how Keymesh is deeply embedded.



Plasterers like Keymesh because the surface is smooth to the trowel in any direction. Keeps its proper distance from the backing, insuring a "true" wall of even thickness.

KEYMESH
HAS BEEN USED
ON THOUSANDS OF
HOMES SO FAR
THIS YEAR



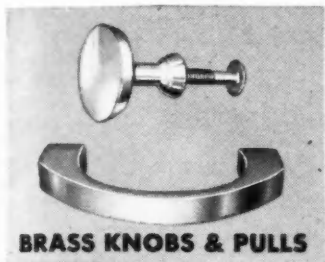
KEYSTONE STEEL & WIRE COMPANY

PEORIA 7, ILLINOIS

From **STANLEY** comes not one but

a parade of new items

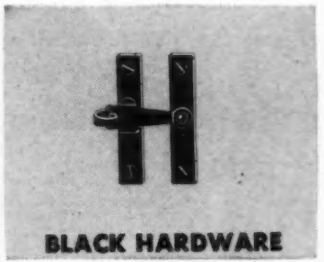
... to make homes **EASIER TO SELL**



BRASS KNOBS & PULLS



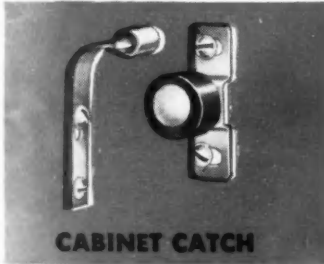
CABINET HINGES



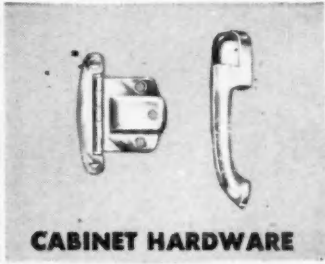
BLACK HARDWARE



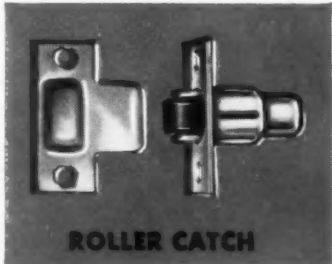
SWING-UP DOORS



CABINET CATCH



CABINET HARDWARE



ROLLER CATCH



ELBOW CATCH



CLICK-LOCK HASP



SURFACE BOLTS



DOOR HOLDER



CONTINUOUS HINGES

You can almost see the admiring, *approving* nods of clients now, as this parade of new Stanley items passes in review. Think of it—a *dozen* new ways for you to add to the beauty and sales appeal of the homes you build!

Yes, you can specify this new Stanley Hardware with confidence that it has public acceptance. Here is the simplicity and richness of design home-owners want, *plus* the craftsmanship that has made Stanley the greatest name in hardware.

Include these new goods in your building plans for the New Year. Every item, you'll find, makes a hit with home owners, and makes it easier to close the sale. Ask your Stanley dealer for details. The Stanley Works, New Britain, Conn.



Reg. U.S. Pat. Off.

**HARDWARE • HAND TOOLS
ELECTRIC TOOLS • STEEL STRAPPING**

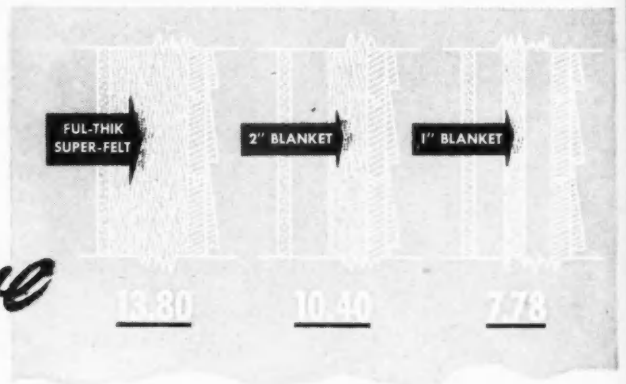


It's "quality built" when you insulate
with Johns-Manville **SUPER-FELT***



Full-wall thickness

J-M Super-Felt Batts fill hollow walls *to capacity* . . . provide maximum insulation . . . no "flue-like" spaces to create a fire hazard. In the attic too, full thickness gives *extra* protection against summer heat, increases fuel savings in winter.



Far more effective

The figures under the above diagrams represent the total resistance to the passage of heat through frame walls insulated in three different ways. Note that the wall with Full-Thick Super-Felt has far more heat resistance than either of the others. This means greater fuel savings to your customers and more year-round comfort.



Costs no more to apply

Installation costs are the same whether you install inadequate insulation or the best. You can easily cut Super-Felt Batts with an ordinary knife to fit snugly around corners, firestops, braces, windows, etc., resulting in a better and more efficient job.

An attractive plaque is available for display in your houses when insulated with J-M Super-Felt. It helps identify you as a quality builder. For details write: Johns-Manville, Box 290, New York 16, N. Y.

*Reg. U. S. Pat. Off.



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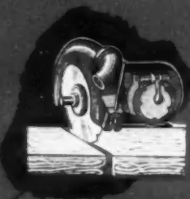
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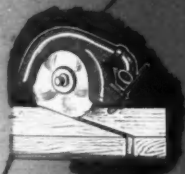
Take this low-cost

Portable Saw-Shop

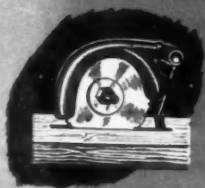
to your job!



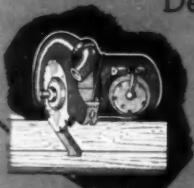
It's a CUT-OFF saw!



It's a MITER saw!



It's a RIP saw!



It's a DADO machine!



It's a ROUTER!



It's a VARIETY saw!



It's a SHAPER!

This ever-popular, low-cost DeWalt is easy to carry from job to job. When you put it to work you actually have a "saw-shop" on the job, because every time you change the cutting tool, you have *another* machine!

To build more and better houses faster—builders use this portable, low-cost DeWalt. Because most of its working parts are now of light-weight, heat-treated aluminum, operators find it easier to handle—safer than ever before—and it does the fast, accurate work they want. It's a machine you can get quickly. Write for catalog. DeWalt, Inc., 11 Fountain Avenue, Lancaster, Penna.

ALL THESE AND MORE
IN ONE . . . and for
THE PRICE OF ONE!

DEWALT

THE SAW THAT'S FIRST WITH BUILDERS

VILLE
M
TS

YESTERDAY...AND TODAY...

Silence and long life sell

"BACK IN NOVEMBER 1937 we installed 45 Servel Gas Refrigerators . . . and they are still giving our tenants noiseless, dependable service . . . at continued low cost, too."

PETERSON-HALVORSEN
Managers of 3521-29½ Broadway
Chicago, Illinois.

"FOR OUR NEW 24-APARTMENT BUILDING we chose Servel. After observing refrigerator performance for the past ten years, we decided that trouble-free service was the feature we desired most."

LARSEN & BLIX
Managers of 2626-32 West Gregory St.
Chicago, Illinois



"AFTER 15 YEARS OF EXCELLENT SERVICE, my tenants thank me, and I thank Servel for the Gas Refrigerator's low-cost operation and year-after-year dependability."

BASIL GAVIN, Treasurer
Boston Management Corp.
137-143 Park Drive
Boston, Mass.

"OUR NEW GAS REFRIGERATORS—installed a short time ago—have already convinced me that Servel is my best refrigerator investment . . . by far!"

PAUL LIVOLI
Fairfield Gardens
Watertown, Mass.

II apartment owners on Servel



"WAY BACK IN 1933 we chose Servel for our 56-room apartment house. Thanks to that wise choice, our tenants have enjoyed 16 years of silent, dependable service . . . at very low cost."

JACOB BROMBERG
President of the 6930-62nd St. Corp.
Ridgewood, Long Island, New York



"JUST ABOUT TWO YEARS AGO we installed 89 new Servels. What sold me on the Gas Refrigerator? Why, no noise, no wear, low operating cost, and longer life, of course."

MORRIS LAINOFF
Agent for Kings Tower Realty Co.
1525 E. 26th Street, Brooklyn, N. Y.

Noiseless, dependable operation year after year is the reason for the Gas Refrigerator's steady rise in preference

Down through the years, the Servel Gas Refrigerator has been a favorite with apartment owners. From experience they have learned that tenants welcome the silent refrigeration that *only* Servel can give.

Tenants also appreciate the Gas Refrigerator's dependable "always on the job" service. They don't have to worry about mechanical breakdowns which can cause costly food spoilage and annoying interruptions to their daily living routines. And, of course, apartment families are enthusiastic over Servel's many modern conveniences, including the spacious frozen food compartment . . . roomy moist cold, dry cold sections . . . and the over-all big, flexible interior.

Low Operating Cost . . . Lowest Upkeep

Even after many years of faithful service, Servel operating costs remain remarkably low. You'll also find that repair and replacement bills stay at the minimum. The Gas Refrigerator does not lose efficiency with age because it has no moving parts in its freezing system. There's not a single piston, pump, valve, or compressor to break down, wear out, or get noisy. Only a tiny, silent gas flame is needed to circulate the refrigerant through Servel's different, modern operating system.

See your Sweet's Catalog for full information on the Servel Gas Refrigerator . . . or write to Servel, Inc., Evansville 20, Indiana.



Servel
The GAS Refrigerator



Handsome glass block panel serves dual purpose of protecting privacy while blocking out a view that may be unsightly.

Hide unwelcome views with Insulux Glass Block

WHEN a side exposure faces a house close by—especially an unattractive house or a blank wall—consider the advantages of Insulux Glass Block.

Panels of glass block hide unwelcome views, as shown above.

Plenty of daylight is admitted by glass block. At the same time, privacy is protected.

Heating costs are lowered, because glass block has high insulating value in winter (about the same as an 8-inch brick wall).

Get all the facts about Insulux, plus many valuable application suggestions, by sending coupon today.

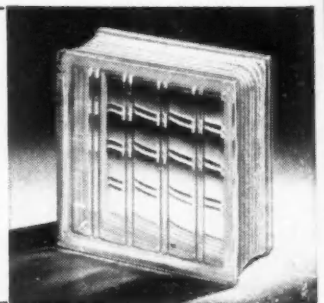
**Visit us at Booth 145, Builders
Show in Chicago, Feb. 20-24.**

INSULUX

GLASS BLOCK ©

**AMERICAN STRUCTURAL PRODUCTS
COMPANY**

Subsidiary of
OWENS-ILLINOIS GLASS COMPANY



Send coupon today

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I understand there is no obligation.

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Lifetime Lubrication Prevents "Freezing"

Jack screw cannot "freeze". Liberally coated with Rust-Ban non-hardening grease assures free adjustment always. Grease is applied on inside of post where it remains free of dust and will not rub off.



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Protected Inside and Out

All parts, except free-turning jack screw, are chemically cleaned and painted with a tight, rubber-base, hard-surface, gray paint—both inside and out.

Every Tel-O-Post bears the Brainard product label. Be sure you are getting genuine Tel-O-Post—look for the label.



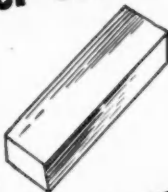
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Special construction at base of jack screw prevents possibility of failure due to complete unwinding of screw. Jack, completely extended, will support 22,000 pounds—safely carry 12,500 pounds. Facts supported by research program carried on by a prominent University.



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SHARONSTEEL

NOTE: Quick shipment of as many posts as you require is assured because Brainard controls Tel-O-Post from basic ore to finished product. Write today for full particulars.

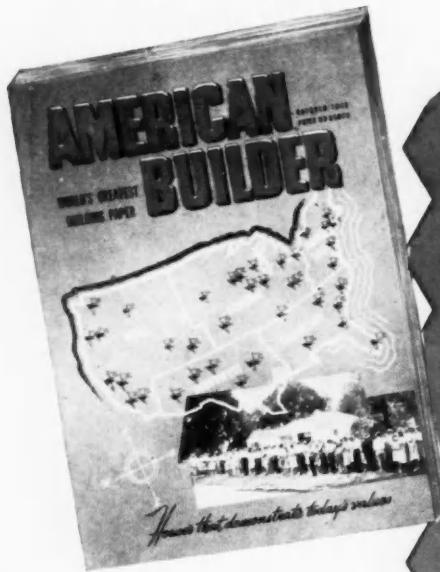
NEW Steel Strong Posts



High strength ductile STEEL STRONG POSTS for residential, commercial, and industrial building application, available from stock. STEEL STRONG POSTS are furnished in standard lengths of 3½ and 4-inch diameters, painted inside and out to prevent rust and corrosion. STEEL STRONG POSTS are sold as complete units including cap and base plates for I-beam fastening.

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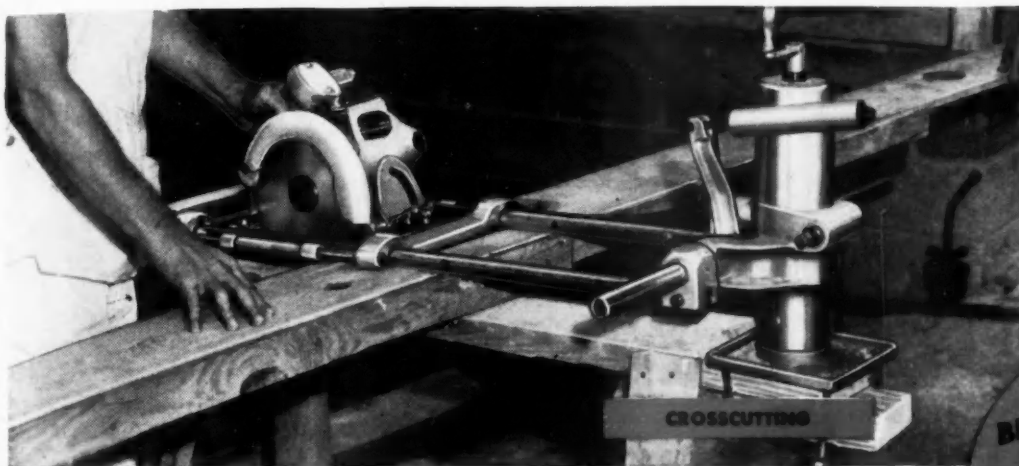
- Builders and Contractors specializing in Residential or Light Commercial or Light Industrial Building.
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Type of Business



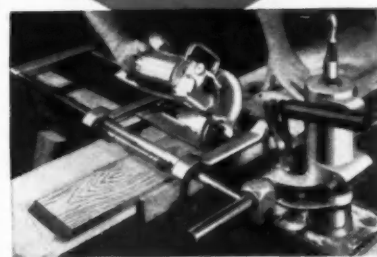
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"Quick-Saw"™
ARM \$148⁰⁰
(NOT INCLUDING SAW)

NEW "Quick-Saw"™ ARM

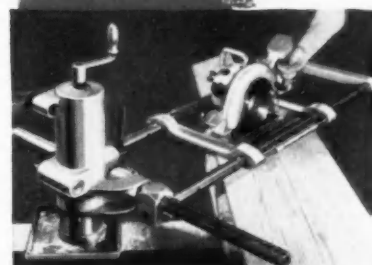
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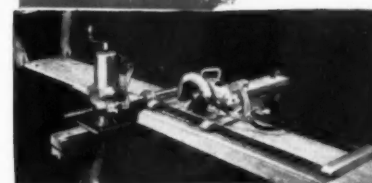
All three Black & Decker Electric Quick-Saws (and most other portable electric saws) fit into the adjustable carriage of the Quick-Saw Arm in a jiffy. Entire unit clamps to saw horse or mounts on table. All adjustments quickly regulated on the column. And, however you use them, Black & Decker Quick-Saws beat hand sawing 10 to 1—in wood, metal, stone or composition sawing—with maximum safety. Ask your nearby Black & Decker Distributor for complete details. Write today for free catalog to: The Black & Decker Mfg. Co., 666 Pennsylvania Ave., Towson 4, Maryland.



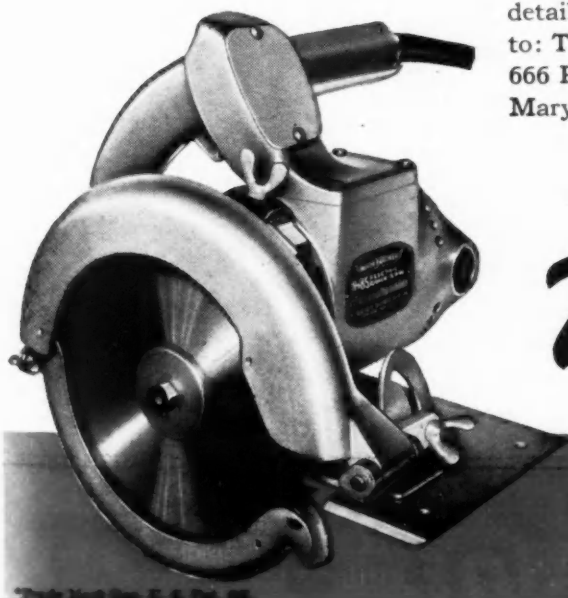
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 Cuts up to 2-1/8" depth
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This Symbol

is your guide to woodwork, finish and mouldings of quality you can depend on to protect your workmanship. Arkansas Soft Pine Satin-like Interior Trim facilitates installation with extra soft texture for easy working, and tough fiber that nails without splitting. Satin-like to the eye and touch, it is free from pitch, absorbing priming coats uniformly to become integral with the wood fiber. Finishing coats of enamel, paint or stain retain their smooth surface, tone and shade for years, free from raised grain or discoloration.

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Trademarked Arkansas Soft Pine is produced exclusively by big, modern mills. It is well manufactured to standard sizes, scientifically kiln dried and seasoned to specified moisture content. Available to you at local lumber dealers and planing mills east of the Rockies. For complete information, data and how to specify, write for your copy of this useful handbook.



Arkansas Soft Pine Satin-like Interior Trim is produced in standard lineal and packaged sets.

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It's the finest finish ever given hardwood floors

MORE BEAUTY . . . GREATER WEAR RESISTANCE . . . EASIER MAINTENANCE



• The homes you build can now have hardwood floors with an amazing finish that's more beautiful, longer-lasting, easier to maintain. Research laboratories of E. L. Bruce Co. have developed this completely new factory finish that's even better than the already famous Bruce "Scratch-Test" finish. It's a penetrating finish that outwears surface finishes many times over. This improved finish is produced by a new process with costlier materials. It can't be duplicated by on-the-job methods. You get it only on the new Bruce Finished Flooring . . . now used by leading builders.

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You save in many ways when you use Bruce Finished Flooring, completely sanded, finished and waxed at the factory. No costly, time-consuming sanding or finishing on the job! No delays due to bad weather that slows up drying of finishes! No interference with other interior work!

Builders throughout the nation say that by using Bruce Finished Flooring they save up to \$100 and at least 3 working days on every home they build. Ask your lumber dealer to show you how this modern hardwood flooring can save you time and money. Or write E. L. Bruce Co., Memphis, Tenn.



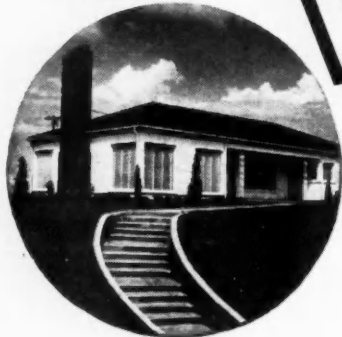
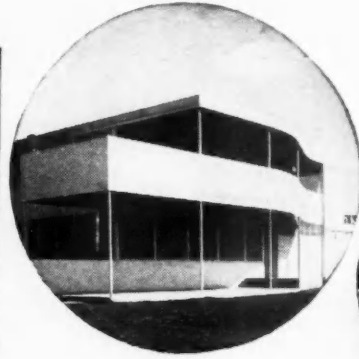
BRUCE *Finished* FLOORS

With the new improved 1949 Finish

Product of E. L. Bruce Co., Memphis, Tenn., World's Largest Maker of Hardwood Floors

Bruce Also Makes Block Flooring, Strip Flooring, Random-width Planks, Hardwood Moulding and Trim, Pine and Hardwood Lumber, Furniture Parts, Ceda'line Closet Lining, Everbond X Mastic, Terminix, Floor Care Products.

EXTERIOR-TYPE
 Douglas Fir Plywood
PLYSHIELD®
 GRADE A-C
 D.F.P.A. INSPECTED
EXT-DFPA



A NEW NAME IN PLYWOOD

... this grade-trademark
 now identifies the most versatile single grade
 of Exterior-Type
DOUGLAS FIR PLYWOOD

**Other Grades of Exterior-Type
 Douglas Fir Plywood**

EXT-DFPA-A-A
 (Sound 2 Sides Exterior)

EXT-DFPA-A-B
 (Sound 1 Side, Solid Back
 Exterior)

EXT-DFPA-UTILITY-B-C
 (Solid 1 Side Exterior)

EXT-DFPA-SHEATHING-C-C
 (Exterior Sheathing)

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PLYSHIELD is the new grade name for the outdoor type plywood panel formerly known as Sound 1 Side Exterior-type (So1S-EXT-DFPA). It has a face of "A" veneer, a back of "C" veneer, and is bonded with completely waterproof resin adhesive.

Versatile? Indeed! PlyShield has a long record of outstanding performance as a preferred material for the exterior siding of homes, garages, stores, warehouses, and commercial and industrial buildings of all kinds. PlyShield is used to great advantage to complement other building materials too—for gable ends, entrance treatments, dormers and bays; for soffits, porch and breezeway ceilings.

PlyShield is a time-tested product with a new, easily identified grade-trademark . . . now manufactured under the more rigid quality requirements of the new U. S. Commercial Standard CS45-48.

If you do not yet have your free copy of the new CS45-48 booklet—which contains complete data on new Douglas fir plywood grades and grademarks—write today to Douglas Fir Plywood Association, Tacoma 2, Washington.

**Grades of
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(A-D or Sound 1 Side Interior) . . . for inside applications requiring one face of the highest appearance value.



(B-D or Solid 1 Side Interior) . . . a new grade, manufactured especially as a backing or base material—such as a base for linoleum or asphalt tile.



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INTERIOR-A-B-DFPA
 (Sound 1 Side, Solid Back)

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**Douglas Fir
 PLYWOOD**

Real Wood Panels

LARGE, LIGHT, STRONG

This
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"Pittsburgh's" factory-assembled door-frame



EASY TO SPECIFY

...EASY TO INSTALL

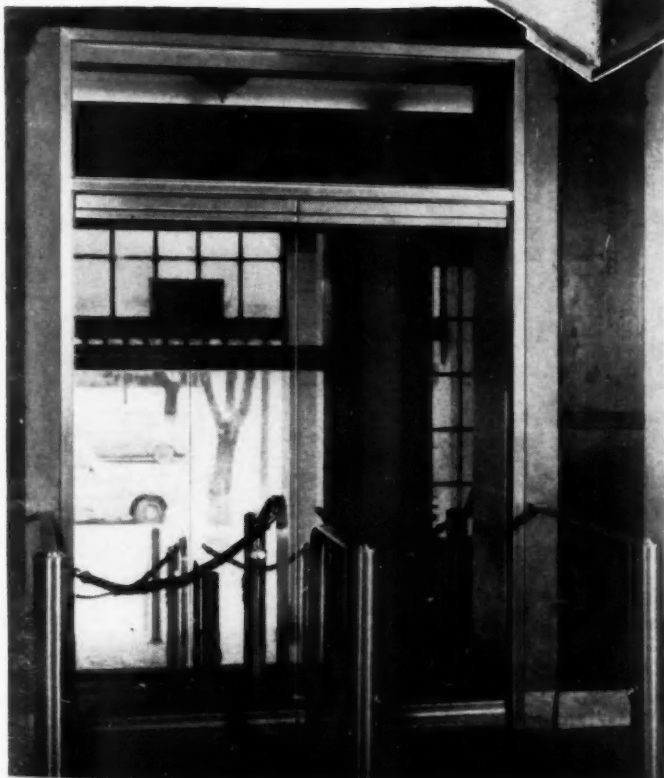
This door-frame assembly comes to the job complete in one case. It's another example of "Pittsburgh" research aimed at developing products and installation methods which will result in better jobs in the field.

HERE is an outstanding example of the results obtained by extensive "Pittsburgh" research, aimed at helping to solve architectural and building problems actually encountered in the field. This door-frame is factory-built of special shapes and of heavy extruded aluminum, reinforced with structural steel. And metal craftsmen fabricate it to high quality standards, using special checking gauges to assure accuracy of all dimensions.

In ordering this frame, all you do is specify: "Herculite Door-Frame Assembly" and give the style number and size. There are twelve standard designs available, permitting a variety of combinations.

Pittsburgh's Herculite Door-Frame Assemblies come complete with moldings for transom glass, supports for sidelights, strikes for locks, sockets for bolts . . . everything. No assembly is required on the job. No time-consuming calculations and other irksome details are involved. And they are supplied with the famous Pittco Checking Floor Hinge, a marvel of modern engineering. Only 6¼" x 6¼", this hinge has remarkable operating characteristics. It provides positive door speed control, a separate checking control, and a built-in hold-open feature.

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HERCULITE DOOR-FRAME ASSEMBLY

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CHEVROLET
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A special feature in one-ton and heavier duty models that assures new operating ease and efficiency.

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**SPLINED REAR AXLE
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Greater strength and durability in heavy-duty models with this exclusive Advance-Design feature.

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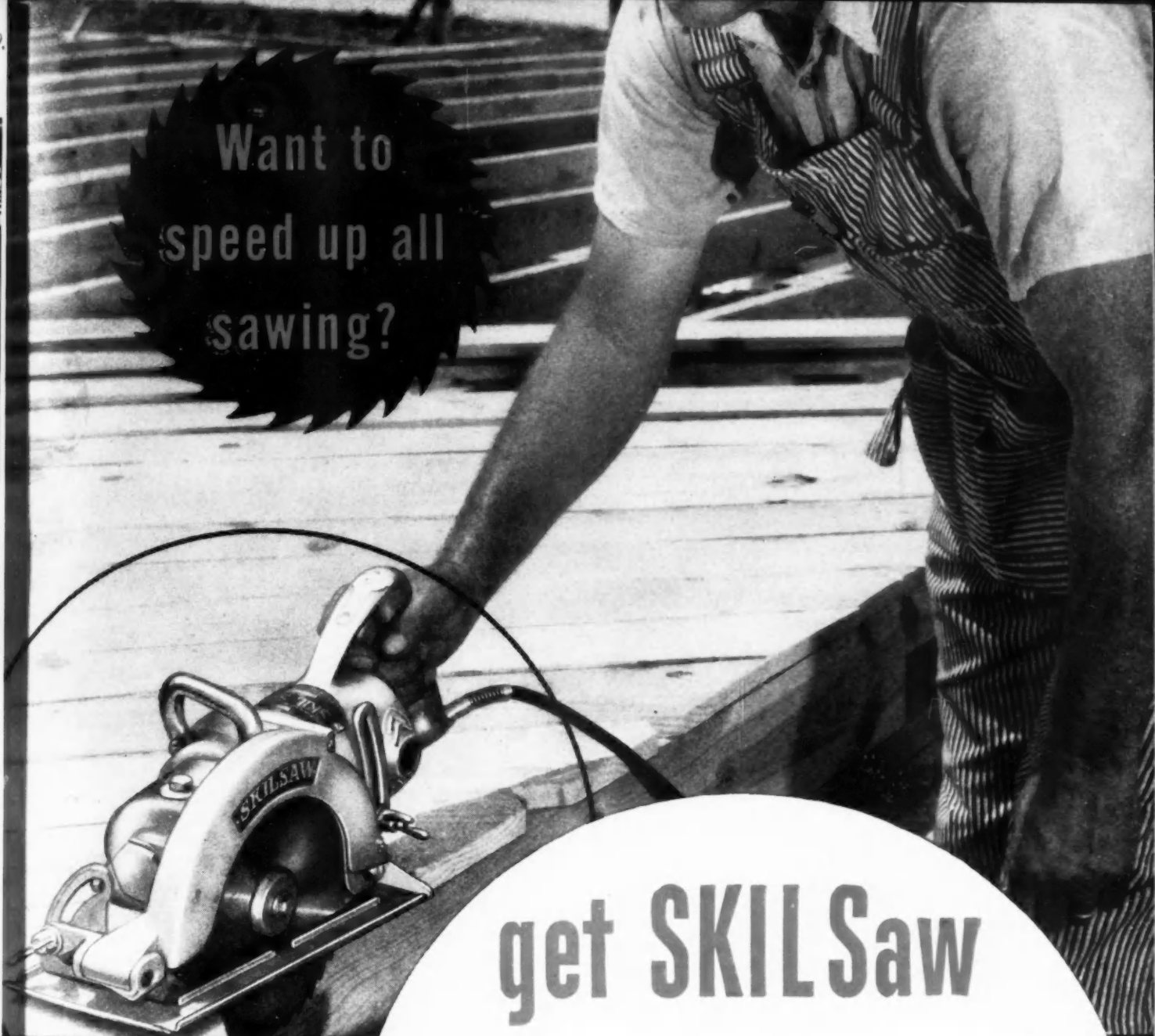
*Heating and ventilating system and rear corner windows with de luxe equipment optional at extra cost.

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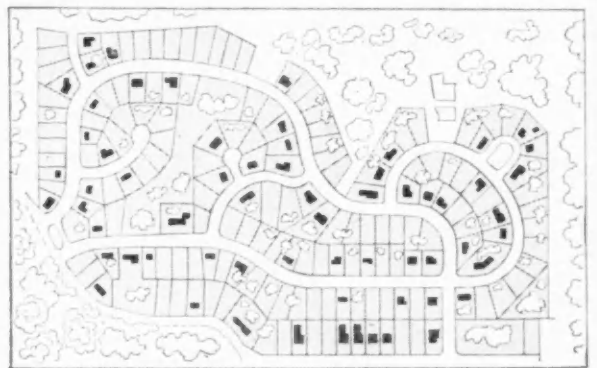


Distinction, harmony... variety... achieved with
ASPHALT SHINGLES and Limestone

In their Bedford Heights development, Indiana Limestone Company, Inc., under the guidance of W. W. Cordes, Architect, and F. W. Pressler, Associate, of Cincinnati, have combined the dignity and permanence of Limestone with the warmth, versatility and long life of Asphalt Shingles to achieve a community of individualized homes of unusual distinction. Through design and color the charm captured in the typical home above has been multiplied by all of Bedford Heights.

Throughout the United States, Asphalt Shingles are contributing their many unique advantages to the success of scores of outstanding modern community and industrial housing developments.

CONSTRUCTION'S BIGGEST DOLLAR'S WORTH



Its trees, hills, park and houses are for employees

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asphalt

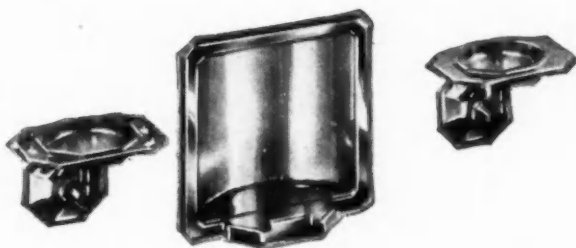
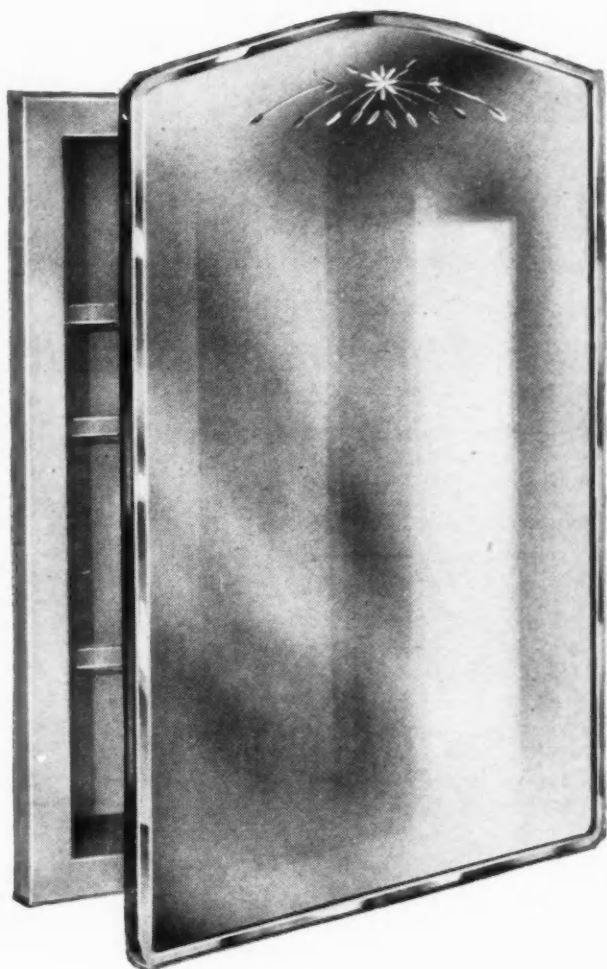
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Give 'em what they want! In medicine cabinets, they want *Gerity*, because of their perfect image *mirrors*—full length, chrome plated, piano-type *hinges*—one piece construction. So they sell!

WHAT WOMEN LIKE!



Brightly gleaming chrome
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All the screws concealed
Easy to keep shining

WHAT MEN LIKE!



Tougher, heavier chrome
Won't flake or wear off
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Self-centering backplate
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EYE-CATCHING DISPLAYS!

Write for complete catalog and price list.

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There are two stories to every house. One concerns the house itself...the other its owner.

If you know them both, you know your market.

A House & Garden reader's house points up important facts. The expert plan attests proud ownership...
the good construction tells of exacting specifications. The entire house reflects good taste...

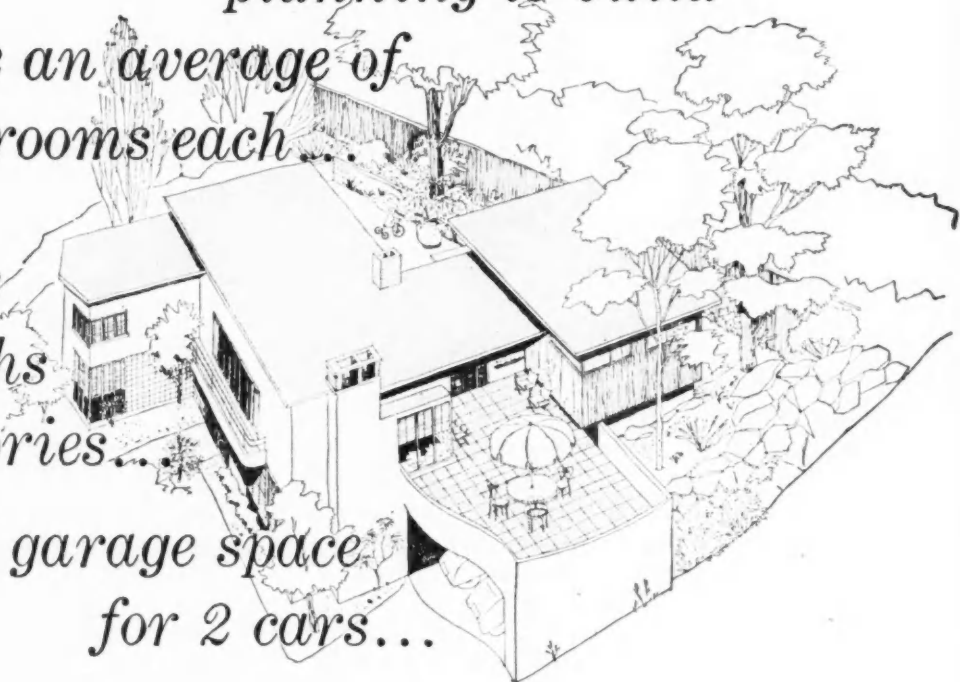
because the occupants have the power of final decision. They are owner-builders

who always insist on the finest—in blueprints, materials...equipment, installation.

Their standards and incomes are high...their influence invariably sets trends. Tell them your message first...

it's *their last word* that decides the selection of *your product*.

*House & Garden readers
planning to build
will have an average of
7.2 rooms each...
plus
2.8 baths
and lavatories...
and garage space
for 2 cars...*



House & Garden

© 1949 THE CONDÉ NAST PUBLICATIONS, INC.

...for the *Owner-Builder* market

6 PLUS VALUES

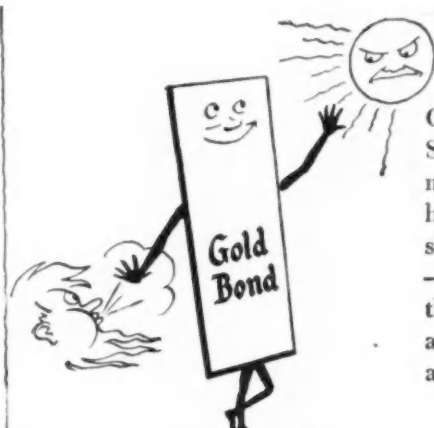
FOR YOU AND YOUR CUSTOMERS

WITH GOLD BOND FIBRE INSULATION SHEATHING



The big, sturdy panels of Gold Bond Insulation Sheathing...made from specially selected Southern pine...provide greater structural strength than the old method of applying narrow sheathing strips.

GREATER STRUCTURAL STRENGTH



Gold Bond Insulation Sheathing keeps summer heat *out*, furnace heat *in*! (Meets federal specifications LLL—F—321 b) And because there are fewer joints and no knot holes, walls are more wind-tight.

BETTER INSULATING QUALITIES



The big, lightweight panels are easily handled, each panel spanning the space between seven studs. They go up so fast that two men can sheathe an average small home in half a day.

SPEEDS APPLICATION



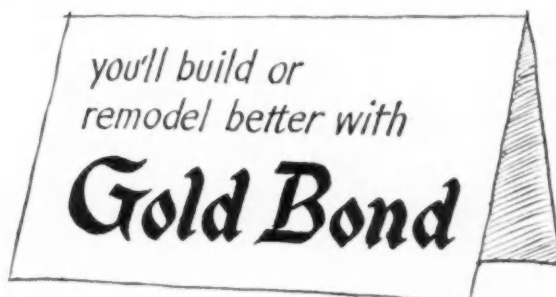
The tough fibres are rendered moisture-resistant by National's Multi-Seal process. Asphalt coated surfaces and edges provide immediate weather protection so that interior work can proceed.

EXTRA MOISTURE PROTECTION



No lap loss, no random lengths, means less waste . . . lower costs. 25/32 in. thick panels supplied in 2' x 8' size with ship-lap edges and 4' x 8' size with square edges. 1/2 in. thick panels 4' x 8' also available.

LOWER COSTS

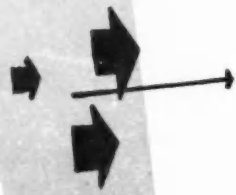


Made by NATIONAL GYPSUM COMPANY

Over 150 Better Gold Bond Building Products including gypsum lath, plaster, lime, wallboards, gypsum sheathing, rock wool insulation, metal lath products and partition systems, wall paint and acoustical materials.



**STRAN
STEEL
FRAMING**

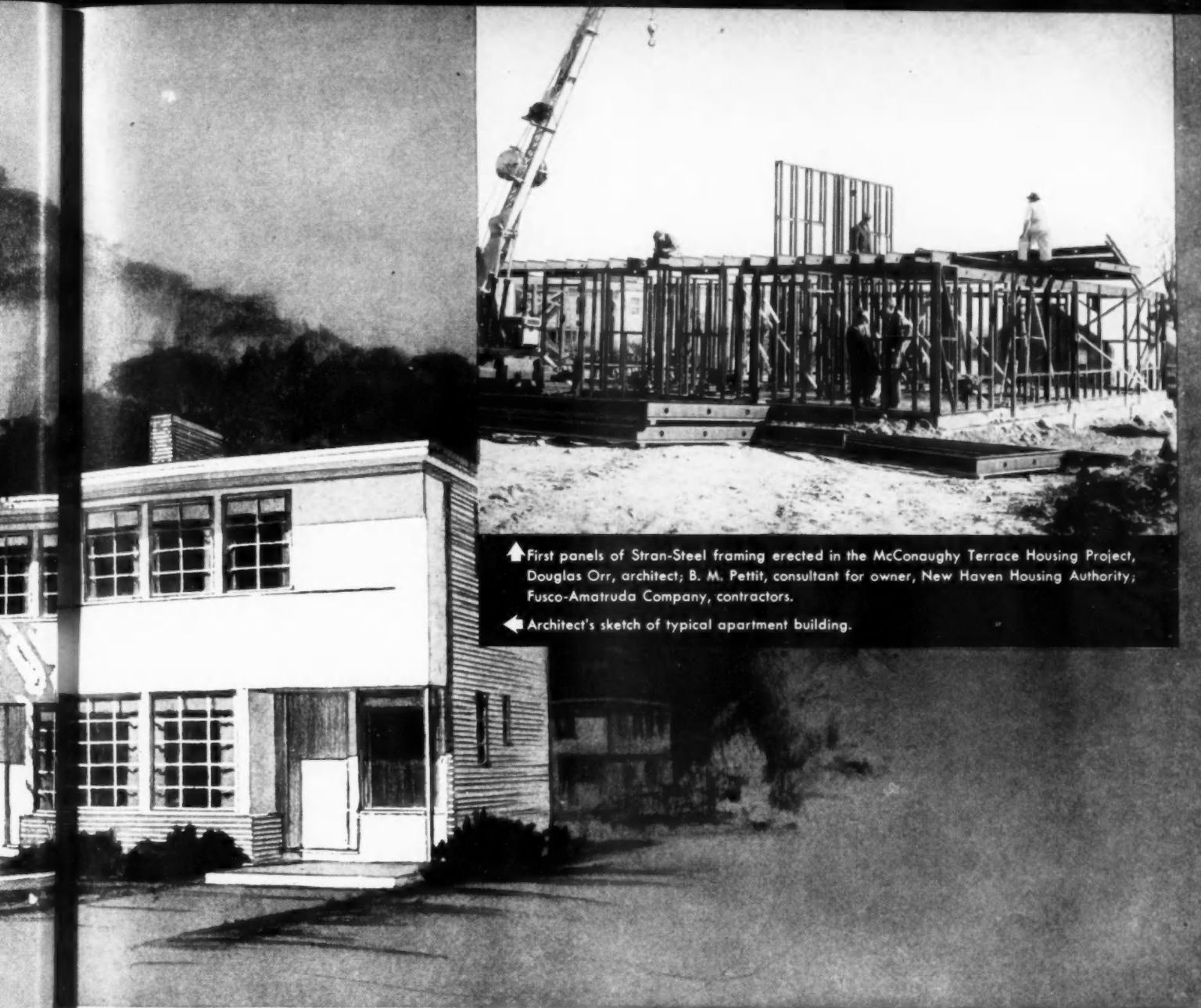


selected for

Use of Stran-Steel framing throughout the fine nine buildings of the \$2,752,000, 300-foot McConaughy Terrace garden-type apartment now under construction in New Haven, Connecticut, is providing fire-resistant, long-life buildings with real economy.

Since this project is being amortized over a fifty-year period, these factors are of vital importance. When plans for the project were formulated, Douglas Orr, architect, and the New Haven Housing Authority, owners, believed that the precision, simplified Stran-Steel framing system could provide premium quality and fast construction.

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▲ First panels of Stran-Steel framing erected in the McConaughy Terrace Housing Project, Douglas Orr, architect; B. M. Pettit, consultant for owner, New Haven Housing Authority; Fusco-Amatruda Company, contractors.

◀ Architect's sketch of typical apartment building.

for McConaughy Terrace Project

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Cost of McConaughy Terrace's fire-resistant construction is on a par with ordinary frame construction, because of the savings in time and the simplified procedures possible with Stran-Steel framing. Moreover, a permanently rigid, rot and termite-proof Stran-Steel framework insures lower maintenance costs and long life.

trades to work simultaneously on both interior and exterior construction.

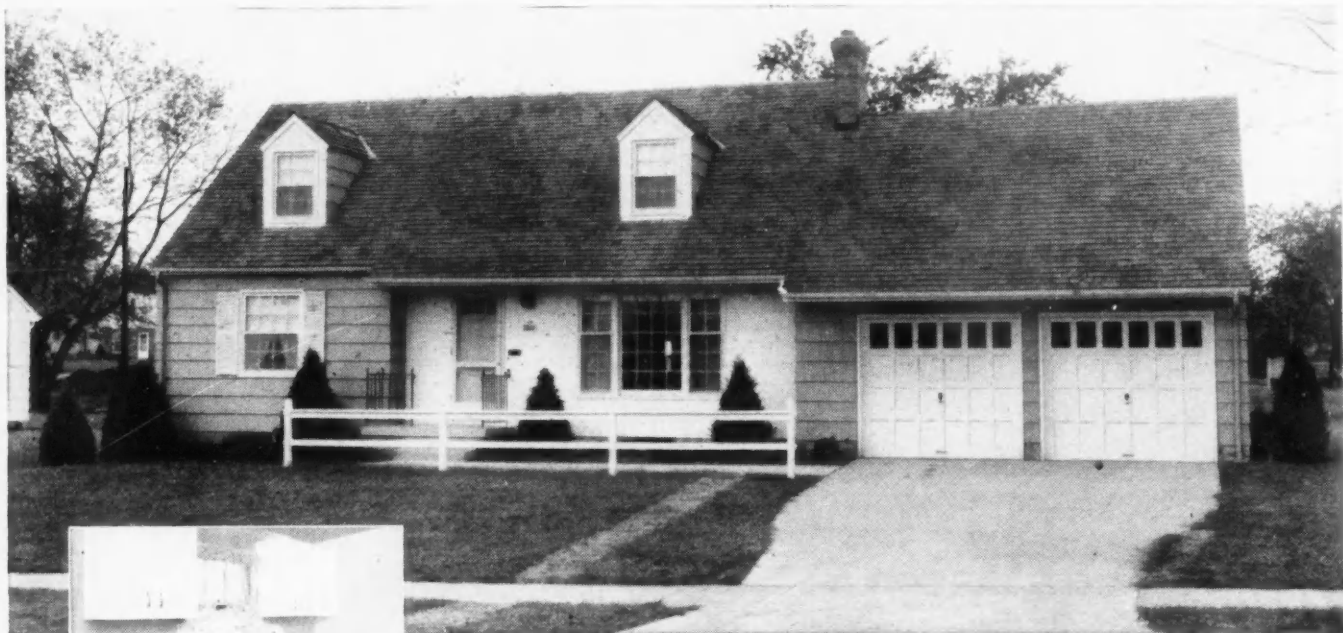
Stran-Steel framing is making McConaughy Terrace apartments *better buildings* without increasing costs. If you are planning new construction—commercial, industrial or residential—you can get the same advantages from this modern framing system.



GREAT LAKES STEEL CORPORATION

Stran-Steel Division • Dept. 30 • Penobscot Building • Detroit 26, Michigan
UNIT OF NATIONAL STEEL CORPORATION

Fabrication and partial pre-assembly of Stran-Steel framing panels off the site during foundation work simplify and speed erection on the site. Delays in close-in time are further reduced by the nailability of Stran-Steel framing, which permits carpenters and almost all other



MR. MILLER NICHOLS

A community without garbage *that's our aim...*

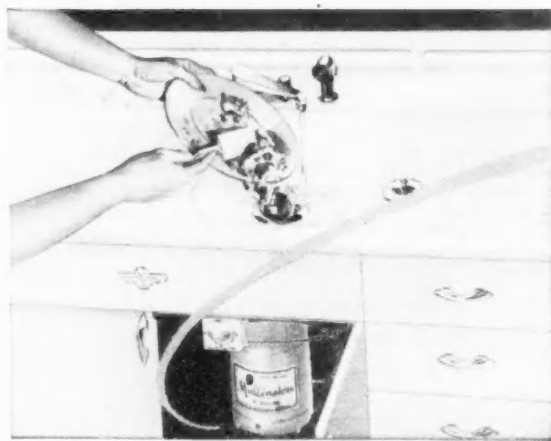
A completely healthy community means one with NO GARBAGE CANS.

In any home, eliminate the messy garbage can and you take a step toward good health. It's easy to do. Simply install a Mullinaider electric garbage disposer.

The J. C. Nichols Company, nationally known developer of the beautiful Country Club district in Kansas City, Missouri, knows what a wonderful sales feature is added to their homes when garbage is eliminated.

Mr. Miller Nichols, Sales Manager, says: "We have now installed 300 Youngstown Steel Kitchens in our Country Club homes—recently, many have included Mullinaiders. *The Kitchenaider-Mullinaider combination is desired by our home purchasers.*"

Remember—by making the Mullinaider an original installation, you save your customers future expense and give a *wanted* home feature. Ask any Youngstown dealer for more details or write Mullins Manufacturing Corporation, Warren, Ohio.



The Mullinaider electric garbage disposer eliminates evil-smelling, disease-spreading garbage cans. Adds only a little to the cost of a house; but adds a lot to the value. Will soon be a "must" in every kitchen.

Visit the Youngstown Kitchens display at the Builders' Show in Chicago, February 20-24, booths 98-102 in the Stevens Hotel.



Youngstown Kitchens

BY MULLINS

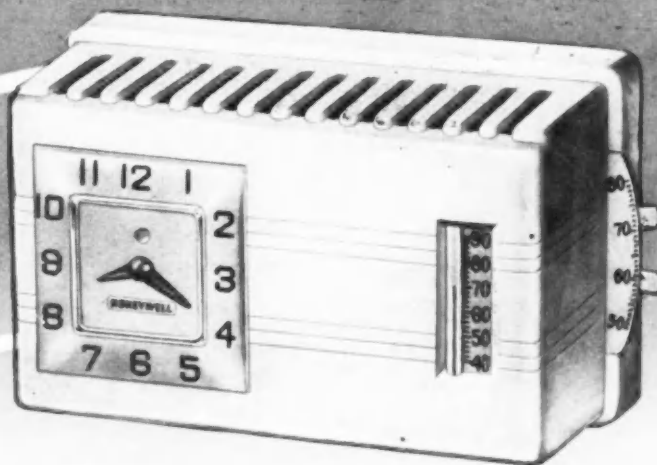
World's Largest Makers of Steel Kitchens

Modern Standards

FOR MODERN HOMES

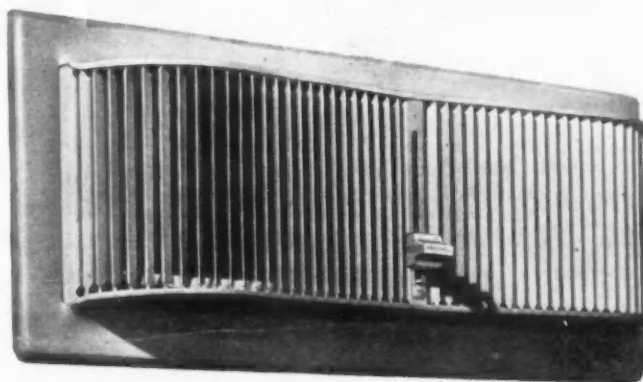
THE FUEL SAVING CHRONOTHERM

... Honeywell's famous electric clock thermostat — the finest ever built — assures carefree heating comfort and fuel economy.



THE NEW AIR DIFFUSION REGISTER

... affords a draft-free, even flow of air to every nook and cranny of the room — for either high or low wall forced air installations.



ALWAYS feature *Honeywell*. It gives your homes the added sales advantage of the name that stands for *the best* in heating comfort.

With Honeywell's new Chronotherm—the finest electric clock thermostat ever built—homeowners enjoy the most carefree heating comfort they have ever known, plus substantial fuel savings. At bedtime, Chronotherm automatically lowers the temperature, or entirely shuts off the heat supply. Then, in the morning, heat is restored before the family arises. The

result—never a worry about heating plant operation, with fuel economy as well.

For all forced air installations, the handsome new Honeywell Register puts an end to discomforting blasts of air. Instead, an even blanket of air is diffused to every corner of the room. Cold spots are eliminated—so are unsightly wall and ceiling streaks. And installation costs are drastically reduced. Minneapolis-Honeywell, Minneapolis 8, Minnesota . . . In Canada: Leaside, Toronto 17, Ontario.

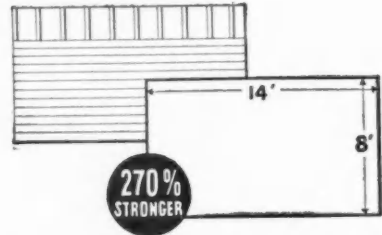
Remember, month after month, powerful national advertising keeps right on building overwhelming acceptance for Honeywell.



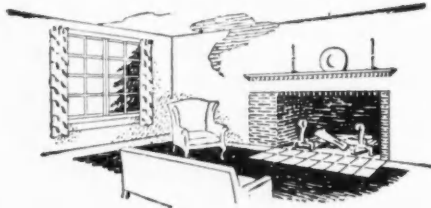
HOMASOTE PROTECTS YOU 4 WAYS



● **against WEATHER**... Use Homasote Insulating and Building Board for interior or exterior finish and for every sheathing need. It is permanently *weather-proof*—provides lasting protection, great structural strength—insurance of a dry and quiet home.



● **against EXTRA LABOR COSTS**... When you can sheathe an 8' x 14' area with one piece of material, you save many handling operations, many unnecessary nailing operations. Simultaneously you get extra strength. Homasote sheathing is 270% *stronger* than conventional horizontal sheathing.



● **against CRACKED AND FALLING PLASTER**... Homasote Big Sheets cover the average wall in a single piece, make a perfect base for paint or wall paper. *The house is forever free from cracks and falling plaster.*

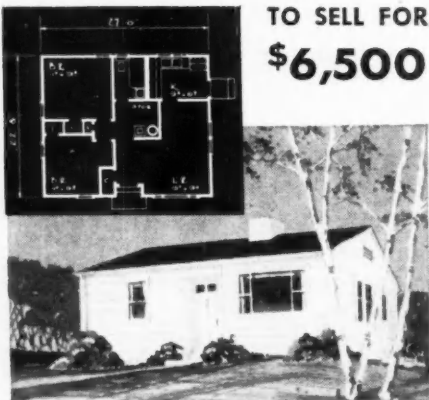


● **against ARTIFICIAL PRICES**... Homasote's sales policy since 1909 is as stable as the material itself. *Homasote prices do not fluctuate on artificial factors.*

You make a contribution of *permanent value* to any structure when you select Homasote for either modernization or new construction.

We invite architects and builders to send for a copy of our new booklet describing some of the many uses for *weatherproof* Homasote. The book gives physical char-

**THIS HOUSE CAN BE BUILT
TO SELL FOR
\$6,500**



acteristics, performance charts, specification data and application instructions. Write for your copy today.

The house pictured at the left has living room, two bedrooms, kitchen, bath, storeroom housing heating plant, and four closets. It is eligible for FHA mortgage. It can be built to sell for approximately \$6,500 — the costs varying slightly according to local conditions. A recessed entrance and a picture window are among its desirable sales features.

This house is one of the results of a \$500,000 research program conducted by Homasote Company over the past 12 years. Every detail of its construction has been fully proved. At an unusually low selling price for today's market, this house offers far more than FHA minimum requirements.

Homasote is happy to make the full de-

tails available to any interested builder. Your only cost is \$15 — for seven complete sets of blueprints and specifications.



in BIG SHEETS up to 8'x14'

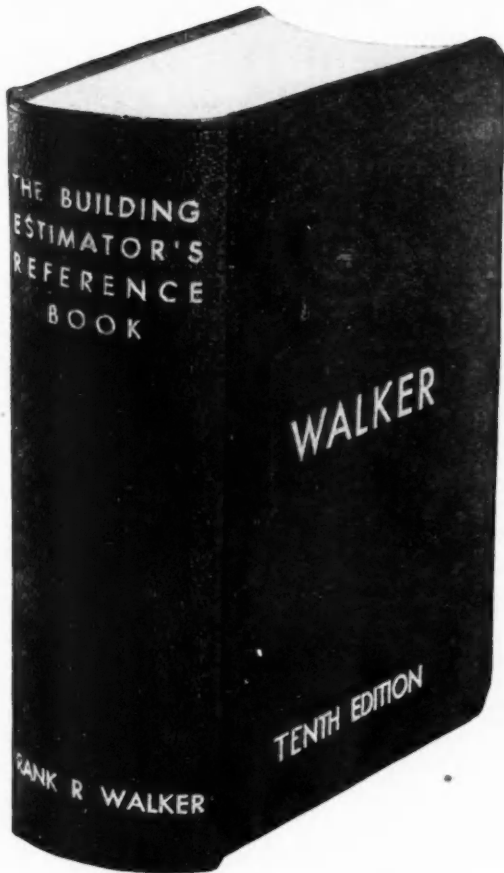
**... oldest and strongest
insulating and
building board
on the market**

**HOMASOTE COMPANY
Trenton 3, New Jersey**

Tenth Edition . . .

The Building Estimator's Reference Book

By Frank R. Walker



1700 pages, 1000 illus., 1000 tables,
25-page index, 4½ x 6½, flexible

COVERS

Excavating, Foundation Work, Reinforced Concrete, Framing, Millwork, Lathing and Plastering, Painting and Decorating, Glass and Glazing, Structural Steel, Masonry, Sheet Metal, Marble and Tile, Heating and Air Conditioning—and many other building subjects.

The new Tenth Edition contains latest estimating and cost data on everything that goes into house construction, from foundation to finish. It can be used in any locality, regardless of local prices or wage scales. It covers all types of small and large building construction.

For 30 years Walker's handbook has furnished contractors and estimators the most complete compilation of estimating and cost data available. The new edition has been revised and improved in the light of postwar conditions. Thousands of items that enter into construction estimates are logically arranged and tabulated for ready reference. A complete cross-index enables the user to quickly locate any subject.

HELPS PREPARE BETTER ESTIMATES

A copy of this new edition will help any builder, contractor or estimator in figuring and performing work at minimum costs. It will reduce the chance of overlooking an important item in an estimate. New methods of doing various kinds of work are explained and new building materials that have come on the market since wartime restrictions were lifted are fully described.

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Send for a copy of the new Tenth Edition of THE BUILDING ESTIMATOR'S REFERENCE BOOK today. Take advantage of the many opportunities it offers for increasing your profits through better estimates. Money back if not entirely satisfactory.

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Enclosed find \$10 remittance for which send me a copy of the New Tenth Edition of THE BUILDING ESTIMATOR'S REFERENCE BOOK and a Free copy of THE VEST POCKET ESTIMATOR. If I do not find the books entirely satisfactory I will return them within five days of receipt and you will refund my \$10.

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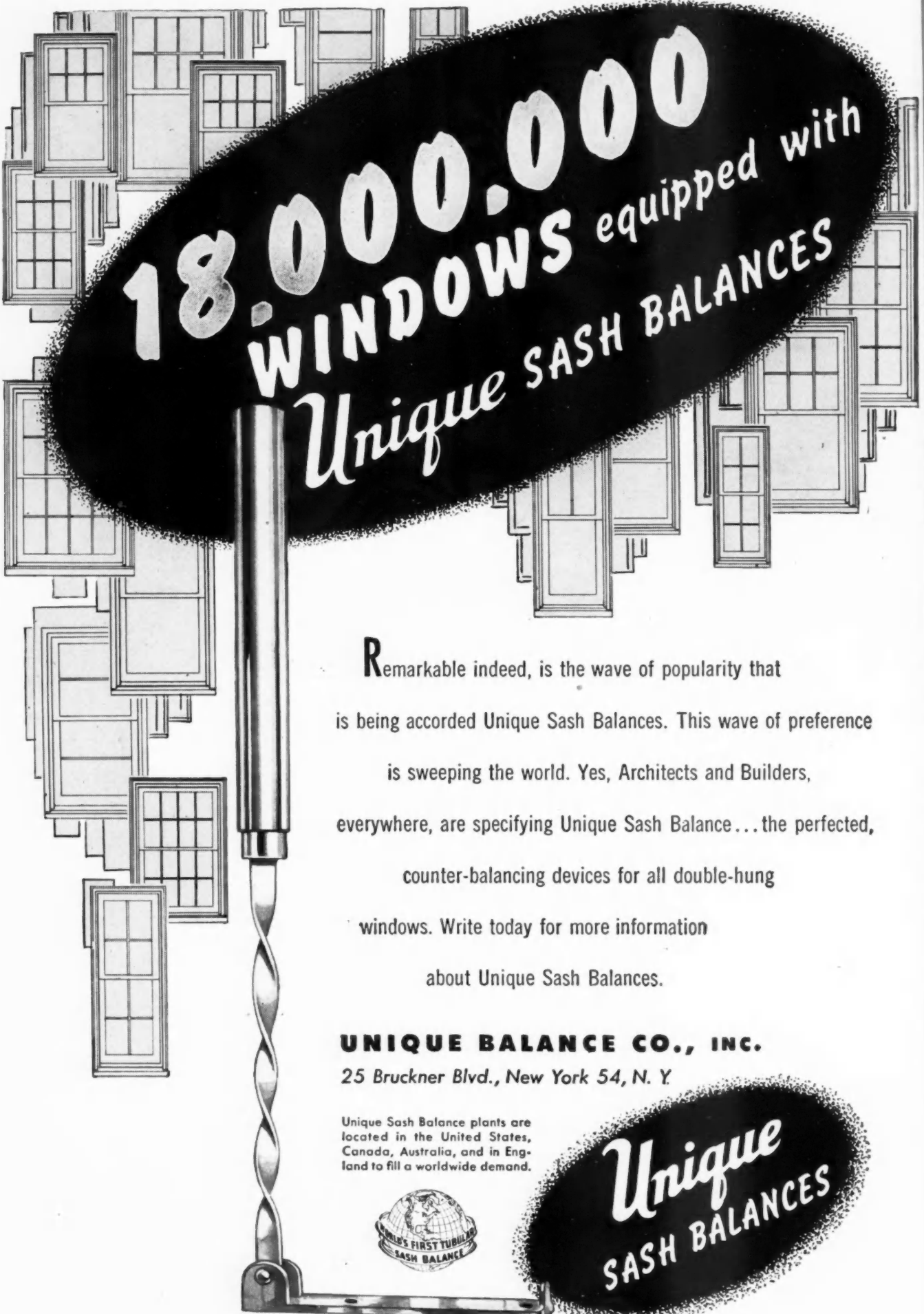
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This is one of the most popular little estimating books ever used by contractors. It contains 220 pages, 2½ x 5 inches, and is flexibly bound to fit the vest pocket. Estimating and cost data most frequently referred to is presented in condensed tabular form. It can be instantly referred to on the job or in the office.



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Unique SASH BALANCES

Remarkable indeed, is the wave of popularity that is being accorded Unique Sash Balances. This wave of preference is sweeping the world. Yes, Architects and Builders, everywhere, are specifying Unique Sash Balance... the perfected, counter-balancing devices for all double-hung windows. Write today for more information about Unique Sash Balances.

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Unique Sash Balance plants are located in the United States, Canada, Australia, and in England to fill a worldwide demand.



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*News, Views
and Comments*

On and Off the Record

LOWER PRICES—How to keep prices where they are, let alone lower them, becomes an intriguing problem for Los Angeles and Orange County (Cal.) builders. Case in point—Hod carriers get \$2 a day increase, raising scale from \$1.95 to \$2.15, and bringing daily pay up to \$21.50 for 8 hours. First and last hours are at double time.

THE CEMENT CASE—Question for the cement companies is whether they can lower their prices to meet competition without being in violation of FTC order issued after Supreme Court basing point ruling. Nobody knows. In meantime only safe course for cement companies is to sell f.o.b. mill or at delivered price of f.o.b. mill plus transportation cost.

CEMENT SUPPLY—Production is at capacity of existing mills. There will be no new mills built until basing point decision is clarified. Reason is that companies cannot afford to build new mills without knowing the market territory the mill will be permitted to serve.

POSSIBILITY—The cement ruling could be the basis for a move to invalidate all delivered price systems, including freight absorption, zone pricing and freight equalization.

PROPOSITION No. 14—That is the designation on the ballot of the state public housing measure which Californians voted on in November. The measure lost 2,182,677 to 985,171. The results make defeat of the Proposition look easy. It was anything but easy. Flying squads, including many well-known home builders, spent weeks informing the public of the dangers of the proposition.

LABOR LEADER—Being one is a taffy pull, says M. F. Darling, head of Chicago's Local 1031, IUEW, with 16,000 members. With communists and malcontents in his own ranks, rugged individualists in

both the ranks of labor and employer, and lawyers writing legalistic booby-trap agreements in the middle, a labor leader is hard pressed to keep from becoming an ex-labor leader. Guess there is no bed of roses for anybody trying to do a fair job in a contentious world.

ASTUTE OBSERVATION—It's this one re the recent elections. "About all the election proved is that the candidates have a lot more sense than the people who vote for them. At least the candidates know where they want to go."

MUMBO-JUMBO—Charge it to Housing Expediter, Tighe E. Woods, who said that while he recognizes the unfairness of rent control he plans to recommend its extension and tightening because housing is essential. It's about the same as kicking a man's teeth out then saying, "I know that was a brutal thing to do, but I am now going to break your arm because good men are essential."

FREE ENTERPRISE—DeWitt Emery, National Small Business Men's Association, Chicago, was asked by his 13-year-old son, a high school freshman to give him a source for a definition of Free Enterprise. The search led through an encyclopedia and a half dozen dictionaries and other reference books, then through the Chicago Public Library. No definition was found. Between them they wrote one. There should be a definition if not a full text book on the subject in every school. The schools are full of text books on every imaginable un-Americanism.

EMERY'S DEFINITION—The one he worked out with his son: "Free enterprise is, first, the right of each individual to decide for himself what his occupation shall be and to change occupations whenever he pleases; and, second, the private ownership and management of the tools and other means of production and distribution."



IT'S THE
Colors
THAT COUNT

CABOT'S HOUSE PAINTS, made by our patented collopaking process, offer you a wide choice of beautiful, non-fading colors. Development builders can find the right color for every design and a variety of color combinations that give each house in a group pleasing individuality.

Cabot's Collopakes produce a porcelain-smooth surface that shows no brush marks and resists the elements for years.

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Collopakes*

Write Today for color cards
and complete information!

Samuel Cabot

INCORPORATED
124 Oliver Building
Boston 9, Mass.



Main Entrance for Victor Carlson Prospects is Through

HOTPOINT All-Electric Kitchens



CARL V. CARLSON
President, Victor Carlson Sons
Minneapolis, Minn.

"WE SHOW our Hotpoint Kitchens first. This puts prospects in a buying mood. The entire house seems to take on greater value out of all proportion to the extra cost when you add Hotpoint All-Electric Kitchens."

● **THAT'S THE ENTHUSIASTIC** report of Carl V. Carlson whose home-building firm has installed 160 Hotpoint All-Electric Kitchens and plans a substantial increase in these sales-clinchers for the future.

● **MORE AND MORE** builders and architects are finding that Hotpoint Kitchens add that magic touch of

extra value needed to justify today's prices. Financing is easy because in most states the cost of kitchen and house can be combined in a "package mortgage."

● **IT WILL PAY YOU** to investigate the extra value Hotpoint Kitchens will give your houses. Consult your Hotpoint distributor or write to Hotpoint Inc. (A General Electric Affiliate) 5600 West Taylor Street, Chicago 44, Illinois.

Everybody's Pointing To

Hotpoint

PIONEER OF THE ALL-ELECTRIC KITCHEN



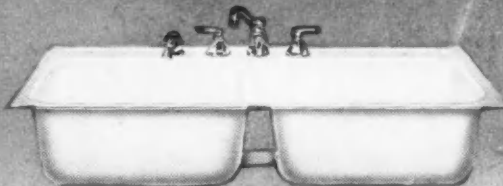
*Richmond's
at home in
any Kitchen!*



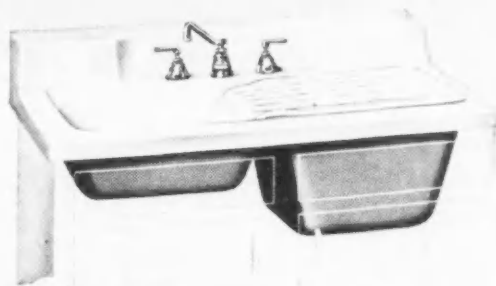
FOR BASE CABINETS—Richmond ledge-back sinks with single or double drainboards. Drilled for deck-type supply fittings with hose and spray. Model shown is the Servilla, plate No. 1535, available in two sizes; 54" x 25" and 60" x 25".



FOR ECONOMY INSTALLATIONS—Richmond Wall Hung Sinks. The Sewanee, plate No. 1554, illustrated here, is a good-looking, roll rim, single drainboard sink. Drilled for combination fittings and large strainer. Right hand drainboard (plate No. 1556) and left hand drainboard (plate No. 1554), both 42" x 22".



FOR COUNTER-TOP SINKS—Richmond Flat Rim Sinks. Illustrated is the Shelton, plate No. 2115. A double compartment, flat rim sink—drilled for supply fittings. Sizes 32" x 21" and 42" x 21".

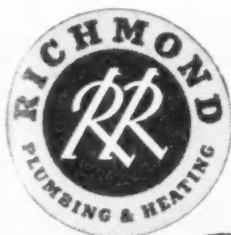


FOR CLOSE QUARTERS—Richmond Sink and Trays. These compact combinations are ideal for restricted space. Drilled for deck type swinging-spout supply fittings. Laundry tray compartment a full 13" deep. Two sizes; 42" x 25" or 50" x 25".

Whether you specify or install—Richmond Enameled Cast Iron Sinks are a credit to any job!

Whiter-white, acid resisting enamel—clean-cut modern design—plus rugged cast-iron assure certain satisfaction to your customers... This complete Richmond sink line ranges from a 42-inch sink, with right or

left drainboard—for small installations, up to the double sink, double compartment 72" Serbin for the finest kitchens... No matter what your sink problems are, Richmond has the answer for you.



RICHMOND

RICHMOND RADIATOR CO.—AFFILIATE OF REYNOLDS METALS CO.



Vitreous China at its best is embodied in the Richmond line of fine lavatories.



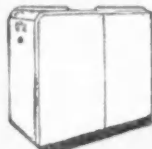
Vitreous China



Gas Boilers



Enameled Cast Iron Ware



Winter Air Conditioners
Gas—Cast iron or steel
Oil—Steel

See your wholesaler or MAIL COUPON TODAY

AB-1

Richmond Radiator Company
19 East 47th Street, New York 17, N. Y.

I am interested in further information on the Richmond Enameled Cast Iron sinks. Please send me full details. No obligations, of course.

Name.....

Company.....

Address.....



**HOW TO GET
THE JUMP
ON COMPETITION**



One of the best ways to keep ahead of competition with the homes you build is this: Give your customers what they *really* want—modern Electric Ranges!

That's the way to build houses that are modern today, and will stay modern for years to come. That's the way to keep abreast of the trend to Electric Cooking. Another million American families bought Electric Ranges last year. Conservative estimates indicate that the same thing will happen again this year.

So during construction, include wiring for an Electric Range, leading to a range outlet in the kitchen. An Electric Range, like electricity itself, is now a "must" in every modern home!

ELECTRIC RANGE SECTION, National Electrical Manufacturers Association, 155 East 44th Street, New York 17, N. Y.

ADMIRAL • CROSLY • ESTATE HEATROLA • FRIGIDAIRE • GENERAL ELECTRIC • GIBSON • HOTPOINT
KELVINATOR • LEDO • MONARCH • NORGE • QUALITY • UNIVERSAL • WESTINGHOUSE

*Follow
the trend...*

WIRE YOUR HOUSES
FOR ELECTRIC RANGES

Another 1,000,000 American families switched to Electric Cooking last year

A SYMBOL OF ADEQUATE WIRING



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EDITORS' Round Table

The February Issue will contain two special editorial features. One of these is a roundup of new building products. The other is a series of articles detailing the organizational setups of a number of well-known operative builders.

No One in the home building industry can afford to miss the roundup of new building products. That is not an idle boast of the editors, nor is it a promotional blurb designed to boost circulation. It is a simple statement of fact based on experience in former years.

Our Managing Editor, who is famous in the business magazine industry for his creation of interesting editorial presentations, first conceived the idea of presenting an imposing parade of new products in 1946. The idea was not new, but his way of doing the job was. We thought the idea was good, but its reception by our readers was nothing short of amazing.

Last Year, the basic idea was improved and expanded. The reception, based on inquiries and letters which swamped the office, was even more amazing.

The Parade this year will be the biggest ever. It will also be the most varied. Illustrations and descriptions (page after page of them) are presented to enable the reader to get a quick view of the item that catches his eye, and to run through the entire parade without spending a lot of time. Part of the presentation includes a plan whereby the reader can order complete information on any or all of the products in just a very few minutes.

The Other Feature consists of a series of articles which give a quick view of the operation and organization of a selected group of successful home building operations. This feature was conceived to serve several purposes. First, it will contain a whole host of ideas from which operative builders can choose for incorporation into their own organizations to increase efficiency.

Small Builders, although in most cases unable to copy any of the organizational patterns in their entirety, will find many ideas that will apply even in one-man operations.

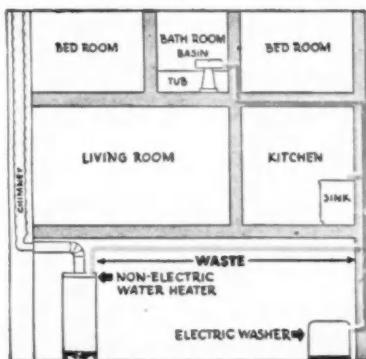
(Continued to page 56)



Don't play Leapfrog — with figures!

Sales and survey figures both show that more people want Electric Water Heaters than ever before. The only way to satisfy them is to install in the homes you build the kind of water heaters that will satisfy your customers both now and years from now—
Electric Water Heaters!

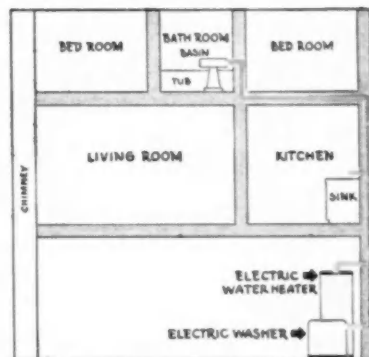
How to reduce construction costs and add customer features...



NON-ELECTRIC INSTALLATION

Electric Water Heaters can save you money on construction costs. There's no flue or vent. Installation can be made anywhere—in the kitchen, in the bathroom, or the utility room—even in a closet. This keeps hot water lines short, cuts piping cost.

Customers like Electric Water Heaters because they are: (1) AUTO-



ELECTRIC INSTALLATION

MATIC (continuous hot water, no attention); (2) CLEAN (smokeless, sootless); (3) DEPENDABLE AND TROUBLE-FREE (as electric light); (4) ECONOMICAL (fully insulated storage, short hot water lines); (5) SAFE (all electric, dependable temperature control); (6) FLEXIBLE (can be installed anywhere, even in living quarters; no flue or vent).

ELECTRIC WATER HEATER SECTION, National Electrical Manufacturers Association
155 East 44th Street, New York 17, N. Y.

BAUER • BRYANT • FOWLER • FRIGIDAIRE • GENERAL ELECTRIC • HOTPOINT • HOTSTREAM
JOHN WOOD • KELVINATOR • MERTLAND • MONARCH • NORGE • PEMCO • REX
RHEEM • SELECTRIC • SEPCO • SMITHWAY • SUNBEAU • THERMOGRAY
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IT'S EASY TO INSTALL an

electric WATER HEATER!

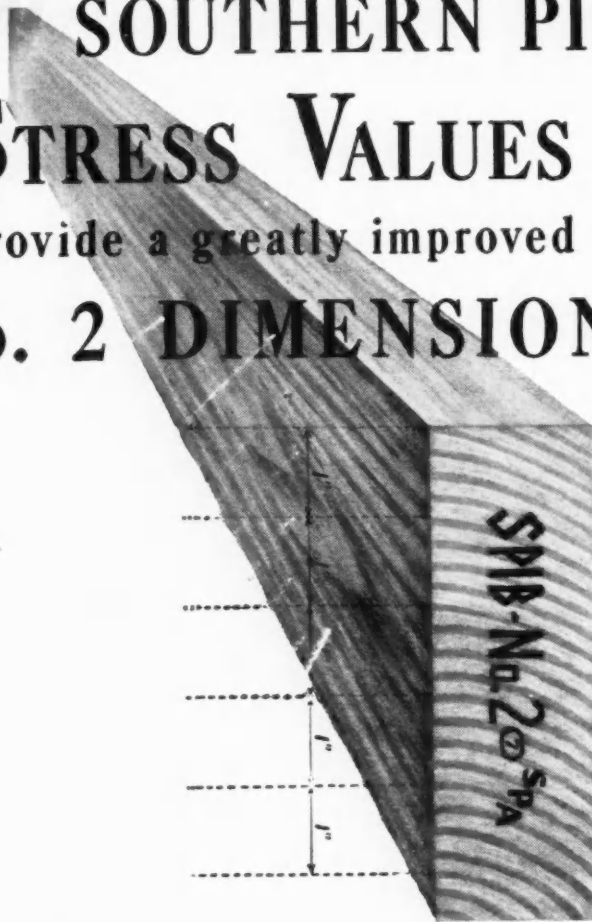
... in a house wired for an Electric Range!

SOUTHERN PINE

STRESS VALUES

provide a greatly improved

No. 2 DIMENSION



OLD

NEW

EXAMPLE:

- ★ BENDING STRESS 1,100 POUNDS PER SQ. IN.
- ★ BETTER TEXTURE (MINIMUM 4 RINGS PER IN.)
- ★ SMALLER EDGE KNOTS
- ★ GUARDS AGAINST CROOKING

Possessing greater load-bearing strength than previous No. 2, this new grade of Southern Pine framing is better qualified for residential and light commercial construction. Proper seasoning is a definite provision, by which this material is *pre-shrunk* and may be used with safety for longer spans than heretofore.

AN ENGINEERED MATERIAL

Southern Pine has long been recognized as superior structural lumber. This new No. 2 grade can now be specified for definite load-bearing stresses *because it is an engineered material.*

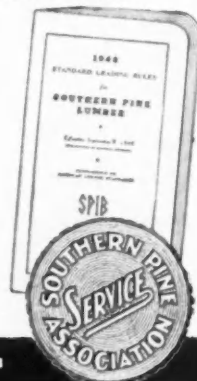
WRITE FOR GRADING RULES

For authentic data to guide you in specifying or purchasing every Southern Pine classification, send for these new 1948 Grading Rules. Your copy, plus the Grade Use Guide, will be mailed on request.

Quality Southern Pine Is Available, Now!

SOUTHERN PINE ASSOCIATION

Canal Building . . . New Orleans 4, Louisiana



EDITORS'

Round Table

(Continued from page 55)

A Third Purpose, since *American Builder* gets second and more readings, many of which are by individuals not directly connected with home building, is to demonstrate that home building is a highly organized, highly efficient business. Close reading of all the articles included in this series is recommended.

Details of meetings, exhibits and other features of the forthcoming Annual Convention and Exposition of NAHB will comprise a third and important feature of the February issue.

November saw a full-dress staff meeting. The full-dress, of course, has nothing to do with clothing. It means that the meeting was attended by editors, advertising salesmen, circulation salesmen and the top management factors of the corporation. It was a planning meeting for 1949, and consumed three full days and most of the nights. The only part of these sessions of interest to our readers is that the editors came up with some new policy ideas for 1949. The purpose is to develop an even more interesting and useful *American Builder* than you have been getting. One or two months will be required to implement the new plans, but as soon as they are ready they will be announced.

Daily Newspapers, three of them, will be published by *American Builder* at the NAHB convention in Chicago in February. Detailed plans for these were a major subject at the staff meeting. The *American Builder* Convention Daily was first published at the 1947 convention. There were four issues. At the 1948 convention only the first of a planned series of three dailies was printed. A printers' strike stopped us.

The Dailies are distributed each morning at the entrance to the exposition hall, and at entrances to meeting rooms. The editors urge that you make it a point to put in an appearance at one of these places to receive your copy. No issue will be published on Thursday.

No Advertising is accepted for the dailies. The time of the editors and the cost of publication are an *American Builder* contribution to the interest of the convention.

(Continued to page 58)

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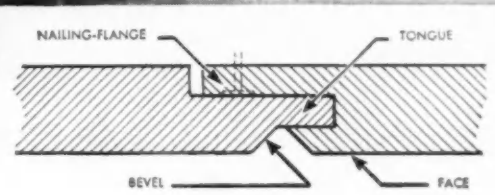
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ON THE LEVEL . . .

Good appearance is important when you install interior finish material. Owners are quick to point out bad alignment, gaping joints, visible nailheads, or panels that sag or buckle as time goes by. Naturally, you want the job to be completely right. It can be, with Armstrong's Temlok® Interior Finish.

Temlok walls and ceilings are always level and in alignment. An exclusive Temlok feature—the Lok-Bevel joint—assures it. This tongue-and-groove type joint allows units to expand or contract without buckling or sagging. It also provides an extra wide

nailing flange which speeds the job, facilitates alignment of units, and hides nails or staples from view.

Armstrong's Temlok Interior Finish is exceptionally strong, light weight, and moisture resistant. Having no grain, it won't crack, split, or splinter. It comes in three convenient forms: factory-painted panels (12" x 12", 16" x 16", 16" x 32"); planks (16" wide, 8' and 12' long); and big boards 4' wide and 7' to 12' long. Ask your Armstrong wholesaler for full details or write Armstrong Cork Co., Building Materials Div., 1601 Ross St., Lancaster, Pa.



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SEWER PIPE

YOU SAVE MONEY. BERMICO Sewer Pipe has strong walls, resists breakage. It's light, handles easy on the truck and on the job. Economical 8-foot lengths.

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YOU SAVE TROUBLE. With BERMICO there'll be no complaints later. It's corrosion-resistant, tough. Resists sudden temperature changes and soil settlements. Joints are root-proof, permanent.

FOR HOUSE-TO-SEWER OR SEPTIC TANK Specify BERMICO. Made in a full range of sizes, connections, bends, reducers, adaptors, etc. Nationally advertised. Use BERMICO Perforated pipe for drainage purposes. For further information write Brown Company, Dept. A-11, 500 Fifth Avenue, New York, N. Y.

EASY TO INSTALL



8-foot lengths reduce number of joints to be made.

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Root-proof, machine tapered joints require no packing.

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BERMICO meets with an ample margin all requirements of Commercial Standards CS 116-44 as issued by National Bureau of Standards, U. S. Department of Commerce.



BERMICO—A PRODUCT OF BROWN COMPANY

EDITORS'

Round Table

(Continued from page 56)

The Western Editor, who was unable to attend the staff meeting because of commitments made months ago, sent in several suggestions, most of which were kicked into the waste basket. That is no reflection on the western editor. *American Builder* staff meetings are rugged affairs, and most of everyone's ideas are squelched. The western editor, however, did have one that stood up. He wants all of our staff to be on the lookout for good public relations ideas by builders and dealers to pass along to others through these pages. The staff has been ordered and the readers are invited to help.

Fritz Burns, noting that the city of Los Angeles received a check for \$132,000, which represented total collections in lieu of taxes from the 13,500 families now living in Los Angeles public housing, decried the fact that the check was blown up for photographic purposes, and received with fanfare by city officials. He wrote, "Without doubt this is a sizable sum of money, and I trust that you gentlemen (the city fathers) are duly impressed. However, I think it is regrettable that the ordinary John Doe taxpayers, who pay ten times as much taxes by the sweat of their brows, are afforded very little ceremony and no flowers. More likely they stand in line for half a day before a tax collector's window in order to avoid dire penalties. . . . Let it be known that the bulk of our real estate taxes evolve from small property owners who, by dint of hard work and a desire to be self-supporting, constitute the backbone of our city. On the average, such families pay real estate taxes of \$100 to \$200 a year, whereas families in public housing projects apparently pay only \$10 a year—but, of course, with much more fanfare. The life of the taxpayer is not easy. Obviously it is easier to be supported by taxpayers than to be a taxpayer. The eulogizing of token payments from subsidized housing projects may cause many a taxpaying homeowner to wonder why he, too, should not choose the 'easy way.' During these times of full employment it seems unbelievable that 13,500 families can presume to live in this city, with all of the services at their command, for the total sum of only \$10 a year."

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... *Luxury without Extravagance*



A fine bathroom is Luxury without Extravagance. When you buy Eljer Plumbing Fixtures, you invest in dependable, quality fixtures that are a joy to the entire family.

Eljer has been making plumbing fixtures exclusively for nearly half a century. In its complete line are bathroom, kitchen and laundry fixtures suitable for every purse and purpose.

Eljer bathtubs are made of rugged, rigid enameled cast iron in a variety of related styles and colors. The thick, glass-like surface is easy to clean and keep clean.

Vitreous china lavatories and closets by Eljer have the

same velvet surface as your finest table dishes—yet with toughness to give trouble-free service for many years. They resist stains and the effect of all ordinary acids.

Ask your Plumbing Contractor about Eljer products today. Or send for Eljer's booklet "Fixtures of Beauty and Distinction". Eljer Co., General Offices, Ford City, Pa.



During many years of constant use, Eljer Fixtures have made remarkable records for durability and low maintenance costs in such buildings as the Netherlands-Plaza Hotel in Cincinnati and the Mayo Clinic in Rochester, Minn.

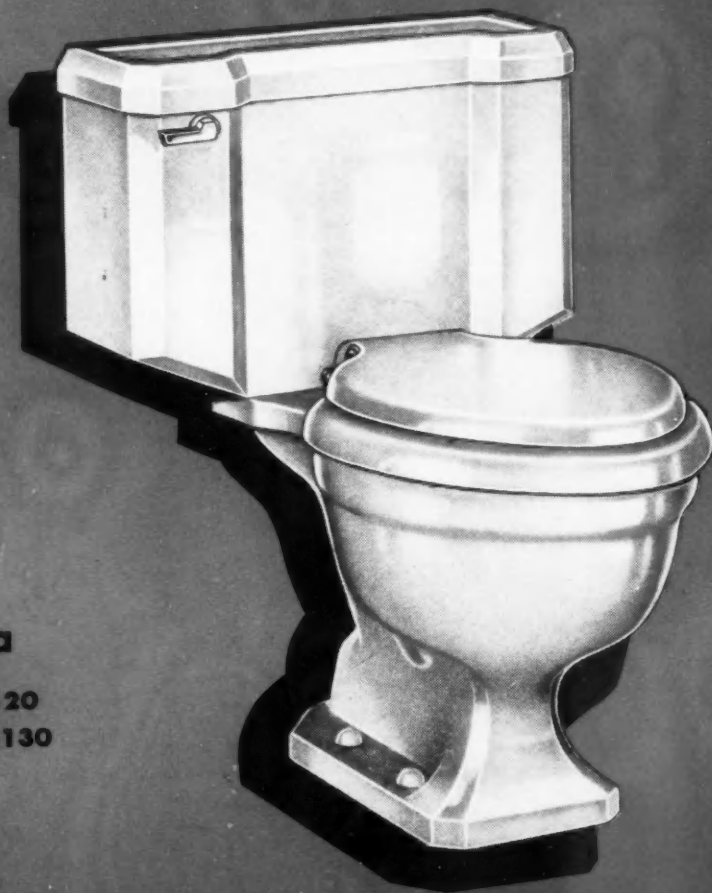


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Only in Eljer's Fine Line of Plumbing Fixtures and Brass Trim**



The Sylenta

Regular Rim—B-5120
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The Eljer Sylenta Closet Combination combines quality features that every homeowner would prefer to have.

This vitreous china combination is easy to keep spotlessly clean because the hard, glass-like finish resists stains and is impervious to all ordinary acids.

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thin metal parts that are vulnerable to the corrosive action of water; ball cock, adjustable to variations in water pressure . . . means longer service.

The Eljer Line is complete . . . to meet the requirements of every purse and purpose. See your Eljer Distributor for fine plumbing fixtures, in Vitreous China and Enameled Cast Iron . . . available in white or popular pastel colors, or write Eljer Co., General Offices, Ford City, Pennsylvania.

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NEWS

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MONTHLY REVIEW

NEWS OF THE NATIONAL ASSOCIATION OF HOME BUILDERS AND AFFILIATED ASSOCIATIONS

NAHB 1949 Convention and Exposition Promises Action-Packed Program

Home builders who attend the Fifth Annual Convention and Exposition of the National Association of Home Builders in Chicago, February 20-24, can expect an action-packed program designed to meet the issues of the industry as a whole, as well as the problems of the individual builder.

That is the promise of the NAHB convention committee which has met at frequent intervals during the past month.

In announcing a tentative convention program, W. Hamilton Crawford, Baton Rouge, La., chairman, revealed that the backbone of the convention will be a carefully selected series of six clinics and four panel discussions. The clinics will be held first on Tuesday, February 22, and repeated on Wednesday, February 23. They are to be repeated the second day in order to give everyone an opportunity to attend as many as possible. The panel discussions will be incorporated into the general sessions.

Clinic discussions are slated on the following topics: "FHA Questions and Answers," "Dry Wall Construction Methods," "The Builder-Erector's Place in Building and Marketing Prefabricated Houses," "Panel Heating," "The Economy House," and "Merchandising Houses Through Better Design."

Panel discussions are entitled: "Tomorrow's Market," "Land Planning for Permanence," and "Grand Roundup." A fourth panel will be announced later.

Names of principal speakers and clinic and panel discussion leaders are not yet available. Frank W. Cortwright, executive vice president, reports that the convention committee expects final selections to be delayed until close to convention time.

"It is our aim," he said, "to have the program as up to date as possible with the current housing situation at the time the convention opens. For obvious reasons, events which take place in January and early February may have a substantial influence in the scheduling of convention activities and the final selection of speakers."

Record Attendance Expected

Attendance at the 1949 show is expected to surpass last year's record showing total of more than 15,000 per-

sons representing every phase of the homebuilding industry, according to Paul S. Van Auken, Chicago, convention and exposition director. He reports a plentiful supply of hotel rooms will be available in leading downtown hotels.

Van Auken predicts the best exposition in the history of the show. The number of exhibitors will exceed 130. They will occupy a record 208 exhibit spaces, all in the Stevens hotel. He also reveals that products to be shown at the exposition will be more diversified than heretofore, and many manufacturers will show new and improved products for the first time at this convention.

Will Show Movies Daily

Movies of the various "Economy House" projects will be shown daily throughout the convention. Extensive use of slide films and other visual aids are planned in connection with clinics and panel discussions.

A special invitation has been extended to members' wives to accompany their husbands. A full program of activities of interest to the ladies has been planned, including sightseeing trips, tours of the Art Institute and museums, a style show and tea. Tickets for radio and television shows will be available.

Van Auken states that members of local affiliated associations of NAHB should make hotel reservations through their local executive officers, who have been provided with hotel reservations and advance registration blanks.

All others who wish to attend the convention should send requests for hotel reservations and advance registration, on business letterhead, direct to Convention Headquarters, NAHB, 111 West Jackson Boulevard, Chicago 4, Ill. Name, address, city, state, business classification, type of accommodations desired (single or double room), name of other occupant if any, date and approximate hour of arrival should be given.

Registration fee of \$12.50 for men and \$7.50 for ladies must accompany requests for hotel reservations. An advance registration certificate will be sent in return as a receipt, which can be exchanged quickly upon arrival for official badge and program.

Panel Discussions Featured Ohio Home Builders Annual

With the emphasis on panel discussions, and a minimum of featured speakers, the Ohio Home Builders Association held its fifth annual convention at Columbus, December 5-7. The morning session on the first day was opened by Walter J. Shapter, convention chairman, who introduced the first panel. The subject was "Merchandising and Selling." The title of the second and final panel of the morning was "Mortgage Financing."

Chairman of the luncheon session was A. J. Alexander, and the afternoon panel, held in the dining room was entitled "Economy Housing." The annual banquet was presided over by retiring President Earl Bailey, and the speaker was Frank Cortright. He reviewed recent national association problems and activities, and called for continuing opposition to public housing legislation.

Presiding at the closing session on Tuesday was J. B. Haverstick. The program featured Normine L. Watkins speaking on membership, and the chairman presenting the film, "Baltimore Story." The concluding speaker, following a luncheon, was Milton J. Brock, president, NAHB. Brock delivered a stirring message on the need for strong associations in the home building industry, and outlined the legislative and other problems which confront home builders in 1949.

An innovation, devised by Chairman Haverstick during the morning session was a panel in which the panel members posed questions to the audience.

Officers elected for 1949 are Francis A. Hendy, Cincinnati, president; Ivan H. Gore, Columbus, vice president; Peter D. Kleist, Rocky River, treasurer; and Paul Kessler, secretary. Over 200 builders attended.

Corace Is New President Of Pittsburgh Association

Frank Corace has been elected president of the Home Builders Association of Allegheny County (Pittsburgh area) to top the 1949 slate of officers. Other officers include: first vice president, Felix Caste; second vice president, Fred Favo; treasurer, William B. Dixon, and secretary, Eugene Cassidy.

Frank Nerone is the executive director of the Pittsburgh association.

Plan Now to Attend or Exhibit at the NAHB Convention, February 20-24, 1949



Cortright's Column

By Frank W. Cortright

Executive Vice President, National Association of Home Builders of the United States

The struggle against antiquated building codes, zoning regulations and their hampering effect on home builders all over the nation has been one of the very challenging problems faced by the National Association of Home Builders. A new and constructive approach to this problem has appeared in the Detroit chapter's Economy Home Demonstration Program to provide a pattern which every chapter can study with profit.

The Detroit effort is more than just a demonstration of economy-priced homes. It is a challenge to the public to clean up the building code and zoning situation in local communities. It can channel the right kind of pressure on local governments to make them take positive action.

The one thing that stands out about the Detroit program is that the association set out to build a good economy-priced group of houses and stuck to that aim. Where codes or zoning regulations set up unnecessary restrictions which increased construction costs, no effort was made to circumvent the codes. Instead, Detroit builders secured land where the restrictions were not in force. They are building homes that can be shown as examples of reasonably-priced construction, such as would be possible under a performance-type building code and realistic zoning law, but which are barred from many communities because of outmoded regulations and restrictions.

People in the Detroit area are going to go out and look at these homes. A lot of them are going to want them duplicated in restricted neighborhoods. The builders are then in a position to say, Sorry, your community government doesn't think these houses are good enough for you. If you think they are, persuade your elected officials to make necessary changes in the laws. We are not in a position to force those changes—but you elect these officials and can let them know what you want.

That tosses the code and zoning revision problem back into the hands of civil government with a mandate to do something about it. Citizens will begin to understand some of the things that have kept the builder from producing a higher volume of economy housing. There is tangible proof that such houses can be built if the industry is allowed to build them.

From the industry standpoint, and the standpoint of the National Association of Home Builders, the Detroit program is particularly well-timed. It ties in very nicely with another effort within the national association—that of the Architectural and Building Code Committee, headed by Luther Boggs.

For 25 years, efforts have been made to develop a standard building code which could be adopted on a voluntary basis by some 25,000 communities in the United States. No one yet has succeeded in doing it, but it looks closer than at any time in history.

Boggs' committee, meeting with the Building Officials Conference of America, has added its recommendations to that group's effort to develop a sample standard code acceptable to small communities. The BOCA work is just about complete.

A program such as Detroit is carrying out, if augmented by similarly planned programs in other communities, could very well create a demand for an acceptable standard code which would hasten the acceptance of the BOCA model—a model which our committee believes far superior to a lot of local codes now in force.

This basic new approach to economy housing, understood by Detroit, is one of the positive developments which may give harassed public officials the one weapon they have needed to secure reforms which many of them know are desirable. It can give public support. Building officials, seeking more modern codes, often have been blocked by public apathy. There was nothing to counteract the pressure of minority special interests which, rightly or wrongly, felt the older codes held benefits for their special groups. The new approach is worthy of widespread application.

California Conference Aims At Code and Zoning Revision

At the 25th anniversary conference in Los Angeles last month, the Building Contractors Association of California wound up its meetings with a series of resolutions designed to improve building conditions and practices and to increase the effectiveness of the service of the association.

Among the resolutions, reports Edward M. Sills, executive vice president of BCA, were demands for elim-



GEORGE STREIT
BCA President for 1949

ination of unnecessary building code and zoning restrictions, a strengthening of the State Contractors License Board, elimination of force account work in federal, state and county public works, and an increase in FHA and VA interests rates to the limits allowed in the housing act of 1948.

It also was urged that the apprentice training program be increased and that the association take part in local and regional planning.

Sills reported that during the coming year, the association program for arbitrating and investigating veterans housing complaints will be expanded.

George Streit, Pomona builder, was elected president of the association. Other officers are: first vice president, Marshall Tilden of Riverside; second vice president, C. J. Wm. Millerburg of Sherman Oaks; secretary, B. F. Jenkins of San Diego. Harry Hanson of Los Angeles continues as treasurer and Sills as executive vice president.

Cleveland Chapter Names Public Relations Director

Jerry Madigan has been named by the executive committee of the Home Builders Association of Greater Cleveland as assistant to Jim Funaro, executive director. Mr. Madigan will have the title of public relations director.

His major activities will be to promote the home show, National Home Week and other planned activities. He formerly was with the Cleveland City Planning Commission as publicist. Prior to that he was public relations director for the Ohio State Employment Service. He spent four years with the Army Air Force in public relations.

Detroit's Demonstration Plan Can Have Far-Reaching Result

The Economy House Demonstration Program of the Metropolitan Home Builders Association of Detroit takes a brand new approach to the problem of building more lower cost houses of the double-barreled job the program is designed to do. In addition to illustrating what the home builders of the nation can do, it provides an equally vivid demonstration of what they cannot do—and why. It focuses the spotlight of public attention on unnecessary restrictions that need changing, and at the agencies that can make those changes if the public demands them.

Since the National Association of Home Builders first undertook to study the problem of providing more economy-priced homes, more and more of its local chapters have been forming economy housing committees to implement the program. The pattern of the Detroit plan, developed by the Detroit chapter's Low-Cost Housing Project Committee, may serve as a guide to other chapters, in the opinion of several NAHB executives.

Here is the rough outline of the plan. Detroit builders have bought a tract of land in Royal Oak, a Detroit suburb, and subdivided it into 132 lots ranging from 50 to 68 feet in width and 134 to 140 feet in depth.

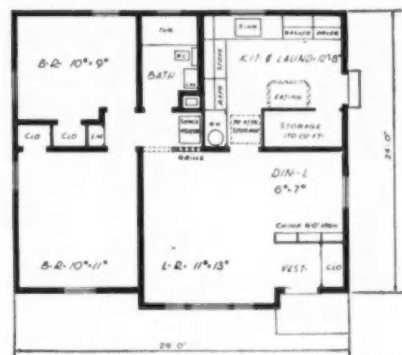
Forty-six participating builders each will build one or two houses on these lots, using six basic floor plans, each with six variations in architectural treatment or specifications. The houses



THE LOUIS ROSE house, built under supervision of Harry Rich, is the first house completed in low-cost housing demonstration of Builders Association of Metropolitan Detroit. FHA-approved, it is completely finished, sells for \$7,870; buyer pays \$390 down and \$33 per month. House has automatic oil heat, insulated sidewalls and ceiling. Floors are all of finish oak

will sell from \$4,000 to \$8,000, including lots. Those in the lowest price range are to be financed under Title I of the National Housing Act. The first house is already complete.

Preceding the adoption of the program, five sub-committees put in a great amount of effort to make it possible. Each was concerned with a different



phase of the program—land acquisition, design, establishment of costs and pricing, financing and publicity.

Henry F. Fett, chairman of the land acquisition committee, had the job of finding a suitable tract in the metropolitan area which had access to public utilities and was covered by zoning and building code regulations liberal enough to permit the low-cost construction.

The design committee, headed by Leo Riley, selected plans and designs and prepared working drawings, specifications and a master plat which indicated the floor plan, elevation and covering specifications for each lot.

The work of the cost-study committee was very important. Under the leadership of Elmer Kundinger, it first prepared a cost estimate for each type of house. Participating builders then submitted their own cost breakdowns which were analyzed by the committee. Any portion of an individual builder's estimate which exceeded the cost committee's estimate was then discussed with the builder.

One of the toughest assignments went to the mortgage finance committee, chaired by Samuel Heckman—that of finding lending institutions which would write mortgages on the Title I houses.

1949 St. Louis Home Show Will Be February 12-20

The 1949 St. Louis Home Show will be held in Kiel Auditorium in that city from February 12-20 under the sponsorship of the Home Builders Association of Greater St. Louis. John M. Bogdanor is general chairman.

Worcester Is Host to Milt Brock



A PRESIDENT of NAHB has to take his birthdays where they find him. President Milt Brock of Los Angeles celebrated his this year in Worcester, Mass., where he spoke before the Worcester chapter of NAHB. Here he blows out the candle on a cake furnished by his hosts. Looking on are, standing, John Olson, regional vice president; seated, Harry Gustafson and Alfred Renker, Worcester builders

Members of Spokane Association Build Groups of Economy Houses



NATIONAL officers of NAHB are shown one of several Economy House projects in Spokane, Wash., a group of \$7,000 homes built by Hahn & Irwin. Left to right are Grant Hahn, president of Spokane Home Builders Association; NAHB executive vice president, Frank Cortright; NAHB president, Milt Brock; Frank Snider and Al Parsons. The visit took place following the Los Angeles directors meeting

Four members of the Spokane Home Builders Association are completing homes in the economy price range on as many different developments. The prices range from \$6,200 to a top of \$7,200 for two-bedroom designs.

Hahn & Irwin is using a 720 square foot plan with full basement, plywood board and batten exterior wall, dry wall interior, heated by a coal-fired gravity furnace. The price is \$7,000.

A basementless design of 700 square feet is used by Glenn Minard, priced from \$6,200 to \$6,500. The floor is a concrete slab. Interior walls are plastered. Exterior wall is wood shakes. A gas-fired wall furnace provides heat.

Bert Cheney has a larger model, 768 square feet, basementless, for \$7,250. Of wood construction, it has dry wall interior and exterior of wood shingles and siding. Equipped with automatic oil floor furnace, electric hot water heater and automatic washer.

The \$7,200 design of Minzel Construction Co. has 785 square feet, plastered walls and exterior of wood shakes and siding. Equipment includes same items as in the Cheney house.

1949 National Home Week Date Is Set by NAHB

The second National Home Week will be held next fall from September 11-17, the National Association of Home Builders has announced. The early announcement of the date is to allow better coordination of national effort in 1949. More detailed plans will be issued in the next few months. The second effort is expected to exceed the first attempt in scope and result, according to Milton Brock, NAHB president. Using the experience of last September's effort, he said, all segments of the building industry can develop coordinated plans for 1949.

Utah Panel Held Up as Model For Economy House Talks

A panel discussion on "How We Can Build Low Cost Houses," led by Alan Brockbank, was one of the features of the Utah Home Builders Association sixth anniversary convention in Salt Lake City. The organization of the panel was considered so outstanding that the questions used were mimeographed and mailed out to all other chapters by Frank Cortright, NAHB executive vice president. The panel included representatives of the builders, of mortgage finance institutions, pub-



ALLAN BROCKBANK

Chicago Economy House Committee Completing Plans

The Economy House Committee of the Chicago Metropolitan Home Builders Association, in reporting progress, has arrived at definite recommendations for suggested foundation options, framing and interior finish specifications. It recommended that an architect be employed to translate these suggestions into plans which have the approval of FHA and VA. The Committee was set up to tie in with the national emphasis on low-cost housing.

lic officials, buildings material suppliers, organized labor, veterans and the government agencies.

B. Lue Bettilyon was elected 1949 president of the Utah Association. A. P. Neilsen is first vice president and Nick Papanikolas is second vice president. Directors include the three executive officers and George Earl, Lou Soules, Hamer Culp, H. S. Barrington, Roelof Steenblik, R. A. Flint, Roy Glazier and Elbert G. Adamson.

Memphis Chapter Elects New Officers



OFFICERS for 1949 elected by Home Builders Association of Memphis are, left to right, Lloyd B. Lovitt, Jr., and Charles K. Chandler, directors; Frank K. Jamison, second vice president; Manny Delugach, president; D. T. Kimbrough, Jr., first vice president; Malcolm R. Fletcher, secretary-treasurer; Charles H. Freeburg and Mason Ezzell, directors. Offices this year involved a contest



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\$1000

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THE ULTRA-MODERN COMPLETE KITCHEN— CREATED TO CUT YOUR CONSTRUCTION COSTS

• Whether you build homes, apartments, multiple housing units or motels, the 1949 Pureaire is a money-saver. The same holds true if you are remodeling or converting.

Why? Because Pureaire is only 48 inches wide—takes only 8 square feet of floor space! This as against at least 100 square feet in even a tiny kitchen!

Think what that means in building costs. At least 92 square feet less— as much as \$1,000 saved in construction costs.

But more. The 1949 Pureaire has new design and beauty—new roomier accommodations—improvements that bring thumping AGA and UL endorsements—as well as the exclusive patented ventilation feature.

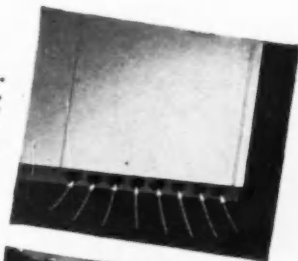
Yes, put this Complete Kitchen—range, oven, refrigerator, sink, shelves and drawers—in 8 square feet of floor space. Cut construction costs by \$1,000.

Let us show you how delightfully adaptable Pureaire Kitchens are to your plans. Mail coupon today for brochure showing typical floor plans and installations.

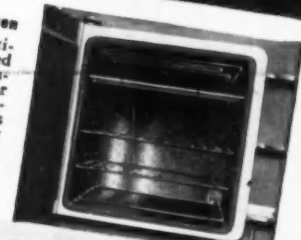
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Patented Ventilation
• Air enters ventilation ducts, rises through specially constructed flues, removing heat and cooking odors into vent.



Eye-Level Oven
• Thermostatically controlled porcelain-enamelled interior—heavily insulated—shelves adjusted to any level—fluted door. Gas Oven has similar features.



Refrigerator
• 5 1/2-cubic-foot capacity—all-metal cabinet—heavily insulated—two adjustable sliding flat-steel-wire shelves—easy to pull outward—lights up when door opens.



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Strength plus Moisture Barrier with
Pittsburgh Steeltex for Stucco

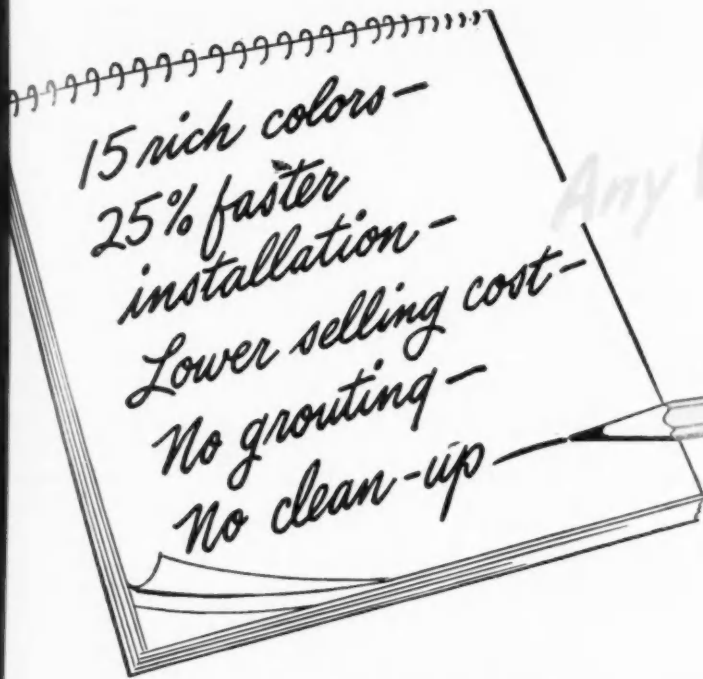
You get positive reinforcement with Pittsburgh Steeltex for Stucco through embedment of the welded wire fabric in the mix. The square mesh of galvanized, cold drawn steel wire provides resistance to strain from any direction. In addition the double ply backing guards against moisture penetration and minimizes stucco cracking—protects the beauty of the finished job—reduces maintenance.

Steeltex for Stucco is easily applied direct to studs or over wood sheathing in one operation. Steeltex is used to advantage both in new construction and the modernization of old structures. For more information on how Pittsburgh Steeltex for Stucco can be used to give you strong reinforcing for economical construction write Dept. AB for bulletin DS 131 or see our catalog in Sweets.

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IS GREATER WITH
PITTSBURGH INTERLOCK
PLASTIC
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No matter how you look at it—
PITTSBURGH INTERLOCK
is the one plastic wall tile that
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Here's Why. It's not only easy to sell—it's so easy to apply.
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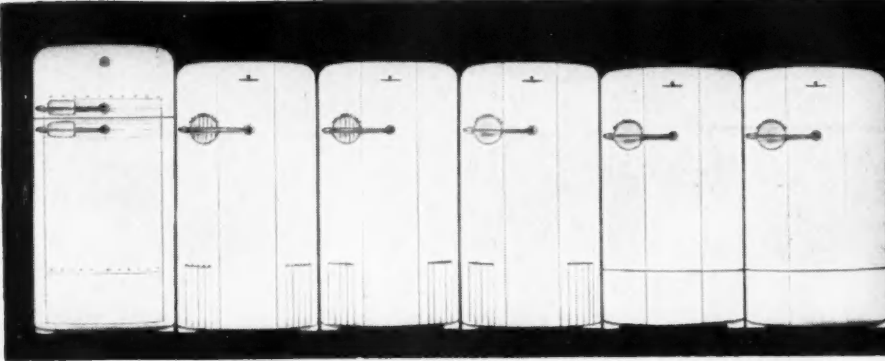
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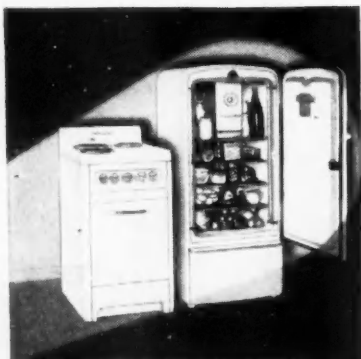
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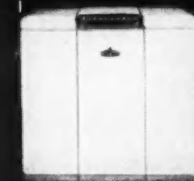
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AMERICAN BUILDER

E D I T O R I A L

Housing Legislation in 1949

THE SEPTEMBER issue of *American Builder* stated that public housing would be a live issue again when the 81st Congress convened. How accurate that prediction was, is borne out in the administration's announced program for housing legislation in 1949. The program calls for passage early in the year of all the features of S. 866 (the Taft-Ellender-Wagner bill), which the special session of Congress refused to pass last summer. Most important among these are federal subsidies for public housing, slum clearance, farm housing and research. The program also includes features for expanding the secondary mortgage market.

Since the schedule to which President Truman is reported to have agreed, calls for passage of the federal subsidy features first, and the financial features next, it can be concluded that each of the five or more features of the program will be presented as separate bills, or that the federal subsidy and financial features will be offered as two separate bills. The former procedure would be the fairer, but either is to be preferred to another omnibus bill such as S. 866.

It is known that the President expects to obtain passage of the entire program with a minimum or total absence of public hearings. The reason advanced for this procedure is that the federal subsidy features have been debated at length during the past three years, and there is nothing more to be said on either side. Whether or not public hearings can be forced remains to be seen.

With or without public hearings, however, there are forces in Congress, and reportedly in the Treasury Department, who recognize the subsidies as dangerously inflationary, and, therefore, will oppose them. Also, there are still strong voices in Congress that are familiar with the object lesson presented by the tragic plight of housing in England, which started with a little public housing. They will continue to present strong opposition to even mild experimentation in public housing. Then, there is the fact that the public housing camp is divided within itself, with all shades of opinion from those who believe that a half-million units in the next five years is adequate to those who want many millions over an indefinite period. Finally, if the subsidy features are passed early in 1949, there is still the possibility that the anti-inflation forces in the administration will refuse to appropriate funds to implement the legislation immediately.

There is no reason to believe that public housing legislation is a certainty in 1949. There is every reason to believe that continued opposition to it can be successful in 1949 just as it was in 1948. *American Builder* always has opposed public housing in the firm belief that it is inimical to the best interests of all who work for a living. No evidence has been presented that warrants altering that belief. Our position will continue to be in the forefront of those opposed to public housing and all other legislation opposed to the greatest good for the greatest number.

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What's Ahead For Building?

Here's What



**RAYMOND M. FOLEY, Administrator,
Housing and Home Finance Agency**

"The dominant fact in the current housing situation, it seems to me, is that the higher-priced market for housing for sale is wearing thin. This is evidenced already by the progressive drop-off in starts since May as contrasted to the contra-seasonal upswing of a year ago.

Accordingly, our prospects for the coming year must be measured by the ability of the industry to produce a much larger volume of housing at substantially lower prices than we have been doing since the war, and a larger volume in the moderate rental field.



**AKSEL NIELSEN, President,
Mortgage Bankers Association of America**

"The mortgage, real estate and home building industries are faced with many new and complex problems as the new year opens but, as I read the signs of the time and attempt to foresee possible developments, 1949 holds every promise of being another productive year. From the mortgage man's viewpoint, the most important factor of the moment is interest rates in the past twelve months.

The increase in mortgage rates so far has been small and some further rise is fully justified. Institutional investors, with a duty to their policyholders, cannot buy mortgages at un-



**M. K. M. MURPHY, President,
United States Savings and Loan League**

"We expect that about 925,000 new dwellings will be built in 1949. Savings associations should be able to supply at least \$1,200,000,000 of the financing needed for the new homes. Our contribution will be mainly in the price range under \$10,000, where savings and loan institutions have been concentrating their efforts.

"The effect of the \$1,000,000,000 record-volume construction loans made by the associations last year is an accumulating experience which creates efficiency and speed in handling and a general momentum toward more lending of this type. Hun-

"The special session of Congress provided many of the legislative aids needed to stimulate the lower construction costs, and to finance lower-cost homes and more rental units. I am hopeful that these will be supplemented by the new Congress with other needed provisions for low-income families, community aids, and broader research.

"Already there is encouraging momentum developing in the building industry to concentrate on the lower-priced field. If the fields of finance, building, labor, and government all focus their resources on this common goal, home building opportunities will be greatly expanded in the years to follow. We can make 1949 a good year both for those who provide homes and those who need them."

economically low rates when better investment opportunities are offered elsewhere. What the G.I. home program principally needs is an increase in interest rates from 4 to 4½ per cent. I, personally, do not anticipate a drop in construction of the size being predicted at the end of 1948. I believe the drive for more low-cost housing is likely to have more force than most of us realize.

Probably the most important development facing us is the government's attitude toward housing. Our industry has consistently contended that the solution to this problem lies at the local level and whatever assistance the federal government makes, should be made to the states based upon their individual needs. As 1949 opens there are ample funds for all legitimate needs, and the 1949 loan is likely to be a sound risk."



dreds of associations which were doing their first experimenting with construction lending in 1947 and 1948 are geared for full-speed ahead this year in what they once thought a type of loan requiring too much care and trouble. Not only the willingness of managers to make construction loans but the wherewithal to make them is in bright prospect for 1949.

"Lack of reasonable financing will not stymie the activity of any of the builders of homes—small builders or large scale builders—whom the savings and loan associations have found to be efficient and reliable as long as they build for the low-priced market, where, as many homes will be absorbed as can be built.

"By keeping all the builders at work as much of the year as possible, we can make another big dent in the housing shortage."

★ CONSENSUS

Optimism concerning the outlook for continued high volume production of new housing in 1949 is tempered by some uncertainty about adequate financing. This is particularly true in regard to mortgage money for houses in the \$6,000 to \$8,000 price range. Builders universally agree that emphasis will be on production of houses that can be purchased and financed by families with weekly incomes as low as \$50 to \$60. There is very little concern over material supplies, with the exception of cement and metals, which are expected to remain short. A sizable government housing program would, of course, threaten both the material and labor supply situation.

★ GOVERNMENT

Along with predictions of favorable conditions for private home builders in 1949 government housing officials emphasize the need for new homes in the low price brackets. They acknowledge that their challenge to the home building industry for increased production of houses in this price range has resulted in nationwide concentration by builders on this class of construction. In addition to the legislative aids granted by the special session of Congress to lower construction costs, government housing officials are hopeful that these will be supplemented with other provisions for low-income families, community aids and broader research by the new Congress.

★ FINANCE

Financial interests express confidence that there will be ample funds available to continue a record volume of new home construction in 1949. While interest rates have become firmer and mortgage rates have increased slightly, there is some opinion that a further rise is fully justified, primarily because institutional investors cannot buy mortgages at uneconomically low rates when better investment opportunities are offered elsewhere. There is general agreement that the G. I. program needs an increase in interest rates to 4½ per cent. Savings and loan associations will continue the program inaugurated in 1948 to concentrate on loans for housing in the price range under \$10,000.

What The Leaders Say About 1949



**MILTON J. BROCK, President,
National Association of Home Builders**

"There is every indication that home production will continue at a high level throughout 1949. Builders in every section of the United States are directing their efforts toward a production record of lower cost or economy housing. The backlog of demand and need for housing in the economy bracket is at an unprecedented high. The building industry has the ability and manpower to meet the demand. Whether or not our plans for 1949 can be carried to a successful conclusion will depend in a large part on the attitude and cooperation of lending institutions. Inadequate financing is the only

threat to a continuing high level of construction, particularly in the lower price brackets. It is up to the lending institutions to see to it that financing obstacles, whether these be interest rates or secondary markets, are promptly removed. With this promise the industry will be well on the road to a complete elimination of the housing problem.

"It is essential that the good industry balance which has been carefully worked out must not be upset by artificial means. The most imminent such danger is the possibility of a public housing program which would draw men and materials from the fast moving private home building industry and throw them into a great, plodding program which would keep the American people waiting years for proper housing."



**JAMES M. ASHLEY, President,
The Producers' Council, Inc.**

"It is unlikely that the number of non-farm housing starts in 1949 will exceed 900,000 units. This would be a small decline as compared with the latest estimates for 1948. The decline from the peak figure indicates some abatement of the 'desperation' demand that has been a feature of the postwar period, and a renewed willingness to defer purchase or investment where the buyer's notion of a proper quality-price relationship does not agree with the seller's. The decline also reflects the presence of a tighter mortgage market than existed during 1946 and 1947. It is not felt, however, that mortgage

funds will generally be much less readily available than during the middle part of 1948 nor that interest rates or down payment requirements will be more stringent.

"As in previous years, the great bulk of production will be of housing for sale.

The increasingly confused and distorted condition of the rental housing market as a result of rent control has become a strong deterrent to new investment in this field, a deterrent against which the special governmental inducements of mortgage and yield insurance probably will be ineffective. There are indications that operative builders will erect generally less higher priced housing, where the market is the weakest, and show increasing interest in more modest units, for which there is still a strong demand."



**R. A. COLGAN, Jr., Executive Vice President,
National Lumber Manufacturers Association**

"Indications are that the demand for construction lumber in 1949 will be high. This opinion is based upon estimates of the construction industry and upon an expressed declaration by the present administration for a federal public housing program. As a forward-looking construction industry accepts the responsibility for providing low cost rental housing, 1949 will see a great increase in the number of frame houses constructed.

Also, other construction materials are continuing in short supply, in turn increasing the demand for all types of lumber products.

"Last year saw many production records broken by America's lumber manufacturers. The lumber industry was able to meet the demand of the nation's builders in most grades and sizes. It is well to note that the building industry also had a record year.

"There has been a decline in the amount of lumber on order during the past two months of 1948, and while some of this is seasonable, other factors such as the longshoremen's strike on the West Coast have had their effect.

It seems definite, however, that the change from a seller's to a buyer's market, is nearly complete, where lumber is concerned."

This will, in turn, call for an increase in the proportion as between lumber and other building materials used for construction

★ MATERIALS

For the first time since before World War II, the home building industry anticipates a year of peak activity when the supply of basic building materials will not be a limiting factor on operations. With the exception of cement and metals, which are expected to remain in tight supply, manufacturers express assurance of a continuing, adequate flow to builders. At this time it appears definite that the change from a seller's to a buyer's market in lumber is about complete. Producers of gypsum products, millwork and specialty items, which have been short, expect to meet demand because of increased production facilities plus some anticipated reduction in new dwelling starts.

★ DEALERS

In the face of an all-time peak production of materials for distribution, retail lumber and building material dealers are expressing concern over government programs which, if adopted, are expected to take a substantial proportion of materials out of conventional channels of distribution. A domestic public housing program, European Recovery Plan needs, accelerated military preparedness and rearming of Western Europe are the four principal points in mind. The feeling prevails that if these programs are pursued energetically by government, it is inevitable that material shortages will appear. Despite these uncertainties, however, dealers are optimistic over 1949 prospects.

★ BUILDERS

Builders are confident that 1949 will be another year of record high volume new home construction. In all quarters evidence appears that an all-out drive is under way to concentrate on housing in the low price ranges—\$6,000 to \$8,000. The industry is confident that the difficulties experienced in recent months in the mortgage finance field are temporary and will be removed early in 1949. This is now the only limiting factor in a building program which can equal the 1948 record in new home starts, although there is general agreement that starts in 1949 will be slightly below those of 1948. Demand has relaxed for new houses in the higher price brackets in some areas.



THEODORE H. MAENNER, President-Elect, National Association of Real Estate Boards

"The general attitude of realtors of the United States who are most actively engaged in home building is that 1949 home production will continue at a higher rate. It is expected greater emphasis in 1949 will be placed on homes priced to sell for less than \$10,000. Our feeling is that there will be a good market for new houses priced from \$5,000 to \$7,500.

If this price range is divided into two ranges—\$5,000 to \$6,250 and \$6,250 to \$7,500, and careful account is taken of the kind of house that may be offered in the two price ranges, it is probable that the market in the latter price range exceeds the former. Our builders are making thoughtful effort to simplify their operations and designs so that prices in these ranges may be more generally attained. Prefabrication has its important part to play in this goal."



CHARLES E. DEVLIN, Managing Director, Douglas Fir Plywood Association

"In the year ahead, the capacity of the Douglas fir plywood industry will be at the rate of 2,200,000,000 square feet a year, an increase of about 10 per cent over 1948. And before the end of 1949, the rate may climb to the 2,400,000,000-foot tempo if demand makes such increase advisable.

"Plywood manufacturers are optimistic that demand will remain on an extremely high plateau provided forecasts of heavy construction, house building and general industrial activity are more accurate than pre-election polls. With a more ready supply of fir plywood indicated in 1949 than at any time since before the war, builders may again plan their projects to utilize the panels more fully. The industry now is advertising and promoting in fields, including the farm market, which could not be supplied for the past eight years."



D. J. CRANE, Vice President, Eljer Company

"Production of all types of plumbing fixtures should continue to increase during 1949. We believe the demand will continue to be great but we feel that the supply will be much more adequate than it has been in 1948. Availability of pig iron will still affect the amount of cast iron plumbing fixtures that will be produced, but we believe enough iron will be

available to increase production considerably. Vitreous china water closet combinations have been shorter than anything else in the plumbing fixture line and in this particular category a substantial increase in production seems almost certain. Production of plumbing brass to trim fixtures should be adequate to meet all requirements. All in all, we believe the plumbing fixture industry will do a good job in taking care of demand during the coming year."



ALLEN HARRIS, Jr., President, National Oak Flooring Manufacturers' Assn.

"It is quite generally felt in the oak flooring industry that sufficient oak flooring will be available for housing and other construction projects during 1949. The industry, starting from scratch at the end of World War II, has been able to rapidly expand production in an effort to meet the needs of home builders. With reasonably favorable weather, the production

of rough lumber suitable for flooring manufacturers should be sufficient for volume operations. The extent of the housing program for 1949 will be the determining factor in whether or not there will be an adequate supply of oak flooring for all housing needs. If home building remains at the 1948 level there should be adequate oak flooring available so that builders and architects may safely specify that material without fear of difficulty in obtaining a sufficient supply."



E. W. RUDDICK, General Manager, Ponderosa Pine Woodwork Association

"While there will be a heavy demand during 1949 for standard pine woodwork items, the supply situation should show some improvement over 1948.

"The production capacity of the industry is such that it can take care of the foreseeable 1949 demand, provided it will be able to get the necessary amount of shop grade lumber to do so. Continued, and further acceptance and use of modular sizes by builders will play an important part in helping this industry to produce more windows. This also means economies for the builders. Along with attention to modular standard sizes, there will be also a wider use and call for exterior woodwork that has been preservative treated, especially in those areas where such treatment is added protection against local climatic conditions."



E. W. DONAHUE, President, National Door Manufacturers Association

"The outlook for the supply of Ponderosa pine stock doors, windows and frames is somewhat better than it was in 1948. The one great obstacle to any substantial increase in production is the scarcity of pine shop lumber and door panel stock. The hope that wartime newcomers in the pine shop lumber market would gradually withdraw has not material-

ized. There are still many buyers who were not prewar consumers. This has been no small factor in aggravating the supply situation for our manufacturers. The relation of supply of our products to demand, however, should be better in 1949 than it was in 1948, not only because we anticipate a reduction in the number of new home starts, but also because we expect some increase in output. Although the order backlog has been reduced, and is showing improvement, it is still substantial."



JOSEPH F. BATTLE, President, Nat'l Paint, Varnish and Lacquer Assn., Inc.

"Paint manufacturers will continue to supply dealers with sufficient quantities of their products to meet demand in 1949. While demand is crowding supply for some of the white pigments, particularly titanium and lead, and a few chemicals, most of the raw materials are obtainable. Even in the case of most materials in short supply, actually a greater volume

is now being produced than ever before, the shortage being due to greatly increased demand. However, manufacturers today are not restricting production because of limited supplies of single ingredients. Modern science has taught them how to use other more plentiful materials without sacrifice of quality. During the war manufacturers suffered from a shortage of drying oils. Present drying oil supplies are so plentiful they constitute a current surplus."



M. C. FAIRFIELD, President, The Insulating Board Institute

"The insulating board industry, having completed its most productive year in history, looks forward with confidence to 1949. During 1948, shipments of insulating board to dealers reached a record high of approximately two billion square feet. Despite this substantial increase in production, output has not fully kept pace with demand. How far the 1949 output of insulating board will go toward meeting the needs will

depend to a considerable measure upon lumber dealers and wholesalers. The biggest demand will come during summer months. Manufacturers at present do not have warehousing facilities to cope with that period. To meet this situation, wholesalers and dealers should be on the alert to build up their own inventories. In that way home owners and builders will be able to get prompt delivery on their requirements."



**BLAINE S. SMITH, President,
Universal Atlas Cement Company**

"Cement shipments this year will probably approach 205,000,000 barrels, which is about 18 million barrels more than the year before or nearly 10 per cent increase. This is an all-time peak of production and shipments for the cement industry.

"It is believed that production and shipments in 1949 will be slightly greater and that at least as much cement will be available for home building and light construction as in 1948. Even with a slight decline predicted in the total number of new dwelling starts in 1949, it is expected that the demand for cement will remain at peak levels in most fields of use. It is expected that there will be no serious supply problems in cement for new home construction. Our company will push production to the utmost and continue to distribute our products equitably."



**E. W. SMITH, President,
Asbestos Cement Products Association**

"During 1948, as for several years previously, the output of asbestos cement building materials was at a very high level. Production, however, trailed demand by a considerable margin because of the shortage of raw asbestos fibers. Improved mining processes have improved the supply to a limited extent, but it is still difficult for most producers to make prompt shipments. In view of this situation, distributors and dealers will take asbestos cement products into stock when they are available during the winter months and thus be in a position to take care of the demand which usually develops with the coming of spring. This industry expects to see a continuation of peak business in 1949. In addition to the residential field, there is a heavy backlog of demand in industrial and institutional construction."



**HARRY B. HIGGINS, President,
Pittsburgh Plate Glass Company**

"For the first time since the war's end, plate glass and paint products should be in sufficient quantity to meet the demand from the construction and building industry during 1949. Window glass will probably remain in short supply. The record 1948 production, brought about by close cooperation of labor and management, technological improvements and increased availability of raw materials helped to reduce the backlog of orders. Both plate and window glass production is expected to continue at the present high levels, as is the output of paint and protective finishes. Production of brushes, particularly top quality, is meeting with difficulty and there is little hope of relief in the near future. Pure China bristle is in very short supply and is extremely costly—being many times above prewar prices."



**FRANKLYN R. HAWKINS, Advertising Mgr.,
Libbey-Owens-Ford Glass Company**

"The present high volume of glass production is expected to continue during 1949. New production facilities and techniques will increase the year's volume of plate glass blanks. A substantial increase above the record year of 1948 is expected in double-glazed insulating window units. The demand for these units continues to grow as the insulating glass is used in large commercial buildings and institutions as well as houses. The tremendous demand for window glass, which has been in short supply, is expected to continue but new production facilities, plus maximum use of existing plants, should improve the situation. With predictions of continued high production figures for new home construction, plus a high volume of commercial and institutional building, it is expected that 1949 will be another good year in glass production."



**B. W. CLARK, President,
National Electrical Manufacturers Association**

"This year will probably be as good for most electrical product lines as 1948—the largest volume year in the industry's history. Actual 1949 accomplishments will depend considerably on the steel and copper supply and on industrial peace in mining, transportation and manufacturing. Steel has been and apparently will be even more critical than copper. Probably 1949 will be the year in which supply of appliances will approximately match demand—a condition which has been expected since the end of 1947.

"Electrical building material sales, with few exceptions, will be dependent only on the volume of actual 1949 construction and the copper and steel supply. The industry has ample production capacity to fulfill all the requirements which we anticipate from the home building industry."



**JOHN W. PEASE, President,
Prefabricated Home Manufacturers' Institute**

"Production of American homes for 1949 should equal the high rate established in 1948 and will be accomplished with a constantly expanding use of prefabricated panels. In support of this prediction there is a generally satisfactory situation as to material supplies but a relatively tight labor market, which definitely favors the efficient and speedy operator. Large scale output of low-cost, line-produced homes must be the free enterpriser's answer to the accusation that the building industry has failed to produce homes for those in the lower wage brackets. With the cooperation of land developers and home builders, mortgagees and the public, plus a sound long-range federal housing policy, the end of 1949 should see many thousands of American families on the road to becoming better citizens through home ownership."



**C. B. SWEET, President,
National Retail Lumber Dealers Association**

"It is difficult to forecast the business outlook for 1949 until after the new Congress convenes in January. I think, however, it is safe to assume that a housing bill will have top priority and that standby controls over materials distribution will be granted. In other words, we as dealers will have government as a competitor. Elimination of the basing point method of pricing has had the effect of eliminating competition between manufacturers of some items and confining dealer purchases to nearby producers. Drastic steps like building regulations, price controls, priorities and allocations invariably lead to black or gray markets. Another phase which must not be overlooked is the almost certain rewriting or modification of the Taft-Hartley law, which is bound to increase the ultimate cost of materials to the consumer."



**CLYDE A. FULTON, Vice President,
National Retail Lumber Dealers Association**

"Retail lumber dealers, particularly in agricultural areas, will find business good during the coming year. In 1949 the alert dealer will find it possible to offer to his prospects the best and most complete assortment of building material that has been available since the beginning of the war. With improved methods of construction now being studied and tested, with new products to offer that will stimulate demand, with the assurance that there will be fewer delays because of material shortages, I am optimistic as to the active interest of our buying public.

"In 1949 in the hearts of the American public, there will still be the longing for new homes and for improvement and modernization of the old ones. We, as dealers, will have what it takes to satisfy their wants."



W. P. ATKINSON, Home Builder,
Oklahoma City, Oklahoma

"I believe that we will enjoy a high level of general economic activity during 1949. I expect many of our basic economic indexes to continue to rise. Therefore, although the peak in housing demand has been passed, we should have a strong demand all through 1949, particularly in the medium and lower price fields. If Congress solves the home

builders present serious financing problems by providing an unrestricted secondary mortgage market, then we should build near the record volume of 1948. It is my further opinion, based on conversation with leading builders over the nation, that a much greater percentage of home construction in 1949 will be in the lower price field. The prospects are that all materials, with the exception of metal and cement, will be more available. Labor is expected to remain tight."



THOMAS P. COOGAN, Home Builder,
Miami, Florida

"Everywhere in my travels I find the builders turning to the \$6,000 house. The outlook for houses in this bracket is excellent and we think there is a tremendous expansion in this price range. There is only one drawback and that is, that builders encounter exceptional difficulties in obtaining mortgage financing on small houses. It is difficult enough to sell the

mortgages on the larger houses but a great many investment institutions refuse to buy mortgages on houses of less than 800 square feet. I think that if a liberal secondary mortgage market could be provided we would have a tremendous volume of home building in a sales price range of \$8,000 and under, with the \$8,000 price prevailing in the northern states, and \$6,000 prevailing in the southern states. There is a huge backlog of demand in these price ranges."



R. M. LOCKWOOD, Home Builder,
Detroit, Michigan

"The present stringency in supply of home mortgage finance is compelling builders all over the country to curtail their plans for 1949. I look for a slightly lower production of housing in 1949 as compared with 1948. Production could become substantially lower if the mortgage finance stringency becomes more acute. Builders simply cannot plan large

housing projects in the face of the fact that the present home finance mortgage makes it necessary for home purchasers to pay more than ten per cent as a down payment. I look for housing in 1949 to cost about five per cent more than it did in 1948, principally because of the fourth round of wage increases. With the outlook for material supplies good, it appears the principal problem will center around procurement of adequate financing, especially in the low price range."



NATHAN MANILOW, President,
Chicago Metropolitan Home Builders Assn.

"The slowdown of the home building industry since the middle of 1948 has had a salutary effect in many ways and may be effective in preparing the stage for greater accomplishment in 1949. The minor slump has caused many to pause and consider, and the result has been a check rein on prices and costs. At the same time the industry has

awakened to the fact that the course of least resistance in construction has been by-passing a tremendous market that has been standing with outstretched arms with few to heed its appeal. That market is symbolized by the \$50 per week man in a factory or wearing a white collar. With favorable legislation, adequate cooperation from agencies and proper codes, the stage can be set for an increasing tempo in the \$8,000 and lower price range that will result in a million new homes in 1949."



NICHOLAS F. MOLNAR, Home Builder,
Cleveland, Ohio

"The outlook for 1949 home building, for sale or for rent, looks very encouraging because: (1) home builders are concentrating on low-cost housing; (2) mortgage money will ease up; (3) the fact that construction costs are not declining will induce many buyers to act now; (4) builders all over the country, who are producing post-war homes with up-to-date

features at moderate prices and financing arrangements not requiring very large down payments nor high monthly payments are having no trouble selling long before completion, indicating an excellent market for 1949. A considerable percentage of the 1949 housing production will be in rental units—two, three and four-family structures. My views will be considerably revised, however, if a large-scale government housing program should be undertaken and deprive the industry of labor and material."



W. A. BARKSDALE, Builder-Dealer,
Charlottesville, Va.

"Since 1945 practically all of the home building in this area has been small houses of about 5½ rooms, selling for just under \$9,500, including land. There is no indication that this type of building will slow down in 1949. While mortgage money on the whole is tighter, those operative builders with good reputations at lending institutions, and with good appraisals,

report ready sales. There is also a backlog of demand for commercial and industrial building, with a notable increase in this type of building in the last few months. The state has planned \$396,000,000 in new school facilities, a program that will be a source of volume for three to five years. Colleges and universities also have extensive building programs planned, to get under way as soon as officials assure themselves that building prices have stabilized."



H. L. STOKELY, President,
Lumbermen's Association of Texas

"Home building in most areas of Texas will decrease in 1949. Among those who can afford homes on usual terms, the demand is normal. The unsatisfied demand is among those who do not have the necessary cash for the down payment or the credit standing to meet monthly payments. In the ranching and agricultural areas of Texas, home building is

expected to remain about the same as in 1948. The volume of small home construction in 1949 could be increased provided the government broadens FHA and creates a secondary market for mortgage loans of this class, resulting in lower down payments. The average Texas family of modest means in need of housing much prefers a home of its own than to be tenants in a government 'project'. Some building materials are still in short supply but prices reached the peak several months ago."



NORMAN P. MASON, Dealer,
North Chelmsford, Massachusetts

"We still have a need for housing, but it is not enough to permit extravagant profits to builders nor to permit a profit after wasteful practices. In addition to other factors which make the new housing market healthy, there is the growing realization among average Americans that housing prices, after all, are in line with other prices in the economy, and

therefore, they should not wait but start building or buying now. So much talk of government subsidized housing may delay building for rental. This would be serious because more than one unit in every five built in 1948 was for rental purposes. Continued low interest rates will make financing more difficult, especially on low-cost houses. With some commodity price adjustments now downward, the public may adopt a "wait-and-see" attitude on housing that would weaken the market."

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TRENDS

Builders Must Sustain High Building Volume to Keep National Prosperity

A RECORD YEAR of achievement for the building industry was established in 1948. It is expected that the final tally will show 925,000 new dwelling units started, just short of the all time record of 937,000 units in 1925, with increases over last year in all sections except the East South Central region. In the January 1948 issue of *American Builder*, 950,000 new dwelling units were forecast. It now appears that the final figure will be 25,000 less than the final estimate of last year.

What happened was a drop in starts in the fall under the record breaking months of 1947. This is generally attributed to the fact that the peak of building starts in the fall of 1947 was contra-seasonal and that 1948 followed a normal pattern with the peak in the spring and a decline in the fall months.

From here and there came reports

of unsold houses, vacant for months, which leads some builders to suspect that buyers are striking or that the housing shortage is over in their communities. Generally, deals are harder to finance and new home prospects with a three or four thousand dollar down payment who meet all the requirements of the mortgage bankers are fewer and farther between than previously.

It is reported that the price of old houses, which soared to a level higher than anyone dreamed possible a few years ago, dropped during the year. The price of new houses in most instances increased thus making a bigger spread between the price of an old house and a new house.

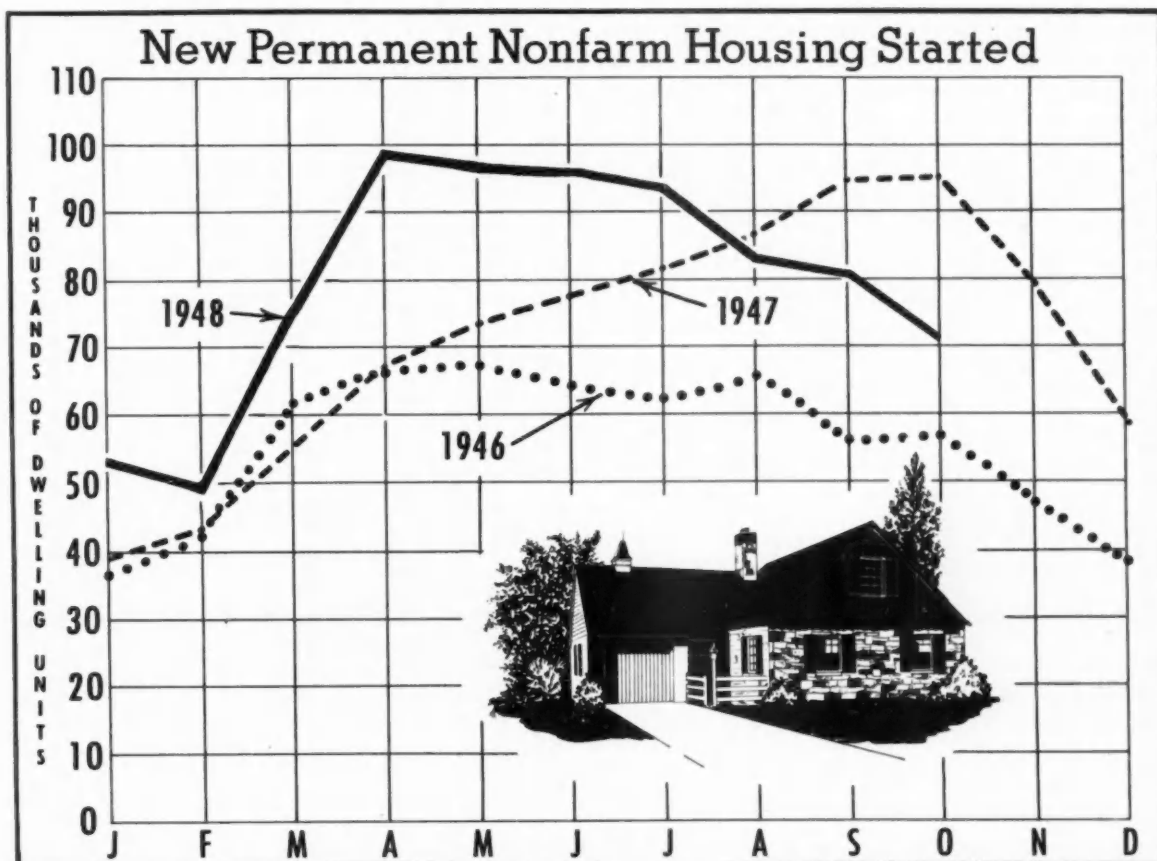
Construction Costs Rise

A standard six-room frame house which cost \$12,761 to build in July 1947, according to Roy Wenzlick &

Co., rose to \$14,402 in July 1948, an increase of \$1,640. In prewar 1939, such a house cost \$5,894. The 1948 price is 2½ times the 1939 price.

But what could be expected with lumber 3½ times its 1939 level and building labor rates more than double their 1939 level? The building industry did not produce a miracle house for \$5,000 in 1948. What it did do was to produce hundreds of thousands of well designed, well equipped houses for \$6,000 to \$10,000 in most parts of the country. No better picture is available of the products of the residential building industry last year than the one presented in the October 1948 issue of *American Builder* which shows pictures, plans, and prices of "Houses That Demonstrate Today's Values" in all the different sections of the country.

Literally millions of people made tours of the new houses in their com-



United States Dept. of Labor
Bureau of Labor Statistics

AMERICAN BUILDER CHART

munities in the first observance of "National Home Week" in September. It was such a "natural" that it was a wonder that no one had thought of the idea that occurred to the editor of *American Builder* to devote a week or longer in the fall to publicizing the new crop of houses which builders placed on the market during the year and to invite the public to inspect the modern equipment and step-saving arrangements.

Prefabricated Houses

The dreams of government planners for prefabricated houses turned out on an assembly line did not materialize. The Wyatt Plan of 1945 visioned 600,000 prefabs a year. No more than 50,000 were turned out in 1948. Most of the more than 200 companies which were building prefabs or planned to build them have folded. It may still be possible to produce a satisfactory prefabricated house that will represent a saving over conventional methods of construction but it has not appeared in quantities at the present time.

Public Housing

While builders were busy building a record number of houses last year, the halls of Congress were ringing with debate on the Taft-Ellender-Wagner bill, designed to build new houses at the rate of 1,500,000 per year for 10 years. Although passed by the Senate, the bill failed to be put to a vote in the House. A similar bill will undoubtedly be reintroduced in

the 81st Congress, probably this month.

No one will quarrel with the objectives of the T-E-W bill which states that "the production of a large and continuous volume of housing during the post-war period is necessary for the:

—highest attainable level of investment and employment in private enterprise generally and for house production's share in full employment of labor.

—increase in the total housing supply required to eliminate current housing deficits and for national growth.

—encouragement of home ownership and provision for rental housing for those who find it most suited to their needs.

—replacement of slums and other substandard housing in urban and rural areas.

—systematic improvement of residential neighborhoods as the core of better city planning.

—correction and rehabilitation of the existing housing supply.

But detected in the facilities proposed for the attainment of these objectives and methods for effectuating policy are the familiar assistance to private enterprise, and governmental aid which have already made agriculture a vassal of government. Transportation, public utilities and the banking system also operate under government regulation. If the residential construction industry is ultimately regulated by the federal gov-

ernment, this will leave only private non-residential construction and such segments of manufacturing, wholesale and retail trade and the service industries as are not affected by the construction industry and agriculture in the realm of private enterprise.

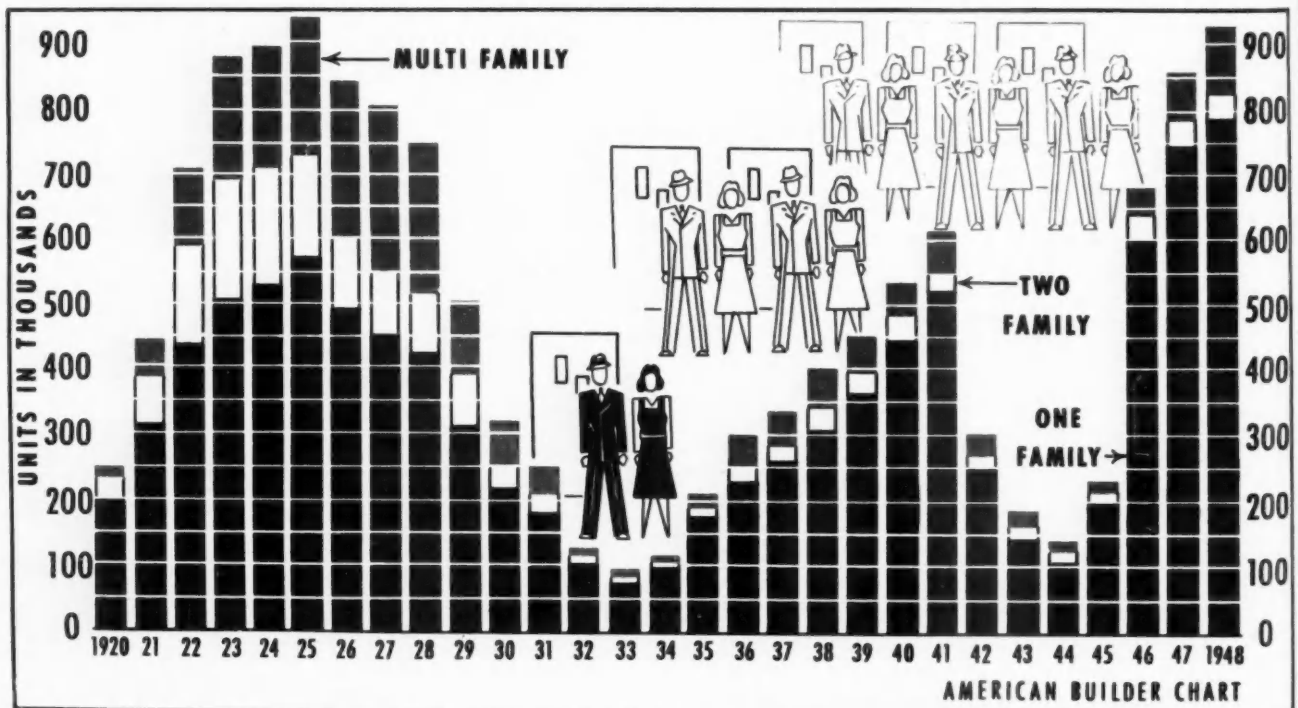
The first experiments with public housing from 1937 to 1942 resulted in the building of 189,000 dwelling units for use by low-income families. About 15,000 units were started last year and 30,000 are planned for 1949. The objective of the T-E-W bill is to build 500,000 low-rent family units in the next 5 years, an average of 100,000 a year. The target may be raised when Congress convenes this month. It can be expected that the public housing units would first appear as they have previously in large cities, but ultimately some would be built in smaller communities.

What to Do?

"The trend toward socialization of housing can be stopped only by the provision for an adequate housing supply and the elimination of slums" according to Fred T. Greene, president of the Federal Home Loan Bank of Indianapolis.

He suggested that savings and loan people in each community organize groups to make continuous studies at the local level of present and future housing needs because provisions of adequate housing for the population is a local problem and the responsibility for studying these problems and making progress to meet them rests first

Dwelling Units Started 1920 to Date—By Type



of all on leaders in the local communities.

Members of the U. S. Savings and Loan League are being urged to concentrate on 1949 mortgage loans on new houses priced under \$10,000. They believe that "production of a million homes a year for the next two years would end the housing shortage in every community," and that "expansion of financing in the lower cost home building field would insure such production."

1949 Forecast

The Departments of Commerce and Labor predict a drop in 1949 new house starts. Their estimate is 875,000 permanent units compared with 925,000 last year, but they forecast an increase in dollar volume apparently in anticipation of further inflation. But there are once more signs that the drop in the price of lumber, which has been expected at various times for two years, may actually occur. This would have an important effect on construction costs. On the other hand this could be largely offset by a fourth round of wage increases.

If it could be expected that rent controls would be removed in populous areas, the market for new houses would expand. This is definitely not in the cards now. Increases in construction costs make rental units at frozen levels more attractive than ever, thus decreasing the number of prospective home buyers.

Non-residential Building

The number of new commercial buildings in urban areas including stores, garages, service stations, office and bank buildings and amusement buildings has declined in recent months from the previous year's level. However the dollar volume has been consistently higher.

A decline in both dollar and physical volume occurred last year in industrial building. Some companies have completed postwar construction plans. Others have shelved them on account of high costs.

Less private educational buildings were built last year in urban areas than the year before. The number of new churches has decreased.

Public building, including such items as highways, sewer, conservation and development projects as well as hospitals, educational and other public buildings, cost about \$4 billion last year. It is expected to increase to \$5 billion this year, an increase of 24 per cent.

All told, the Department of Commerce expects that new construction in 1949 will set a new high dollar value of \$18.7 billion, a 5 per cent

increase over last year's \$17.8 billions. Physical volume will be about the same as last year.

Prospect for Lumber Dealers

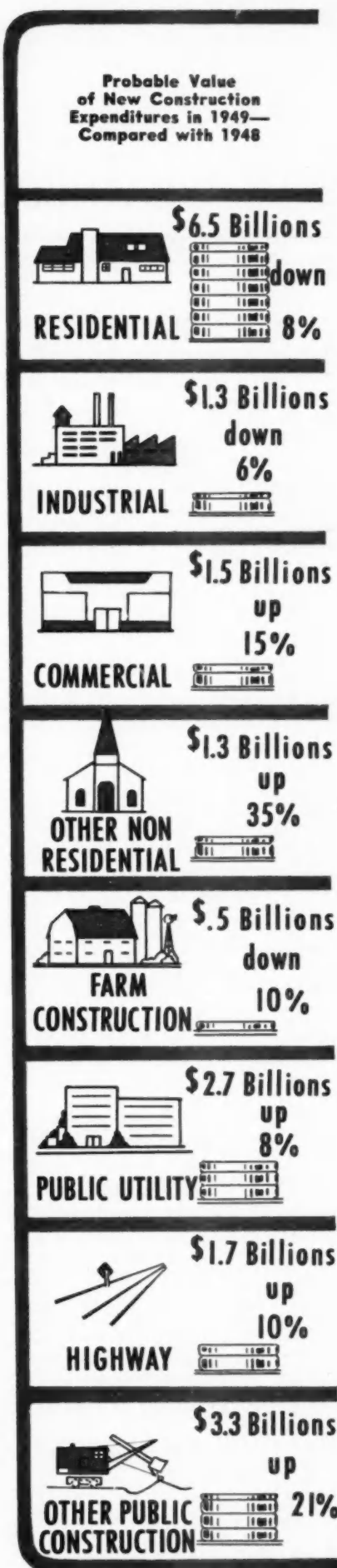
In September 1948, the index of sales of building and hardware dealers stood at 456.4 (1939 = 100), the highest of any classification of retail stores. The building materials retailers did a business of \$655 million in September 1948 as compared with \$575 million the year before, an increase of 15 per cent. If the government's forecasts as to the amount of new construction in 1949 prove accurate and the dollar volume rises only 5 per cent above 1948, the sales of lumber dealers will not increase by the large percentages that have appeared on their reports for the last three years. It would be expected that the same physical volume of building materials will be handled this year as in 1948, unless the amount sold for maintenance and repair varies appreciably.

Whether business goes up or down depends on growth in the dealer's particular community; just as the opportunities for builders vary from place to place. Some communities still face a critical housing shortage. In others the situation has been greatly relieved. New commercial buildings, schools, hospitals and churches are needed by communities which have grown rapidly in the past three years. In others, urgent requirements have been taken care of.

Farmers are the best customers of many lumber dealers and they are being urged to help ease a slump by buying "better living." The Agriculture Committee on National Policy of the National Planning Association says that "If farmers built the approximately two million new farm houses they need; repaired another million that need it; put in such improvements as electricity, running water and plumbing, refrigerators and other household conveniences then they would come into the market as substantial consumers of industrial products."

Building Means Prosperity

The building industry never was in a better position to capitalize on the lessons of the past than it is now. A large pool of labor has been assembled and more efficient methods have been evolved during this period of peak activity. The 1949 builder is alert to changes in the market and has developed a sense of showmanship which will help to move his product. The public knows that the future appearance and prosperity of all communities depend upon builders.



American Builder Chart



HIGHLY organized building technique involves specialized crews for each job



LEFT TO RIGHT: Frank Sheldon, Reno Sirrine, Milton Kauffman, and Don Wilson, Kauffman, veteran builder, gives his key men a free hand

CUSTOMER

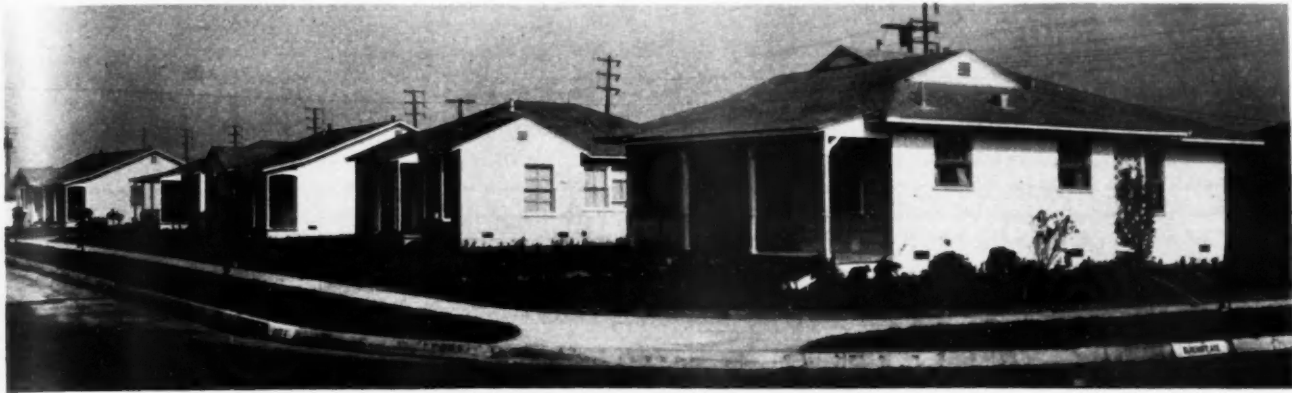
Result is record of 914 houses built and sold in one year without expensive promotion. Behind achievement was technical experience and the ability to organize men, methods and materials



SKIP-LOADER is used for putting fill into area for porches. Sled facilitates fast loading and delivery of form lumber

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TWO-BEDROOM houses sell for \$8,150 to \$8,575; three-bedroom houses sell for \$9,250 to \$9,950

CONFIDENCE *Multiplies Sales—*

THE STORY is one of a veteran subdivider and builder, Milton Kauffman, who surrounded himself with three young men—each of whom is an expert in his particular line.

An expert, himself, Kauffman subdivided his first tract in 1907. He has been at it ever since. Altogether he has subdivided more than 15,000 lots and built 2,223 homes in Southern California. At a time of life when many men think about retiring, he began work in Norwalk Manor, about 15 miles from downtown Los Angeles, and formed the organization which established the record of 914 houses built and sold before completion in one year.

In a phrase, Kauffman's philosophy is "Live and let live." He applies it to both his associates and his customers. He believes in making a profit for himself, but he sees to it

that his key men are paid handsomely. He believes in a low profit per house on a lot of houses; one reasonable profit on the entire transaction, from raw land to final sale.

His executive vice president, Don Wilson, grew up in commercial and real estate loan work. He now controls all disbursements; handles all FHA matters and all loan negotiations. Since the company's volume grew from nothing to \$7,000,000 in one year, Wilson's executive ability and genius for organization was taxed to the utmost in running the office and making the innumerable decisions which arise in a fast growing business.

The man responsible for the sale of the houses is Reno H. Serrine. "Don't let your prospect get too comfortable," is one of this salesman's instructions to his men—"sell him while

he's still on his feet." Serrine sold 914 houses in a single year—in the competitive Los Angeles market.

When the second unit comprising 600 more houses was started, Serrine sold 146 houses valued at \$1,307,550 in a single day.

He had accumulated the names of over 300 veterans who asked to be notified when more would be available. When the second unit was ready for sale, he wrote these veterans asking them to be at the tract the following Sunday. They came, and 146 of them bought homes and made deposits.

One unusual policy established by Serrine which is paying big dividends in creating confidence is his practice of refunding down payments (less escrow cancellation charge and credit report fee) at any time prior to moving in, if the buyer changes his mind.



CONCRETE mixer is fed by skip-loader, left; enough rough lumber for a complete house arrives at building site on one truck

When it is considered that all of the 914 houses sold last year were sold from three to six months before they were completed, it will be realized that the buyers had a great deal of time to change their minds. This liberal policy undoubtedly cost some sales, but Serrine feels that the confidence and good will it brings far offsets the disadvantages.

Serrine believes that it is easier to sell from plans than from model homes. "All prospective homebuyers have a subconscious mental picture of exactly what they want," he says. "When they buy from the plans, the picture is not disturbed; then when a buyer watches his home develop under construction, he transfers his picture to the house he has bought."

In July, 1947, the company sold its two-bedroom house containing approximately 800 square feet of floor space, plus a one-car garage, on a 60x100 foot lot for \$7,825. Today, in spite of the tremendous rise in the cost of labor and materials the same model is being offered at \$8,150, an increase of only 4 per cent.

Frank C. Sheldon, vice president and associate builder, is the man who builds the houses at costs which enable his company to undersell competition. He is in complete charge of all building operations, including purchasing and expediting. He also directs the architectural department which produces the plans used. The architectural work was formerly done on the outside, but Sheldon has found that by doing it within the organization, he can exercise a closer control and avoid the use of plans and specifications which result in waste or in costly building procedures.

Sheldon started in the building business when he was just a boy, working as a carpenter. During the

war, he was superintendent on a 3,200 house project in the Northwest. For the past two years, he has directed construction of some 3,000 housing units in the Los Angeles area. He is a firm believer in streamlined on-site methods, using specialized crews for each operation.

Starting from scratch, with no organization, he completed the first 914 houses in one year. The going was rough, he says, and required 14 hours a day on the part of himself and his assistants in order to establish a flow of materials, to coordinate the various trades, to select and train his supervisory personnel, to build up competent crews of mechanics. But gradually his present system and organization began to evolve, and today he feels no hesitation in predicting that the new group of 600 houses will be completed in six months.

Sheldon says that his work might be described as the "Four C's Program" — Coordination, Cooperation, Cost Control. Under the heading of coordination he describes the vast amount of advance planning which precedes the actual start of construction work, and then the coordination of supplies and labor necessary to maintain schedules.

As soon as FHA approval has been secured on a new tract, and while waiting for recording of the loans, Sheldon starts placing orders for materials and lining up subcontractors who in turn order their materials. Subs are chosen not entirely on the basis of lowest bids, but on the basis of proved ability to get the work done on schedule and willingness to work harmoniously with other trades.

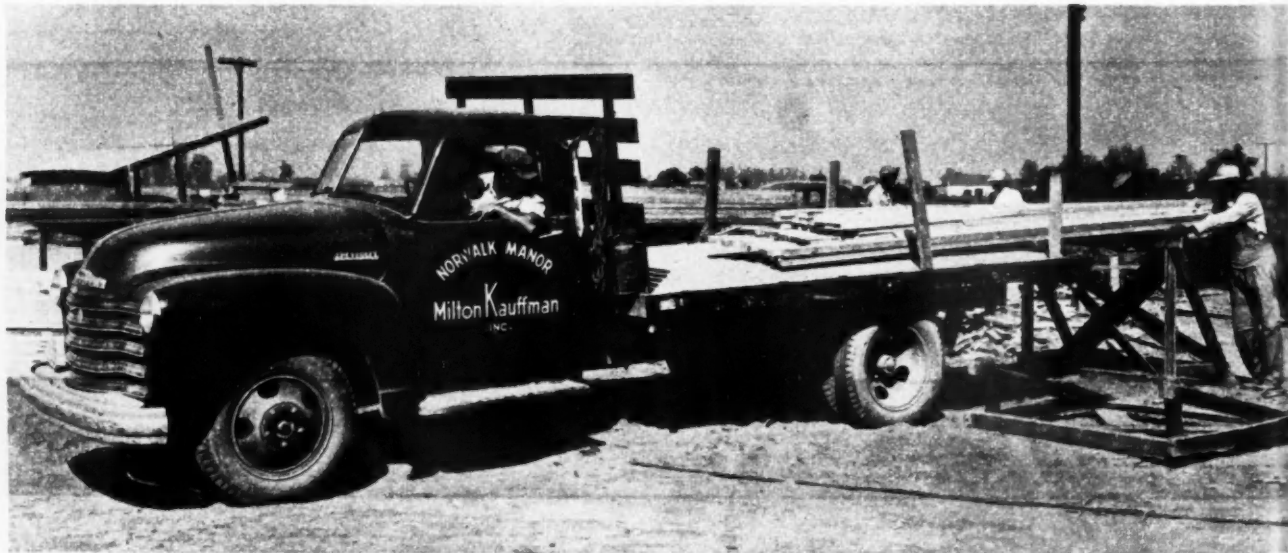
"I include the word cooperation in my program," says Sheldon, "because I have found that no amount of driving, prodding, or even threatening

will take its place. If the various factors in a construction program do not cooperate, the program will bog down and it's almost impossible to fix the responsibility. That's why we hold weekly meetings with our purchasing, expediting, and field supervisory men all present. Any complaints one department may have against another are ironed out at these meetings."

Sheldon is much pleased with the cooperation he receives from union officials. He takes pains to keep them informed as to his probable future requirements, and they usually are able to take care of him.

All four of the "C's" enter into the highly organized technique used in the actual building operation which involves specialized crews for each job to be done. The mudsill crew, for example, does nothing but attach mudsills to the foundations. They become expert at it, they know what to do without instructions, they usually establish a satisfactory performance which can be depended upon. The various carpentry crews break down as follows:

- 1—Mudsills
- 2—Girders
- 3—Joists (Laborers bring the lumber to the carpenters)
- 4—Laying subfloor in place and toenailing
- 5—Nailing of subfloor
- 6—Layout of bottom and top plates. Top plate is tacked temporarily to bottom plate
- 7—Nailing of corner posts
- 8—Raising crew
- 9—Porch lintels and posts
- 10—Rafters
- 11—Facia and starter boards
- 12—Roof sheathing
- 13—Setting of window and door frames



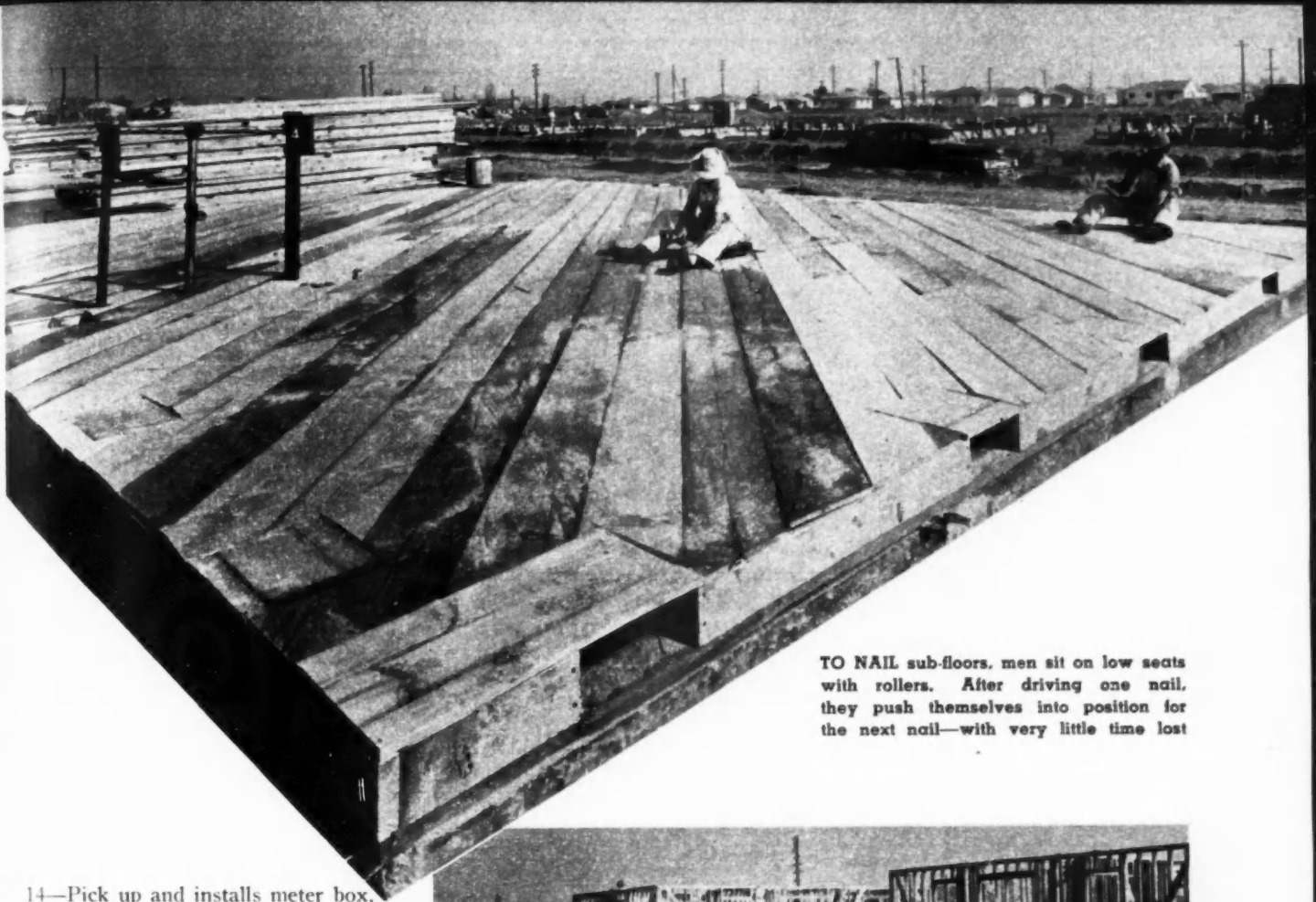
RAFTERS are placed on two horses. Truck backs into load; first horse is pulled out, then second, as truck backs further

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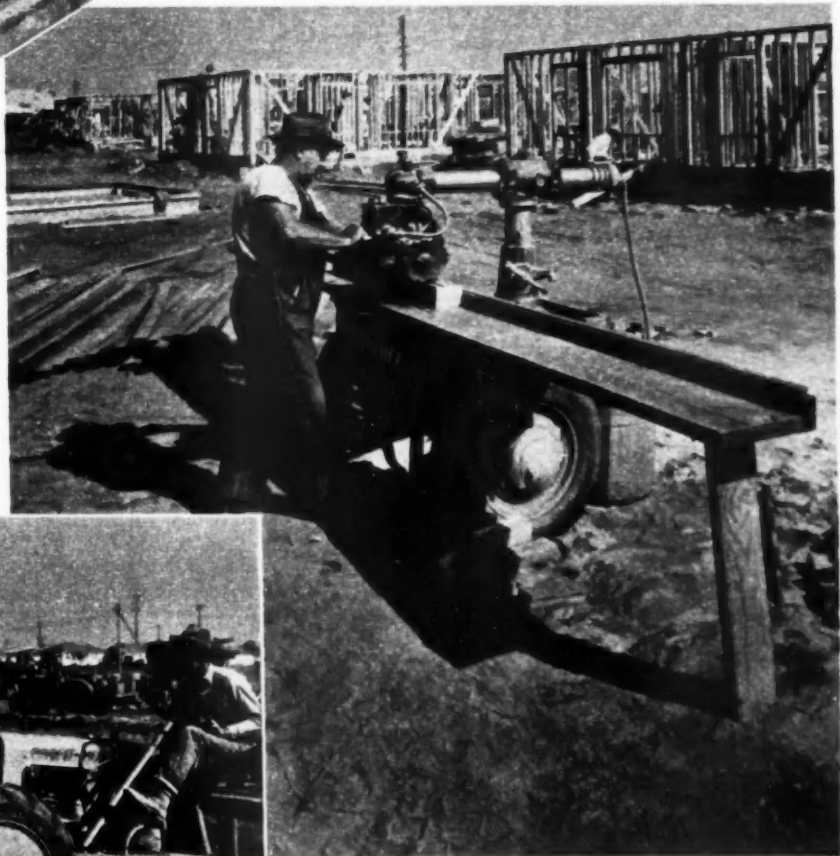


TO NAIL sub-floors, men sit on low seats with rollers. After driving one nail, they push themselves into position for the next nail—with very little time lost

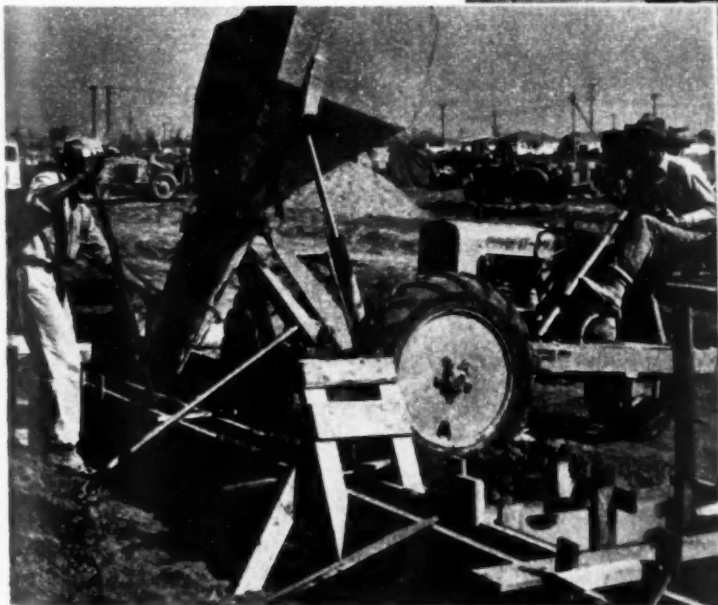
14—Pick up and installs meter box, grounds and blocking.

It will readily be seen that this method of operation requires eternal vigilance on the part of the superintendent. If one crew bogs down, all the rest are thrown out of gear. On the other hand, this very fact is realized by all the men, and it tends to keep them on schedule. Frequently a friendly rivalry exists between crews performing the same operation.

The framing lumber is packaged at the lumber yard and a load comprising all the necessary lumber for a complete house except rafter stock



CRIPPLES, headers cut with power saw; "Doodlebug" delivers concrete from the mixer to the forms



MILTON KAUFMAN INC.

LOT NO.	CONCRETE		FORMS		ROOFING		PLASTER		PAINTING		CABINETS		DOORS & WINDOWS		TILE		FLOOR LATH		LINOLEUM		FINISH HEATING		FINISH ELECTRICAL		FINISH PLUMBING		STUCCO	
	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST	EST. UNIT COST	TOTAL UNIT COST

FORMS		CONCRETE		ROOFING		PLASTER		PAINTING		CABINETS		DOORS & WINDOWS		TILE		FLOOR LATH		LINOLEUM		FINISH HEATING		FINISH ELECTRICAL		FINISH PLUMBING		STUCCO	
PHI INSPECTION																											
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SUB FLOOR																											
PARTITIONS																											
RAFTERS																											
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STUCCO																											

Code	Est. S.F. Cost	Total S.F.	Total Est. Cost	Total S.F. Earned To Date	Total Cost To Date	Est. Cost To Date	Over	Under	% Compl.	S. Earned This Week
521-A	.25	2252	460.08							
521-B	.025		581.87							
521-C	.007		578.07							
521-D	.03		440.38							
521-E	.04		5307.04							
521-F	.08		1653.92							
521-G	.028		485.18							
Totals	.143		11,480.14							

Code	Est. S.F. Cost	Total S.F.	Total Est. Cost	Total S.F. Earned To Date	Total Cost To Date	Est. Cost To Date	Over	Under	% Compl.	S. Earned This Week
531-A	.0478	20,516	4308.00							
531-B	.018		1360.14							
531-C	.134		12243.06							
531-D	.06		4524.30							
531-E	.09		8161.61							
531-F	.028		2364.30							
Totals	.283		32,958.00							

Lot No.	Plan No.	S.F.	531-A	531-B	531-C	531-D	531-E	531-F
1	1A	1000						
2	2C	1024						
3	3C	1123						
4	4B	1123						
5	5A	1123						
6	6A	1122						
7	7A	1100						
8	8A	1100						
9	9A	1100						
10	10B	1123						
11	11B	1100						
TOTAL		11,110						

HIGHLY organized operation techniques used by Kaufman organization include what Vice President Sheldon calls a "Four C's Program"—daily records of costs and progress

is dumped at the foundation, with the mudsills and girders on top. The 2x4's are precut to exact size, but the balance is cut on the job. One member of practically every crew has a power tool to do the cutting.

Rafter stock is not included in this load because Sheldon has found that by the time the men get to the rafters, the necessary long lengths have usually been used up for some other purpose. The method used in cutting the rafters and loading them on a truck is shown in one of the photographs. This loading method saves 15 to 20 minutes.

A power saw on wheels is brought to the particular spot where walls are being raised, for the purpose of cutting headers and cripples. In order to prevent waste, a pick-up man gathers the short lengths cut from plates and takes them to the saw man.

Sheldon has experimented with prefabricated forms for foundation walls, but has not been able to arrive at a saving. He now uses 2x6's, cut to length, and nailed together for each foundation. An interesting method of hauling them from one foundation to another is by a skid, or sled, built for that purpose.

Concrete work is speeded up by use of a skip-loader which puts sand and stone into the mixer, and by the use of a "Doodle-bug" to take the concrete to the foundations. Another skip-loader puts the fill into areas for porches.

The rough plumbing assembly is prefabricated at the plumber's shop. The plumber goes beyond usual procedure, even for big operations, by prefabricating his water lines to the fullest extent possible.

The all important matter of controlling costs was given much study. Sheldon developed a "weekly cost



FLOOR plan is typical example of house with garage in Norwalk Manor project

analysis" in order to keep a constant check. This is made up in three parts, or sheets; one covering concrete labor, one, rough carpentry labor, and the last, finish carpentry labor. The sheet on concrete labor is broken into five operations: Excavating; form setting; pouring foundations and garage, stripping and cleanup; aprons, sidewalks and steps; concrete mixing and transit. An optimum cost is set up for each of the operations.

There are columns to the right of the sheets where the number of units completed as of each week and the actual cost are entered, thus enabling Sheldon to determine how his costs are running each week.

The same type of form is used on the rough carpentry and finish carpentry labor. They are broken down as follows: Rough carpentry labor—mudsills and girders, subfloors, framing, rafters, roof sheathing, jambs, frames and grounds; finish carpentry labor—porch trim, plywood, siding, sash and doors, interior trim, finish hardware and screens.

Each man's time is carefully charged against the type of work he does. If he works on several operations during the week, this shows on his time card. At the end of the week, his card is turned in to the payroll department where the time applied to each operation is taken off, totals computed and posted on weekly cost



THIS house features a unique window treatment. Floor plan of same house, below

analysis forms in the general office.

In addition to the weekly cost analysis, a daily progress chart is used to record the progress made each day on all operations, including those done by subs. Every night, each superintendent sends in his progress report on the work under jurisdiction, and these reports are entered on the progress chart which is placed on Sheldon's desk by 9 a.m. each day. Thus he can tell at a glance where pressure or help is needed in order to maintain scheduled operations.

The houses have stucco exteriors, with many models being embellished with boards or shingles. Interiors are plastered and floors are hardwood. Asphalt shingles are used on the roof. Lots are 60 feet wide by at least 100 feet deep. Sidewalks, curbs, gutters, paved streets and sewers are provided. One- or two-car garages are included.

The two-bedroom houses are priced from \$8,150 to \$8,575; the three-bedroom models run from \$9,250 to \$9,950. All houses are priced at the figures set by the Veterans Administration, or lower. Down payments are \$500, including all charges and escrow fees.

Milton Kauffman is making plans for extending his operations and has just concluded negotiations for 277 lots in nearby Compton, where the same type of houses will be built.

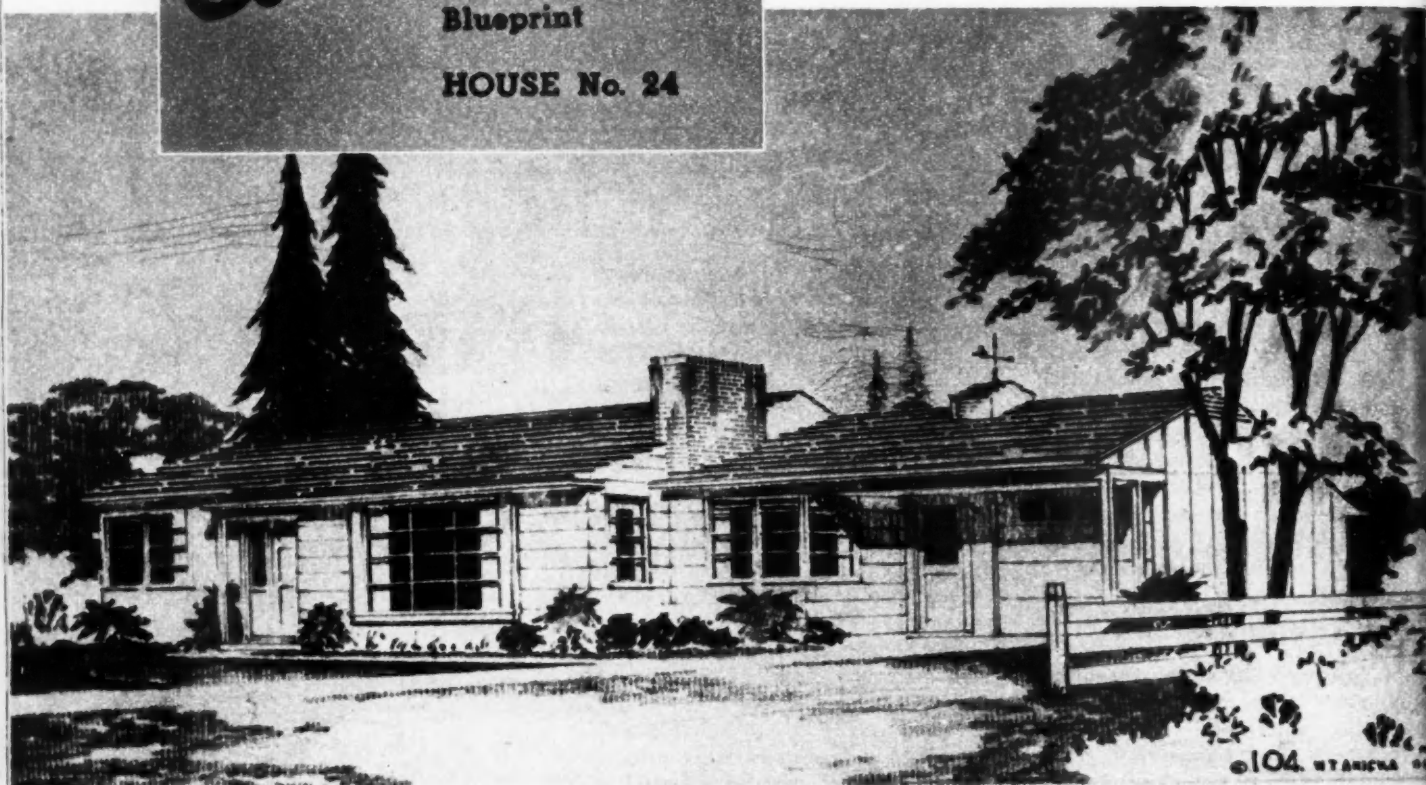


VARIATION, and a distinctive character in each house was achieved in the sub-division. Above is typical floor plan used



Anicka

Blueprint
HOUSE No. 24



THIS HOUSE which is designed for a growing family, contains all the elements for good, comfortable living

Eye-Appeal from Any Angle

THE CURRENT blueprint house is another of the typical Anicka houses that have proved to be very popular. Its characteristics make it adaptable to all climates and locations.

One of the interesting features is the irregular plan contour around the perimeter of the house. This makes it possible for the architect to obtain the proper visual appeal regardless of the angle from which a view of the house is taken. The nature of the plan contour is such that the prospective builder or owner is not limited to one feature elevation; rather he has a house that can be adjusted to conform to any site. This can be accomplished by orienting the house to the site requirements, using either the front, rear or garage side as the principal facade.

The plan is a typical Anicka arrangement. The rooms are separated into groups according to their functions. The reception room, living room, dining room and study form the center core. The quiet wing is composed of bedrooms and bath, while the service unit containing kitchen, garage, basement stair and entry flanks the other side of the center core.

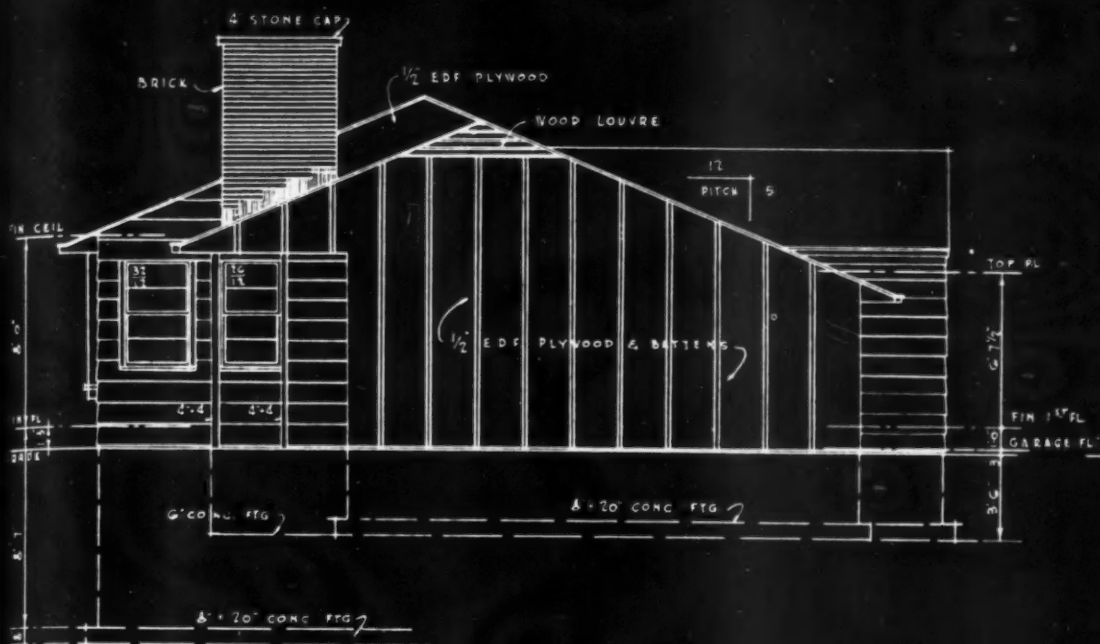
In this plan, circulation revolves around the living room which becomes the focal point for all activities. The service entrance at the opposite end of the house is protected from the elements by a large roof overhang that extends over the garage door. Access to kitchen, basement and garage is obtained through this entrance. A large terrace at the rear of the house provides for outdoor living.

The basement under the center portion of the house provides space for a large recreation room in addition to laundry and heating facilities. Concrete stairs lead directly from grade level at the rear to the laundry. This arrangement allows easy access from the basement to the outside.

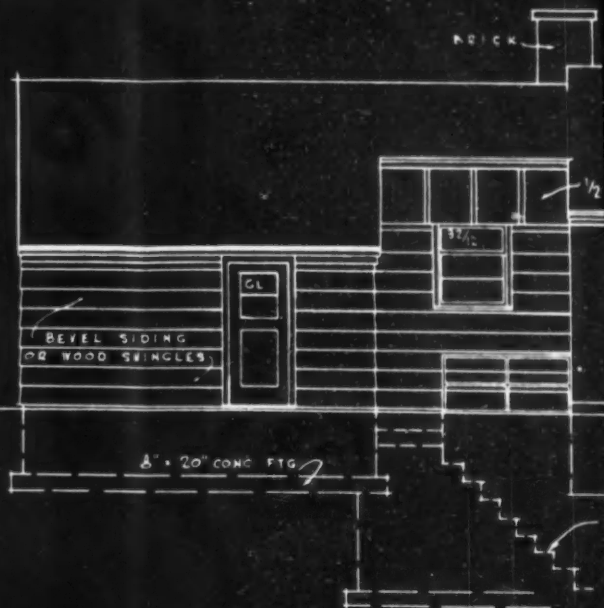
Roof lines of the house are kept simple yet effective. This has been accomplished despite the fact that the plan contour is irregular. The low, wide-spreading eaves accentuate the current design approach to the one-story house, as well as providing shade for large glass areas.

Construction of this house follows conventional methods. Anicka has established room sizes based upon standard joist dimensions in order that a minimum of cutting and fitting will be required.

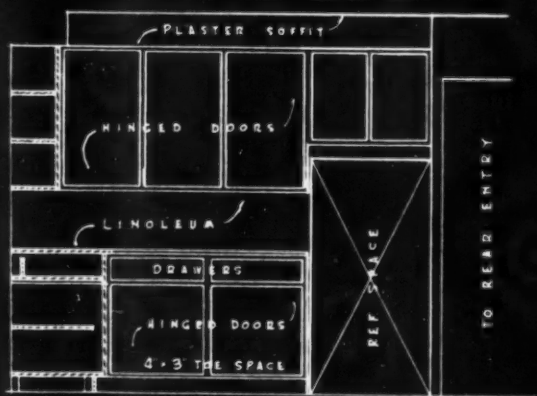
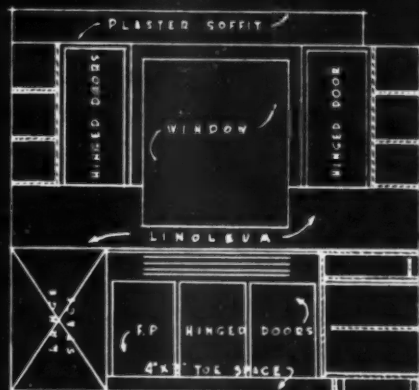
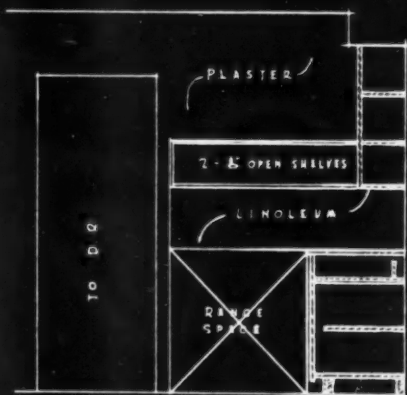




RIGHT ELEVATION

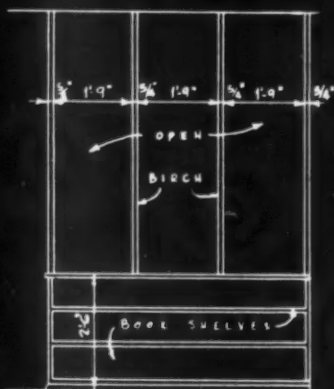


REAR

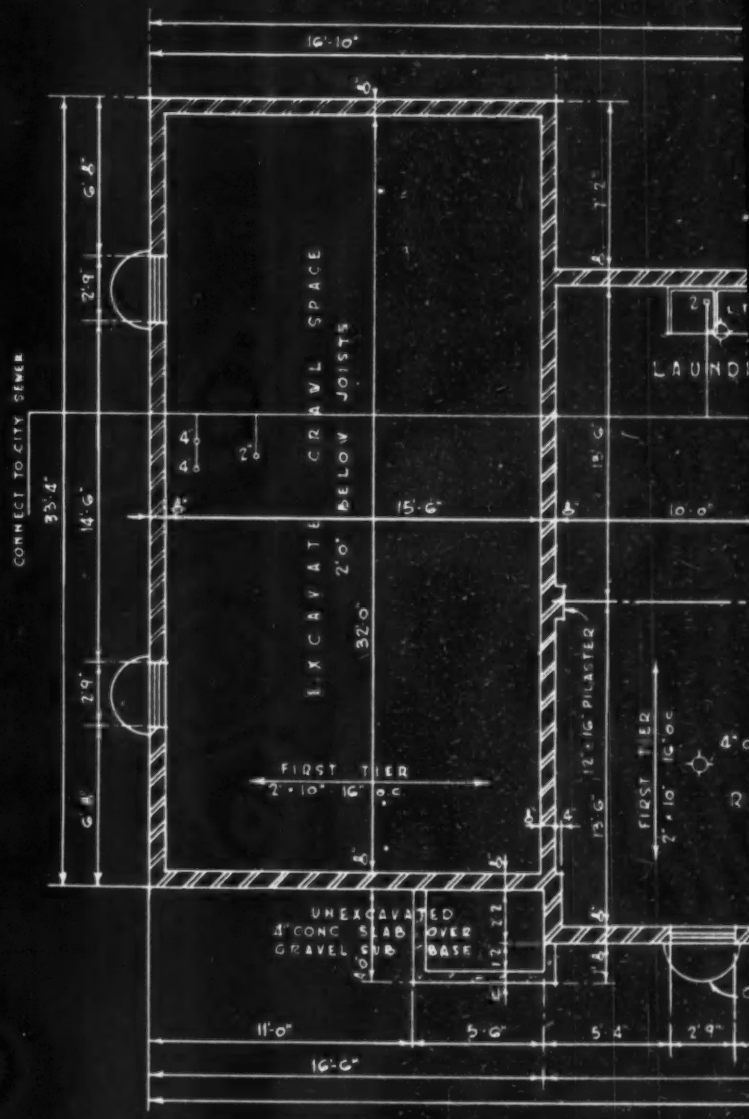


KITCHEN DETAILS

SCALE 1/4" = 1'-0"

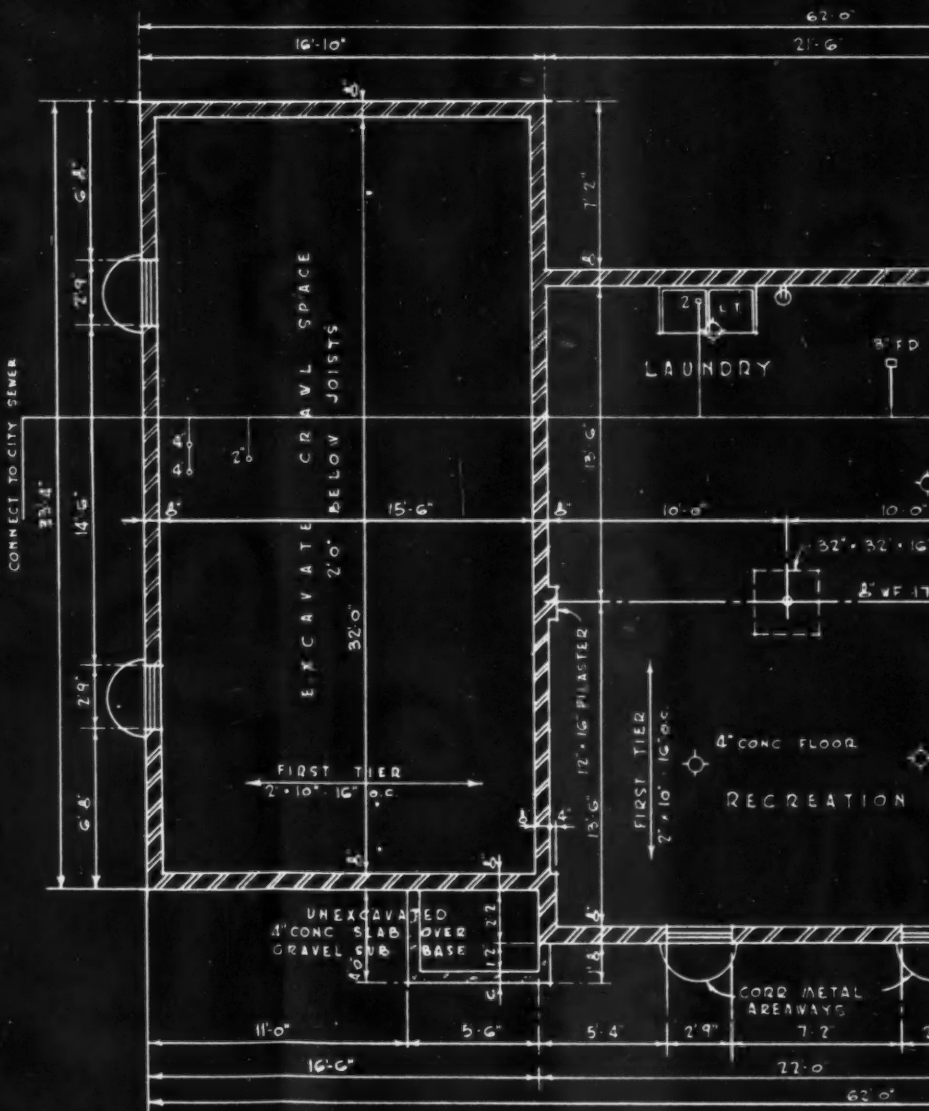
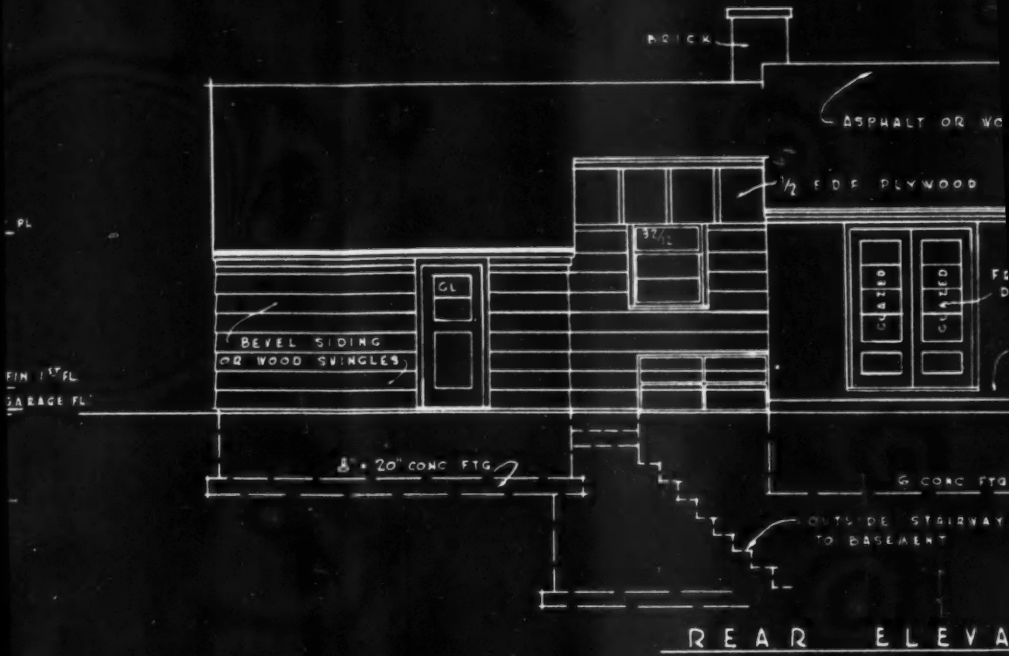


BOOK SHELVES



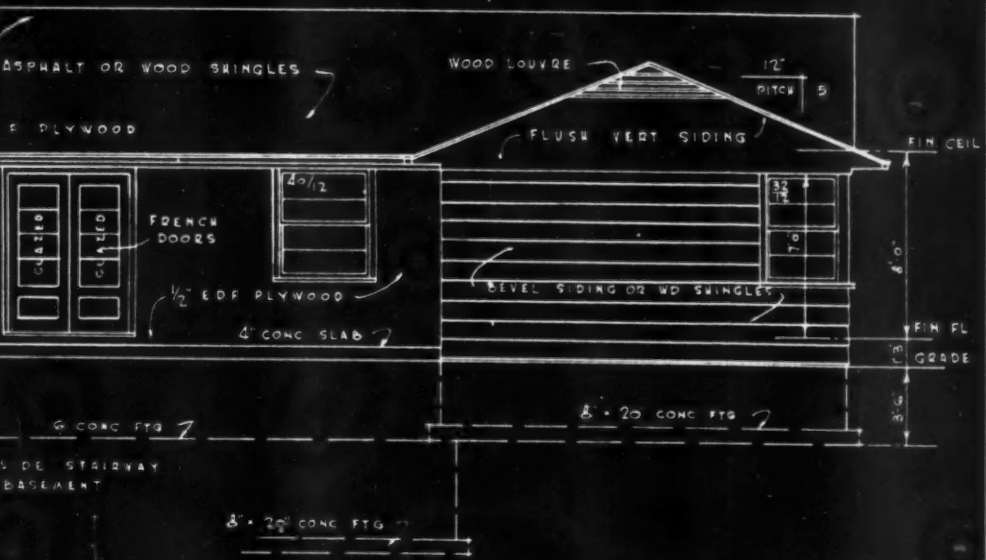
FOUNDATION

SCALE 1/8"

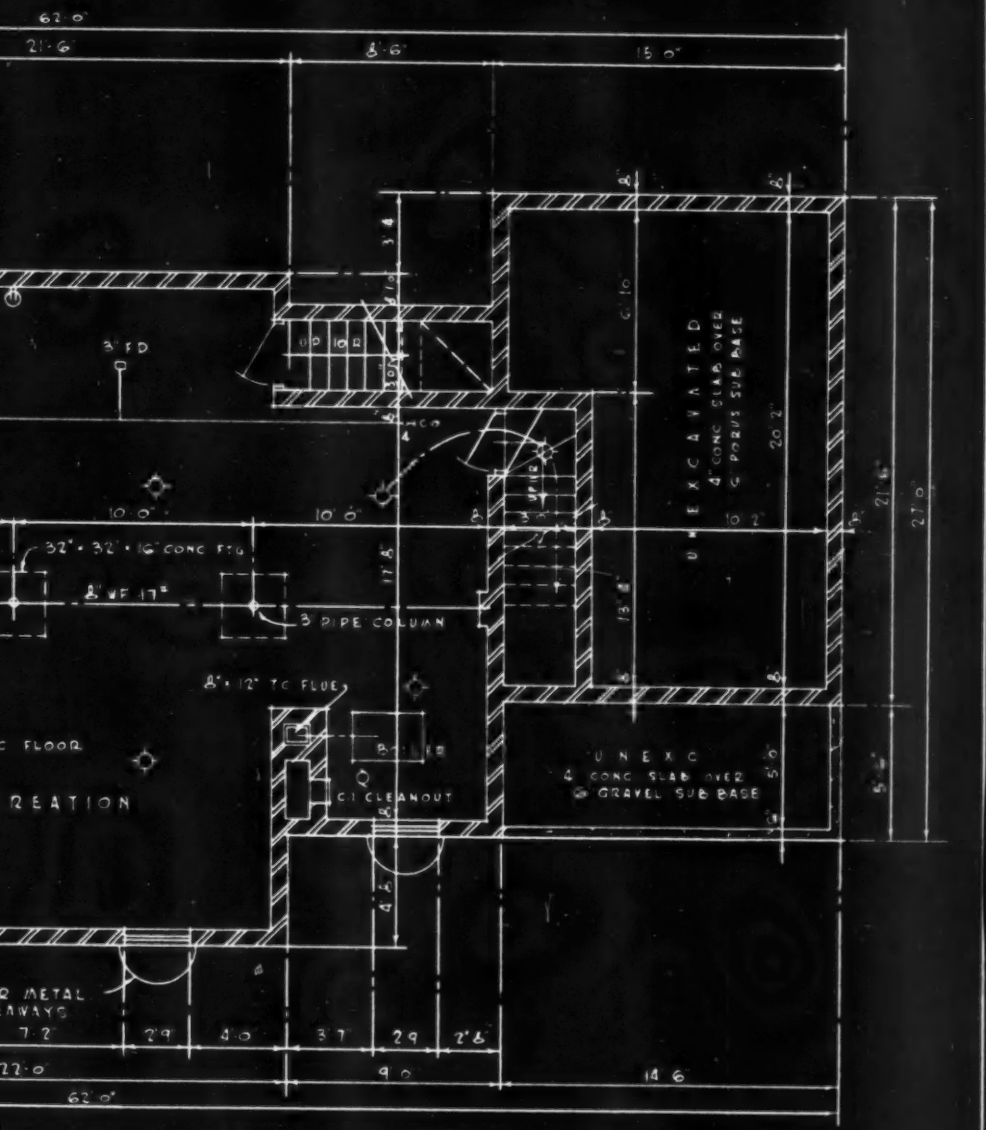


FOUNDATION PLAN

SCALE 1/8" = 1'-0"

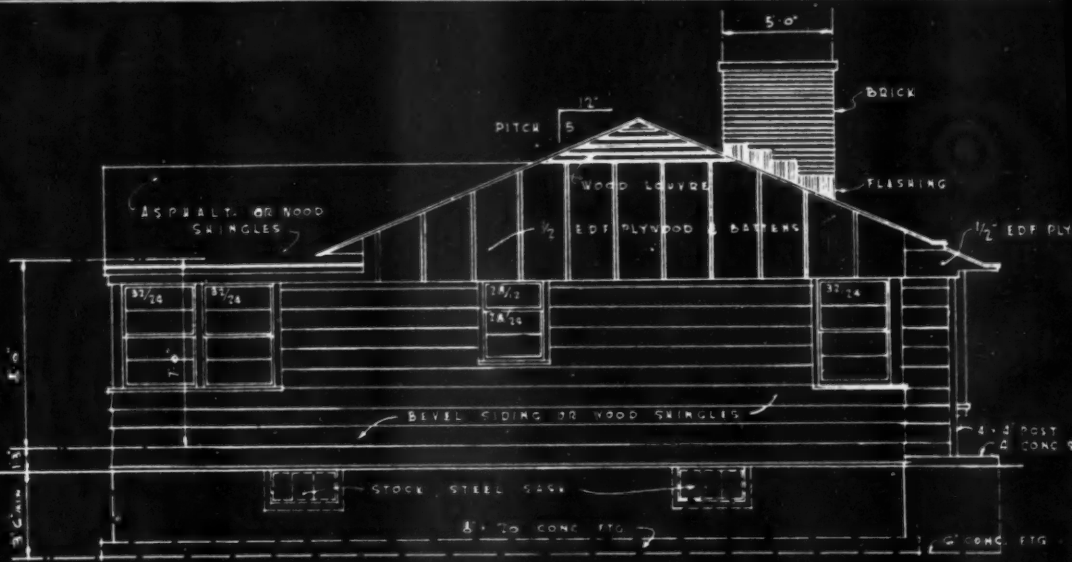


ELEVATION

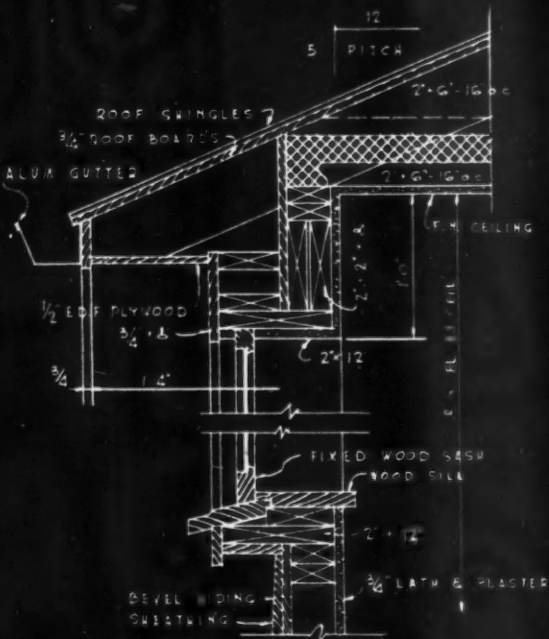


PLAN

DESIGN No. AB 137
AMERICAN BUILDER BLUE PRINT SERIES
 Designed By
WALTER T. ANICKA, ARCHITECT.
Ann Arbor, Michigan.
 Simmons Boardman Pub. Corp. 105 W Adams St. Chicago, Ill.

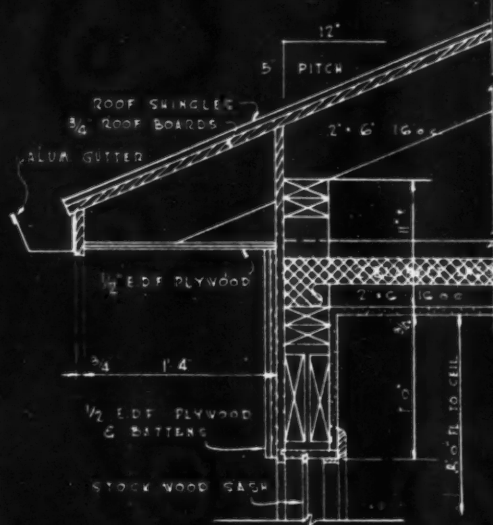


LEFT ELEVATION



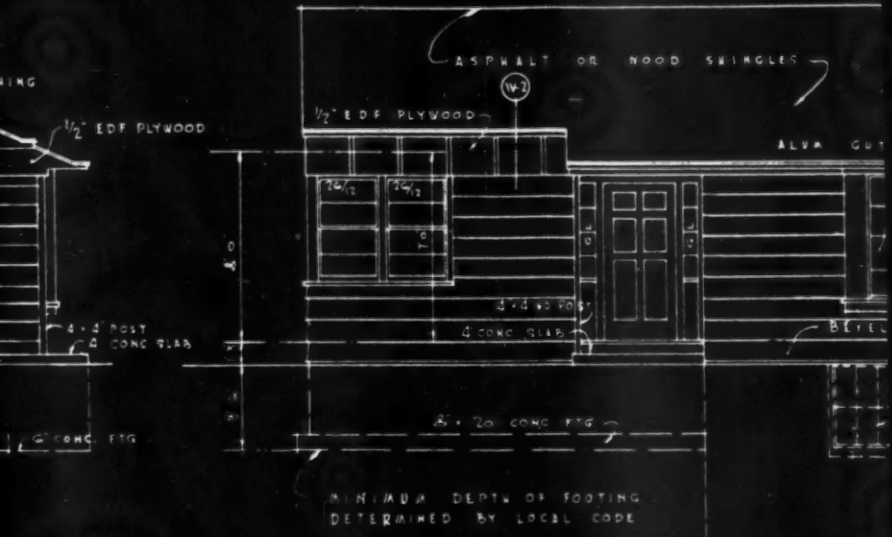
BAY WINDOW DETAIL

SCALE $\frac{3}{4}'' = 1'-0''$



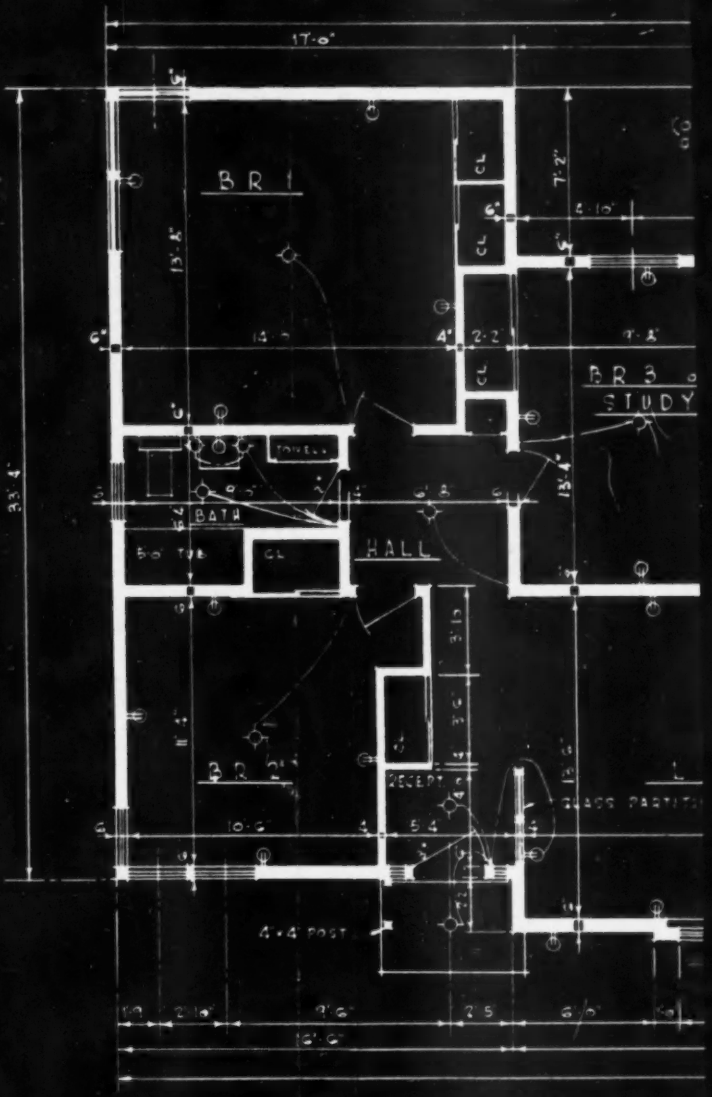
SECTION W-2

SCALE $\frac{3}{4}'' = 1'-0''$



MINIMUM DEPTH OF FOOTING DETERMINED BY LOCAL CODE

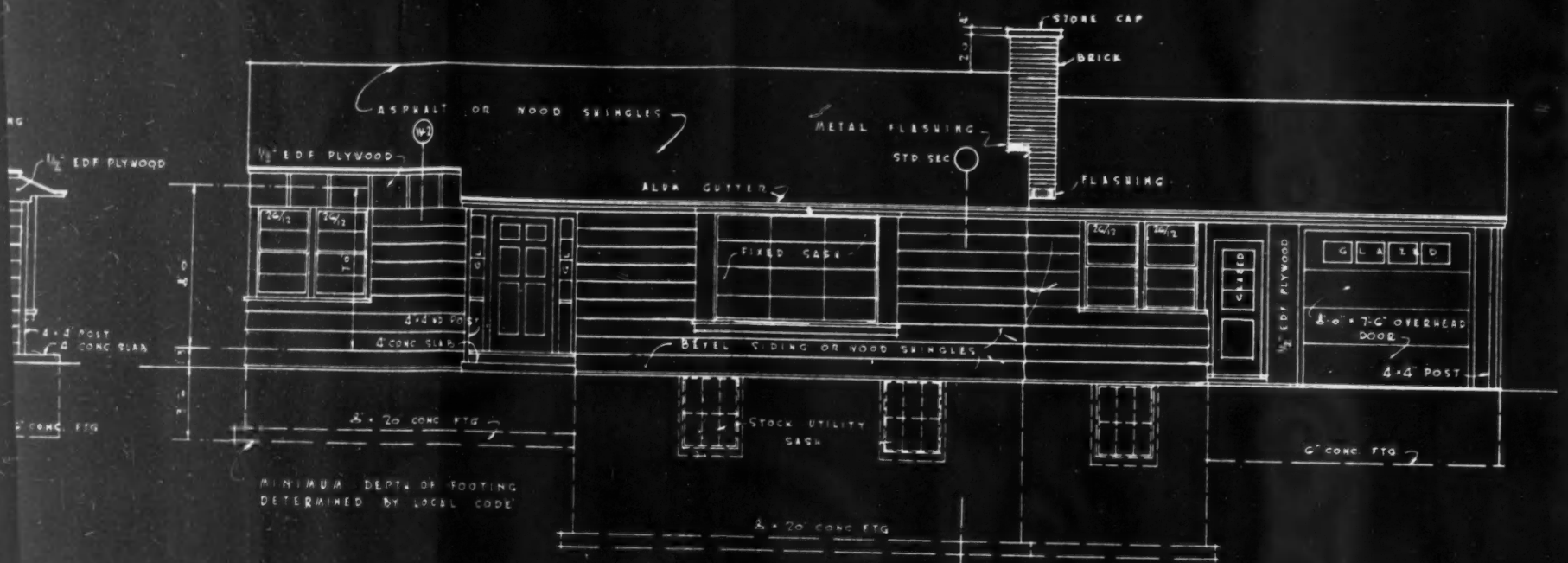
FRONT



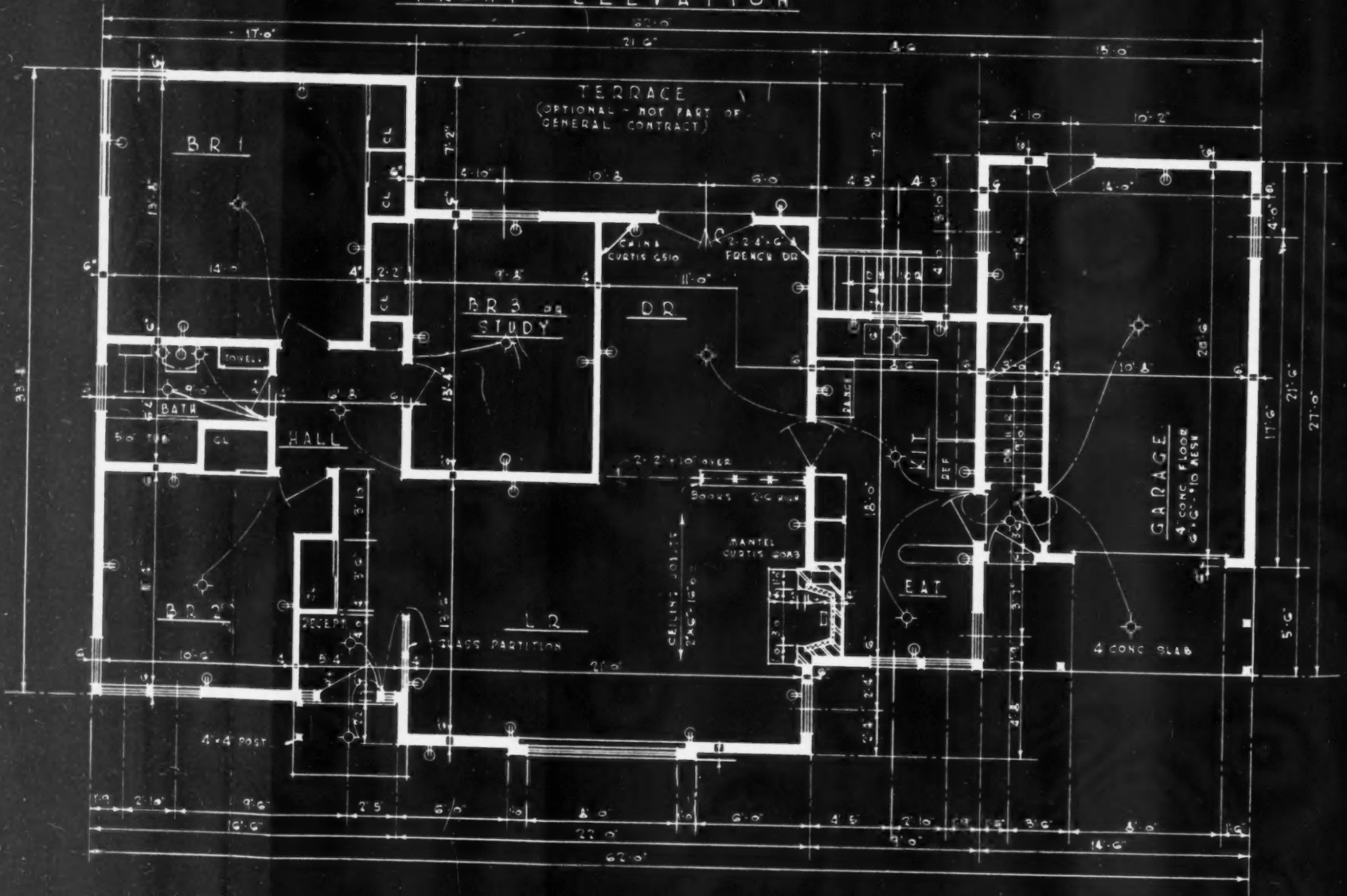
V-2

FLOOR

GIVEN DIMENSIONS NOT TO BE SCALED



FRONT ELEVATION



FLOOR PLAN

SCALE 1/8" = 1'-0"

GIVEN DIMENSIONS NOT TO BE SCALED

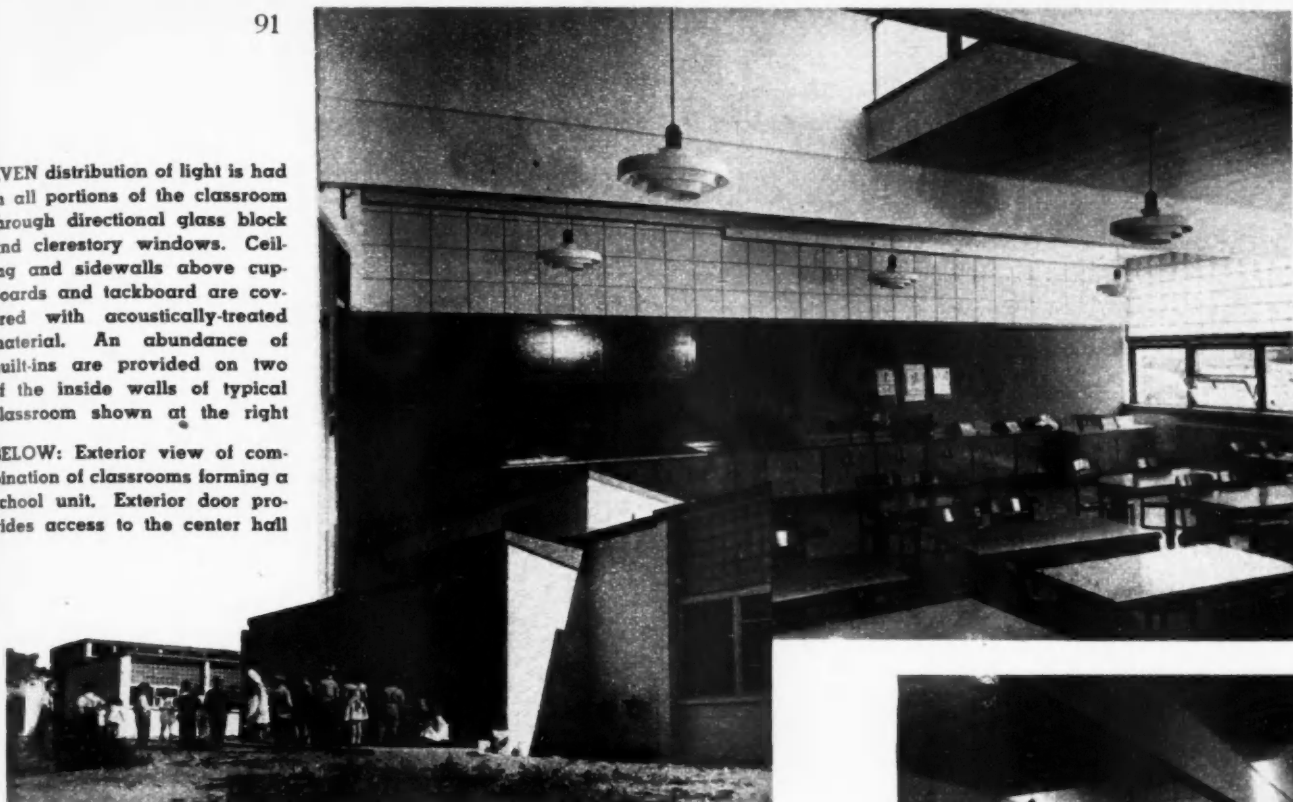
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EVEN distribution of light is had in all portions of the classroom through directional glass block and clerestory windows. Ceiling and sidewalls above cupboards and tackboard are covered with acoustically-treated material. An abundance of built-ins are provided on two of the inside walls of typical classroom shown at the right

BELOW: Exterior view of combination of classrooms forming a school unit. Exterior door provides access to the center hall



New Type Classroom In Northwest Schools

Seattle area utilizes both clerestory and directional glass blocks for even light distribution in one-story square class room



THE RESULT of 20,000 miles of travel throughout the country observing school design and construction is manifested in the new type school room developed by William Arild Johnson, A.I.A., and Associates, architects and engineers, Everett, Wash.

Natural daylighting, as it applies to school classrooms, is one of the chief concerns of school designers. One of the new techniques employed by Johnson is the use of directional glass blocks above the bank of ventilating and viewing windows in the exterior wall. Used in conjunction with clerestory windows or a monitor in the roof, the glass block provides excellent light in all portions of the room, including the corridor side, which was Johnson's greatest concern. This arrangement throws light back into the room, thereby, equalizing the light throughout and eliminating the necessity of shades.

There has been considerable increase during the past few years in the use of the "square" type class

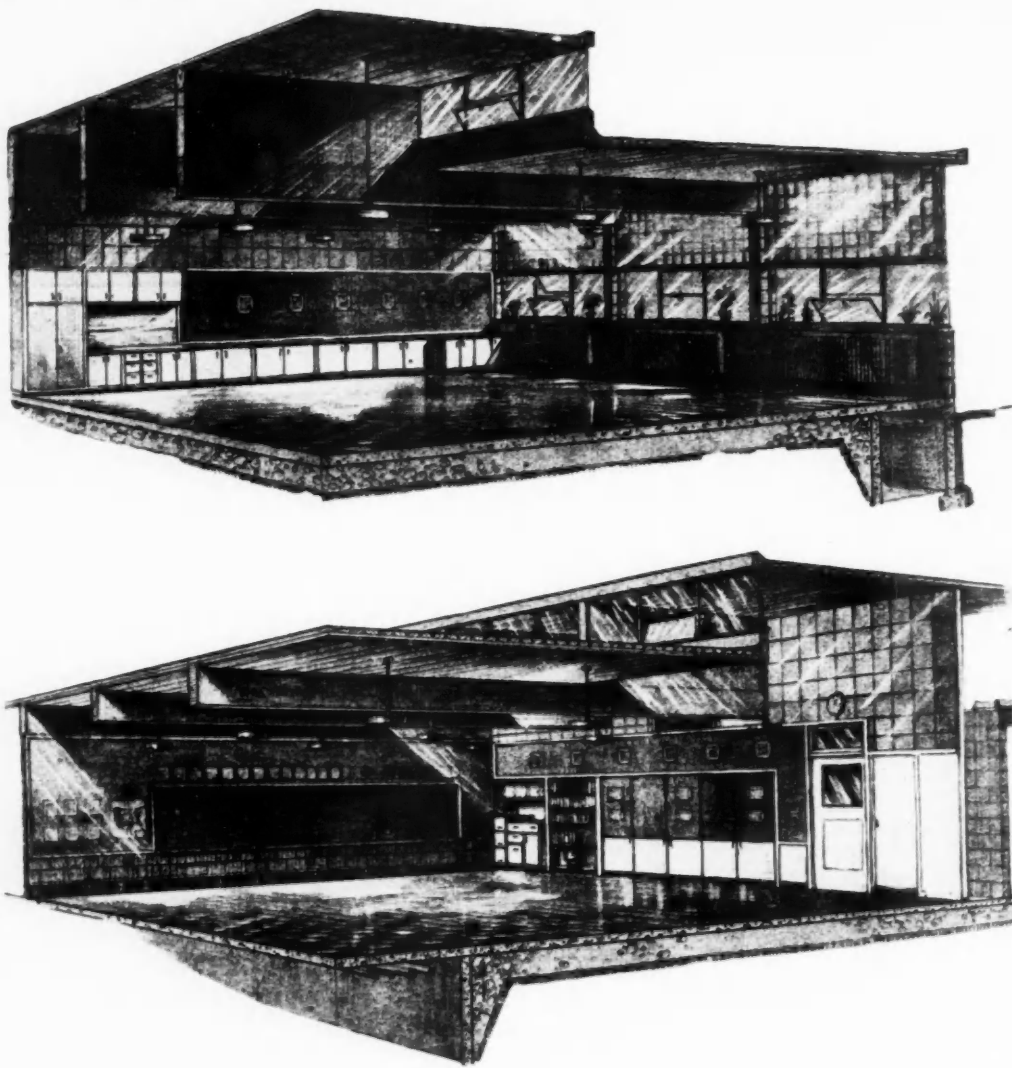
room. A feature of this room is the use of glued-up laminated beams overhead which function as trusses, eliminating interior bearing walls. This method makes the interior of the building completely flexible. All interior partitions can be removed without danger to the structure. Future rooms can be cut smaller or larger as desired. The glued-up beams are supported on the outside walls by concrete block piers and on the inside by wood posts set flush with interior partitions.

The new type class room does not present a structural problem. The laminated beams span the 30 foot width. Square classrooms are found to be more economical to build than the conventional type, where wood joist construction is used on a typical 24-foot span. An enginered factory and mill type of construction for the roof, together with a monitor, is employed. It makes possible more and better distributed daylight at reduced costs. This type of class room is

better suited to one-story than to multiple-story buildings. The latter would present a structural problem because of the 30-foot span. Where a number of these class rooms are placed alongside each other in a group to form an entire school assembly, then a greater cost saving is made. It is possible to obtain a better use of the available ground area due to the dimensional change from the conventional type. Larger playground area is possible; water, sewer, electrical lines and corridors are reduced in length.

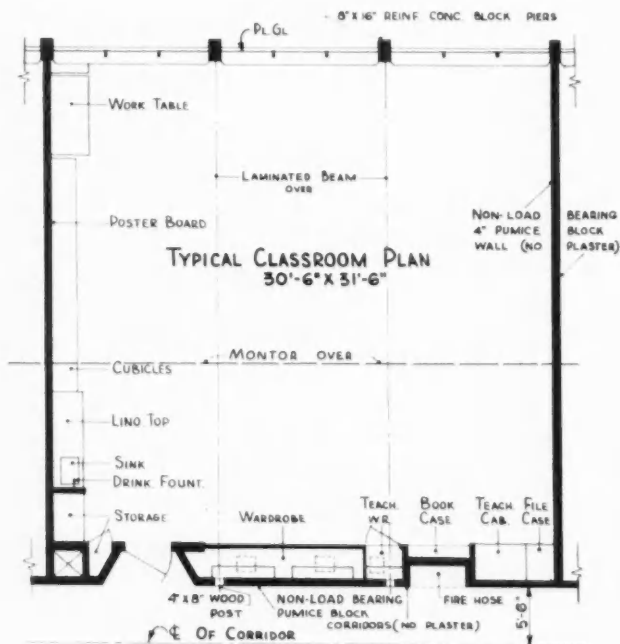
The school room space can be enclosed at less cost because it requires fewer lineal feet of wall. The whole school plant is more compact; more efficient use is made of the building space.

From an educational standpoint the "square" type school room has a number of advantages over the conventional arrangement. Instead of the activity or work spaces being concentrated in one end of the room, they can be placed to the

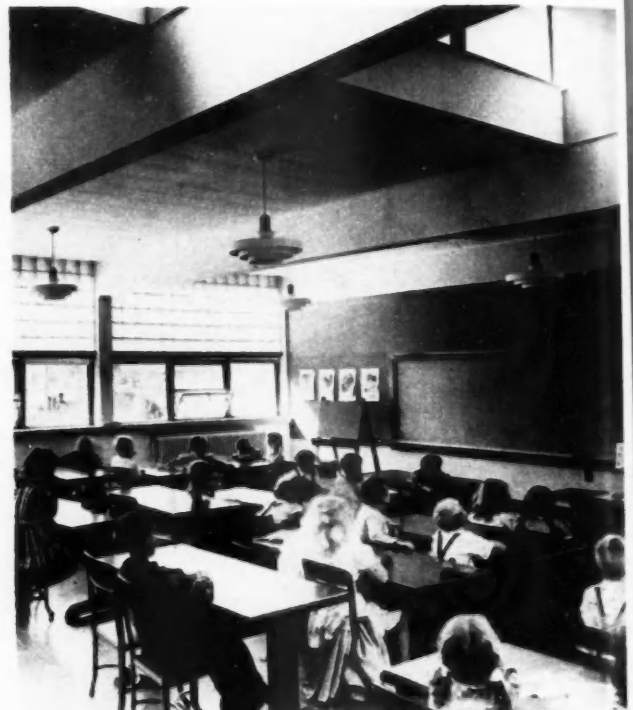


CUTAWAY drawings at left of typical classroom. Drawing at top shows view of exterior and rear walls, with front and rear walls removed. Arrangement of the laminated beams supporting the roof are clearly indicated here

Drawing below shows view of front and corridor walls with exterior and rear walls removed. This view shows arrangement of blackboards, bookcase, cupboards and wardrobes



PLAN of typical one-story square classroom. With the use of directional glass block and clerestory windows, this type room is receiving wide acceptance because of economy of construction



VIEW in typical classroom showing exterior wall with bank of ventilating and viewing windows and glass block above. Light from clerestory windows shown in upper right hand corner of room

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best advantage for use by the student or teacher. The space also allows more flexibility in seating arrangements, and provides for three major instructional spaces.

Through the adoption of the "square" room and the accompanying innovations, Johnson is able to deliver schools at a lower cost per square foot. In the state of Washington in which Johnson operates, school building costs vary from \$13 to \$16 a square foot; the average cost being around \$14. On the four schools of this type, built under his supervision, the cost was \$9.20 a square foot. This saving is reflected in the speed of construction. The fact that the schools were built in five months each has served to cut down the contractor's

cost and overhead. On a cubic foot computation, the cost is 55 cents a cubic foot.

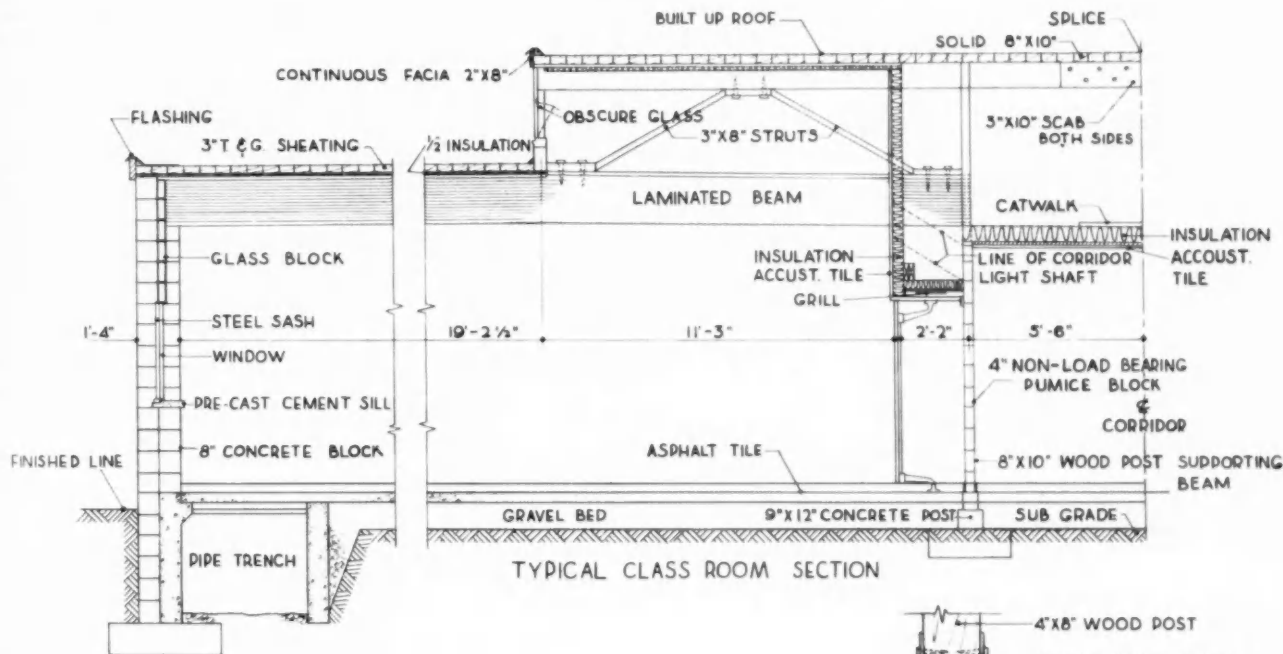
In designing this type of school building, Johnson was concerned first with the cost and availability of materials. The fact that lumber was in ample supply in this area prompted him to turn to wood construction. The use of laminated, glued-up beams, 11 feet on centers, allowed 3x6-inch T&G roof sheathing to span the distance. A built-up roof is applied directly to the sheathing. One by three-inch wood strips are secured to the underside of the sheathing after Kimsul insulation is installed. Acoustically-treated ceiling material is applied to wood strips. The upper portion of the inside face of the corridor

partition is also similarly covered.

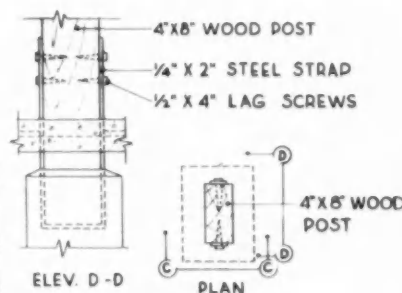
All walls are exposed concrete or pumice block. In the class rooms, there is very little exposed block as most of it is covered with blackboards, tackboards and cabinets. The interior partitions are non-bearing of 4-inch pumice block. This can be painted or left unpainted. Concrete floor over the entire area is reinforced with a heavy gauge mesh. Asphalt tile is laid over the concrete.

Each room is completely equipped with built-in wardrobes, teacher's cabinets, files, activity center across the rear of the room with sink and drinking fountain.

The heating arrangements in the schools, completed by Johnson, consist of hot water wall radiation.

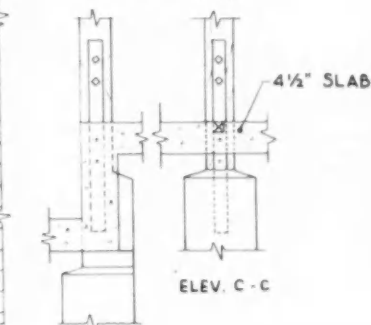


TYPICAL CLASS ROOM SECTION



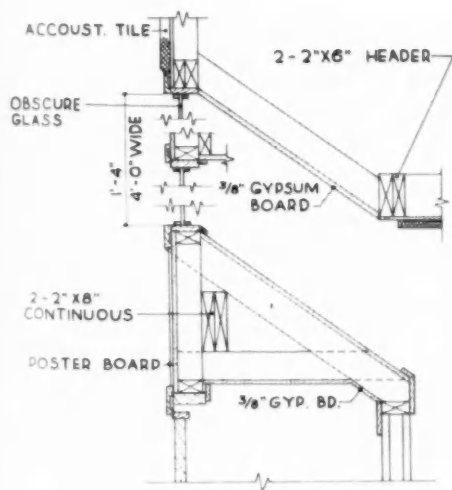
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PLAN

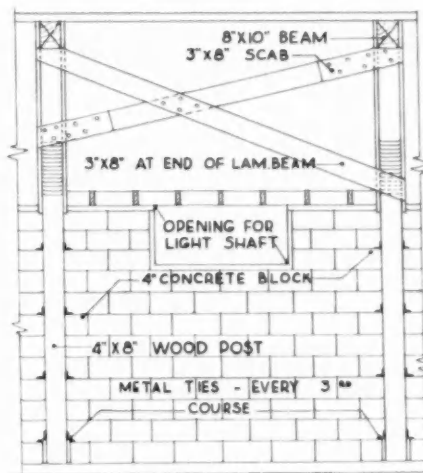


ELEV. C-C

COLUMN DETAIL



DETAIL SECTION CORRIDOR LIGHT SHAFT

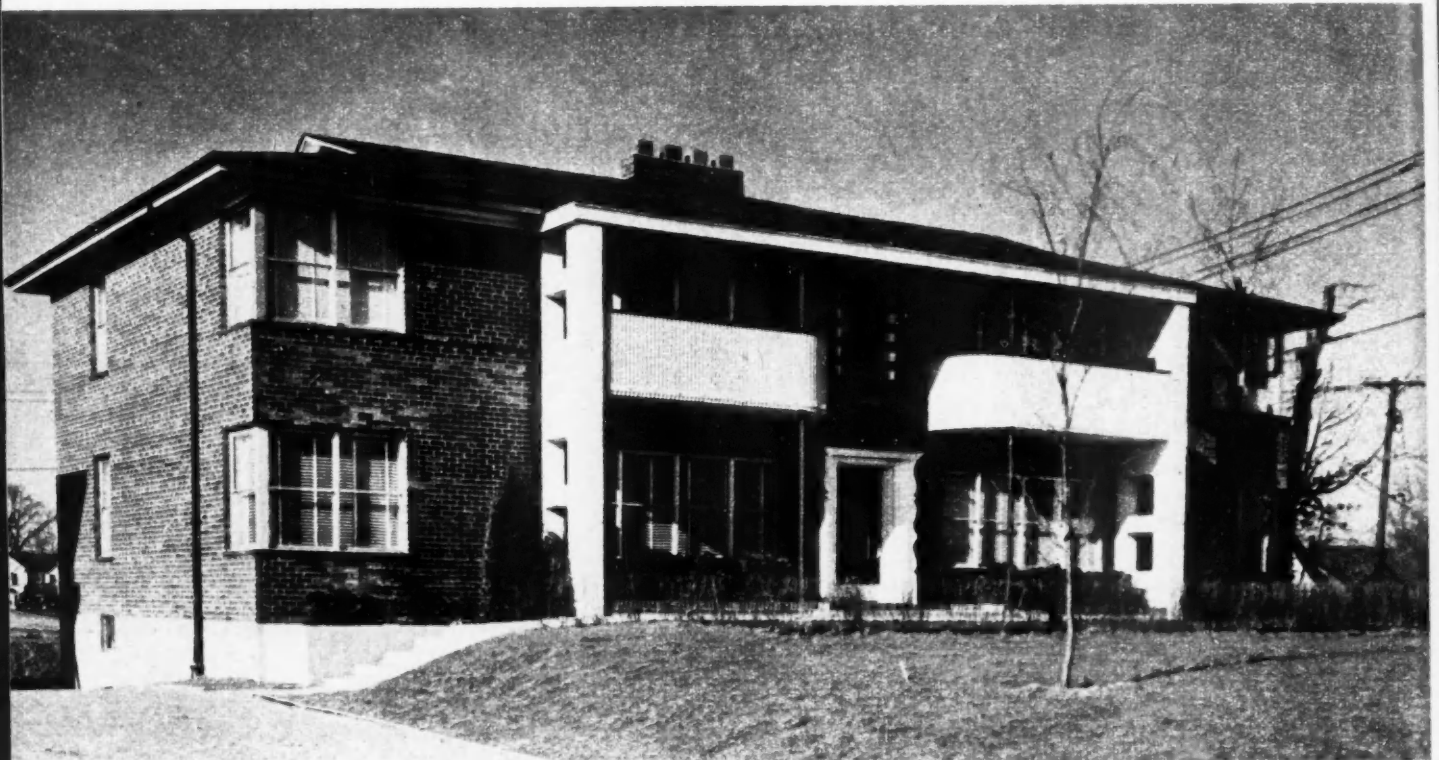
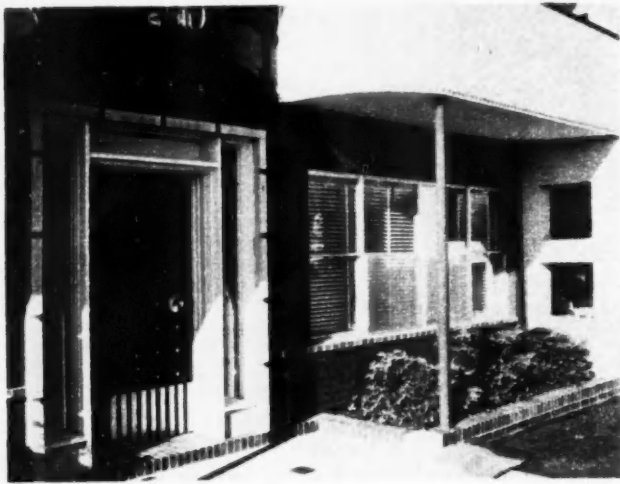


ELEVATION FROM CORRIDOR

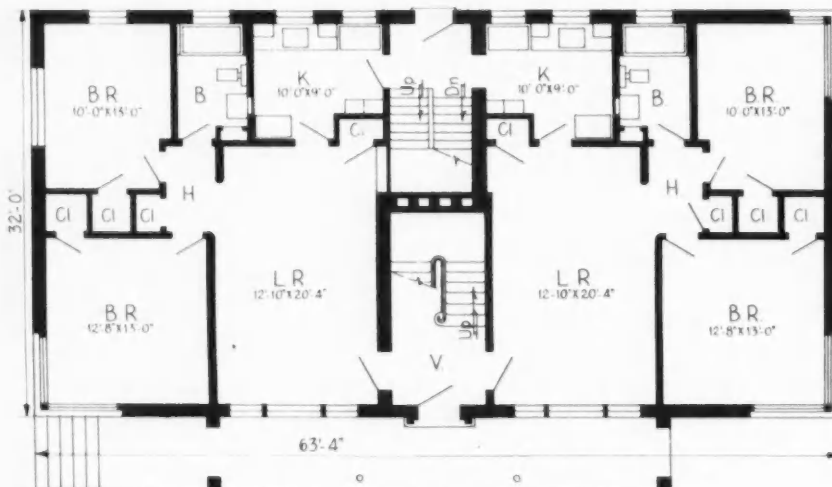
DETAIL drawings showing section through classroom. Large scale details indicate type and method of construction used

Giving Apartments a "Residential Look"

Careful study of exterior design details produce a home atmosphere in multiple dwelling units



ARCHITECTURAL accent on Delmar apartments is confined to large center motif. Entrance to Del-Oaks apartments above. Plan below



THE "Delmar and "Del-Oaks," two deluxe type apartments, designed by Bernard McMahon architect, Clayton, Mo., have recently been completed by Wendel Shasserre and R. O. Dethloff, builders of St. Louis, Mo.

Located in a residential neighborhood, McMahon was constrained to conform to the nature of the community. This was done primarily by keeping the first floor approximately level with the terraced grade. The sloping roof of asphalt shingles with wide projecting eaves all around, together with face brick on all the walls, completes the residential aspect.

The two buildings are similar in design with the exception of the entrance door. McMahon's concept of a two-story apartment building follows

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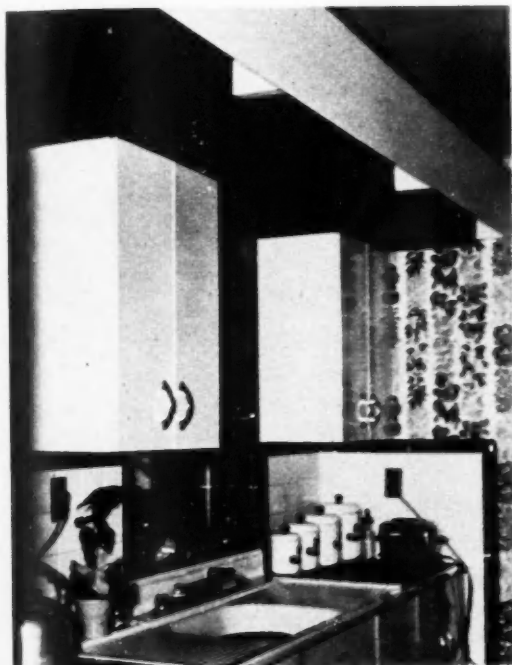
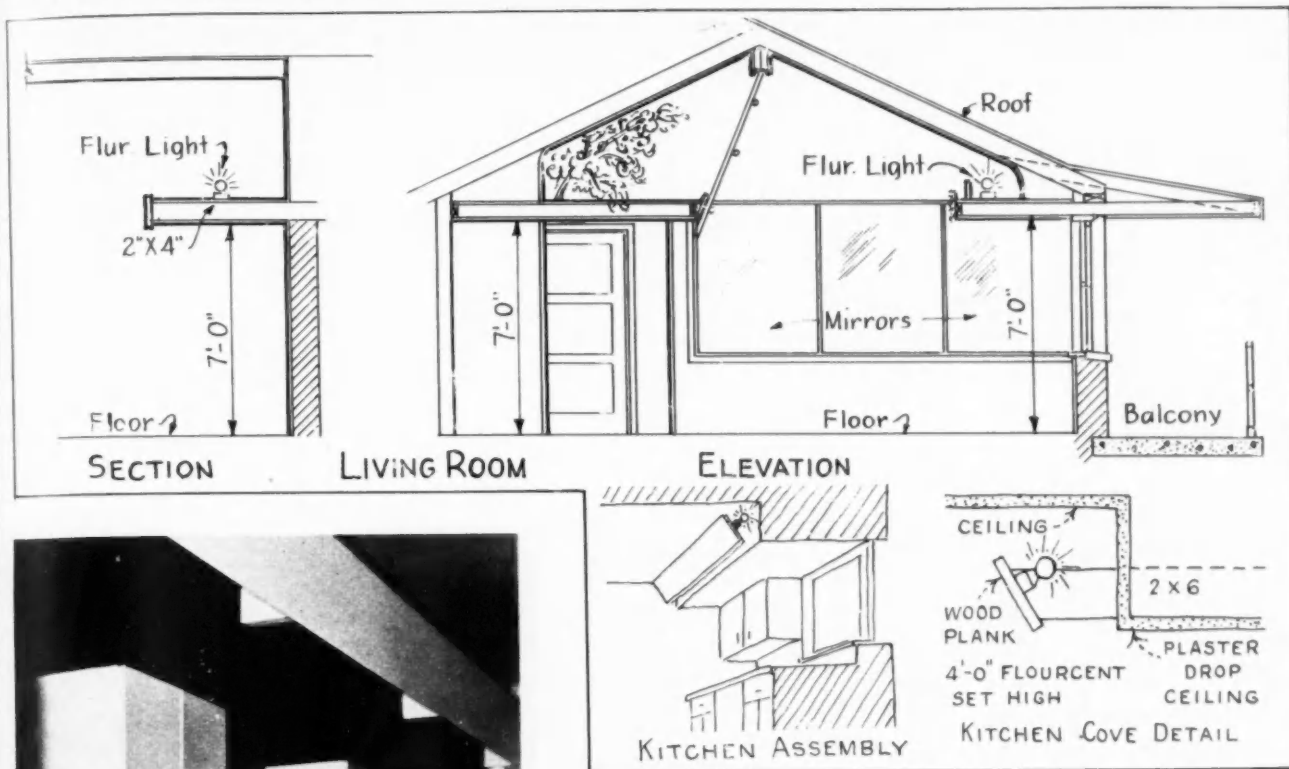
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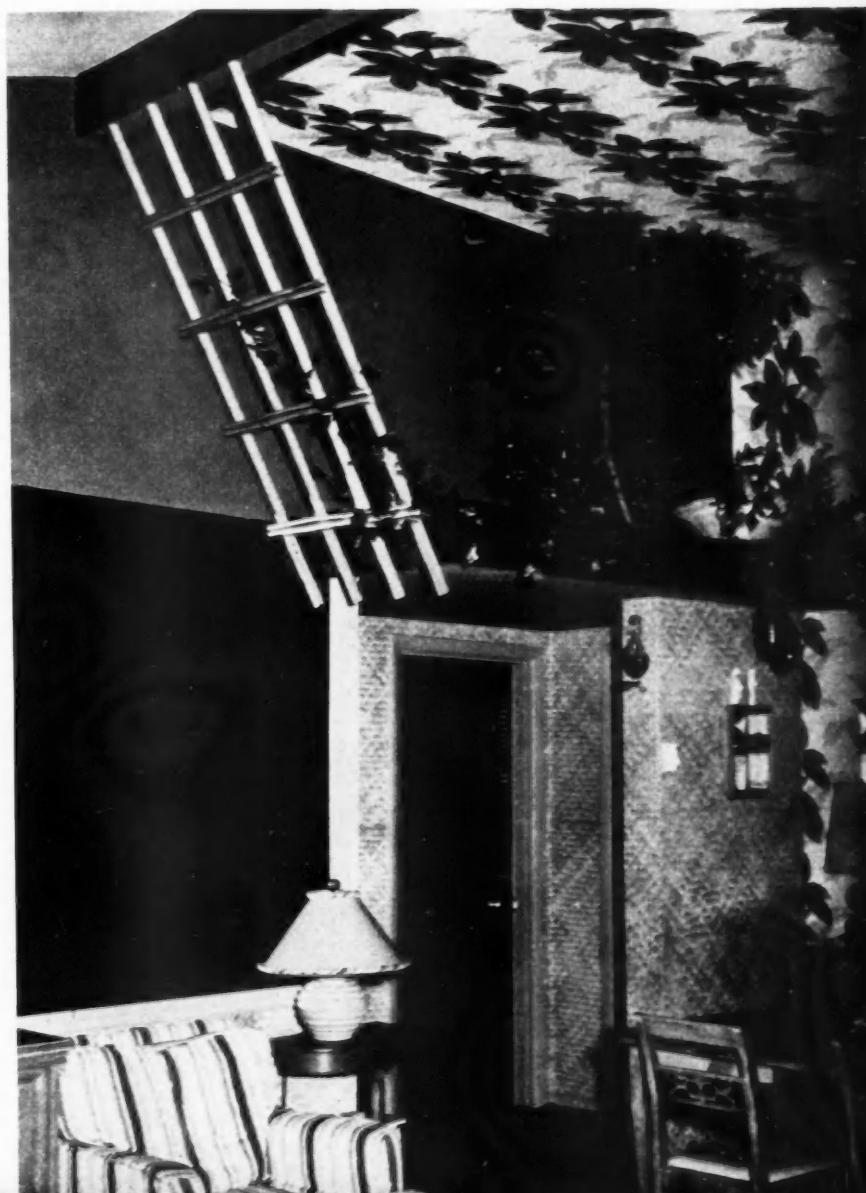
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ABOVE: View in kitchen. All fixtures are confined to one wall. This affords an unusual opportunity for a novel concealed lighting arrangement in the ceiling

RIGHT: View in typical second floor living room. Additional height is gained in this room by having finished ceiling follow the slope of the roof. Concealed lighting effects are arranged in back of canopy extensions at windows and rear wall of living room



a general pattern that has had a ready acceptance in this area because of its practicability.

Each building contains four apartments. Each apartment has four rooms, consisting of combination living-and-dining room, kitchen, two bedrooms and bath. A garage for each apartment, and ample facilities for storage and laundering are located in the basement. Access to the garages are from the rear, with a driveway at one side, extending to the street.

The first floor is constructed of precast concrete joists with 3-inch reinforced concrete slab over the joists. Asphalt tile is laid directly over the slab. Second floor is wood joists, covered with subfloor and finished oak. Exterior walls are of brick and concrete with partitions of frame. An individual gas-fired furnace for each apartment is located in the basement.



St. Louis builder collaborates with architect to perpetuate established pattern of design featuring "residential look"

CONSTRUCTION OUTLINE

Precast concrete joist	Carr, Adams, and Collier Co.
Steel bar joist	"Bilt-Well" cabinet and millwork
Armstrong asphalt tile	Kitchen Kraft equipment
Portland cement products	Westinghouse refrigerators
Flintkote asphalt shingles	General Electric refrigerators
Kohler plumbing fixtures	General Electric ranges
Revere copper pipe	Magic Chef ranges
Robertson Co. steel balconies	Lennox gas-fired furnaces
General Bronze aluminum windows	Security gas-fired furnaces
Mesker Bros. steel casements	Rockwool insulation
Carr, Adams, and Collier Co. "Superior D.H." wood windows	Pittsburgh Plate Glass Co. glass

Clayton, Mo., like other towns throughout the country, maintains certain building requirements and traditions that pose additional problems to builders of multiple dwelling structures. Some are imposed by law, others are self-inflicted through a desire on the part of the builder to maintain a pattern of community development, that will perpetuate the high standards of building already established.

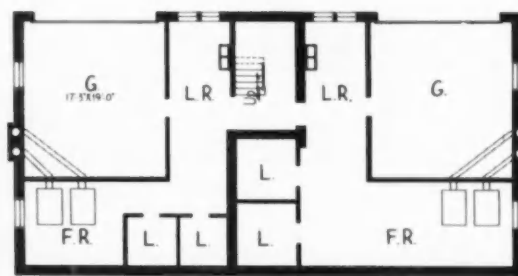
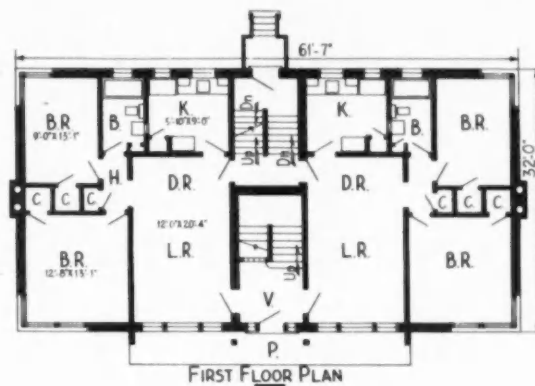
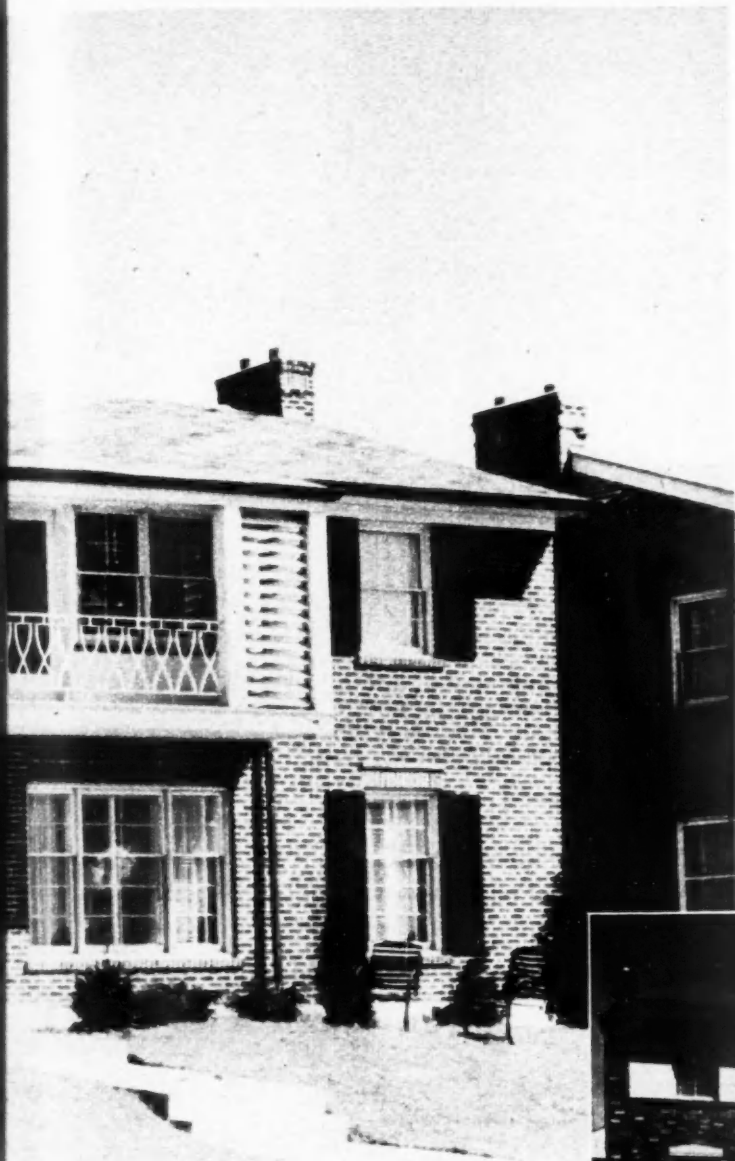
In the case of Clayton, Mo., a suburb of St. Louis, the bulk of the building is residential, therefore, it was desirable to maintain a "residential look" in the design of these apartments.

When the John C. Gross Construction Co. developed Clayton Gardens, the aid of Bernard McMahon, architect, who has gained widespread recognition for outstanding designs in connection with residential and apartment building, was enlisted.

Clayton Gardens is a \$5,000,000 subdivision in a continued process of development. There is an area set apart for apartments flanking the business section. This area looks over a depressed portion, devoted to homes. Thus, it was axiomatic that the apartments had to conform to the adjoining homes insofar as possible.

While two types of four-family apartments

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BASEMENT PLAN

ABOVE: Basement and first floor plan of typical four family apartment building. Second floor similar to first floor. LEFT: Extended balcony at second floor level features the design of front. BELOW: Same plan used for all elevations. Change is in center motif



were constructed in the area, one with a narrow frontage and one with a wide frontage, this article confines itself to a discussion of only one, namely, the wide frontage type. For this type, only one basic floor plan was used. However, a wide variety of exterior designs were developed around this single plan, of which four are illustrated.

The apartments are arranged on both sides of a center entrance hall. The level of the first floor is approximately 12 inches above the terraced grade. A driveway at the side leads to garages in the basement. The garages are also accessible from the rear. Each apartment contains four rooms with a combination living and dining room, two bedrooms, kitchen and bath.

In this group of buildings, the designer held to conventional treatment of the rooms. Ceiling heights were kept at normal level in order to conform to a fixed cost. Steel bar joists and concrete slabs were used on the first floor with frame construction above. Face brick was used on all walls with Haydite backup. All interior partitions and ceilings are of frame with plaster surface. Each apartment is provided with a separate furnace located in the basement.



MATERIALS are taken from car directly to saws, then fabricated into rafters and loaded on trucks for fast delivery with minimum of handling. Radial saw cuts top angle. Workman at left notches the bottom with a power hand saw, last stage in cutting

IT is becoming apparent that the small home builder can never enjoy the economies of precutting and site fabrication unless the building material dealer gives him the chance. Recognizing this fact, and an opportunity, an Eastern dealer-builder has proved that it can be done by doing it.

Joseph Entress, of Rochester, N.Y., who has been a home builder for 25 years, also operates the Coldwater Lumber Co. The lumber company was established to give himself and other builders an opportunity to enjoy the advantages of precutting and site fabrication. His system can be adapted by any dealer to supply any

This lumber company is realizing economies in its operative building project, and the system used can be adapted to supply precut parts of any repetitive, standard design to any builder

builder with precut parts for any repetitive, standard design. The savings come from lack of waste, the elimination of much handling, and big time saved in marking and erecting the homes.

Ten years ago, when factory fabrication of homes was only an idea, Entress got the idea of applying certain techniques of prefabrication to

conventional home building. This is based on the idea of standardization. With standardization of plans and parts, substantial economies are possible.

These economies are increased when a large number of homes are built. Currently, Entress is proving these economies in a 90-house project in Rochester. All have the same floor



THOUGH the same floor plan is used throughout this 90-house project in Rochester, N. Y., there are eight exterior variations

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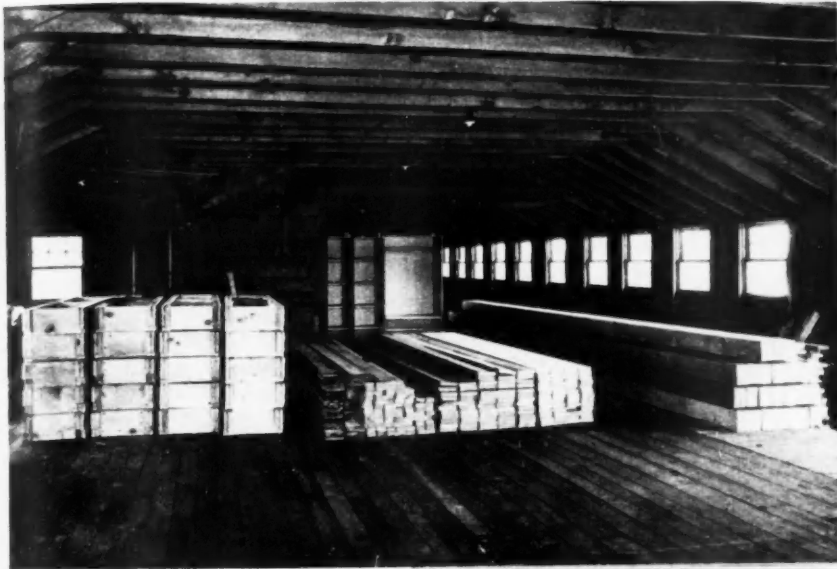
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Precuts Homes for Small Builders



SECTIONS, beams, plates, sills, and ridge boards are fabricated to exact length, spaced and marked, ready for immediate delivery. In fabricating a house 32 feet wide, 16-foot plates, sills, and ridge boards are used. These items are all marked for spacing before delivery

PREASSEMBLED door sections are piled along driveway of yard for easy loading

plan, but there are eight exterior variations in elevation. They sell for \$7,500 to \$7,800.

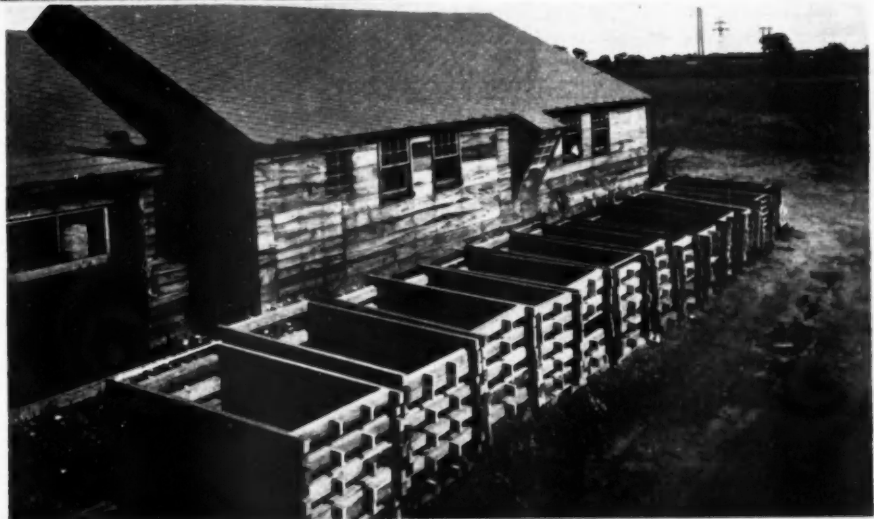
For the basic house, a complete schedule of dimensioned parts is made. A similar trim schedule is worked out. These schedules make possible an exact pricing for the basic house.

For the alternate exterior variations, alternate schedules are worked out to show additions to and reductions from the basic house schedules. For example, the basic house design requires nine squares of shingles. Design variation No. 2 requires nine and a half squares. Therefore, if an order calls for Design No. 2, the basic list is changed to add a half square more of shingles.

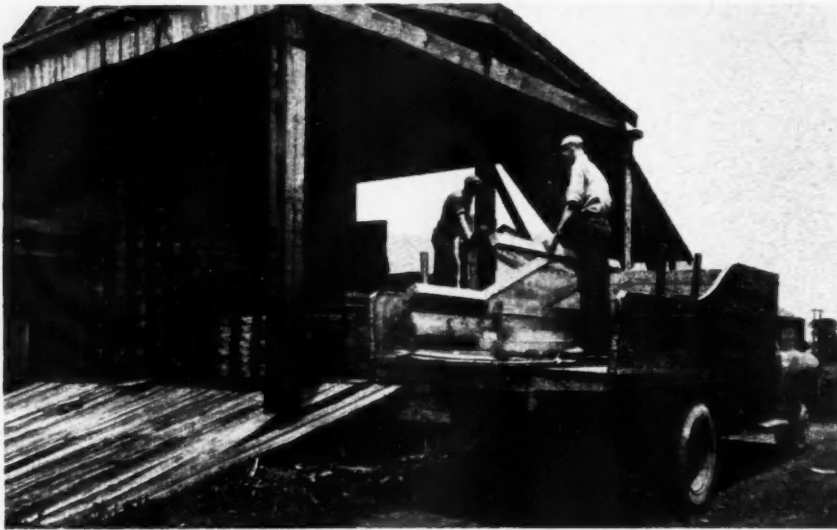
The added materials are priced and totaled. The subtracted materials are priced and totaled. The difference in cost between the two represents the amount by which the basic house cost is increased or decreased.

This system enables Entress to stock enough parts at all times to complete several standard houses. If a small builder wanted to erect just one house, and was willing to accept one of the standard designs, Entress could deliver a complete house to whatever site he selected, could tell him the exact cost in advance, and would make it possible for the builder to erect the complete home without using many more tools than a hammer. Virtually no cutting on the site would be necessary.

How does Entress' Coldwater



TRUCKLOAD of stairs, linen closets and wardrobe closets is prepared for delivery to project. These materials are partly assembled, and will be completely assembled and stored until needed at the project



SECTIONS are being loaded from stock supply at assembly plant. Approximately 20 houses of framing are kept on hand ready for immediate delivery at all times

Lumber Co. effect the economies in its part of the operation?

The lumber is delivered to his yard just as it is to any dealer—in freight car loads from the lumber mill. But instead of being stockpiled in the form in which it is received, much of it is processed immediately.

The railroad siding permits placing of the freight cars directly at a loading platform near which is installed appropriate power machinery. Lumber, unloaded by gravity rollers, is brought direct to the saw table where it is cut to predetermined lengths. As many as a carload of rafters may be cut at one saw setting with the lumber coming directly from the car. The cutting will include the proper miter at the top and the proper notching at the bottom. The same process applies to the preparation of studs

and all the other dimensional parts.

In the case of sills, plates, ridge boards and similar pieces, a unique marking system is used. As framing members are cut to length, they are slid onto a wide table which holds many pieces at one time. Guide boards are installed on either side of the table which are grooved at intervals corresponding to spacing used on the construction site. The table is really a jig for marking, and is the only jig necessary. A rule, laid in the guide board notches, permits marking a whole group of plates for the position of all studs, saving any time for measuring on the site.

This system is rhythmic in operation and much faster and easier than it may seem from the printed description.

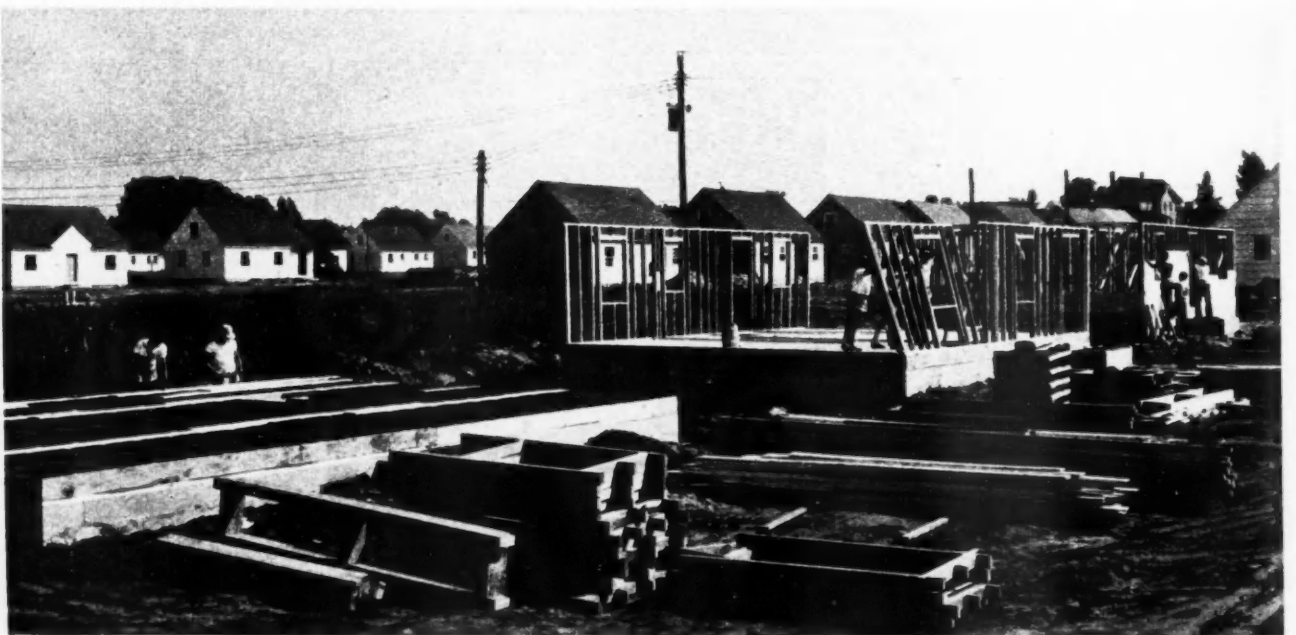
Where practical, various units of

framing are assembled in the plant. These include door and window openings, corner posts, and so forth. Cutting is done accurately on power equipment. Units are assembled and stockpiled in accordance with a predetermined delivery schedule.

Items such as wardrobe closets are cut and delivered semi-assembled to a storage house on the project. There they are completely assembled and stored until needed.

Each employee at the plant is trained in his particular job and uses motor-driven, precision equipment to insure accuracy and speed far beyond that obtained by the small builder in conventional operation.

At various points in the lumber mill, blueprints of the eight types of houses, and the standard floor plan, are tacked on the wall. Alongside,



PRECUT materials delivered to the site include the assembled sections plus corner posts, rafters and studding

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BESIDES the space provided in this basic, first floor plan each house has an unfinished second floor. Below, Entress congratulates Richard Kurtz, new home owner



there is a plan of the development tract, with each lot numbered and with the number of the design that will be built on that lot. If a prospective buyer comes to the office, he can pick the design he likes and immediately see on the plot plan where one of that type is being erected.

A similar set of plans and blueprints is tacked on the wall at the dispatcher's office. Also, there is a master sheet which lists every piece of lumber and assembled units common to all houses. Besides this list is a schedule of the additional materials required for the various alternate designs. These two lists cover all materials needed for the complete house in any design, and the dispatcher can make out a detailed order for any design by reference to them. When he has filled out the order, material for the complete house is assembled and delivered all at one time. The necessary parts are already pre-cut and stockpiled in inventory.

In addition to using the method described for pre-cutting standard design for his own operative development, Entress has worked out standard lists for a design used by another firm of Rochester builders and is supplying this firm with completely pre-cut houses. The two operations, at present, just about exhaust the capacity of the lumber company's operation, but the idea is capable of future expansion. It points the way by which other dealers may serve small builders in more than just a warehousing capacity. The dealer who performs such a function will build good will among his builder customers and tend to discourage many from starting their own supply companies—a practice which some larger builders have been trending toward.

The standardized plan used by Entress has many of the modular fea-

tures suggested by the National Retail Lumber Dealers Association in its campaign to lower building costs by efficient construction techniques.

The house is 32x24 feet. This permits the use of plates, sills and ridge boards 16 feet long. Marked in the jig table already described, each unit is interchangeable with any other unit of the same type, and also has no right or left, so that it cannot be installed backward.

Room dimensions are laid out so that full sheets of wall board can be used wherever possible; all cutting being confined to one side of the plan.

Kitchen cabinet facings and shelves

are standardized, pre-cut and sanded in the mill. So are the drawers and doors for the closet combinations.

All framing is 16 inches on centers. Joists are 2x8; rafters 2x6 inches. Sidewalls are double coursed shingles. Insulation is mineral wool blanket; 2 inches in sidewalls and 4 inches above ceilings. Windows are weather-stripped. Kitchen has a cabinet sink; the bath, a built-in tub with shower. Chrome wall fixtures and a medicine cabinet are provided. Heat is from an oil-fired or gas-fired warm air furnace. There is a 20 gallon automatic gas water heater. Flooring is ¼ inch prefinished oak.



KITCHENS in houses built by the lumber company have cupboards and cabinet sinks

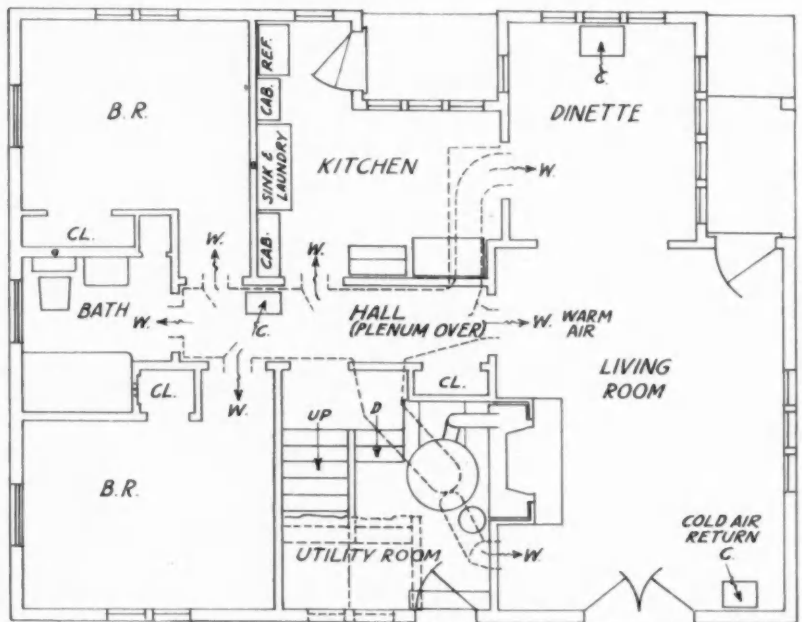
23 Years of Progress

In Basementless House Construction

by V. L. Sherman

Heating Engineer and Pioneer in Basementless House Construction

Basementless house construction in cold climates is nothing new to "Vic" Sherman who, 23 years ago, designed and built his own basementless home in which he still lives today. That he still chooses to remain in the same house is not a mystery when the comforts he enjoys as a result of good construction are considered. Some of the sound principles, modern methods and techniques he offers in this article are important how-to-do-it pointers



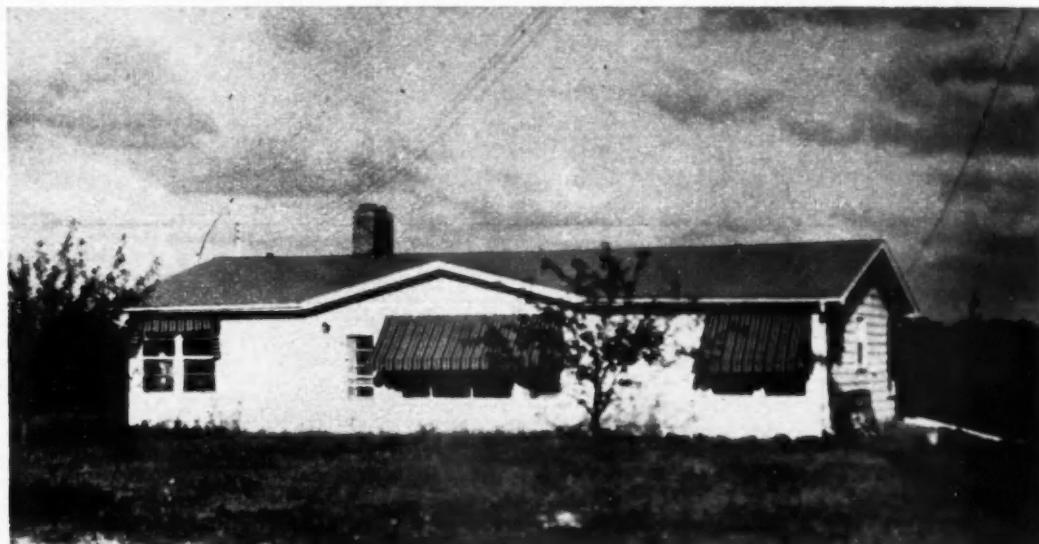
THE basementless house shown on this page was built 23 years ago by V. L. Sherman. Utility room floor is 20 inches below house floor. With warm air furnace placed next to chimney, cold air returns from three cold air faces are brought along under hall and connected to furnace. Except for warm air register to living room, all registers are fed from plenum chamber over false ceiling in hall, permitting warm air to come out above doorways—a hall-plenum system used in some construction today

THE NEW BASEMENTLESS home to be discussed is one of many designs, all of which have essentials in common. Without making use of a second floor, trusses can be used and room spaces enlarged beyond those possible for second floor joists of average dimensions. From the floor plan, it is seen that the living room is 20 feet, 6 inches by 21 feet, with plenty of glass at either end. The trusses measure 27 feet, 6 inches. Bearing walls were used across the width of the house as a precaution, not as a strict necessity.

Another notable advantage when trusses are used is in warm air delivery.

In this type of overhead system the ducts are led to any location, and though the warm air is fan driven this freedom of overceiling space permits duct design that is low in friction losses. The return air ducts or pipes beneath the floor can have very nearly straight runs from all rooms. Return air is not taken from the kitchen or bathroom. Both rooms are ventilated to the outdoors by small fans which are automatically protected by closing louvres when not in use.

Since the new type of one-story, truss-roofed house has become more popular, there is a possible opportunity for suiting many more housewives who wish certain partitions could be moved to other locations. With a well-laid concrete sub-floor which maintains its level surface, and ample truss structure, partitions really need no beam support. Excepting those partitions carrying piping, it would be possible to shift partitions without endangering the whole structure. In the old basementless house it would



ADVANTAGES of one-story truss-roofed houses with proper concrete sub-floors are many, says Sherman. Freedom of overceiling space permits duct design that is low in friction losses, for one thing; partitions need not support beams, and if they carry no piping, they may later be shifted

have been possible to take out one of the partitions between the kitchen and the hall to make a larger dining room, relocating the kitchen in the north bedroom (note plan). But that is about the only change that could be safely made. These remarks come from many experiences with the after-thoughts of women who have endorsed floor designs before building and then wanted to change the room arrangement later. This is a strong point for roof trusses.

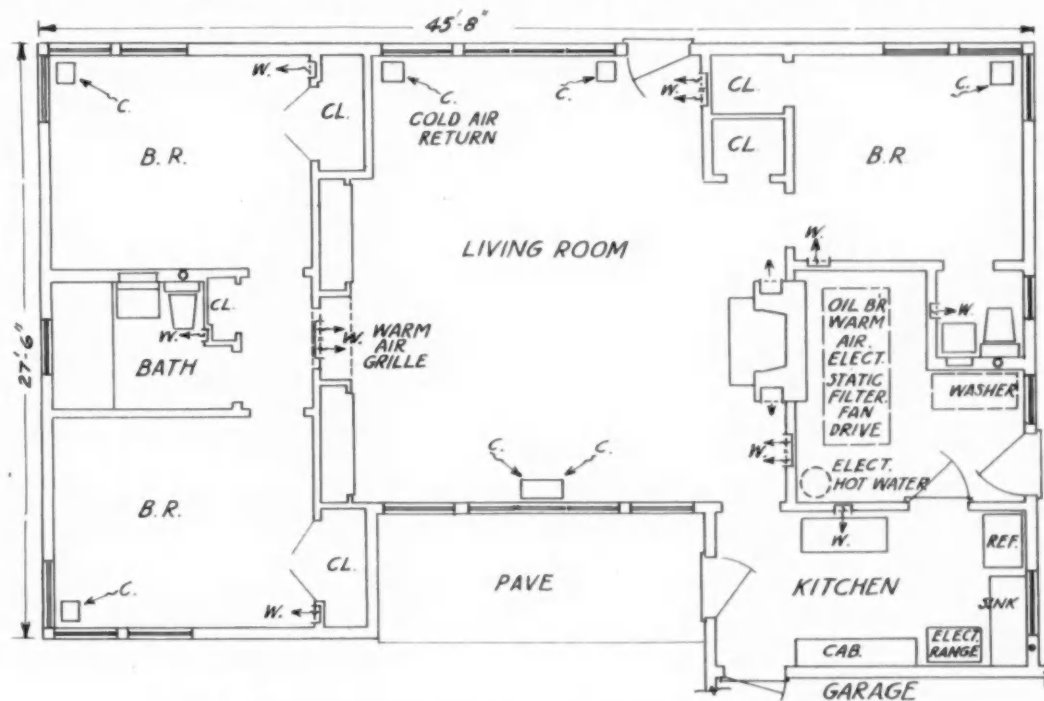
Foundations are different in design in various parts of the United States, and over different soils. The depth of the foundation wall depends on the frost line. Frosts should never get under the footings, nor should water ever get through the foundation. In unheated garages, with what were thought to be secure foundation walls extending below the frost line, cracks at the wall corners have admitted enough moisture to freeze in the soil and heave the floor. The cracks which developed left the ground exposed to constant renewals of moisture and continuous freezing and thawing.

Where a floor slab is used, as they usually and properly

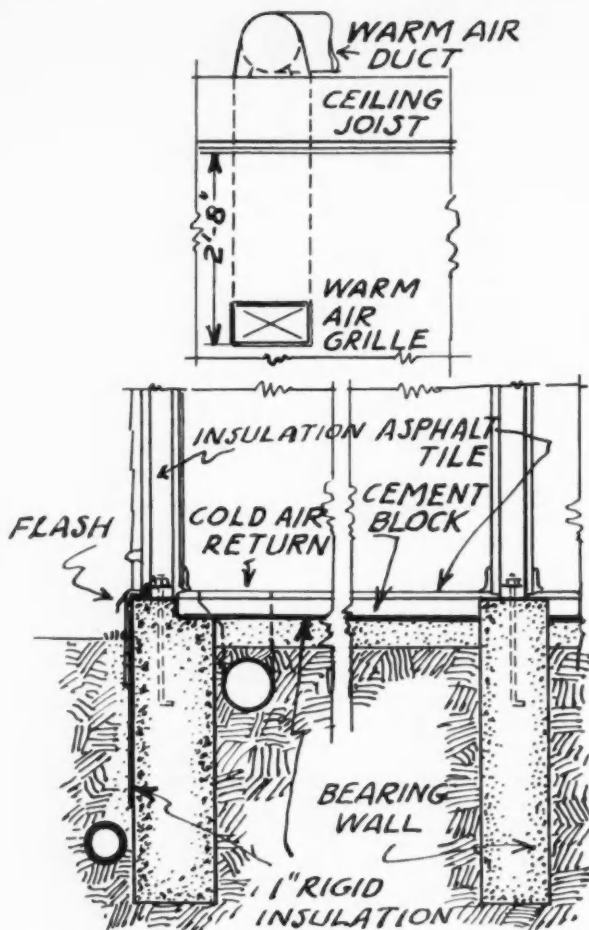
are in basementless houses today, there is not only the problem of keeping out the water but of keeping in the heat. For the first, the wall should be thoroughly waterproofed with gravel fill and drain tile along the footing. The site of the house should be on land that ensures good drainage. The corners of the foundation walls should be reinforced and protected with extra waterproofing material. Block foundations are not recommended.

So far as heat losses through the floor are concerned, there are these problems. In some smaller homes the pit-type furnace is used where one large register suffices for the whole house and the return air drops into the furnace around the register. There are more of these in warmer sections where ground temperatures are not too low, but, to conserve heat, the pit must be thoroughly insulated. The floors, too, could do with some insulation.

In the old basementless house there was an air space between the wood framed floor and the ground beneath. Air is a capital insulator if there are no convection currents. The grade was carried up very close to the trim. But



PLAN of new basementless house shows direction of warm and cold air flow. If slab is uninsulated, return air pipes under floor lose much heat



CONSTRUCTION section shows situation of foundation and bearing walls of modern house discussed by Sherman

in one spot where the creep-space was not filled in because water and sewer lines were to be accessible, there was a noticeable chill spot in one bedroom.

An 8-inch poured concrete wall will lose .7 B.T.U. per square foot per hour per degree difference in temperature inside and out. That is nearly as high a coefficient as that of a window without storm sash. A floor slab of concrete would have a still higher coefficient, and a main factor is the difference in temperatures above the floor and in the ground beneath. One contractor, explaining the lack of slab insulation, contended that heat loss to the soil would guarantee warm floors. But what if the soil within the foundation walls was kept at an average of 50 degrees, and there were 400 square feet in the 8-inch foundation wall with an average of 30 degrees in the ground outside? The ground would not stay at that temperature very long, and fuel costs would include the expense of keeping the ground warm.

Return air pipes under the floor will lose considerable heat with an uninsulated slab. Radiant heat piping in the floor will lose more. By all means, use insulation. There are various ways of insulating. In this case, there is a 4-inch gravel or crushed-rock fill extending under the entire floor to the foundation wall. Over this is laid a moisture or vapor barrier. This is a rigid asphalt board, $\frac{1}{8}$ -inch thick. Asphalt-filled duplex paper may be used. Such sheets are overlapped and sealed with asphalt. If rigid insulation does not cover the entire floor above the vapor barrier, care should be taken that such a paper barrier is not broken when the slab is poured. In this case non-absorbing rigid insulation, one-inch thick, extended under the entire floor. Some recommend a floor skirt of

two-inch insulation, extending in two feet from the foundation wall. One-inch rigid insulation extended down outside the foundation wall about two feet and was flashed at the trim to prevent water getting back of it.

If the top of a concrete foundation wall, carrying a plate for the studs is without ventilation, moisture will collect when the walls temperature drops below the dew-point of the air. For best results in frame structures insulation should be carried outside the foundation wall and up under the trim to join the house insulation. The house in this discussion is completely air conditioned, which means humidifying the air in winter. In severe weather, frost will form at any spot where the surface temperature goes below freezing.

While insulation is under discussion, it is recommended that roofs be insulated rather than ceilings and ducts. If moisture gets into the attic space this will cause frost to form over wooden surfaces if not insulated, and drip off when the sun warms the roof. This has caused many ruined ceilings.

Now for the advantages gained in this modern basementless house.

Gas as a fuel was not available; so electric current is used for cooking, washing and ironing, hot water heating and refrigeration. These appliances are all modern, quite improved from those of 23 years ago. A kitchen-bathroom-heating unit might have been used to good purpose, but the owner wanted an electro-static air filter. The heat is furnished by an oil burner. The air is conditioned, and the house can be thoroughly sealed because renewal air for ventilation is taken in automatically and discharged.

The basementless house has another advantage. The convenience of a utility room just off the kitchen, where mildew is entirely absent, and no stairs to climb, mark two of the greatest advantages. One lack in this plan was a small lavatory in the utility room. The owner speaks highly of the fireplace, remarking that he gets more than the radiant heat of the fire by side convectors, and that by burning logs, he has plenty of wood ashes for his gardens which he "doesn't have to carry up from the basement ashpit."

There are many comforts to be derived from a basementless house, but 23 years ago one big comfort came in lopping off the cost of a basement. In an estimate at that time, it was found that a full basement would have added 22 per cent to the building cost. Reductions vary from less to more than that now, but it is certain that no occupant of a well-constructed house without a basement will ever regret investing money in it.

In an effort to determine the most satisfactory concrete slab floor from the standpoint of comfort, the University of Illinois in conjunction with the Small Homes Council studied the construction of concrete slab floors which are

Tests at the University of Illinois by the Small Homes Council reveal methods of basementless house construction adaptable to various climatic conditions

designed for use in climates where central heating is desirable. The floors tested were those for basementless houses having a conventional type of heating system; not those with heating pipes or ducts in, or under, them.

Edge insulation and a vapor barrier are foremost in their recommendations as a result of the tests. To be warm and dry, a concrete floor slab must also be laid on well-drained land with a fill of gravel or crushed rock.

"A 4-inch fill of coarse, washed gravel or crushed rock should be spread over the entire area where the floor is to

be laid," stated a report issued by the University of Illinois Small Homes Council. Structural clay tile can also be used for a fill. Though the fill is designed to reduce the capillary rise of moisture, it is not designed as an insulation. A vapor barrier must be provided to prevent moisture from rising from the ground into the slab.

The vapor barrier must be placed over the fill, and should extend to the outside edge of the floor area. The material used as a vapor barrier should overlap 4 inches when it is laid, and should be sealed at the edges with asphalt cement. The material should be sufficiently strong so that when concrete is poured over the vapor barrier, it will resist puncturing.

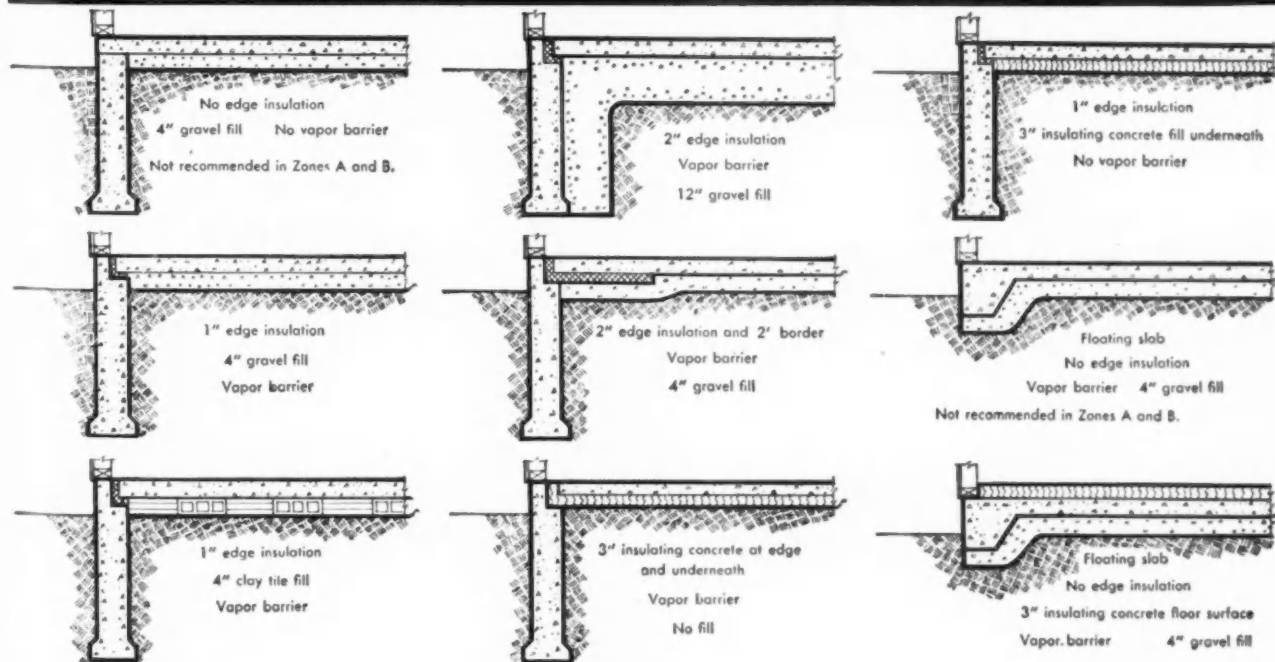
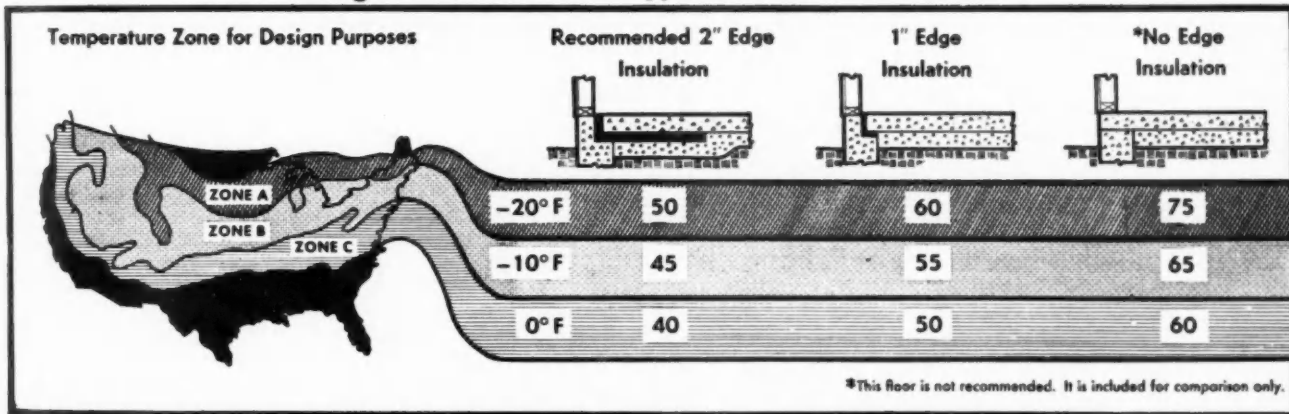
"In zero weather," the Small Homes Council reported, "a floor slab having edge insulation will be about 20 degrees warmer along the outside wall than an uninsulated floor. A floor having no edge insulation may become so cold that moisture in the air condenses on the floor near the outside wall just as it sometimes does on windows."

At least 2-inches of rigid waterproof insulation placed along the exposed edge of the floor, extending 2-feet under the floor as a border, is recommended.

Drawings courtesy of Illinois University Small Homes Council.

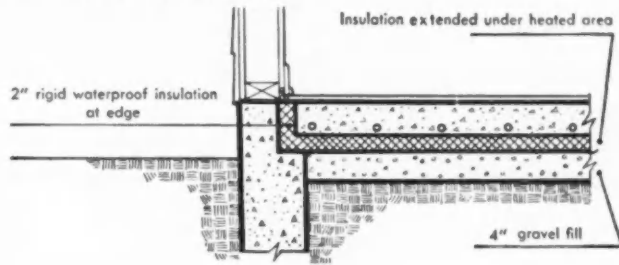
TO ESTIMATE B.T.U. heat loss per hour for concrete slab floor, multiply length of exposed edges of room and factor in chart below that represents zone of construction and type insulation used. One way to insulate when grade beam is used and when panel heating system is used is shown above. Tested by Small Homes Council, nine different types of floors, below, revealed heat losses, temperatures at various points throughout floors, and amount of moisture passing from the ground to top of the slab

Design Factors for Three Types of Floor Construction

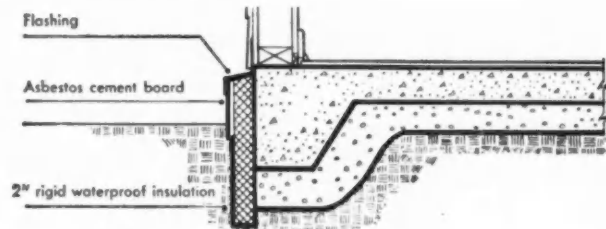


How to Insulate

When grade beam is used



When panel heating is used



Versions of Blandings House Reflects Demand Of Local Clients



ADAPTATION of Blandings Dream House, left, built by M. W. Turner Co., Tulsa, Okla., is situated on a wooded lot, 115x225 feet. House above, built by the Nelson Brothers, in Mt. Lebanon, Pa., contains latest in automatic electric equipment. Houses are priced to sell at between \$35,000 and \$40,000



OF 65 adaptations of the Blandings Dream House completed from coast to coast in the past several months, few are alike; and few, if any, are exact duplicates of the original house built in Hollywood for the RKO movie, "Mr. Blandings Builds His Dream House."

The three adaptations presented here substantiate that statement.

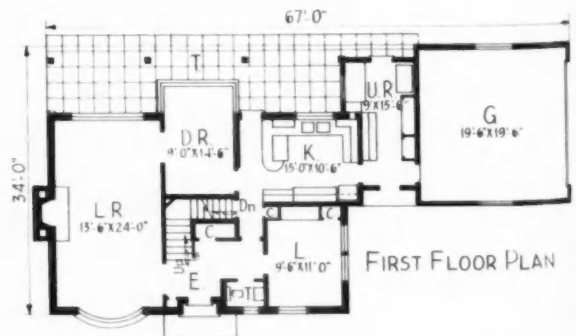
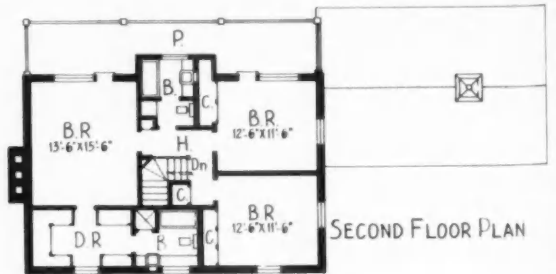
Main reasons why the adaptations varied were the choice and price of materials in given localities, and the nature or design of subdivisions in which the houses were constructed.

The Blandings house in Tulsa, Okla., built by the M. W. Turner Co., and the house in Salt Lake City, Utah, built by Alan E. Brockbank, are examples of the application of brick in exterior walls, one of the more extreme variations from the Hollywood version, which was of frame construction. Like the original, the houses contain the latest in modern hardware; heating, kitchen and bathroom equipment, and appliances.

Building the Blandings house adaptations gave some builders an opportunity to employ a few ideas that they otherwise might not have used; it gave them a chance to test buyers' attitudes toward certain materials and home equipment. The Blandings house in Willow Terrace, Mt. Lebanon, Pa., built by the Nelson Brothers, is equipped with an intercommunicating system between rooms, Autosonic garage door operators, plug-in phones, and indirect lighting.



VERSION of Blandings Dream House, right, was built by Alan E. Brockbank, of Federal Homes, Inc., in Salt Lake City, Utah

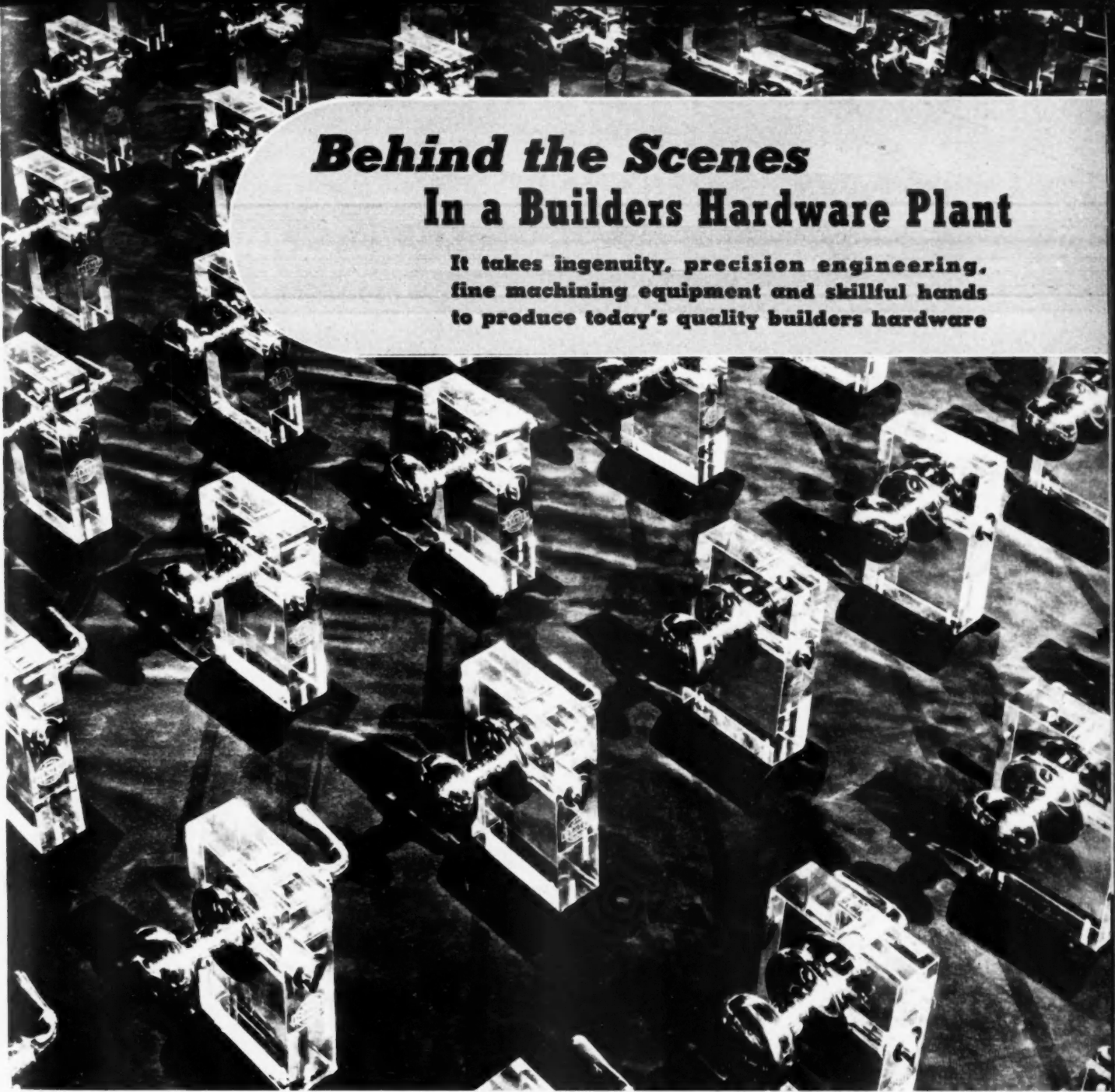


FLOOR PLAN is of Salt Lake City version built by Brockbank, but is typical of many other adaptations constructed throughout the country

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Behind the Scenes **In a Builders Hardware Plant**

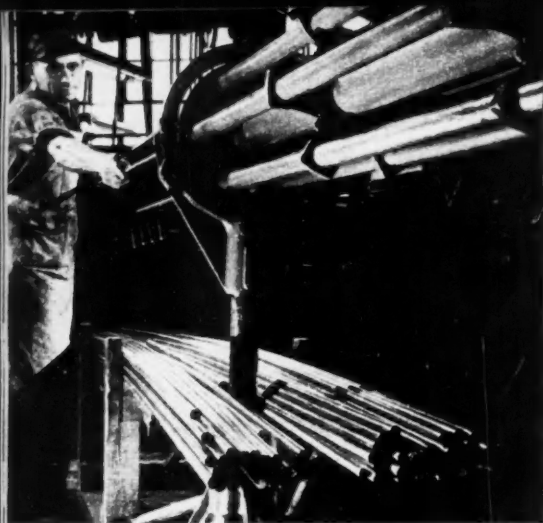
It takes ingenuity, precision engineering, fine machining equipment and skillful hands to produce today's quality builders hardware

Photos courtesy National Brass Co., Grand Rapids, Mich.

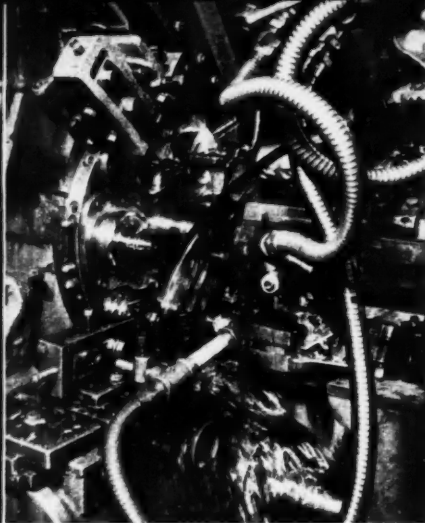
BACK of the simple lock and latch sets being installed in today's homes is a multi-million dollar builders hardware industry, manned by thousands of trained individuals pledged to produce and deliver a product of trouble-free, lifetime durability and beauty. In less than a hundred years the excellent finish hardware of today has evolved from the clumsy, handmade devices of the early nineteenth century. It was around 1865 that the modern, pin tumbler, cylinder lock was developed. The unit lock was introduced about 1902. In the early 1920's the now popular tubular lock, with the basic feature of simple installation, was first marketed.

Along with the amazing refinements in mechanical design, manufacturers have developed hundreds of

automatic precision machines which not only produce a better product but do it faster and more economically than ever before. Beyond the "Employees Only" signs on the doors of the average modern builders hardware plant is an impressive, orderly array of some of the finest machining equipment to be found anywhere in the world. The raw materials of modern builders hardware—brass, bronze, nickel silver and steel—are routed through automatic screw machines, huge presses, trimming, shaping and polishing devices, plating and lacquering processes to the assembly department where all the various parts are put together to create the finished product, attractively packaged. With one manufacturer's line, for example 173 separate operations are required to produce a complete 5-pin tumbler



AUTOMATIC screw machine making door knob shanks from solid brass rods. Machine will produce 216 precision pieces an hour



THE SCREW machine shapes the outside, drills and threads the spindle hole of the knob shank in one operation



PRECISION tools and dies are essential. Tool and die maker works with dimensions smaller than thickness of printing paper

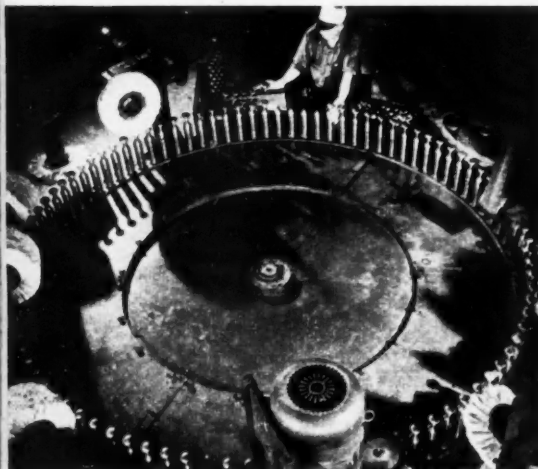
cylinder lock set and 135 operations are involved in the manufacture of that firm's bathroom latch set.

Intensive inspection at all stages of manufacture by highly trained individuals assures the home builder and ultimate purchaser that the guarantee or warranty placed on the product by

the manufacturer is bona fide. Thousands of dollars are spent annually on research probing for possible weaknesses in current products and developing improved designs and working parts. Hundreds of expensive mounted specimens of builders hardware are made each year by manufacturers to

help merchandise the products and reveal the inner workings of lock and latch sets.

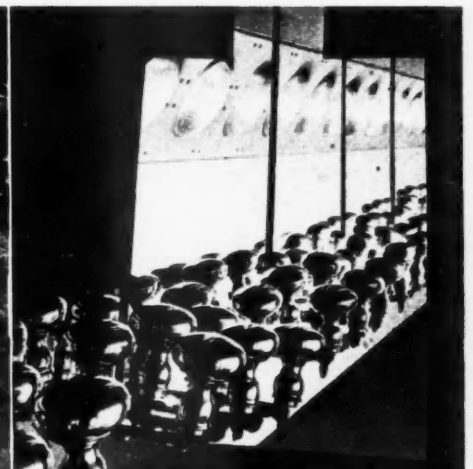
In addition to manufacturing quality products that are easy and economical to install, manufacturers also design and produce special tools for carpenters to facilitate proper instal-



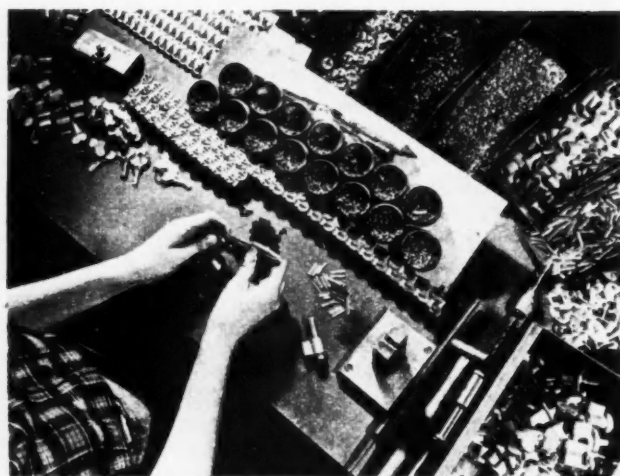
POLISHING brass door knobs on huge machine. They pass ten different polishing stations before returning to operator



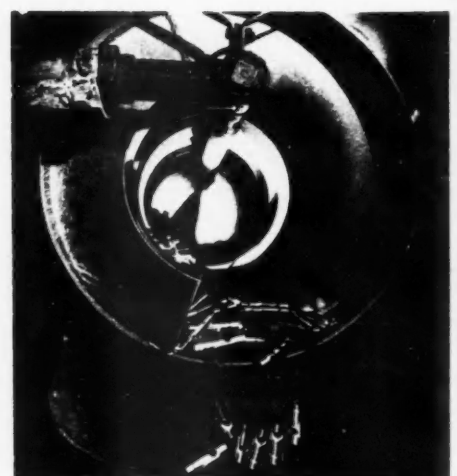
HERE KNOBS are leaving the 12-foot polishing dial. Note how they sparkle. Inspector is near operator checking units



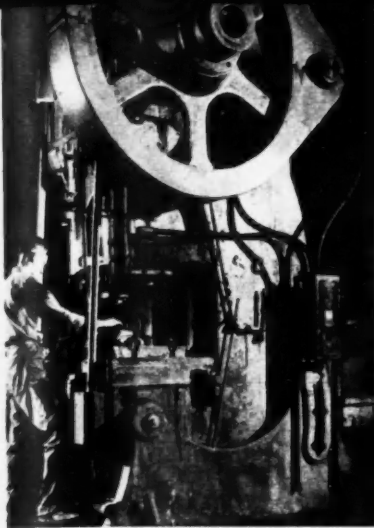
AFTER KNOBS are polished, they are dipped in lacquer and run in a bake oven which cures the lacquer at 325° F.



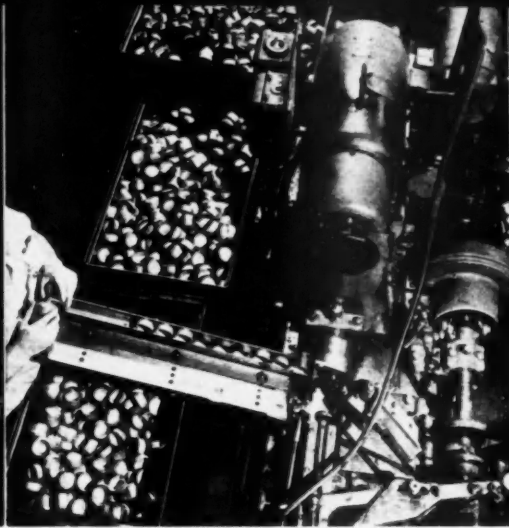
ASSEMBLING the 5-pin tumbler cylinder—the heart of the lock. It takes skillful hands, precision machines and ingenuity to produce today's quality builders hardware



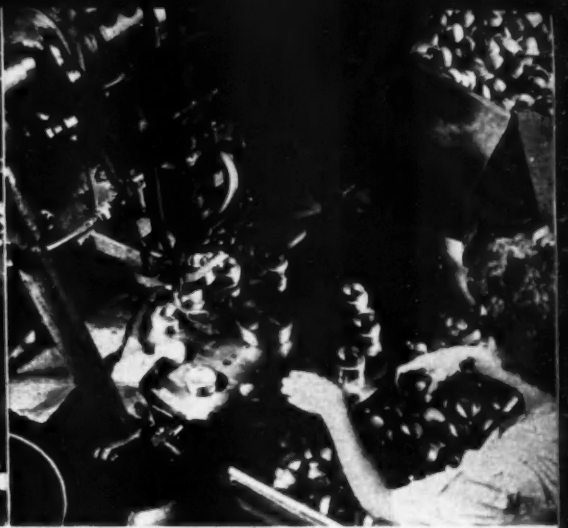
THIS IS a "washing machine," cleaning stamping compound from lock cases preparatory to rust-resisting plating process



EXERTING pressure of 80 tons, this huge press draws top of the knob from solid brass sheets at a high rate of speed



THIS MACHINE trims metal from knob top, after it comes from press at left, to produce a part with precision measurements



KNOB TOP still requires more fabrication. Another process turns edges inward preparing it for attachment to knob shank

lation. Thanks to the foresight and ingenuity of builders hardware manufacturers, homes of today can be equipped with the finest, longest wearing builders hardware ever made available, with each unit taking only minutes to install as compared with hours a few years ago.



IN ADDITION to the knobs, the other 33 parts of this tubular latch set are channeled to the assembly department



WRITTEN assurance of quality, good workmanship and long life is last to be inserted in package by major manufacturers



CAREFUL control of quality is a constant project in laboratory. Nothing is left to guesswork by these skilled individuals



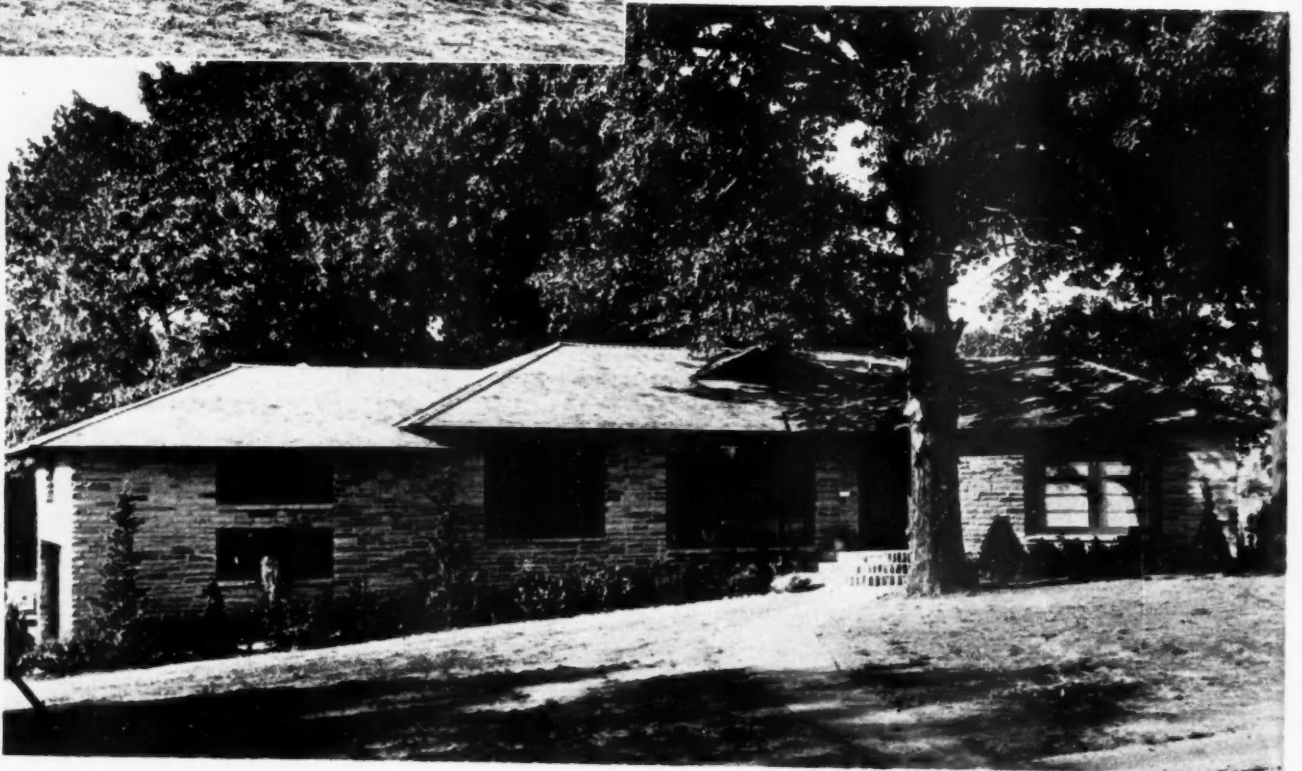
INTERIOR working parts of these tubular latches are steel to assure long, trouble-free service after they are installed



BUILDERS hardware manufacturers spend thousands of dollars annually to prepare mounted specimens of their products for demonstration and inspection by builders and consumers. This is part of the merchandising help rendered by alert producers

Built-ins Rate High

Ideas for unique and valuable built-ins topped all other suggestions in nationwide survey of features women want in homes



THIS ranch-type bungalow has 1000 ideas incorporated into its design suggested by women throughout country



LIVING-DINING area forms center core from which all other quarters evolve

MRS. R. B. BUTLER, prominent Tulsa, Okla., home builder, queried 3,000 women realtors for suggestions of interesting features they would like in new homes. From their replies she culled 1,000 ideas which she incorporated into the design of a model house. The house, a rambling ranch-type dwelling, was exhibited to the public in August. It broke all previous demonstration home attendance records in Tulsa, and sold for \$35,000 three days after it was put on the market.

Topping all other suggestions were ideas for unique and valuable built-in storage facilities. The inclusion of convenience items which add measurably to the comfort of a home comprised the balance.

The ideas for built-ins were skil-

fully a house adapted created innova the us French of the storag books, sils. C built-i cabin for po

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With Women



MRS. R. B. BUTLER

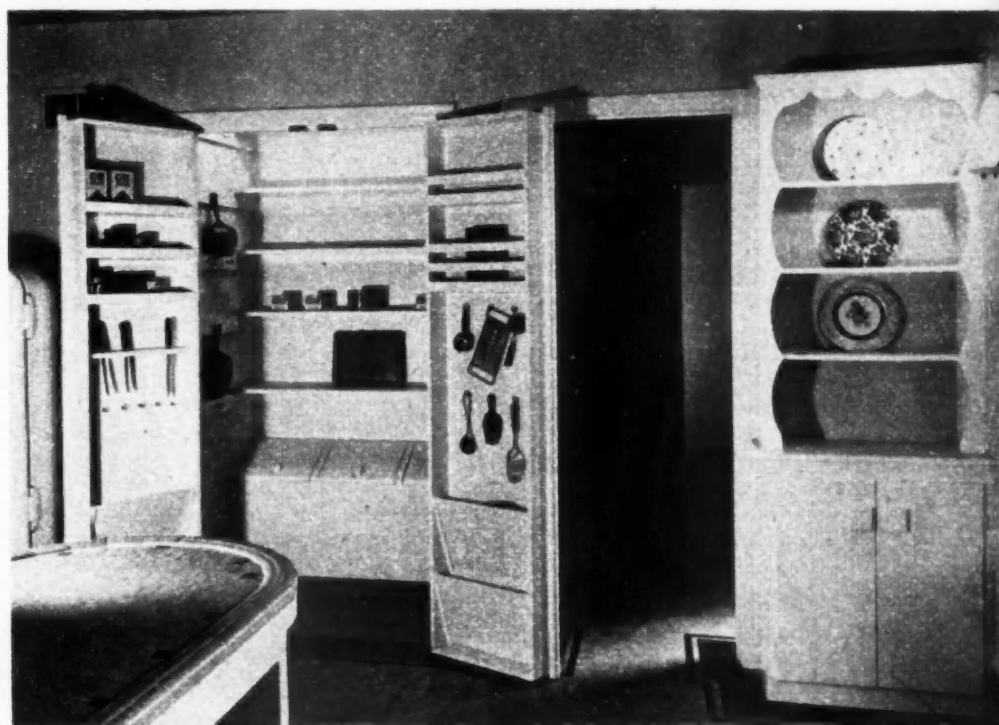
fully and generously worked into the house plan. In the kitchen, a modern adaptation of the old fashioned pantry created a great deal of interest. An innovation in its compact design is the use of double doors which open French door style. The inner sides of the doors are utilized to provide storage space for pan covers, cook books, condiments and cooking utensils. Other features of the pantry are built-in bins for vegetables, a storage cabinet for fruit, and storage space for pots and pans.

In the bathroom, space for built-ins was gained by extending the lavatory counter the width of the room. Cupboards and open shelves were then installed above and below the counter, furnishing ample storage for towels, medicines, and sundry other articles related to the bath.

Spacious wardrobes were built in the bedrooms. To utilize every inch of space they were built to ceiling height to provide storage compartments for seasonal clothing or seldom used belongings.

Convenience items adopted by Mrs. Butler include the installation of an electric light in the front step, and the use of a transparent mirror in the front door. This latter feature permits the person inside to see out but prevents the outsider from seeing in.

The solid glass sliding door which separates the living room from the



INNER side of double pantry doors provides storage for covers and utensils

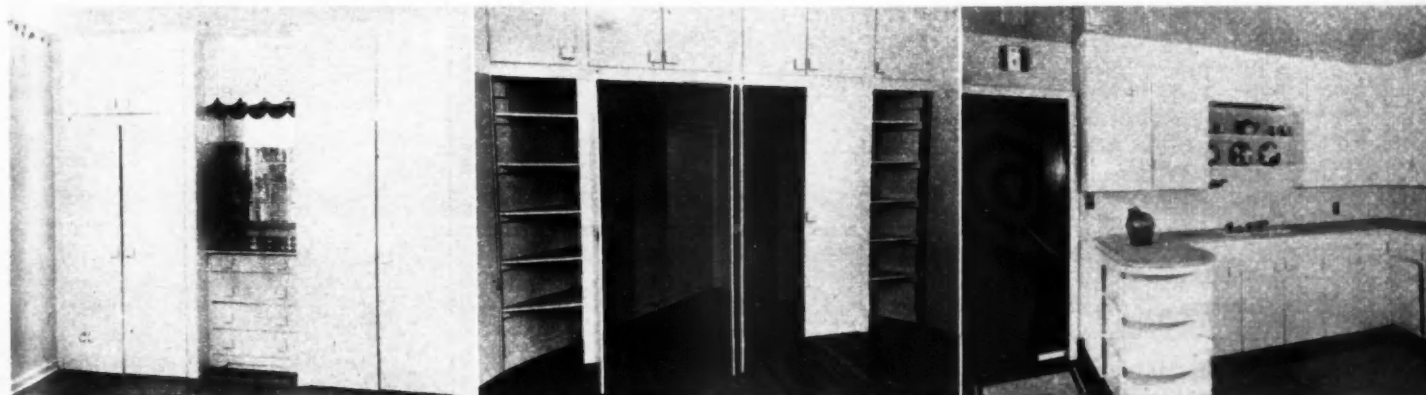
den was suggested by a Honolulu realtor and graciously accepted by the public, Mrs. Butler reports. Another novel feature is the use of a flower box made of glass brick to partition off the dining area from the living room.

The house is situated in an exclusive Tulsa neighborhood. A local stone was used for its exterior, and cedar shingles for its roofing. It has three bedrooms, two baths, living room, den with wood burning fireplace, two-car garage, laundry room, and an outdoor barbecue pit.

Mrs. Butler has made good kitchen planning a specialty. In this home she has built the combination kitchen and breakfast room in a U-shape. A large picture window in the breakfast nook permits a view of the barbecue pit, patio, and playground areas. Space for utilities is provided between the kitchen and the garage.



PLENTY of built-in cabinets in bath



SPACIOUS wardrobe and linen closets have storage compartments above. Open shelves are decorative feature in kitchen

Fuel for the flames?

By R. E. Saberson

THE DIRECT cause of the high cost of home building can be ascribed to the obvious fact that we have been trying to build too many houses in too short a time. We simply are not set up production-wise (with materials and man power) to end the pent-up demand as quickly as a great many people would like to see it terminated. That, of course, creates acute shortages and prices zoom skyward.

Yet whenever ways and means are discussed for "solving" the housing shortage or suggestions are offered as to how the cost of homes can be reduced, the disastrous efforts of "too-many-too-soon" are seldom considered. Strangely enough relief measures invariably veer in the opposite direction and it isn't long before their sponsors find themselves groping ineffectually for some method whereby homes can be built in even larger quantities and at a greater speed . . . for less money.

Notwithstanding the fact that such proposals do not make sense they still happen to be the end-of-the-rainbow objective that many happy politicians will be toying with during the next few months as the housing shortage is given new prominence and relief measures are churned up in an effort to reward voters who subscribed to the belief that the temporary problems of scarcity can be better solved politically than in any other manner.

In order to obtain a better perspective of the whole housing situation, and the cause of the temporary high prices, it merely is necessary to take a quick look at what we have been doing during the past three decades. We need not be ashamed of the record since our achievements have resulted in a larger percentage of home ownership, and better homes, than any nation has ever acquired. To have accomplished this satisfactory result called for huge quantities of materials, efficient equipment, skilled workmen and plenty of know-how by all parties concerned.

Let's first consider the busy Twenties when we built 7,034,000 new, permanent nonfarm dwelling units during the ten years without benefit of government help or public funds. That was an average of slightly more than 700,000 units per year for the decade. It was a par-

ticularly bright and shining example of competitive, free enterprise at work. The houses, of course, were relatively simple as compared with the efficient, automatic homes we build today but they were snug, economical affairs and all very wonderful to the happy families who have enjoyed them greatly down through the years.

The picture during the following decade was in sharp contrast and indicated conclusively that 700,000 houses per year was a bit too big a bite to swallow. The average for the Thirties dropped from 700,000 to 273,400 and there were five consecutive years when it was approximately 80,000 per year!

Now it doesn't take much cogitating to figure out why leaf raking, during such a period, proved to be a Godsend to many men in the building trades or why building material manufacturers and distributors boarded up their windows. Houses were a dime a dozen and one of the largest and busiest federal agencies was formed to come to the aid of distressed home owners.

By the end of the Thirties we had begun to recover our financial equilibrium and our home building average for the last four years of the decade worked back up to 180,000 per year . . . still a far cry from the 700,000 average of the Twenties but much better than the low of 80,000.

In 1940 and 1941 we did right well with a total of 1,308,700 residential units albeit the figure is not all typical, as far as today's needs are concerned, due to military distortions. Then came the war years and the resultant cessation of the construction of homes for normal civilian use.

Averages may be more or less meaningless for many purposes but in this particular instance we are leaning on them rather heavily merely to call attention to the fact that our productive capacity of homes (materials and manpower) is set up on a basis of approximately 500,000 annually based on the number of homes we have built since 1920.

In the Twenties the average was undoubtedly too high based upon what happened in the Thirties, a situation which invariably follows overproduction. However, the pendulum swung too far in the oppo-

site direction in the Thirties with the result we had too few homes at the beginning of the Forties. Making up this pent-up demand, plus the war time shortage, created the acute emergency which existed at the end of the war . . . a situation too well known to require comment.

Assuming that our postwar productive capacity was large enough to again handle the 700,000 average of the Twenties it can readily be seen that the political demand for enough houses immediately to meet all needs could only result in getting us into plenty of hot water. By straining our economy almost to the breaking point we have averaged better than 823,000 homes per year for three years in a row. To accomplish this herculean feat called for the help of all available skilled labor and a great deal not so skilled. It likewise required the use of all suitable materials and endless quantities that never would have been used had the proper materials been available. And it caused



prices to zoom to unprecedented highs.

The mad rush to build too many homes too soon (based upon our productive capacity) created something akin to chaos for at least two years and provided an opportunity for hysterical politicians to come to the "aid" of their constituents by doing the very thing that made matters worse instead of better.

With the boilers almost at the bursting point and the water running low the all-out cry was to add still more fuel to the flames!

Now that the housing shortage has eased off in many communities and another 900,000 or 1,000,000 units (the estimate for 1949 is 875,000) will accomplish the same purpose in practically all others, except the few abnormal spots, it behooves us to cast an appraising eye in several directions in an effort to determine where we are headed.

It is our steadfast conviction that we are now developing a productive capacity which will eventually result in the vast overproduction of homes. Excessive demand and high prices are all that it takes to bring about such an undesirable situation and its many attendant evils.

In the Twenties one method of construction and two basic materials were competing for the housing market. Today there are three major methods of construction and twelve materials fighting for it. Back in the carefree Twenties construction of a home was limited by the number of skilled craftsmen available to put it together. Today building parts, for assembly on the building site, are becoming larger and larger and are produced in streamlined factories. Individually built homes are now constructed with the aid of power equipment which begins with the excavating and extends to every part of the

operation. Laborious hand labor has given way to power saws, sanders and scores of similar devices. Then, of course, on-site fabrication has advanced to the point where it represents intelligent effort in its most efficient form. And finally come the proponents of the factory-built houses who are proceeding with their prodigious plans despite the skepticism of the advocates of the more traditional methods.

In materials the competition for the house market is even greater. It represents the results of research activities that have projected many new and important products, available in huge quantities, into the home building field. Not all of these efforts have come to full bloom. Some are extremely revolutionary and may never prove successful. But while all this has been going on, giant strides have been made in the construction of homes by more conventional methods and we have proceeded far enough with less conventional plans to conclude that not all of them will come to naught.

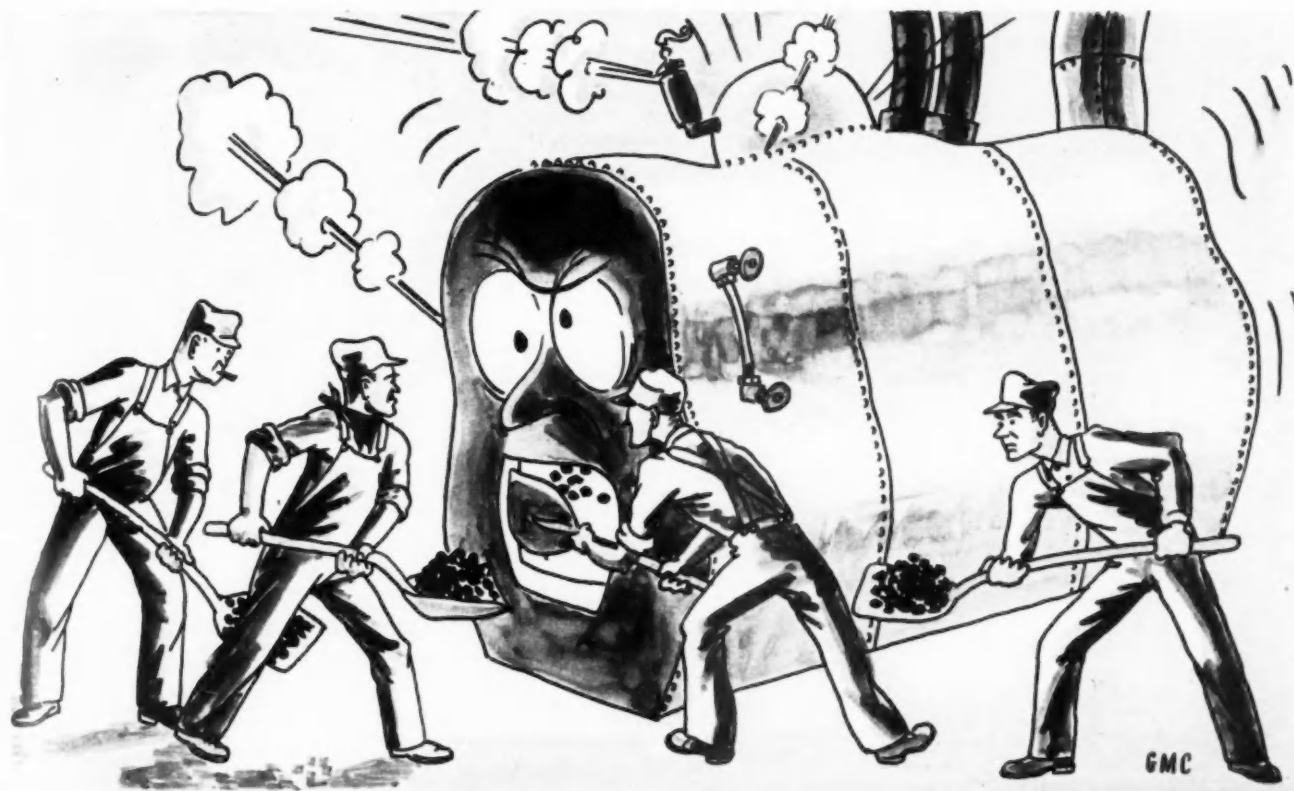
As we are finding out how to build houses faster (and better, eventually) we shall likewise learn that a big dent has already been made in the housing shortage . . . a dent that is so sizable in some areas that the price of old homes has lessened materially and has even extended to new homes.

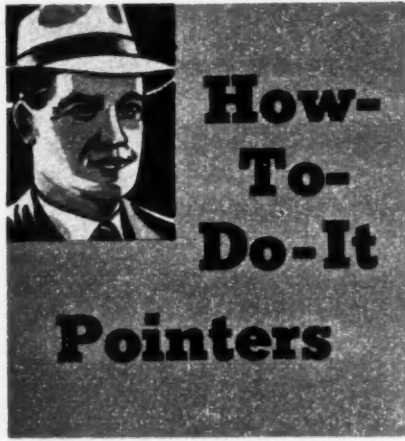
Certain building materials too

are beginning to feel the effects of maximum production and declining demand. The price of lumber, one of the most important materials used in residential construction, has dropped substantially in all but a few grades and species. Price declines are showing up in other materials. This more or less orderly decline would, no doubt, continue were it not for the proposed plans of the federal government to provide for the construction of several hundred thousand new public housing units in the next five years. This on top of the "normal" program (875,000 houses) of the home building industry, could well be the fuel that causes the inflationary flames to burn even more furiously.

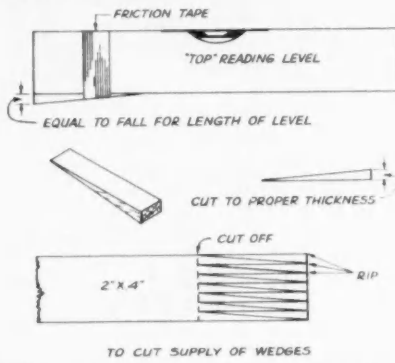
But there is another more serious aspect of the situation. High prices, created by the hysterical desire to provide houses too quickly for everybody, only serve to intensify the competitive efforts of new methods and the production of new material with over supply the inevitable result.

Too much productive capacity, especially at a time when the great housing shortage is coming to an end, will make prices as much too low as they have been too high. When that happens it will take more letters than there are in the alphabet to name the federal agency that will have to be set up to bail out the millions of families who paid too much too soon.

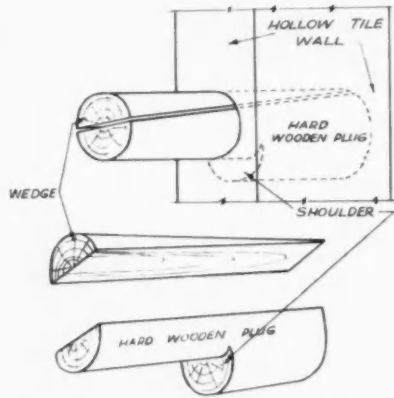




How to Determine the Pitch of Sewer Tile



WHEN it is necessary to determine the accurate slope to sewer tile or pipe, and if it is difficult to erect lines or resort to other usual methods, an old time top-reading carpenter's level can be used as shown. If more than one wedge is needed, take a piece of 2x4, 18 or 20 inches long and lay out the wedges from 0 to 1/4 inch up to 0 to 1 inch in a length of 4 to 6 inches. Rip the end of the 2x4 and then cut it off. To use, place level on top of tile, with wedge at the low end, then adjust tile until the bubble reads "level". Submitted by L. G. KELLY, Lombard, Ill.



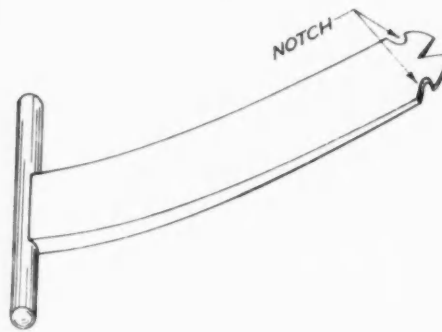
How an Auto Spring Is Converted to Handy Tool

A PRACTICAL little gadget is made from a discarded auto spring by C. A. EGGBRATEN, Madison, S. Dak.

This gadget has proven to be quite a time and material saver when patching shingles or in removing siding.

To make this tool, an old auto spring is cut in two. Three notches are cut into the flattened end of the bar, and on the other end, a cross bar is welded on to provide a hand grip.

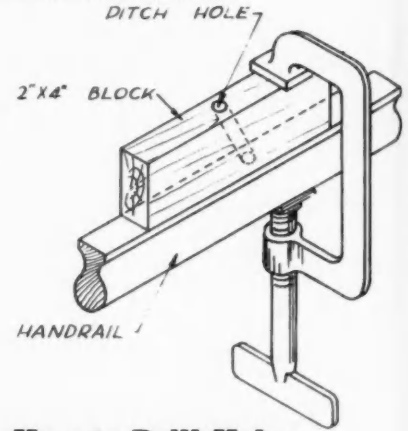
The tool is slipped under the shingles raising them just enough to loosen the nails without splitting. Then the notched end of the tool is used to pull out the nails.



How to Fasten Shelves or Pictures on Tile Walls

A METHOD for overcoming the difficulty of securing objects to a tile wall is submitted by HERBERT E. FEY, New Braunfels, Texas.

A simple but practical way is by drilling a 1/4 inch hole in the hollow tile and then inserting a permanent wooden plug in the hole. The shouldered plug is first inserted with the shoulder inside the tile. The wedge is then driven in to lock the assembly in place. The wedge is made about one half the size of the plug and screws and nails are driven into wedge. A plug of this kind will not crack the hollow tile.



How to Drill Holes For Stair Balusters

IN SUBMITTING this suggestion JAMES A. ELLISON, Birmingham, Mich., says: "It was always a problem for me to keep the same angle when drilling holes for balusters in the bottom of a Colonial type stair rail. I devised the above 'jig' which can be made from a piece of 2x4 and held to the rail by means of a 'C' clamp. The 'jig' may be marked and drilled by means of a 'stair pitch block'. From then on the same angle can be obtained for each hole."

Selected Exterior Residential Details

By R. J. Alexander

EXTERIOR FEATURES of residential work require careful study and detailing. Items such as porch cornices, rails and balustrades must be designed in proper scale to the balance of the house in order to obtain the desired results.

The highly ornamental porch of the Victorian period with its intricately moulded cornices, turned balusters, and other features has been superseded by the simple straightforward lines of today's modern porch.

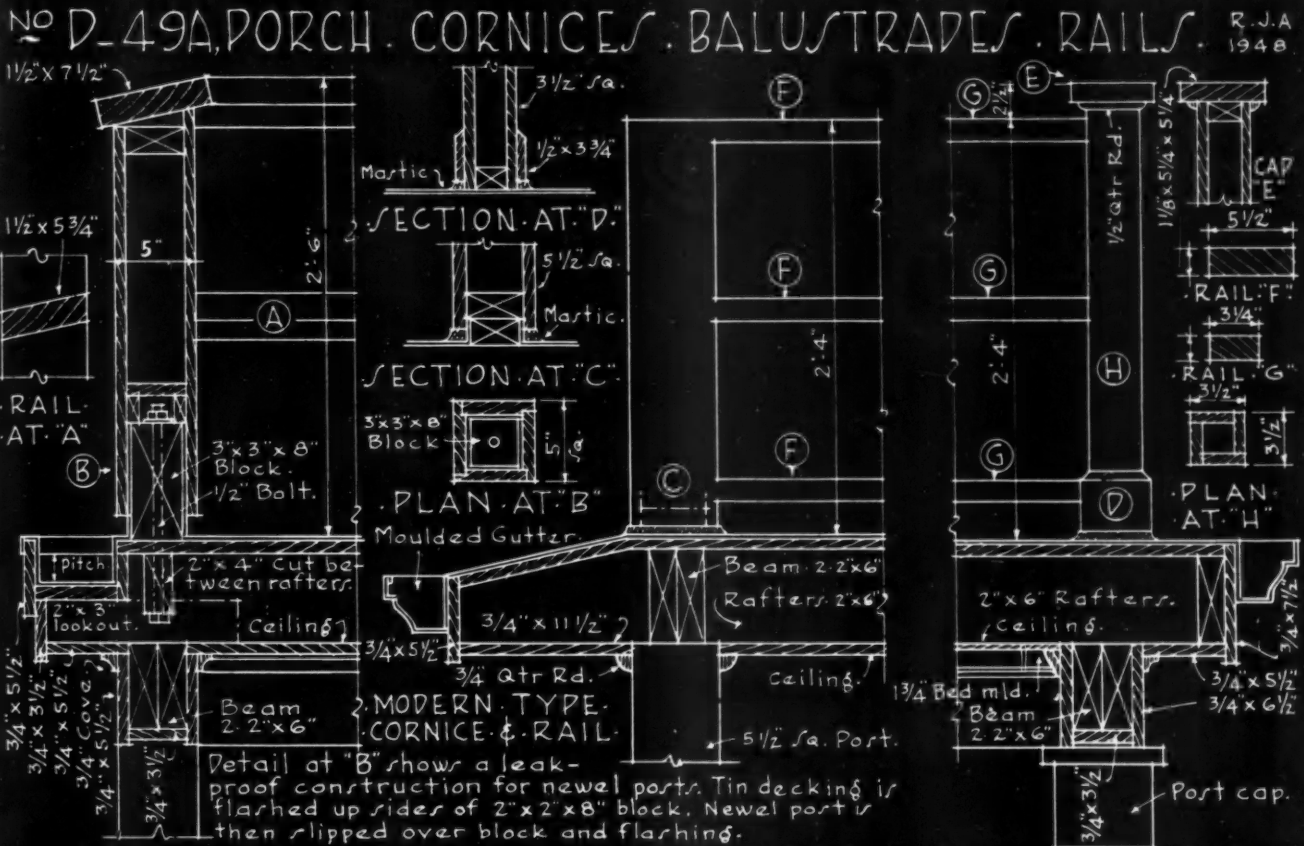
The scale of porches and the parts that make up the various units should receive careful study. Obviously a large house will require a larger porch or entry than a small cottage. Similarly the units of a large porch will be made proportionately larger than the same parts adapted for a small porch.

This month's detail sheet offers suggestions and ideas for the construction of a flat roof porch and balustrades. Balustrades used on this type roof require particular attention in construction to insure against leaking.

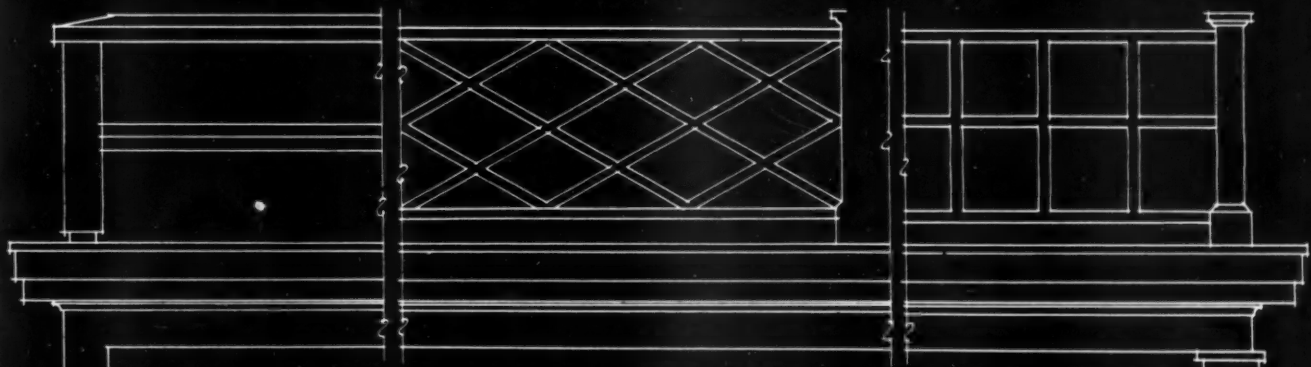
Of first importance is the deck covering. A permanent material such as copper is recommended. It should be well flashed against the adjoining building and newel posts.

The detail shown at "B" for fastening newel to deck, should provide a rigid, leakproof construction. The anchor block should be solidly anchored to the joist framing. The block is then flashed, after which the newel post is slipped over the block. Members should be primed on sides and end surfaces before assembly.

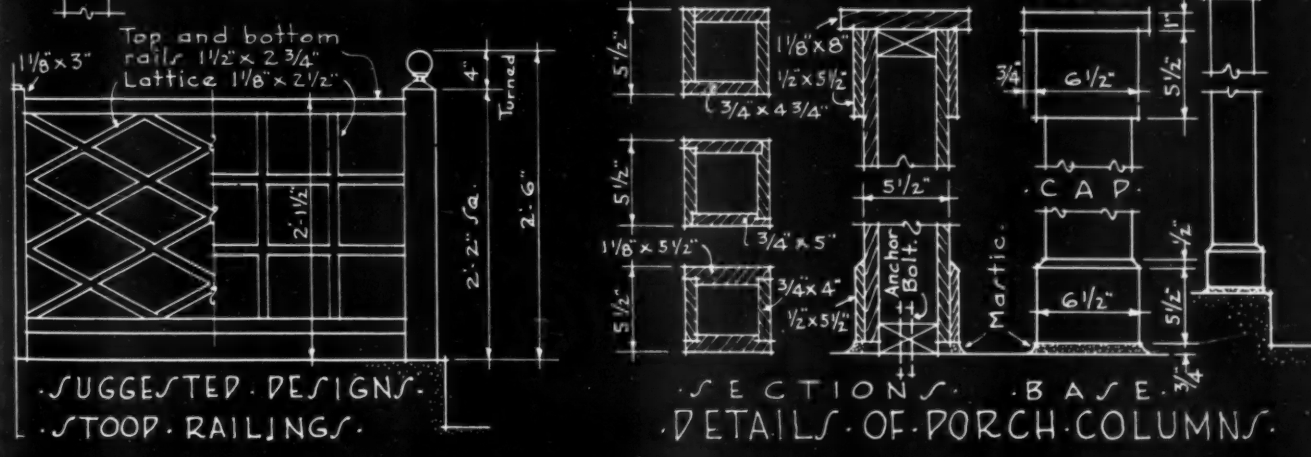
AMERICAN BUILDER'S BETTER DETAIL PLATE

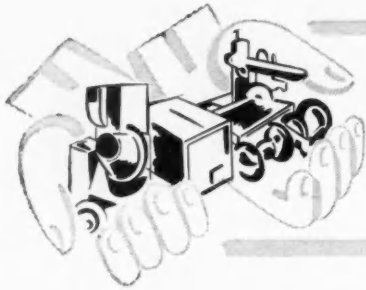


DETAILS OF FLAT PORCH ROOFS & CORNICES



SUGGESTED DESIGNS FOR BALUSTRADES

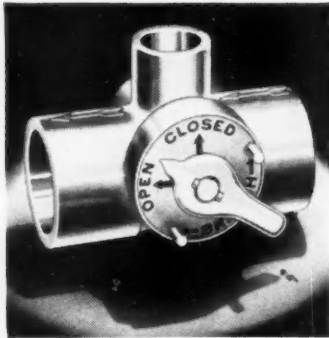




NEW PRODUCTS

Offered by Manufacturers

ADJUSTABLE SUPPLY TEES AB1923
Bronze adjustable supply tees with solder connections for copper one-pipe hot water heating installations, available in four sizes: $\frac{3}{4} \times \frac{3}{4} \times \frac{1}{2}$ -inch; $1 \times 1 \times \frac{1}{2}$ -inch; $1 \frac{1}{4} \times 1 \frac{1}{4} \times \frac{1}{2}$ -inch, and



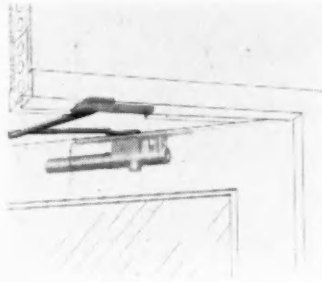
$1 \frac{1}{2} \times 1 \frac{1}{2} \times \frac{1}{2}$ -inch. Adjustable supply tee makes possible close control of water flow through each radiator, and provides balanced, uniform heating. Any amount of flow can be diverted through each radiator. Shutting off a radiator opens the main flow completely. Manufacturer: H. A. Thrush & Co., Peru, Ind.

ALUMINUM SCREENS AB1907
"Tension-Tite" screens are installed from inside with five screws—no other hardware needed. Adjustment channel at bottom of each screen slips off to serve as template for accurately placing the screws. Top and bottom bars and wire cloth are made of aluminum alloy. Manufacturer: Rudiger-Lang Co., 8th and Carleton Sts., Berkeley, Calif.

COMPACT REFRIGERATOR AB1926
Shelvador Model S-79 features seven cubic feet of food storage in a cabinet that measures 55 inches high, $24 \frac{1}{2}$

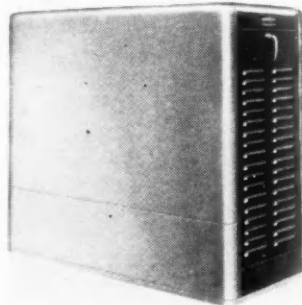


inches wide and $24 \frac{3}{4}$ inches deep. Frozen food compartment adequate for 25 pounds of food; chill tray for meats. Manufacturer: Crosley Div'n, Avco Manufacturing Corp., Cincinnati 25, Ohio.



CONCEALED DOOR CLOSER AB1931
Door closer provides concealed control for metal interior door up to 3 feet 6 inches by 7 feet $\frac{3}{4}$ inches in size. Closing mechanism concealed within top rail of door. Slender arm only is visible, attached to frame by recessed soffit plate. Shock-absorber and hold-open arm may be specified. Manufacturer: LCN Closers, Inc., 466 W. Superior St., Chicago, Ill.

AIR CONDITIONING UNITS AB1924
Two new Series "80" oil-fired air conditioning units have Underwriters' Laboratory approval. Available in both

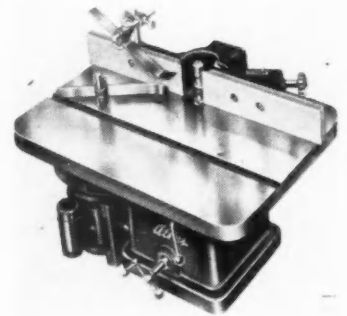


conventional and Hiboy designs. Capacity, 80,000 B.T.U. Both Hiboy designs are automatically fired by oil, delivered completely assembled, wired, and ready for installation. Manufacturer: Ko-Z-Aire, Inc., Red Oak, Iowa.

COMMERCIAL SCALE MODELS AB1915
Single and multi-floor buildings, $\frac{1}{4}$ -inch scale, of clear lucite, are built to exact print dimensions with engraved scale grid floors. Designed to enable architects, engineers, and layout men to study building and planning problems. Models, of any type of commercial or industrial buildings, are complete with all columns, stairwells, elevator shafts, and other physical building characteristics exactly to specifications. Manufacturer: Visual Planning Equipment Co., Inc., Oakmont, Pa.

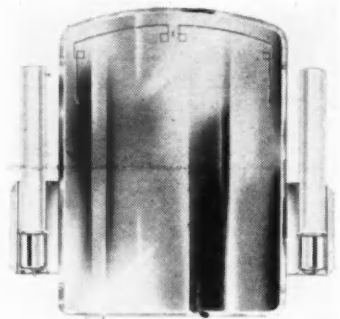
SPINDLE SHAPER AB1928
Atlas spindle shaper, a big-capacity portable machine, is of heavy con-

struction. Precision ground table is 15x-21 inches, with 2-inch vertical travel. Cutter capacity, $1 \frac{1}{2}$ inches high, $\frac{1}{2}$ -inch bore; $\frac{3}{4}$ -inches diameter spindle, turned to $\frac{1}{2}$ -inch for cutters. Operates from $\frac{1}{2}$ h.p.; 3450 r.p.m. motor. Overall dimensions less motor: 26 inches long by $15 \frac{1}{2}$ inches wide by $18 \frac{1}{4}$ inches high with table in highest position. Manufacturer: Atlas Press Co., 26010 N. Pitcher St., Kalamazoo, Mich.



ALUMINUM WALL TILE AB1929
Hastings Alumitile, aluminum wall tile, may be applied to any smooth wall surface with special waterproof mastic. Color, sprayed onto aircraft aluminum, is controlled to absolute uniformity. Sizes are stamped out of the metal after finish has been sprayed and baked on. Manufacturer: Metal Tile Products, Inc., Hastings, Mich.

LIGHTED BATH CABINETS AB1903
Lighted cabinets are wired at factory to supply adequate light for entire bathroom. Designed in a pattern that is appropriate for all styles of interior trim, fixture is die stamped from heavy metal, heavily chrome plated. Cannot



bend out of alignment or permit globes to tilt. Manufacturer: Grote Manufacturing Co., Bellevue, Ky.

CABINET HARDWARE AB1921
"Matched" set of cabinet hardware, made of wrought brass or bronze in polished brass, dull bronze, and polished chromium plated finishes, is suitable for use on linen closets, cabinets in playrooms, dining rooms, kitchens, or

bathroom or nat
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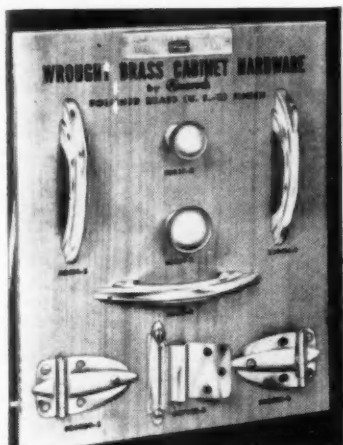
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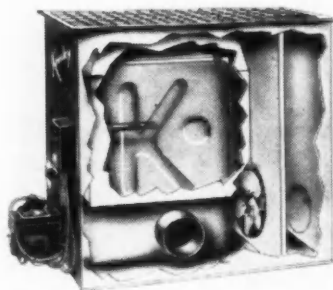
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bathrooms. Suitable for use on painted or natural finishes. Manufacturer: American Cabinet Hardware Corp., 416 S. Main St., Rockford, Ill.

OIL BURNING FLOOR FURNACE AB1922

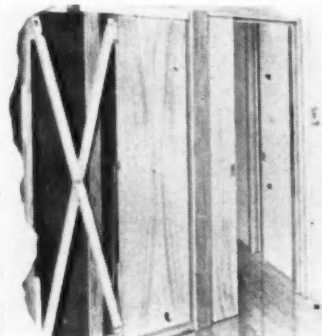
"Evenheat," Model EVF, 20x36 inches, requires 36 inches of subfloor space for installation. Available in flat floor type, No. EVF, or dual wall register type, No. EVD. Output, 72,850 B.T.U. per hour. One blower supplies air for fuel combustion, regardless of draft conditions, and circulation fan, suspended in rubber, forces circulation of warm air to the rooms. Fully auto-



matic, with thermostatic controls. Manufacturer: Kresky Manufacturing Co., Inc., Petaluma, Calif.

DOOR HANGER AB1902

"Floating action" door hanger requires neither tracks at bottom nor hangers above. Doors are suspended by steel scissor mechanism which is noiseless. Door may be moved at touch of finger. May be installed in any regulation 4-inch wall, in new or existing home.



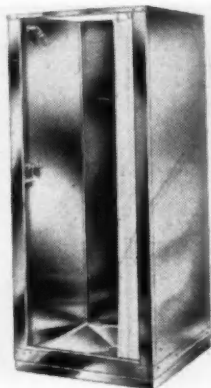
Easily repaired. Manufacturer: Dorflo Manufacturing Co., 1902 First Ave., Hibbing, Minn.

ALUMINUM SURFACE COATING AB1930

"Alodine" can be applied by dipping, spraying or brushing the aluminum parts. Produces protective covering in two minutes or less. Coating is iridescent in color. Manufacturer: American Chemical Paint Co., Box 301, Ambler, Pa.

PREFABRICATED SHOWER CABINET AB1925

All-stainless steel prefabricated shower cabinets are self-contained and leak-proof. May be assembled from the inside, if space is limited, or may be



erected complete and moved into position for connection to water and drain. No extra floor or wall preparation necessary. Available now in 36-inch size. Manufacturer: Bathe-Rite Div'n of Milwaukee Stamping Co., 865 S. 72nd St., Milwaukee 14, Wis.

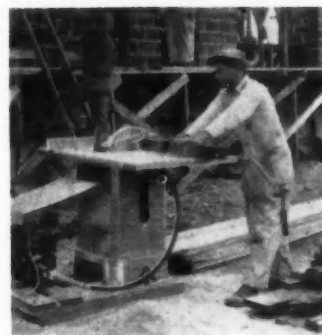
WALL TILING AB1910

"Crys-Glas," an all glass wall tile, is available in 15 different non-fade colors. Light weight, it is 1/8-in thick, and can be applied to any kind of surface. A nonaging rubber mastic is applied to the back of the tile to make it adhere to the wall. Mastic remains resilient and acts as shock absorber, protecting tile from damage due to settling of the building, expansion and contraction. Manufacturer: The Dearborn Glass Co., 2414 W. 21st St., Chicago 8, Ill.

TILTING ARBOR SAW AB1932

Model No. 97, 12-inch tilting arbor saw, is gasoline engine-driven. Handles jobs calling for straight ripping, cut off, angular cutting, grooving, dadoing,

shaping and rabbeting. Main table, made of gray iron, is 20 inches wide and 27 inches long. Equipped with three



aluminum extensions to provide working surface of 42x32 inches. Manufacturer: Toolkraft Corp., 449 Meadow St., Waterbury 91, Conn.

FIREPLACE HEAT EXCHANGER AB1904

"Hearth-Aire-Place" is a heat exchanger set within a fireproofed recess or metal shell. Aside or in front of a chimney, recess front may be plastered as the rest of the room. Air enters at bottom by gravity or blower and discharges out of sides of recessed walls, or out of top through ducts to rooms. Unit may be equipped to burn oil, coal, wood or gas. Easily repaired. Parts are accessible through fire opening; back accessible through registers. Cast iron resists rust and burning. No rain enters from chimney. Manufacturer: Hearth-Aire Co., 3126 Scarborough Rd., Cleveland, Ohio.

LADDER BRACKET AB1908



Offset ladder bracket, designed to be used with any ladder, will not damage gutters and cornices. Ladders secure (Continued to page 132)

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City.....STATE.....

AB1901	AB1907	AB1913	AB1919	AB1925	AB1931
AB1902	AB1908	AB1914	AB1920	AB1926	AB1932
AB1903	AB1909	AB1915	AB1921	AB1927	AB1933
AB1904	AB1910	AB1916	AB1922	AB1928	AB1934
AB1905	AB1911	AB1917	AB1923	AB1929	AB1935
AB1906	AB1912	AB1918	AB1924	AB1930	

When you address inquiries direct to manufacturers concerning a new product described here, please mention that you saw it described in American Builder.

DEALER REVIEW



NEWS OF NRLDA AND STATE AND REGIONAL ASSOCIATIONS

Officers and Executive Committee of NRLDA Conduct Annual Fall Meeting

THE ANNUAL meeting of the executive committee and officers of the National Retail Lumber Dealers Association was held at Miami Beach, Fla., November 8 to 11. In addition to the usual review of activities and accomplishments for the past 12 months, and discussions of policy for the coming year, the program was highlighted by the address of retiring President Norman P. Mason and the award of plaques to dealers being cited for outstanding public relations work during 1948. Mason issued a ringing challenge for management in "this great nationwide industry of

small businesses to meet the needs and the desires of the public of America while preserving the spirit of initiative which has made America great."

Delivering his annual report to practically all of the 400 lumber and building material dealers who attended, H. R. Northup, executive vice president, said the industry's major concerns are with material supply and export controls, and said that the probability of stand-by control and regimentation laws, the freight rate basing point problem and the newly imposed credit restrictions will all

(Continued to page 120)



WINNERS of the public relations awards given by NRLDA: left to right, Floyd and Lois Pendleton, F. S. Pendleton Lumber Co., McComb, Ohio; Don Sterner, Sterner Coal and Lumber Co., Belmar, N.J.; Art Clifford, The A. W. Burritt Co., Bridgeport, Conn.; Joe Morris, Tulsa Lumbermen Association, Tulsa, Okla.; Joseph B. Grossman, L. Grossman Sons, Inc., Quincy, Mass.; H. L. Stokely, president, Lumbermen Association of Texas, accepting for Richards and Krueger, New Braunfels, Texas; Stanley Horn, editor of Southern Lumberman, who made the awards



TOP-RANKING officers of NRLDA at Miami Beach meeting: seated, left, Norman P. Mason, retiring president, North Chelmsford, Mass.; right, C. B. Sweet, president-elect, Longview, Wash.; standing, left, H. R. Northup, executive vice president; right, vice president-elect, Clyde Fulton, Charlotte, Mich.

The President's Column



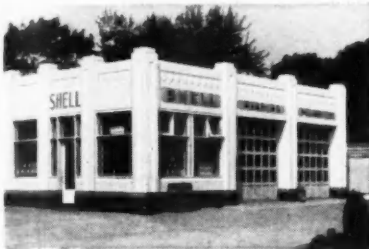
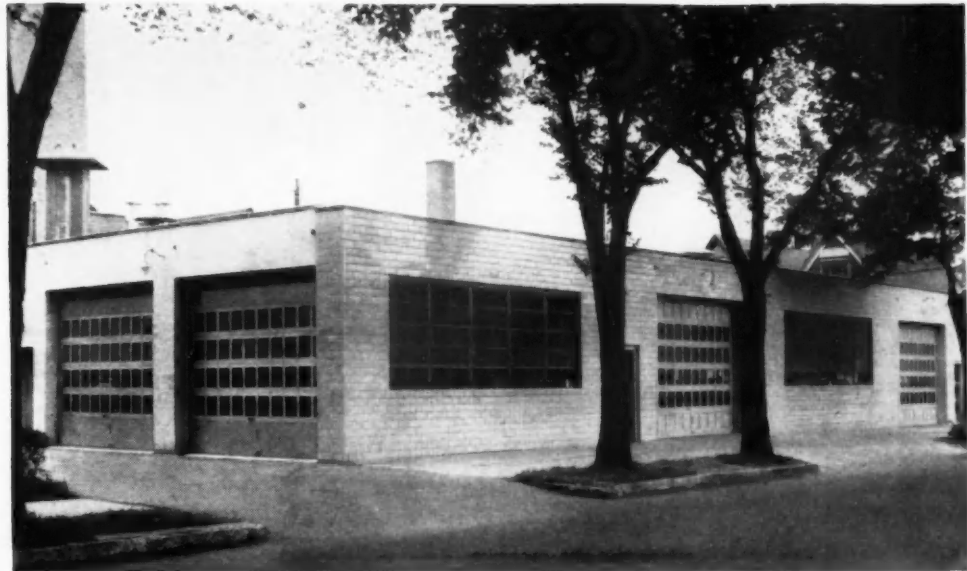
By C. B. SWEET
President, NRLDA

As the new president of NRLDA, C. B. Sweet becomes a regular contributor to *American Builder*, beginning with the January issue, succeeding Norman P. Mason, who has been writing "The President's Column." The new president is manager of the 13 Long-Bell retail lumber and building material stores in the Pacific Northwest. He has been with the company since 1922, when he started as a logger. He is a native of Kansas City, Mo., and attended Culver Military Academy and the University of Kansas.

As the new president of the National Retail Lumber Dealers Association, I would like to take this opportunity to greet the readers of *American Builder* and to thank the editor for the privilege of giving you my views each month.

Those of you who attended the annual meeting of the National Retail Lumber Dealers Association in Miami Beach the first part of November, went home, I am sure, with a feeling of satisfaction. There was concrete evidence that the building material industry was awake to its multiple responsibilities and was actually doing something about them—not just talking about them. This was dramatically demonstrated by the excellent entries in the annual Awards for Outstanding Service to the Industry and to the Community. They proved conclusively that the retail lumber dealer is an outstanding individual and leader in his community. He is not one who is just living and doing business in his community—he is working for it.

(Continued to page 120)



Just what the Builder ordered

Every inch a Ro-Way Overhead Type Door

Whenever you specify Ro-Way Overhead Type Doors . . . for commercial, industrial or residential installations . . . you *know* you'll get exactly what you order.

That's because every Ro-Way is *every* inch a Ro-Way, completely fabricated and built in Ro-Way's own plant. From millwork to hardware—the product of Ro-Way design, engineering, workmanship, and quality control.

What's more, when a Ro-Way Door is installed by a Ro-Way distributor, he takes as much care and pride in its installation as we do in its construction.

All of which is why so many builders, architects and owners *insist* on Ro-Way Overhead Type Doors. Specify Ro-Way on *your* next job.



Dependable Ro-Way sales and installation service is available nationwide. Consult your classified telephone directory, or write for distributor's name.

There's a Ro-Way for every Doorway!

ROWE MANUFACTURING COMPANY
746 Holton Street • Galesburg, Illinois, U. S. A.



CHOOSE
YOUR TOOLS
AS YOU CHOOSE
YOUR FRIENDS



Stanley
No. 51 1/2 Hammer

Pick a hammer that will work with you, take the hard knocks, and stay sound and true for years and years. Pick Stanley No. 51 1/2 Hammer because it's made that way.

Head forged from special analysis steel and "super heat treated". Hardness drawn from claw tips. Beveled grip claws for sure, fast nail pulling. Exclusive Stanley "Evertite" process and triple wedging locks live young hickory handle in head for good.

Builders know that this and other Stanley tools are designed to help workers do a better job, faster and with less effort.

Look for Stanley Tools at your local hardware dealer's. Stanley Tools, New Britain, Conn.

THE TOOL BOX OF THE WORLD

STANLEY

Reg. U. S. Pat. Off.

HARDWARE • HAND TOOLS • ELECTRIC TOOLS • STEEL STRAPPING

The President's Column

(Continued from page 118)

It is difficult to forecast the business outlook for 1949 until after the new Congress convenes in January. I think, however, it is safe to assume that a housing bill will have top priority and that standby controls will be granted. In other words, we as dealers will have government as a competitor. This will mean that we must consistently and everlastingly keep telling the people at home the true facts about how this will affect them, so that they in turn can intelligently guide the thinking and actions of their Congressmen. Consequently, an aggressive public relations program is vital.

Was the result of the November 2nd election an indication of a change in the American philosophy or was it merely apathy on the part of scores of individuals? It seems to me this question should be given careful consideration. If it was due to apathy, then we as Americans must see that our cherished franchise is not again ignored. If, on the other hand, it was due to the spread of ideologies so inimical to and destructive of everything that has made this country great, then each one of us is duty bound to give of his time and effort to prevent it. We must not let the unique and previous American way be discarded, and its virtues laid aside in favor of the very weaknesses which have destroyed other countries while we have forged ahead.

In closing, may I wish you a very Merry Christmas and a most prosperous New Year.

NRLDA Annual Meeting

(Continued from page 118)

have a bearing on home construction rates, costs, and building material distribution.

Plaques for outstanding public relations activities during the year were awarded to F. S. Pendleton Lumber Co., McComb, Ohio, Class 1; Sterner Coal and Lumber Co., Belmar, N.J., Class 2; Richards & Krueger Co., New Braunfels, Texas, Class 3; L. Grossman Sons, Inc., Quincy, Mass., Class 4; A. W. Burritt Co., Bridgeport, Conn., Class 5; Tulsa Lumbermen Association, Tulsa, Okla., Class 6, group public relations programs: Edward Hines Lumber Co., Chicago, Ill., special Industry Engineered Homes award.

Officers elected for the coming year are C. B. Sweet, Longview, Wash., president; Clyde Fulton, Charlotte, Mich., vice president; W. Albie Barksdale, Charlottesville, Va., treasurer.



AllianceWare's
Modern Styling and Beauty
fit cottage or mansion



TWENTY-FIVE years ago porcelain enameled steel bath tubs were merely a dream. Ten years ago *AllianceWare* tubs—after much scientific research and experiment—had to prove themselves.

And prove themselves they did.

When introduced, acceptance for *AllianceWare* was immediate. Today, the thousands and thousands of *AllianceWare* tubs that have been installed in all types of buildings have proved the beauty and durability of *AllianceWare* design as well as the practicality of *AllianceWare* formed metal construction.

There are sound reasons for this acceptance of *AllianceWare*. The modern styling and gleaming surfaces of *AllianceWare* fit cottage or mansion...

enhance the beauty of large bathrooms or small.

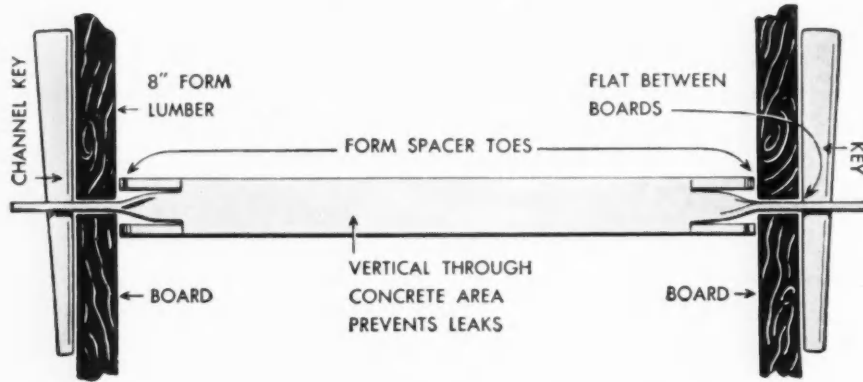
Other practical details of *AllianceWare* construction such as exact dimensions, wall guard flange that stops water seepage around the rim at the wall line, and anchor lugs which prevent shifting or settling of tub are added values popular with builders.

Your plumbing contractor can give you complete details of *AllianceWare*. Or, if you prefer, write us.

ALLIANCEWARE, INC. • Alliance, Ohio
Bathtubs • Lavatories • Sinks



PACO CONCRETE-FORM SPREADER-TIES



NO { permanent forms
walers
spreaders
wire or bolts } : straighter
: smoother
: stronger
: lower
: cost } WALLS

Paco concrete-form spreader-ties provide the fastest, most economical method of setting up forms that has ever been devised. One 5-man crew completed nine basements, 24 ft. x 32 ft. in eight days. Forms removed after 18 hours.

Ties rest vertically in form; permit easy flow of concrete; eliminate air spaces and assure permanently dry wall. More than 1,000 walls have been poured without a single failure.

IMMEDIATELY AVAILABLE

Paco spreader-ties are in full production. Ample stocks are maintained to assure immediate shipment in any quantity.

PRICES and SIZES

A complete range of sizes from 6-inch to 36-inch length is available. 8-inch ties, \$47.50 per thousand; 10-inch ties, \$50.00 per thousand. Keys, fit all sizes, \$42.00 per thousand. Keys are retained as permanent equipment. Prices on other sizes quoted on request.

FREIGHT PREPAID ON INTRODUCTORY ORDERS

Where Paco ties are not available through your regular dealer we will ship C.O.D., freight prepaid, with schematic drawing and instructions. Mention name of dealer when ordering.

JOBBERs and DEALERs WANTED

Write, now, for sample tie, prices and discounts.

Outlook for Building and Building Materials In 1949

By H. R. Northup

Executive Vice President National Retail Lumber Dealers Association

DESPITE the fact that the heavy hand of uncertainty is tipping the scale, business in 1949 should still be very good for lumber and building material dealers.

Certainly the demand for middle and low-income priced homes will continue heavy, and many areas report that financing for soundly constructed homes is not too hard to get.

Were it not for the three factors that will be threatened to tip the scales throughout the year, the outlook for 1949 would indeed be bright. These factors are: (1.) An omnibus government housing program; (2.) Allocations, priorities, and price controls based largely upon a defense program; and (3.) An almost inevitable fourth round of wage increases to be followed by an increase in living costs.

If anything of a normal nature could be expected, the outlook for an adequate supply of building materials for homes, commercial, and industrial use would be highly favorable.

Dealer inventories of common lumber are averaging close to 100 per cent; upper grades of lumber are becoming more plentiful; without the strain of unusual demands for abroad and at home, millwork, including doors, windows, trim and cabinets could be expected to round out into good supply in 1949.

With several new gypsum plants coming into full production, the supply of gypsum wall board and plaster base could be expected to be adequate, with only spotty or regional shortages in evidence during 1949.

Steel supply will be affected by our foreign commitments; cement supply, while adequate in itself, may still be showing spotty shortages because of the new court rulings eliminating the basing point method of pricing.

Hardware manufacturers seem to have overcome most of their labor problems; and plumbing and heating manufacturers are in full production and the former backlog of orders is disappearing.

Pressing against this all-time peak production of building materials are the four programs which the Administration is urging. These are: (a.) Public housing domestic requirements; (b.) European Recovery Plan requirements; (c.) Our speeded-up military preparedness requirements; and (d.) Re-arming Western Europe requirements.

(Continued to page 124)

PACO 327 SOUTH MARKET ST. • WICHITA 2, KANSAS

Here's why HEABEL'S the Builders' Department Store

used



The Heabel Company, Cedar Rapids, Iowa, remodeled their store recently . . . and they specified 1/4" Apac on the exterior walls. That's a particularly good testimonial, because Heabel's have been handling builders' supplies for many years.



K & M "Century" APAC features:

• **Easy to Use and Apply**

With Apac you save cutting time . . . just score it and snap off. You can lay up its 4' x 8' sheets 32 sq. ft. at a time . . . fasten them with nails or screws.

• **Durable**

Made of asbestos and Portland cement . . . Apac sheets are completely fire-resistant . . . rot-proof . . . rust-proof . . . weather-proof. They grow tougher with age!

• **Attractive**

Because of their smooth finish and pleasing light gray color . . . your finished job will be neat and attractive. And Apac never needs painting . . . though you can paint it when desirable for decorative reasons.

• **Economical**

Low first cost . . . long maintenance-free life makes Apac a leader in long range economy. Invaluable in building customer goodwill.

That's why the Heabel Company used K&M "Century" Apac . . . and why you'll want to use this building material. Get full information about "Century" Apac from your K&M dealer . . . or write directly to us. We'll attend to your inquiry promptly.

Original manufacturers of asbestos-cement roofing shingles in this country.



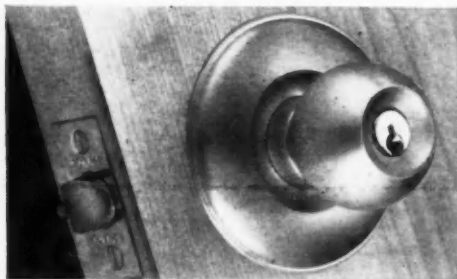
KEASBEY & MATTISON COMPANY • AMBLER • PENNSYLVANIA

SCHLAGE LOCKS

...so easy to install!



Two Holes...
Two Screws...
Two Bolts...



...and the Lock is in!

Write for
illustrated booklet:
"Locks by Schlage"



SCHLAGE
LOCK COMPANY
SAN FRANCISCO NEW YORK

ORIGINATORS OF THE CYLINDRICAL LOCK

(Continued from page 122)

If all of these programs are pursued energetically by the present Administration, it is almost inevitable that material shortages will appear—first at one point and then another; and such an extension of our resources may have a marked effect upon our economic price structure.

The Administration's housing program has been clarified by the Foley-Truman statement embodying a four-point government housing program.

The four points of the Foley-Truman housing proposal include the features of the T-E-W Bill which were not passed by the third session of the 80th Congress. They are: (1.) Public housing; (2.) Slum clearance; (3.) Farm housing; and (4.) Government research into housing.

A public housing program at this time is regrettable on two counts:

(1.) It will spend the people's money for high cost housing at a time when all construction costs are high, without adding one house to the number that would be built anyway by private industry.

(2.) It will slow down and may block private building by creating distortions in building material distribution and by diverting materials being used in private housing to public housing sites.

Both of the above probabilities may add to the present inflation of living costs and to building costs.

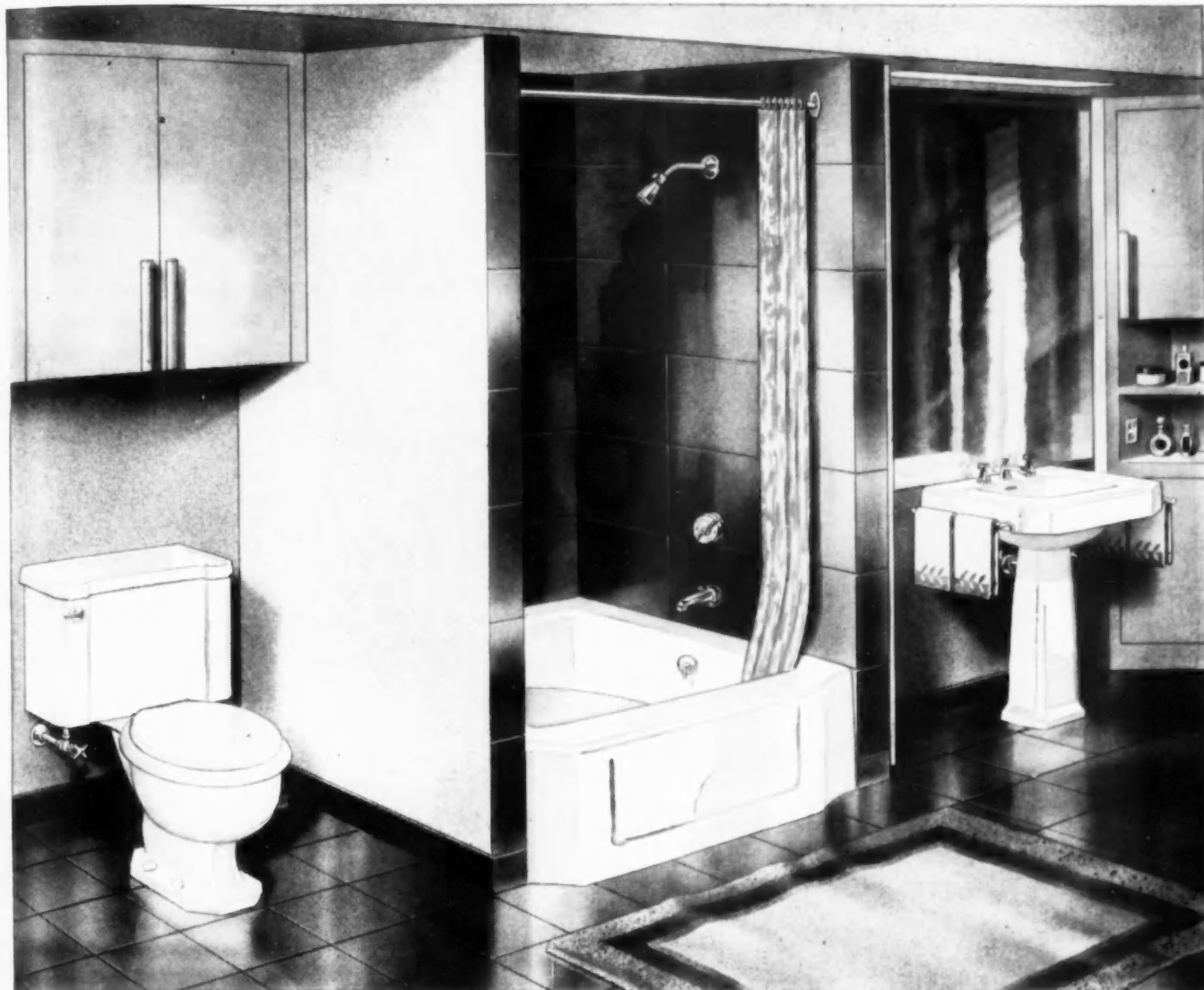
There is very little that we in business can expect except change. Next year the situation will undoubtedly be different than it is this year. Only the forewarned are forewarned enough to cope with such imponderable mass types of change and evolution as we see before us.

Carolina Association Dates Set for March 23, 24 and 25

THE CAROLINA Lumber and Building Supply Association annual convention dates have been set for March 23, 24 and 25 instead of the dates announced earlier. Convention sessions and exhibits will be at the Asheville Civic Auditorium in Asheville, N.C., with the George Vanderbilt and Battery Park serving as convention hotels.

Supreme Nine of Hoo-Hoo Holds Meeting in Chicago

RECOGNIZING the vital need for the training and education in greater productivity of every classification of the lumber industry's manpower in all branches the Supreme Nine of Hoo-Hoo in its annual meeting in Chicago in November took positive action toward the adoption of an educational program for club activity.



KOHLER PLUMBING FIXTURES

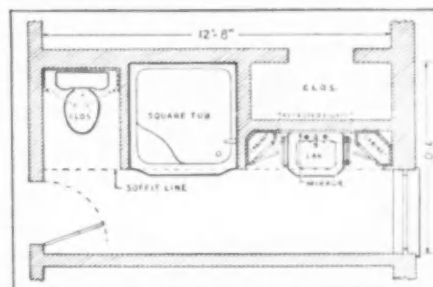
a source of permanent pride and satisfaction

No explanations are needed when plumbing fixtures carry the Kohler name. Home owners know the Kohler name and quality reputation, built through 76 years of doing things well. They know "Kohler" means beauty and dependability in the highest degree.

The Times Square Bath is roomy and convenient to use, yet its compact 4' x 4' dimensions often allow extra closet room. This bath has a handy corner seat. Fixtures come in pure white or delicate pastel shades.

Kohler's extra value at no extra cost

is represented in the lustrous, glass-hard, easy-to-clean Kohler surfaces—in the non-flexing iron base of the bath, cast for rugged strength and permanent rigidity—in the precision-made, chromium-plated brass fittings. The efficient Triton shower fitting is shown with the Niedecken mixer. Graceful, convenient Jamestown pedestal lavatory is made of highest quality vitreous china. Well-worth close-coupled closet works smoothly and quietly. Kohler Co., Dept. 22G, Kohler, Wisconsin.

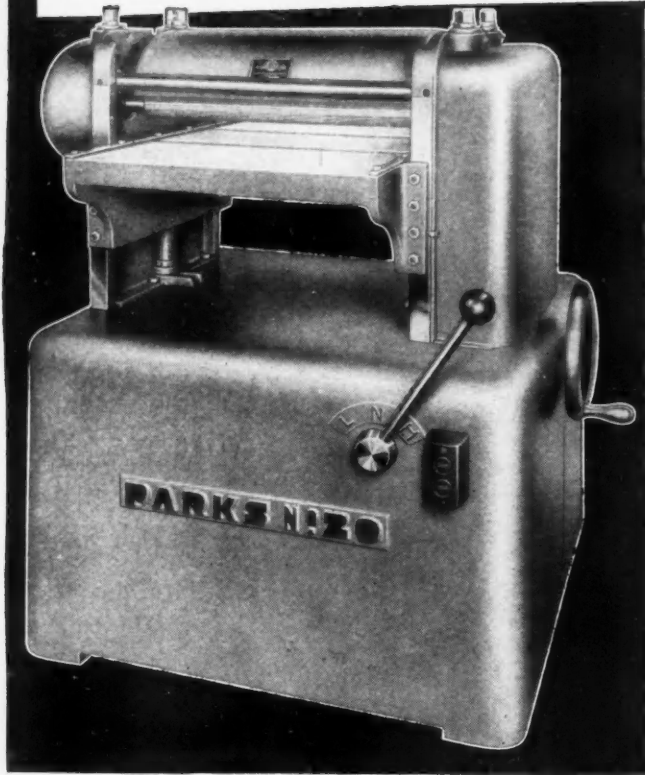


This arrangement illustrates the extra closet room which use of the Kohler Times Square Bath frequently allows. The fixtures are well placed for convenient access, and though the bathroom is compact there is plenty of storage space.

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS

The Sensationally **NEW** Low-Priced



PARKS No. 20 20" PLANER

Here is a modernly designed, rugged, high-speed, low-priced planer that is ideally suited for every shop and industrial plant requiring a quality surfer. The Parks No. 20 Planer has a four-knife cutterhead with a speed of 3600 R.P.M. and offers two feed speeds — 20 and 40 F.P.M., and 40 and 80 F.P.M. Write for complete descriptive literature.

The PARKS Heavy-Duty 12" x 4" Planer

A compact, sturdy, thickness planer that offers mill planer precision and ruggedness at a sensationally low price. Write for descriptive catalog sheet.



The PARKS WOODWORKING MACHINE CO., Dept. 30-M, 1546 Knowlton St., Cincinnati 23, O.



Catalogs and HOW-TO-DO-IT INFORMATION

488—HEATERS AND ACCESSORIES—A catalog of the Hotstream line of heating equipment has been released by The Hotstream Heater Co., 2363 E. 69th St., Cleveland 4, Ohio. Products of Hotstream described and pictured include water heaters, heating boilers, floor furnaces, thermostats, valves and related equipment.

489—BAKED ENAMEL FINISHED WALL BOARD—is the subject of a pamphlet offered by the Wallace Manufacturing Co., 10th and Fayette St., North Kansas City, Mo. A color guide in full color, suggested applications, and illustrations of typical installations comprise the contents.

490—MODERN FLOORS OF SOLID RUBBER—where and how rubber floors may be used, and various patterns of Rubberlock flooring available are discussed in an eight-page catalog released by the R. L. Mitchell Rubber Co., 2130 San Fernando Road, Los Angeles 41, Calif. Well-illustrated catalog presents installation information, showing how unusual product may be installed without mastic or cement.

491—"CUTTING COSTS WITHOUT CUTTING CORNERS"—six-page bulletin on new square or rectangular Agitair "RTC" air diffuser, illustrates how the RTC is installed in various methods of suspended ceiling construction. Product is especially designed for use in acoustical ceilings, and made in modular sizes to conform to standard tile dimensions. Sizes, patterns, and typical installations are shown in this

bulletin issued by Air Devices, Inc., Dept. RTC, 17 E. 42nd St., New York 17, N.Y.

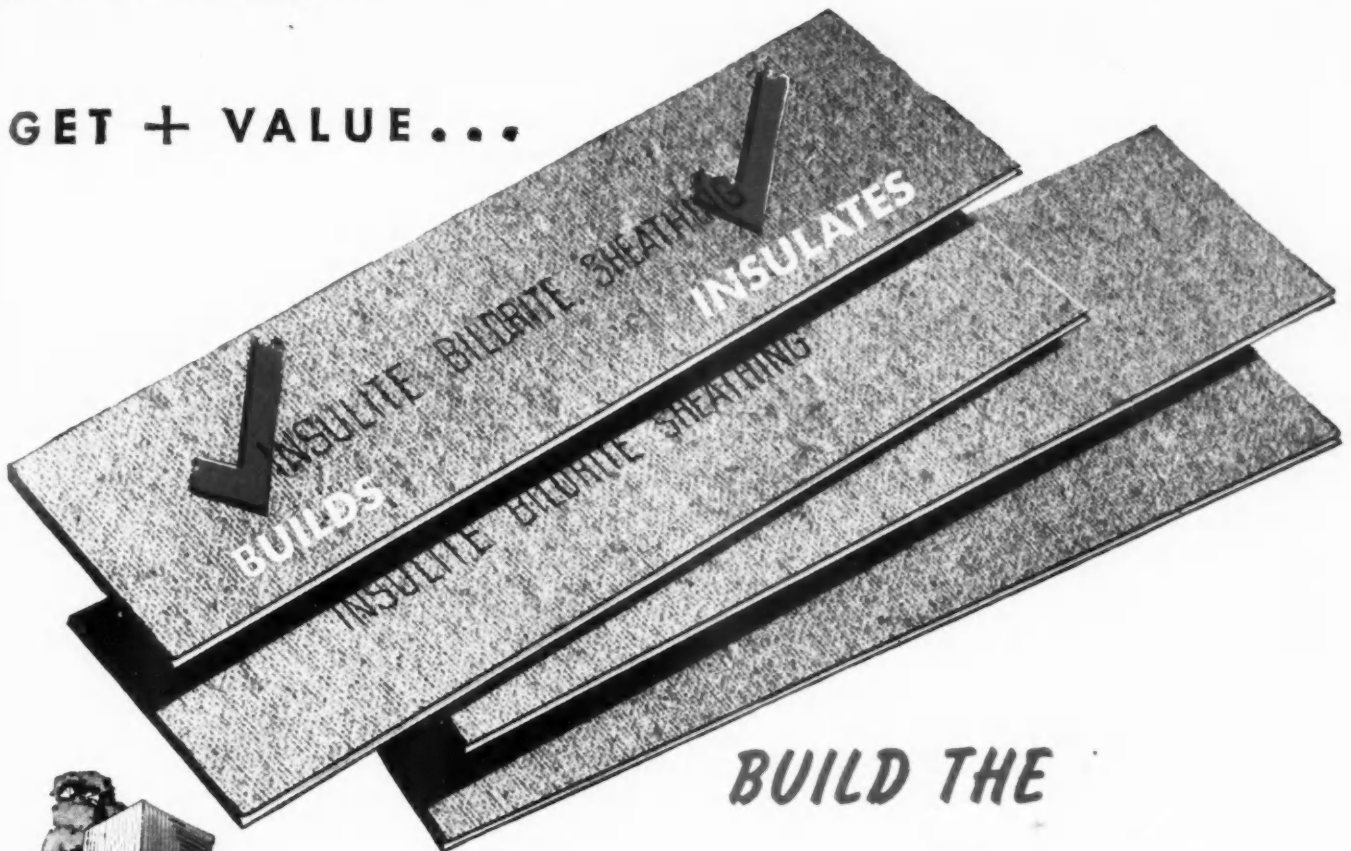
492—PLUMBING REFERENCE BOOK—is the new 144-page illustrated catalog now available from Kohler Co., Kohler, Wis. Commemorating the 75th anniversary of the company, 100 pages are devoted to profusely illustrated Kohler of Kohler products. Full color illustrations, with floor plans, followed by a series of matched sets, provide helpful suggestions for the architect, plumber and home builder.

493—HOW WINTERIZED WINDOWS SAVE MONEY—is shown in a two-color 16-page folder released by Detroit Steel Products Co., 3101 Griffin St., Detroit 11, Mich. The folder, "Fenestra Inside Metal Storm Windows," discusses reasons for window glass condensation and offers preventive recommendations. Choice of styles in inside storm windows for various casements are illustrated.

494—AUTOMATIC TACKERS—their wide application and versatility are described in a 26-page catalog issued by the Fastener Corp., 860-902 Fletcher St., Chicago 14, Ill. Various models of the Duo-Fast tackers are shown, plus instructions on their maintenance and operation.

495—ASBESTOS CEMENT BUILDING MATERIALS—of all kinds are discussed in a 24-page new products guide distributed by the Asbestos Cement
(Continued to page 128)

GET + VALUE...



BUILD THE

Double Duty WAY

WITH

INSULITE

That's an easy way of giving your customers extra value without costing you extra money. Insulite *builds*... and *insulates* at the same time. That's why it's called DOUBLE-DUTY Insulite. You get another *plus* value in the time saved putting it up. Handles easy, saws easy, fits easy. That adds up to a better profit on every job for you.



See Sweet's File for Builders — 2c/11

Double Duty

INSULITE

The GENUINE

INSULITE DIVISION
PAPER COMPANY
MINNEAPOLIS 2, MINNESOTA

MINNESOTA & ONTARIO
COMPANY

"Insulite" is a registered trade mark, U.S. Pat. Off.

royal jet-flow

outperforms heating units
costing three times
as much*



HENRY I. FLINN JR.
says: "The Royal Jet-Flow
is doing a stupendous job
. . . . The unit has far
exceeded our greatest
expectations. We have had nothing but praise
from each one of the 200 tenants . . ."

FOLMAR & FLINN
Operative Builders
Montgomery, Alabama



* Proved by tests conducted in America's
Finest Independent Laboratory. Royal Jet-Flow
uses jet principle and high outlet delivery
to achieve a velocity of 300 feet per minute.
Heats entire average size house with a mini-
mum differential from room to room. Royal
Jet-Flow costs only slightly more than a floor
furnace - much less than forced air.

write today for complete information

royal heaters, inc.

1024 WESTMINSTER AVENUE
ALHAMBRA, CALIFORNIA

Catalogs

(Continued from page 126)

Products Association, 509 Madison Ave., New York 22, N.Y. The booklet, "The Asbestos Cement Products Reference Book," provides answers to the questions most likely to arise concerning methods of handling and application. Handling procedures are illustrated by photographs and drawings.

496—MULTI-PURPOSE LIQUID ADMIXTURE—for concrete, mortar, stucco and cement plaster is a product discussed in a six-page folder issued by L. Sonneborn Sons, Inc., New York 11, N.Y. Application methods of the product, "Trimix," are illustrated. Results of tests of the material are shown, as well as specifications for its use.

497—SIMPLIFIED METHOD OF SPECIFYING FINISHING HARDWARE—is presented in a unique 24-page architect's manual issued by the Lockwood Hardware Manufacturing Co., Fitchbury, Mass. Profusely illustrated manual presents hardware specifications for residences, apartments, hospitals, hotels, schools, commercial and public buildings.

498—STEEL BRACES FOR WOOD JOISTS—methods of installation, drawings, diagrams and illustrations, are presented in a four-page brochure issued by Beloit Steel Industries, Inc., 307 City Hall Bldg., Rockford, Ill. Beloit's product, "Sta-Tite" steel braces, is described.

499—FIFTEEN BASIC PLANS—with photographs and individual sheets showing elevations of each house are presented in a loose leaf portfolio distributed by the General Timber Services, Inc., Dubuque, Iowa. Available to dealers, the plans are designed by capable architects and meet all FHA requirements.

500—ART IN IRON—by the Artercraft Ornamental Iron Co., 724 E. Hudson St., Columbus, Ohio, is a profusely illustrated, 40-page catalog that presents many ideas on the artistic and practical use of iron in different types of construction.

501—TRUSS RAFTER CONSTRUCTION—is discussed in a seven-page catalog entitled "Clear Span Teco Trussed Rafters in Modern Home Planning" issued by the Timber Engineering Co., 1319 18th St., N.W., Washington 6, D.C. Economics, mechanics, and planning, are topic headings, and each topic is illustrated with photographs and diagrams.

SERVICE COUPON—CLIP and MAIL to CHICAGO

Readers Service Department (January, 1949)
American Builder,
105 W. Adams St., Chicago 3, Ill.

Please send me additional information on the following product items, or the catalogs, listed in this department:

Numbers.....

Name.....

Street.....

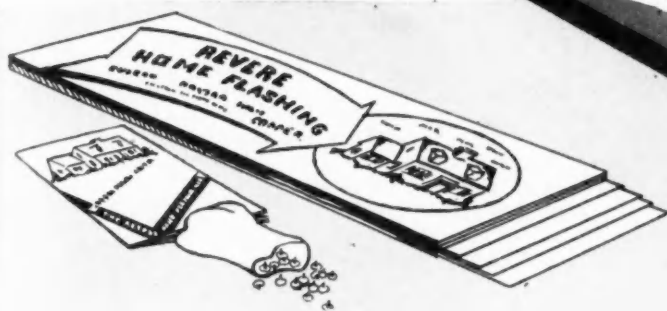
City..... State.....

OCCUPATION*.....

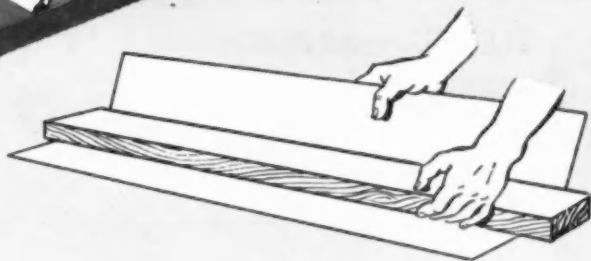
*Please note that occupation must be stated if full service is to be given.

WITH THIS ECONOMICAL, PACKAGED SYSTEM SEALING THE VALLEYS 1-2-3 IS EASY AS... 1-2-3

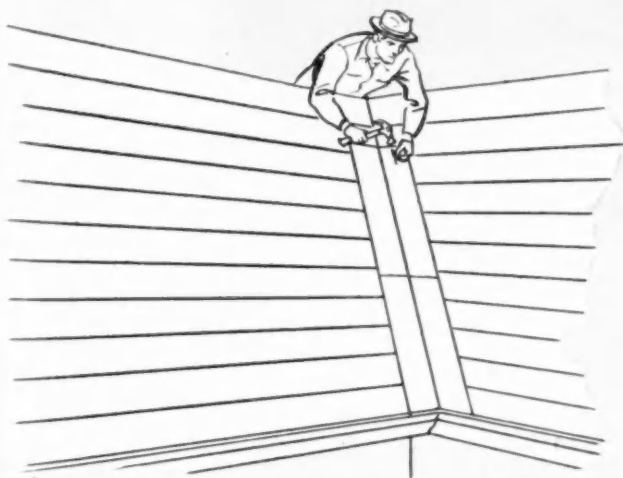
Revere Home Flashing is a packaged system developed exclusively for use in valleys and flashing on low-cost houses. Based on a special size, special temper and special gauge of sheet copper, it is packaged, complete, ready for economical installation.



Each package contains 10 sheets of this special copper, pre-cut to 18" x 48"; bronze nails; complete, illustrated instructions for installation.



The sheets are easily and neatly bent by hand—with the help of a straight edge—into the same angle as that of the valley.



Sheets are then installed as shown in the illustrated instruction book. And they provide lasting protection that can never rust nor rot.

Your building supply dealer has Revere Home Flashing in stock or can get it for you promptly. Ask him about Revere Home Flashing today.

Revere Home Flashing provides economical weather-proofing in valleys, around chimneys, doors, windows and other wall and roof joints. In addition, being copper, it adds an important selling point to the house; it shows that the builder uses quality material; and it assures complete satisfaction for the owner. And it does all this at such low cost that you'll want to start using it right away.

REVERE

COPPER AND BRASS INCORPORATED

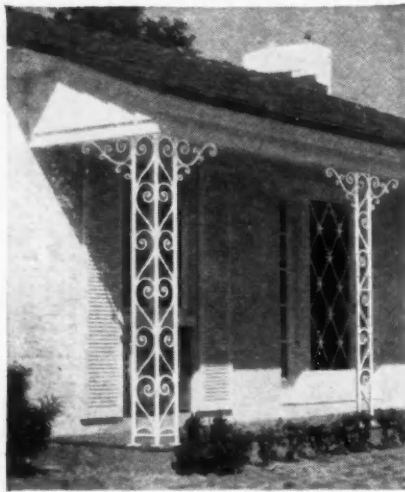
Founded by Paul Revere in 1801

230 Park Avenue, New York 17, New York

Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; New Bedford, Mass.; Rome, N. Y.—Sales Offices in Principal Cities, Distributors Everywhere

OF COURSE, QUALITY CONSTRUCTION CALLS FOR COPPER GUTTERS, DOWNSPOUTS AND PLUMBING LINES, TOO.

ORNAMENTAL IRON
BY *Coffman*



**Homes Dressed Up
QUICKLY—EASILY
At Low Cost**

... with Coffman Grilles, Posts, Brackets, and Entrance Rails

S MALL HOMES are easily beautified at very little expense with Coffman Ornamental Iron! All the charm of Old New Orleans and Charleston is built into these hand-wrought ornamental iron posts, brackets, grilles and railings. Designed by master craftsmen, their architectural proportion is exact, their quality—unsurpassed!

Stock Designs, Sizes ... Low Prices

Lumber and Building Supply Dealers have Coffman Ornamental Iron instantly available from stock. Easy to install, all Coffman designs save labor, give lasting satisfaction. They are superior to wood or masonry, and won't rot, split, warp, or shrink; and, of course, they are termite-proof.

DEALERS

Coffman low cost hand-wrought ornamental iron has a wide market in the small home field. Its quality of design and construction, together with standardized production economies, makes selling easy to the low cost home builder ... he can afford ornamental iron, NOW! If you are not stocking this line at present, be sure to get the facts.

Write Department A-B, P. O. Box 259, for free catalog of designs, sizes and prices.

Manufacturers of the Original "Complete Builders Line" of Hand-Wrought Ornamental Iron

The R. G. Coffman Co. Inc.
ORLANDO, FLORIDA
ESTABLISHED 1925



How-To-Do-It

(Continued from page 114)

How to Lay Sewage And Drainage Pipe

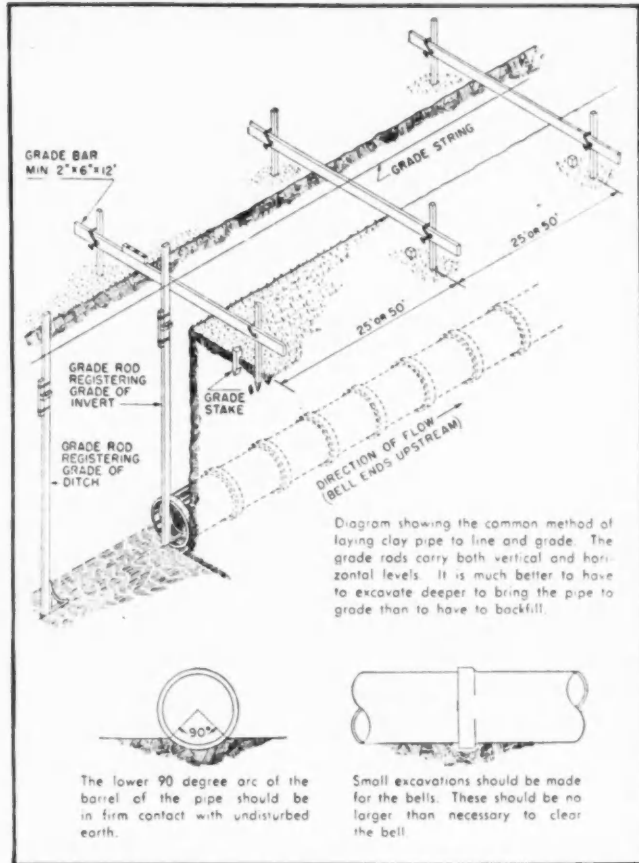


Diagram showing the common method of laying clay pipe to line and grade. The grade rods carry both vertical and horizontal levels. It is much better to have to excavate deeper to bring the pipe to grade than to have to backfill.

The lower 90 degree arc of the barrel of the pipe should be in firm contact with undisturbed earth.

Small excavations should be made for the bells. These should be no larger than necessary to clear the bell.

TRENCH WIDTH, variations in soil, bracing and sheeting, foundation, alignment, slope, and joints must be properly handled to obtain a good drainage or sewage clay pipe installation.

Sufficient bracing and sheeting should be placed in the trench before the pipe is laid. Obtaining a proper trench width and adjustments for soil variations will add structural strength to the pipe.

The bottom quadrant of the clay pipe should be fully and uniformly supported. Bell holes should be carefully excavated at proper intervals so that no part of the load is supported by the bells. The full load should rest on the barrel of the pipe.

For proper pipe bedding, it is recommended that mechanical excavation be held four inches above the final invert grade. The remainder of the trench should be shaped by manual excavation.

If the bottom of the trench is not

Data courtesy of Clay Products Association sufficiently stable, supplementary foundations are essential. The simplest supplementary foundation is a layer of broken stone, gravel or other coarse aggregate. In extreme cases it may be necessary to install continuous timber or masonry bridging supported upon a pile foundation.

If the pipe is laid in rock trenches, a layer of sand or small-sized broken stone or gravel, at least four inches thick under the pipe, should be applied.

Where loose uneven material is used, tamping may be necessary for the full depth of the trench to prevent excessive settlement. Wet tamping is not recommended.

Where sewer and drainage pipes lie below the ground water level, it is necessary to minimize infiltration. Hot-poured joints are recommended to obtain water-tight joints. Trenches should be kept water-free until jointing material has had sufficient time to become fully set.

It's Here... *New* STRAND DOUBLE-GARAGE DOOR

For Opening 16' x 7'



NOW STRAND ANNOUNCES a track-type door for 16' x 7' openings, with the same sturdy strength, ease of operation and other advantages of Strand all-steel single doors. The new Strand double-garage door saves you about 15% of the cost of two single doors, eliminates the cost of building a center post, and ensures an unobstructed opening 16' wide, with ample space for two of the new, wider cars.

INSTALLED QUICKER—Strand all-steel doors for double-garages are shipped in two 8' x 7' door leaf units, with splice channel and packaged hardware. Surprisingly quick and easy to install.

THE PROTECTION OF GALVANNEALING, added to the strength of steel, assures lifetime durability of

Strand Doors. They're hot galvanized for rust protection—and annealed, too—for a smooth, uniformly coated surface and a clinging base for paint without need for a special priming coat.

BUILT FOR STRENGTH—welded all-steel door leaf, and welded all-steel frame and braces, provide outstanding strength for a lifetime (steel will never sag, warp, shrink, swell or rot).

OPERATES EASILY—A child can open the Strand Door. Simple, efficient hardware is designed for trouble-free service.

Strand Doors are available without waiting and without limit. Mail the coupon now for more information.



Of course, Strand Doors are also available for single 8' x 7' openings. Two types—Receding (track) and Canopy.



—Produced by Strand Building Products Co., a subsidiary of Detroit Steel Products Company.

ALL STEEL • GALVANNEALED • OVERHEAD

STRAND GARAGE DOORS

TWO TYPES . . . RECEDING (TRACK) AND CANOPY

STRAND BUILDING PRODUCTS COMPANY

Dept. AB1, 1710 Buhl Building, Detroit 26, Michigan

Please rush detailed description of Strand All-Steel Garage Doors, including the new door for double-garages.

I am a () Builder, () Dealer, () Prospective Owner, () Other

Name _____

Address _____

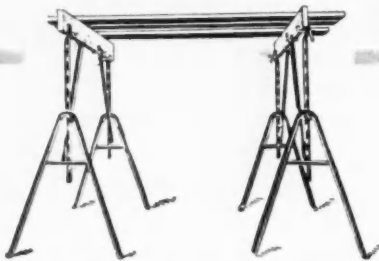
City _____ State _____

DO....

ALL OVERHEAD WORK
This easy, low-cost way!



"Trouble-Saver"
Adjustable
STEEL TRESTLES



SAFE! STRONG! ECONOMICAL!



• Details of the quickly-adjustable "Trouble-Saver" Steel Trestle.

Builders, contractors, maintenance men and others save time, labor and material with "Trouble-Saver" Adjustable Steel Trestles. They're unequalled as a safe, sure, low-cost method of handling all overhead work under a wide variety of conditions.

Write for new catalog and complete information.

SIZES - SPECIFICATIONS, ETC.

Size No.	Low Point	High Point	Number of Adjustments	For Working Heights
2	16"	22"	4	7 1/2 to 7 3/4'
3	2'	3'	5	8 to 9'
3 1/2	2 1/2'	3 1/2'	5	8 1/2 to 9 1/2'
4	3'	4 1/4'	6	9 to 10 1/4'
6	4'	6'	9	10 to 12'
8	5 1/2'	8'	11	11 1/2 to 14'
10	6 1/2'	10'	15	12 1/2 to 16'
12	7'	12'	19	13 to 18'

THE STEEL SCAFFOLDING CO., INC.

856 Humboldt St., Brooklyn 22, New York
Telephone: EVergreen 3-5510

NEW PRODUCTS

(Continued from page 117)

their bearing by a swivel bearing plate from roof slopes, regardless of roof pitch. Ladder rails are thus kept free from cornice members. Brackets may be used in pairs as a scaffold. The scaffold arm is always level, without adjustment, when the ladder is set at proper pitch, and may be used on either inside or outside slope of the ladder rails. Rigid steel construction. Manufacturer: Steadfast Equipment Co., 57 Wheeler Ave., Pleasantville, N. Y.

ELECTRIC RANGE AB1911
For modern electric cooking in confined kitchen areas, range has four surface units and full size oven. Measuring 42

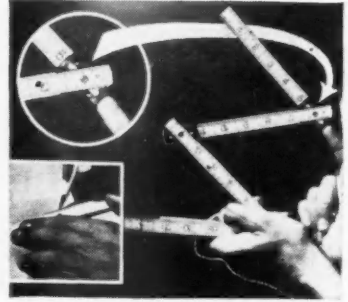


inches high overall, 21 inches wide, and 25 1/8 inches deep, range has one-piece acid-resisting porcelain cooking top and backsplash. High speed broiler is

American Builder, January 1949.

included. Range may be placed flush against wall. Manufacturer: Frigidaire Div'n, General Motors Corp., 300 Taylor St., Dayton 1, Ohio.

METAL FOLDING RULE AB1913
All-metal rule, 3/8 inches wide, has white face for easy reading of numerals and calibrations, and is equipped with



spring steel joints that snap into place and remain rigid. Straight edge is maintained along joints so that line may be marked all along full 72-inch length without break or irregularity. Inside markings for additional convenience. Manufacturer: George E. Watson Co., 164 W. Lake St., Chicago 1, Ill.

SMALL HOME FURNACE AB1916
The "Challenger" has a one-piece, 20-inch all-steel body, and is designed for homes requiring 75,000 B.T.U. at the bonnet. Encased in enameled finish square casing of two-tone color. Simple to operate; adaptable to coal, oil, or gas firing. Manufacturer: Wheeling Furnace Corp., Martins Ferry, Ohio.
(Continued to page 134)



Take "The Labor" Out of Tacking

HAMMER TACKERS

DRIVE STAPLES FROM 5-32 TO 9-16" IN LEG LENGTH
FEED AND DRIVE STAPLES AUTOMATICALLY
TACK 2 TO 4 STAPLES PER SECOND



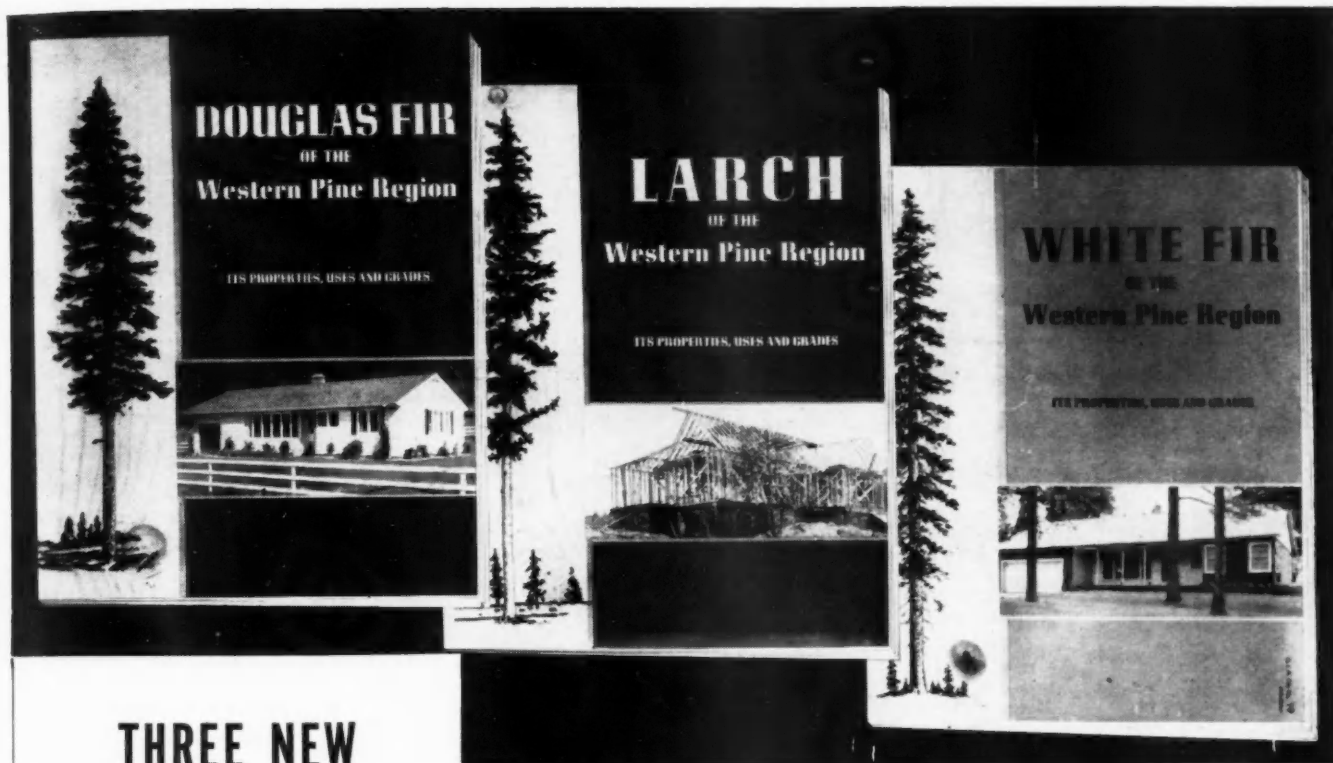
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EASY TO CLEAN - EASY TO LOAD

Tacking presents no problem when you use a Duo-Fast Hammer Tacker. It is time-saving, efficient and thorough. One hand does the complete job. This is the easiest, quickest method of tacking insulation, building papers and felts. Write for information on the Duo-Fast hammer, gun and air tackers.

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FASTENER CORPORATION
888 Fletcher Street Chicago 14, Illinois

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THREE NEW SPECIES BOOKS

Send for your free copy

Every lumber dealer, builder, wood user, and architect should have these books. They describe in detail the uses, properties, and grades of three of the Associated Woods of the Western Pine region—White Fir, Larch and Douglas Fir.

Factual, complete, profusely illustrated—including photographs of typical pieces of each grade in each species. Write today for your free copy of each book.

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Dept. 160 B, Yeon Building
Portland 4, Oregon

Western Pine Region Sets Production Record

To meet the demand of the building industry the Western Pine region produced 7¼ billion feet of Western Pines and Associated Woods* in 1948—½ billion feet more than in 1947 which was the previous all-time high. Shipments also set a new record in 1948.

The member mills of the Western Pine Association extend to the retail lumber dealer, the wholesaler, the building contractor, the architect, and industrial buyer their sincere appreciation for the part each has played in the marketing of Western Pine products.

And for the future the Western Pine Association is pledged to a policy of harvesting timber resources under private management in a manner which will support a high level of production and provide a more than adequate timber supply.



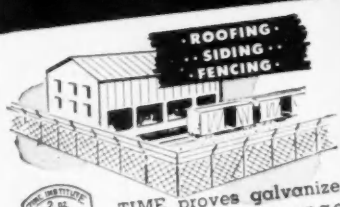
**These are the Western Pines*
Idaho White Pine • Ponderosa Pine • Sugar Pine

**These are Associated Woods*
Larch • Douglas Fir • White Fir • Engelmann Spruce
Incense Cedar and Red Cedar • Lodgepole Pine

Well manufactured—thoroughly seasoned—carefully graded—by all Association member mills

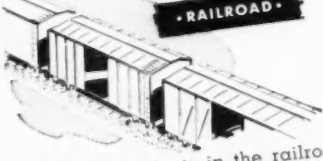
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Galvanizing (Zinc coating) insures long-time, low-cost service. For as long as iron or steel is coated with Zinc, it cannot rust. For satisfaction, use galvanized materials. They're "Sealed-in-Zinc" against rust.




THE INSTITUTE
2 oz.
SEAL OF QUALITY

TIME proves galvanized sheets stay stronger longer. Used as roofing and siding, they give buildings the "strength of steel" . . . the rust protection of Zinc. The "Seal of Quality" (above) is your guide to economy in buying galvanized sheets. It means they carry at least 2 oz. of Zinc per sq. ft. Galvanizing also lengthens fence life and service.



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Galvanized products in the railroad industry guard bridges, cars, buildings, etc., against rust.



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Send me without cost or obligation the illustrated booklets I have checked.

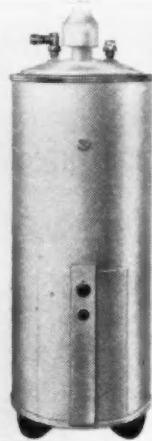
- Repair Manual on Galvanized Roofing and Siding.
- Facts about Galvanized Sheets.
- Use of Metallic Zinc Paint to Protect Metal Surfaces.

Name _____
Address _____
Town _____ State _____

NEW PRODUCTS

(Continued from page 132)

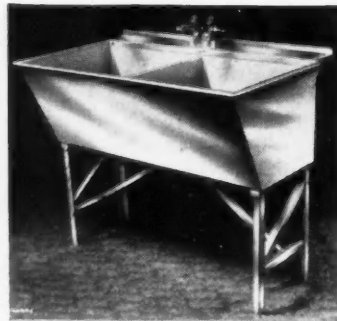
WATER HEATER AB1917
Rex "XL" model contains no projecting parts. All functioning parts, thermostat, and gas safety pilot are concealed. Temperature control knob enables



housewife to have hot water at almost any temperature desired. Safety pilot cuts off all gas supply to burner, in any emergency, and a temperature and pressure relief valve further add to safety. Manufacturer: The Cleveland Heater Co., 2310 Superior Ave., Cleveland 14, Ohio.

CEMENT BASE WATER SEAL AB1919
"Stonfil," a cement base water seal for masonry surfaces, seals brick, unglazed tile, stucco, concrete, stone or precast blocks against moisture penetration. Applied to inside or outside surfaces, above or below grade. Scrubbed into pores of clean masonry surfaces, it expands as it sets; then seals pores. Contains no organic binder. Packaged in 25 pound bags, one package providing four gallons of paste, sufficient to cover 400 square feet, depending upon porosity of surface. Manufacturer: Ross Industrial Products Co., 3908 Olive St., St. Louis, Mo.

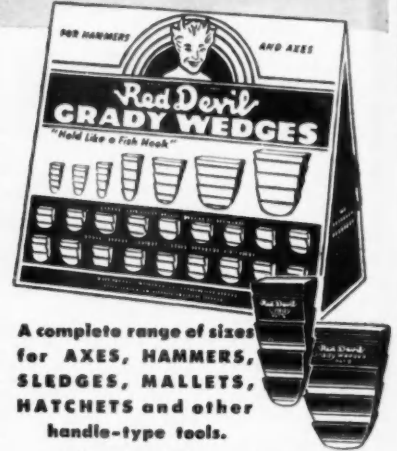
LAUNDRY TUB AB1920
"Easy-Kleen" aluminum laundry tub is available with twin or single compartments, unfinished, or with special baked-on white vinyl finish if desired. Joints are permanently fused. Tub can be installed with or without utility shelf. Weight, 25 pounds. Equipped with two 3-inch cadmium plated brass strainers



with rubber stoppers and waste connectors. Manufacturer: Aluminum Door Corp., 467 S. Woodward Ave., Birmingham, Mich.

(Continued to page 136)

Red Devil GRADY WEDGES



A complete range of sizes for AXES, HAMMERS, SLEDGES, MALLETs, HATCHETS and other handle-type tools.

Red Devil GRADY WEDGES
"hold like a fish hook".

New counter-salesman holds 36 No. 5 and 24 No. 10 Wedges for quick sales. Complete line illustrated in actual size.

Can't chip—rust resistant—barbs withstand vibration and force—they won't work loose.



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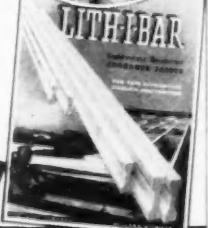
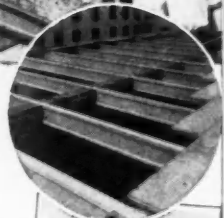


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For all types of fire-safe buildings.

For any type building from small homes to commercial or industrial buildings, the Lith-I-Bar System will provide greater speed, simplicity, minimum in field work, therefore, greater economy. Lith-I-Bar Machine made joists embody electrically welded reinforcements.

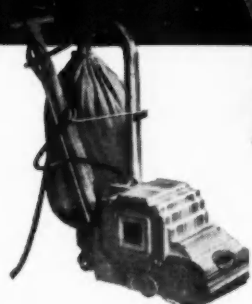
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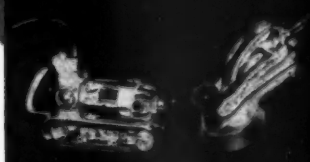
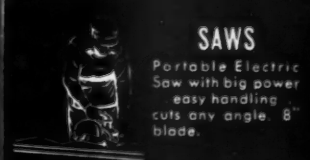
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 Maintenance Machines Small Sanders

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



FLOOR EDGERS
American Spinner disc-type sander finishes right up to edges of floors, stairs, closets. 5 1/2" and 7" discs.



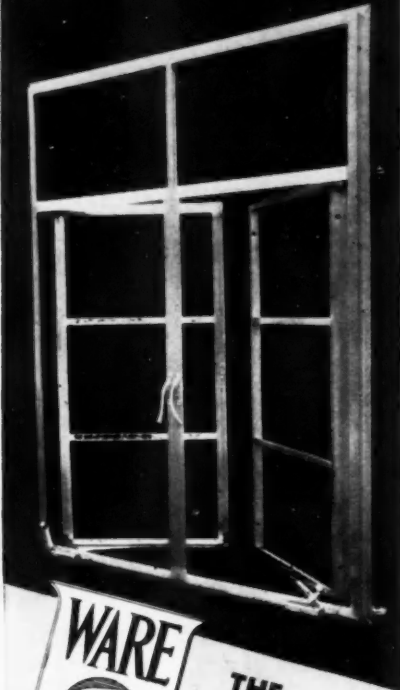
SAWS
Portable Electric Saw with big power easy handling cuts any angle. 8" blade.

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Many uses for the Sanderplane, a belt sander, and Speedy Spinner semi-flexible disc sander.

MAINTENANCE MACHINES
Labor-saving machines for polishing, disc sanding, steel wooling and scrubbing floors. Brush spread 13, 15 or 17 inches.



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THE IDEAL CASEMENT WINDOW

- Unusual depth of section in both frame and vent section. Unusual thickness of web in vent section.
- Electrically fused corners - super strength - finished to show no joint.
- Optional choice of hinges - butt hinge or extension hinge to suit your requirements.
- Exclusive Ware putty retaining feature.
- Your choice of cam or butterfly locking handles.

Write for details of remarkable air infiltration tests on Ware Aluminum Windows.

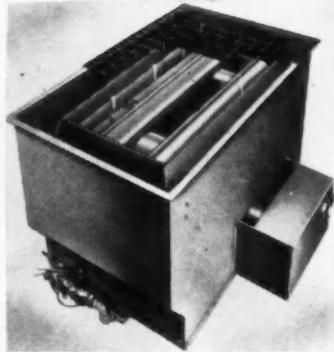
WARE LABORATORIES, INC.
1827 Delaware Pkwy., Miami 35, Fla.
New York Office 21 West Street



NEW PRODUCTS

(Continued from page 134)

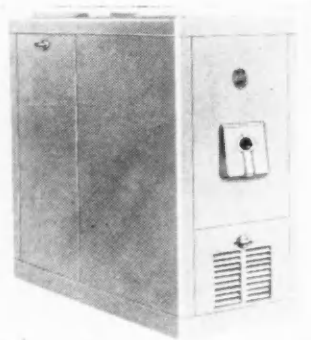
SHALLOW FLOOR FURNACE AB1901
Temco Model 506-1, shallow gas floor furnace, measures 25 1/2 inches overall depth. Unit is equipped with porcelain enamel heat chamber which is guaranteed not to rust, corrode or burn out. Ceramic surface treatment on heat chamber is type developed by National Bureau of Standards for use on aircraft power plants. Includes safety pilots. Automatic electric temperature controls optional. Furnace line includes 35,000,



50,000, and 70,000 B.T.U. models. Manufacturer: Tennessee Enamel Manufacturing Co., Nashville, Tenn.

GARAGE DOORS AB1906
"Taylor-Made," jack knife type door is adaptable to openings that are unusually high and where door must raise up and out of the way. Doors are made in two sections with extruded aluminum frame and heavy aluminum face. Requires no room for the door installation inside the garage. Manufacturer: R. L. Taylor, Inc., 12480 Evergreen Rd., Detroit 28, Mich.

AIR CONDITIONING FURNACE AB1935
"Toridheet," package all-steel winter air conditioning furnace unit, incorporates rotary wall flame burner in a welded boiler plate combustion cham-



ber. Round cornered steel cabinet, finished in sage-green baked enamel, is elevated above floor on full length metal skids. Access doors lift out entirely. Shipped assembled with Underwriter-approved control accessories and float controlled humidifier as standard equipment. Sizes: 60,000 and 90,000 B.T.U. at register. Manufacturer: Toridheet Div'n, Cleveland Steel Products Corp., 7306 Madison Ave., Cleveland, Ohio.

(Continued to page 140)

Art in Iron

NEW stock designs — lower prices!



Artcraft stock rails No. 395 in 4 lengths. Priced per pair.
2'6" — \$12.00 3'6" — \$14.00
3'0" — 13.00 4'0" — 15.00

STOCK PORCH COLUMNS
Corner & Single-panel
Height corners 12" panels
7'0" \$25.00 ea. \$14.50 ea.
7'6" 27.00 ea. 15.50 ea.
8'0" 29.00 ea. 16.50 ea.

IMMEDIATE DELIVERY on all Artcraft stock items. Prices net F.O.B. Columbus, Ohio. Terms: Payment with order or C.O.D. Have ARTCRAFT do your most exacting custom iron work too. ORDER DIRECT! SATISFACTION GUARANTEED!

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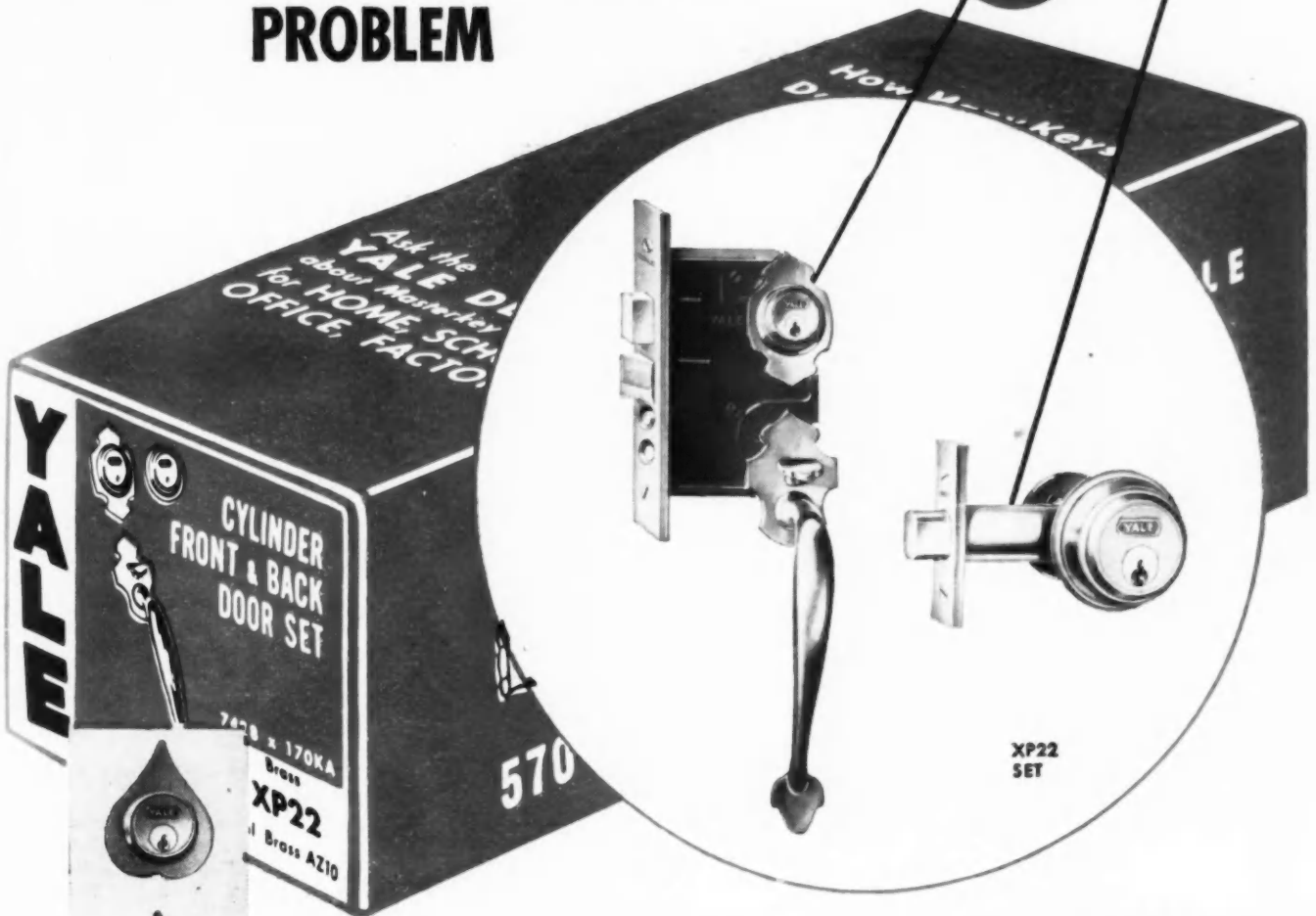
Take Our Tip

If you want to keep abreast of new developments in building you should have a reference shelf of standard handbooks and new books to consult. No one can keep all this information in his head or in private note books. The information on current developments in the trade press is fragmentary. It is brought together in books after being tested on the job and found worthy of permanent record. The information is stripped down to basic facts and in many instances clearly illustrated or compared with other data in tabular form.

To build up a small reference shelf of building books you need to know what books are available on subjects of particular interest, what they contain, the year of publication or last revision, and their current prices. You will need some good plan books, a few estimating books and forms, and some carpentry and building details books, among others. We have three Recommended Lists of books on these subjects which are free on request. Take our tip and send for them today.

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It's a Box of "Matches"
that will
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PROBLEM



Now YALE gives you a complete "Package of Protection" for front and back doors.

XP22 Front and Back Door Lock Set has XP74281 Handle Set for front door . . . plus 170 KA Tubular Deadlock for back door.

A. Exposed front door units are *matched* in design.

B. Back door deadlock has chromium plated inside trim to *match* modern kitchen fixtures.

C. Keys *match* for both locks.

Other Yale *packaged* combinations are:

XP2 which consists of XP291 tubular latch set and 170KA tubular deadlock with matching cylinder collar for front door, plus 170 KA tubular deadlock for back door.

XP1—same as above, without back door lock.

The combinations are also available in XH design.

Simplify your hardware selection—choose a YALE "Package of Protection". THE YALE & TOWNE MANUFACTURING COMPANY, Stamford, Conn., U. S. A.



Makers of the famous YALE lines of Locks, Door Closers, Hardware; Pumps; Heating Units; Hoists, Industrial Trucks, Scales.

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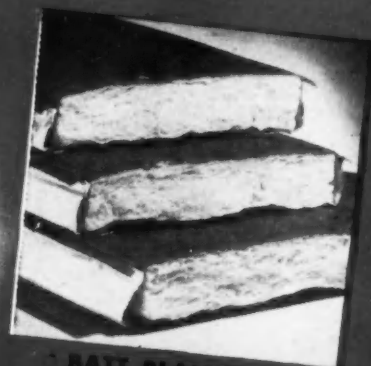
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WAYS TO USE FIBERGLAS BUILDING INSULATION

Insulation packages save up to 40% of storage and trucking space, can be passed through stud and joist spaces. No bulky cartons to dispose of.

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Insulation for every building need. Speeds installation, makes for a better job.

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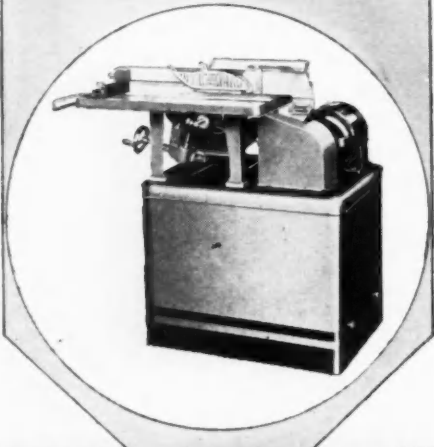
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THE ONLY

10" TILTING-ARBOR SAW

which can be successfully driven by low-cost standard (not special) motors, gas engine or line shaft by using "rolling drive pulley".



BOICE-CRANE NO. 2514

Has 3/4" arbor, the largest arbor and heaviest bearings of any 10" saw. Handles heavy overloads.

Motor is entirely separate from machine and away from the dust, keeping vibration from the saw arbor and eliminating needless wear on trunnions and slide ways. With motor weight off the arbor, the arbor always stays accurately locked in any tilted position.

28" long cast iron rip fence, precision ground both sides, features one-knob lighting-fast automatic control of both front and rear locks. Fence is aligned as it micro-sets, saving the necessity of reaching over blade to set or adjust fence. Secure and accurate alignment on first lock-up.

Conveniently grouped controls for quickly, accurately tilting, raising and lowering saw blade. Positive locks. Easy-to-read accurate gauges. Large dust chute encloses lower portion of blade, and discharges sawdust away from motor.

Finest miter-gauge yet designed, with patented plunger-setting and adjustable stops for 45° and 90°.

Approved tilting safety guard shields entire blade. Reinforced splitter prevents binding, has anti-kickback feature.

Powerful V-belt drive, capable of transmitting up to TWO horsepower. Available in bench or floor models.

SPECIFICATIONS:

Table: 20" x 27"; with extension 36" x 27".
Saw Blades: 10" dia. max.—Dado Heads 6" dia. x 1-1/16" wide.

Depth of Cut: Saw Vertical: 3". Saw Tilted: 2-1/8".
Rip Capacity: No. 2500—21" max. No. 2505—37" max.
Cut-off Capacity: 13" clear before blade.
Bearings: New Departure Grease-sealed.

Write for free literature

BOICE-CRANE COMPANY
966 Central Avenue • Toledo 6, Ohio

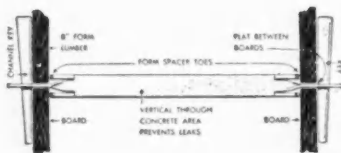
BAND SAWS • JOG SAWS • SAW JOINTERS • BELT SANDERS
SPINDLE SANDERS • LATHES • THICKNESS PLANERS
SPINDLE SHAPERS • DRILL PRESSES • JOINTERS

NEW PRODUCTS

(Continued from page 136)

CONCRETE-FORM SPREADER TIES AB1905

Paco tiles rest vertically in form; designed to permit easy flow of concrete and to eliminate air spaces and assure



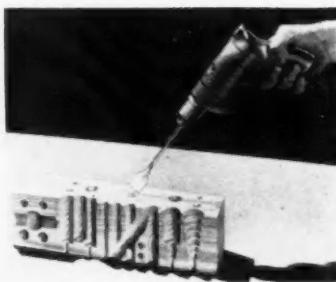
permanently dry walls. Complete range of sizes from 6-inch to 36-inch length. Manufacturer: Paco, 327 S. Market St., Wichita 2, Kan.

BUILDING PAPER AB1918

Leatherback All-Purpose Building Paper is a heavy base stock with an average uniform asphalt impregnation of 50 per cent of the sheet cross-section. It is approved by FHA as a Class "D" breather type paper. Base stock is made up of 80 per cent new long fibres. Weight: 500 square foot roll, 25 pounds. Manufacturer: Protective Papers Inc., Union, Ill.

WOOD BORING TOOL AB1912

"Whiz-Bit," flat type high speed wood bit is designed for use with drill presses, portable electric or pneumatic drills. Long pilot starts hole and maintains hole diameter to close tolerances. Holes



can be bored in any direction, wherever pilot can bite into wood. Bit shank is 4 1/2 inches long, and holes can be bored to full shank length without removing bit. Made of one-piece forged "moly" steel. Available in sizes from 3/8 inches to 1 1/8 inches. Standard set consists of six bits and one countersink, in canvas case. Manufacturer: Rex Laboratories, 1717 Gent Ave., Indianapolis 2, Ind.

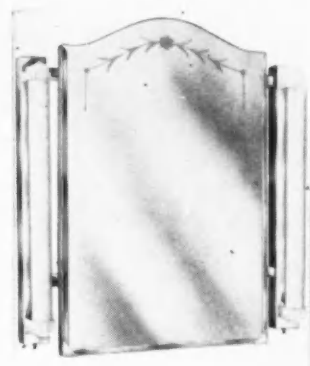
INTERLOCKING SHINGLE AB1927

Four-way interlocking aluminum shingle for residences and institutions has three sections, each embossed with cedar-like grain. One nail fastens each



shingle. Nail, driven through a tab, is concealed by the shingle above. Weight: 40 pounds per 100 square feet. Manufacturer: The Alumalock Corp., Equitable Bldg., Portland, Ore.

(Continued to page 142)



Attention DEALERS, BUILDERS, AND CONTRACTORS

The most beautiful all chrome finish fluorescent medicine cabinet with plate engraved Everlast mirror, all General Electric equipment, plastic caps, Underwriters' approved, retails at \$43.75. This medicine cabinet unit is built for the purpose of saving all wiring and fixtures necessary for the bathroom as it contains all the wiring and switches necessary and also a convenience outlet for electric razor or any other use. Each fixture has a separate switch so that you may light one or two lights as you desire and will provide sufficient light for any bathroom without any extra fixtures. The only thing necessary is to connect the cabinet with the main line.

The price of this cabinet is very reasonable and at the same time it covers all the cost of wiring and fixtures for the bathroom.

Manufacturers representatives and distributors invited.

Manufactured by

FLUORESCENT LIGHTING CO.
MONTICELLO, N. Y.

"USE YOUR ATTIC"



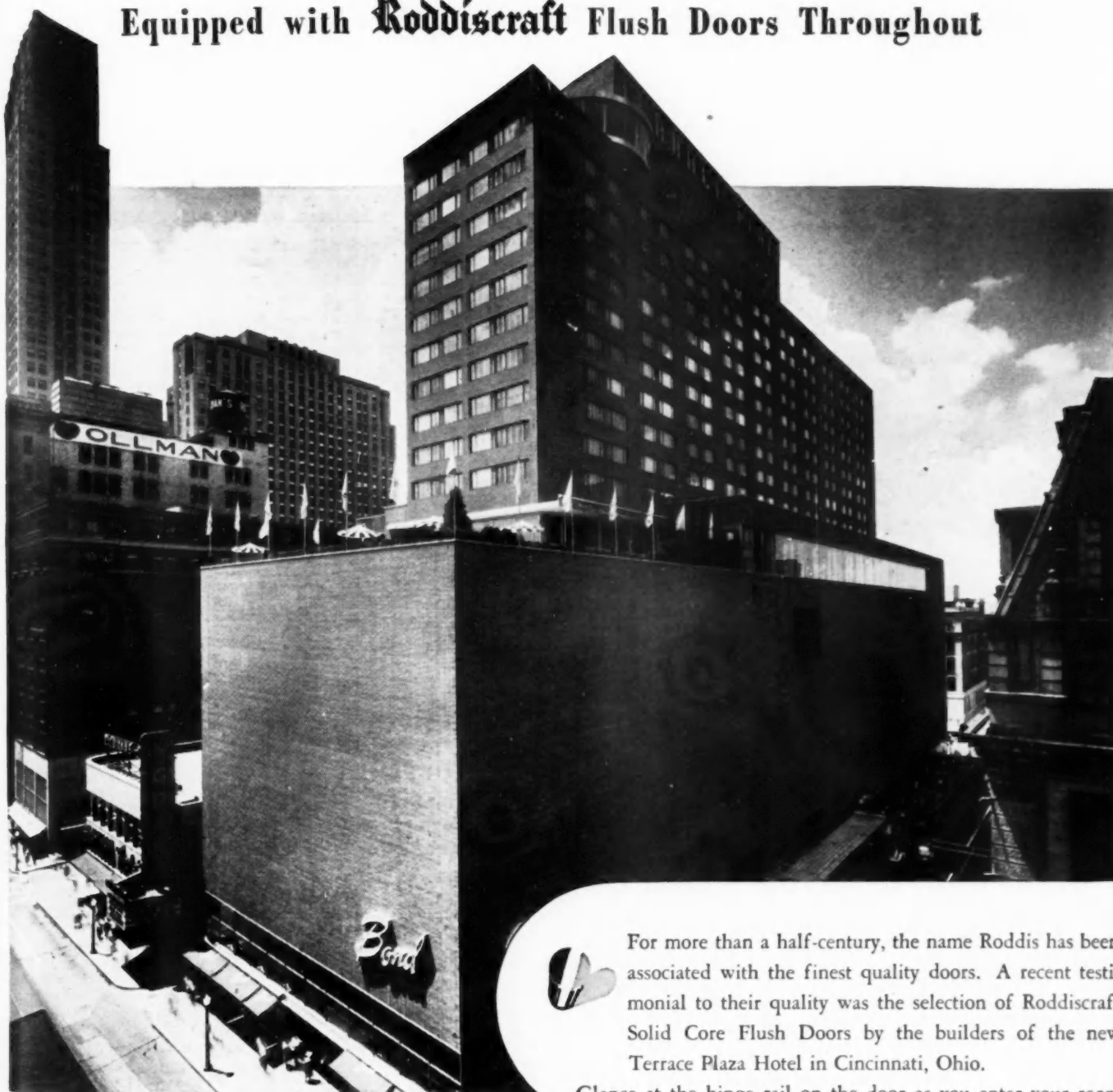
For free information, see your building material dealer or write—

MARCO STAIRWAYS
1697 N. CLEVELAND AVE.
ST. PAUL 8, MINNESOTA

The New Terrace Plaza Hotel

CINCINNATI, OHIO

Equipped with Roddiscraft Flush Doors Throughout



For more than a half-century, the name Roddis has been associated with the finest quality doors. A recent testimonial to their quality was the selection of Roddiscraft Solid Core Flush Doors by the builders of the new Terrace Plaza Hotel in Cincinnati, Ohio.

Glance at the hinge rail on the door as you enter your room when next you stop at this beautiful hotel. You will see the built-in red-white-and-blue dowel . . . symbol of Roddiscraft Solid Core Flush Doors. The designer of this modern hotel selected Roddiscraft Flush Doors not only to carry out the modern design but because of their combination of beauty and rugged ability to stand up under heavy hotel traffic.

NATIONWIDE Roddiscraft WAREHOUSE SERVICE

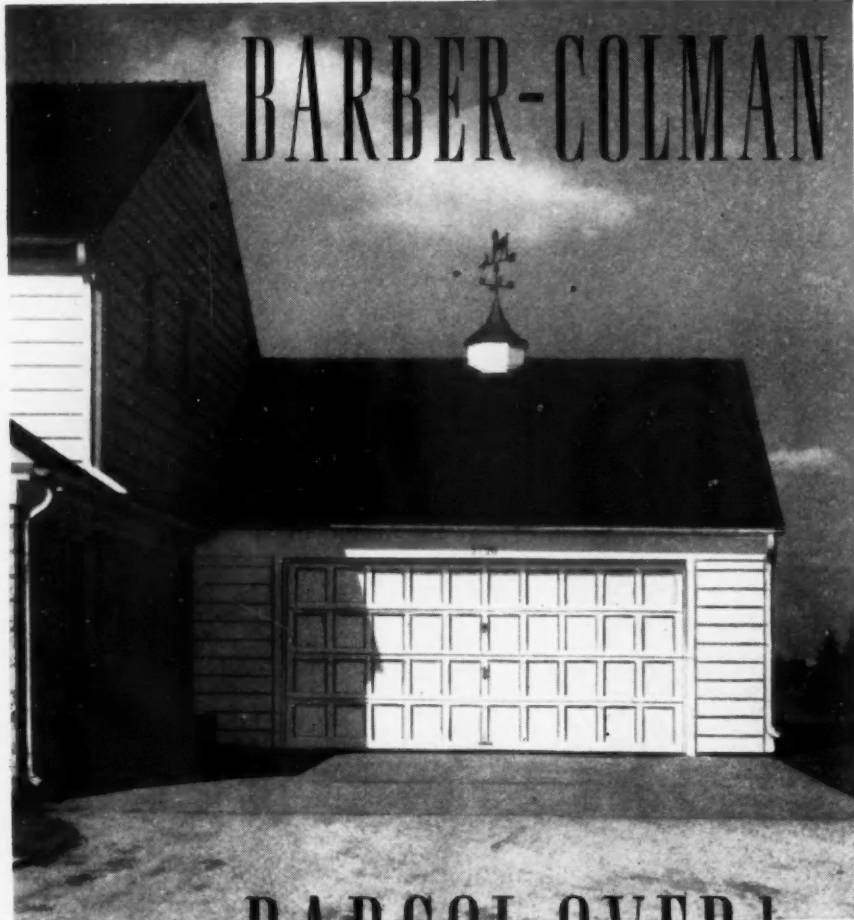
Cambridge 39, Mass. . . 229 Vassar St.
 Chicago 8, Ill. . . 1440 W. Cermak Rd.
 Cincinnati 2, Ohio . . 457 E. Sixth St.
 Dallas 10, Texas . . . 2800 Medill St.
 Detroit 14, Mich. . . 11855 E. Jefferson St.
 Kansas City 3, Kan. . 35-53 Southwest Blvd.
 L. I. City, N. Y. . Review & Greenpoint Ave.
 Los Angeles 11, Calif. . 2860 E. 54th St.

Louisville 10, Ky. . . 1201-5 S. 15th St.
 Marshfield, Wis. . . 115 S. Palmetto St.
 Milwaukee 8, Wis. . . 4601 W. State St.
 New York 55, N. Y. . . 920 E. 149th St.
 Port Newark 5, N. J. . . 103 Marsh St.
 St. Louis, Mo. 4453 Duncan Ave.
 San Antonio, Texas . . 727 N. Cherry St.
 San Francisco 24, Cal. . 345 Williams Ave.

DEALERS IN ALL PRINCIPAL CITIES

Roddiscraft

Roddis Plywood Corporation
 Formerly Roddis Lumber & Veneer Co.
 MARSHFIELD, WISCONSIN



THE CHOICE OF BUYERS
WHO INVESTIGATE
BEFORE THEY BUY

BARCOL OVERdoor

WEATHERTIGHT. Special roller crank closing action moves the entire door smoothly and evenly against the stop strips in the last few inches of its downward travel, effectively sealing the opening against dust, dirt, litter, snow, rain, sleet, and wind.

EASY WORKING. Tailored twin-torsion counterbalancing springs accurately support the weight of the door, so minimum effort is required for raising or lowering. Sticking is eliminated by the fast-freeing effect of the closing action.

DURABLE. Barcol OVERdoors give long, trouble-free service because they are strongly built, accurately assembled, and carefully installed by factory-trained men.

DOUBLE-WIDTH FEATURES. Above we show a double-width Barcol OVERdoor as used on a modern two-car garage. The use of wider single doors like this reduces the cost of installation, reduces the mechanism, eliminates the center post, gives more room for maneuvering two cars, and reduces the chances of damaging cars or garage by collision. These advantages are worth considering for every two-car garage door installation, whether new or remodeling.

ELECTRIC DOOR OPERATORS. Available for swinging, sliding, and overhead type doors, and for sliding gates. They offer the convenience and protection of switch control or the amazing Radio Control.

SEE OUR
CATALOG
IN SWEET'S

FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES in PRINCIPAL CITIES



BARBER-COLMAN COMPANY
104 MILL ST. • ROCKFORD, ILLINOIS

NEW PRODUCTS

(Continued from page 140)

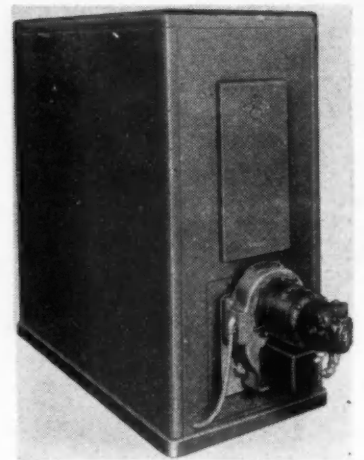
OIL BURNING HEATER AB1909

"Deluxe" model portable heater, using kerosene for fuel, is adaptable to temporary and semi-permanent heating applications. Has sufficient capacity to heat three ordinary five-room houses. Unit powered with electric motor, and standard equipment includes two 12-inch diameter by 12-foot long collapsible canvas ducts through which the heated air may, when desired, be conveyed to areas where needed. Ignition and operation are automatic, with manual controls for starting and stopping. Manufacturer: Herman Nelson Corp., Moline, Ill.

AIR CONDITIONING FURNACE

AB1933

Superfex Model 4100 is equipped with pressure atomizing gun-type burner which is designed to burn heavy "cat" cracked fuel oils. Incorporates two-stage fuel pump and a two-stage air circulator. Triple-flue heat extractor gives a heating surface of 6,216 square inches. Heavy welded steel construction.



Bonderized casing, finished in Silver-tone brown baked enamel. Recommended for homes having six to seven average size rooms. Manufacturer: Perfection Stove Co., 7609 Platt Ave., Cleveland 4, Ohio.

AIR CONDITIONING GRILLES AB1934

"Bulator," combination of deflecting vane grille and decorative grille for air conditioning installations, is constructed so that air flow can be deflected to right or left, up or down, or in combination of directions. Deflecting vanes not noticeable when installed in duct recesses, as they are concealed behind ornamental grille. Available in wide variety of design motifs, sizes and materials. Manufacturer: Hendrick Manufacturing Co., Carbondale, Pa.

LAWN HOSE HOLDER AB1914

The "Guardian," is a combination fire and lawn hose holder. Holder is installed in basement, and hose is fed from holder to lawn through a special pipe. When not in use, hose retracts through pipe in the basement wall, automatically coiling in the holder. Hose may be always connected for immediate use without danger of freezing. Water shuts off at sill cock. Detachable handle for shut-off valve is provided. Manufacturer: The Guardian Manufacturing Co., 225 S. Fifth St., Minneapolis 2, Minn.

When considering Doors remember this:

Weldwood Doors Are Guaranteed
 against warpage or binding
 in opening due to any dimensional changes in the door.

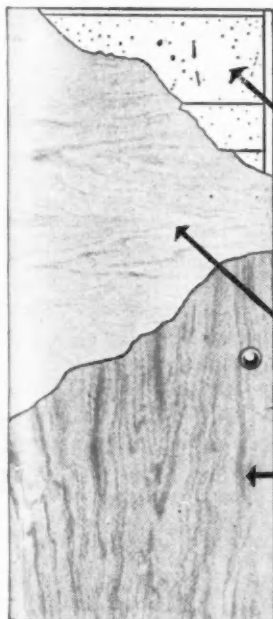
IT'S a fact! These beautiful new Weldwood flush veneer doors are *guaranteed* against swelling and sticking in the summer . . . or shrinking and rattling in the winter.

Combine that feature with light weight and the rich beauty of real wood . . . and you have a truly

superior door that you'll want for your next job. Write or contact our nearest branch for full information on this new Weldwood Flush Veneer Door. Also ask about the amazing new *Weldwood Fire Door* which carries the Underwriters' label for Class B openings.

ONLY WELDWOOD DOORS GIVE YOU THESE 5 UNIQUE ADVANTAGES

1. PERMANENT HOT PLATE BONDING of veneers to core and banding with TEGO Film Waterproof Glue.
2. VERMIN AND DECAY PROOF mineral core resists fungus, decay and termites for life of structure.
3. INSULATING PROPERTIES are superior to double glazing, such as opening protected by storm door . . . when door is installed in an exterior opening with weather stripping.
4. EXCELLENT VAPOR BARRIER assured by TEGO Film Phenolic Glue bond between core and veneer.
5. INCOMBUSTIBLE MINERAL CORE has a fibrous reinforcing with a nominal density of 20 lbs. per cubic foot. This material has a sturdiness which assures proper performance under most severe conditions.



EDGE BANDS are thoroughly kiln dried hardwood, built up of two pieces of $\frac{3}{4}$ " stock, securely glued together to provide greater dimensional stability.

MINERAL CORE. Each core is made of three or more pieces, securely bonded together by high frequency process, thus offering a solid piece of homogeneous character. Moisture content not in excess of 5%. Sized with highly waterproof solution, offering a perfect base for laminating cross bands and faces.

CROSS BANDING of $\frac{1}{16}$ " veneer is bonded to core with TEGO Film Waterproof Glue.

FACE VENEER. At present, handsome Birch veneer forms the hardwood faces. Wide variety of other decorative woods available on special order.

SIZES AND THICKNESS. Made in all stock sizes. $1\frac{3}{4}$ " thick.

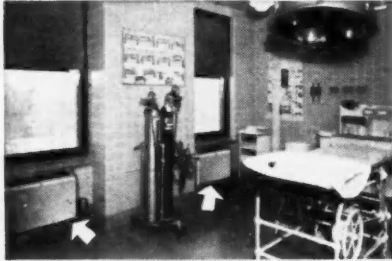
UNITED STATES PLYWOOD CORPORATION

55 West 44th Street, New York 18, N. Y.

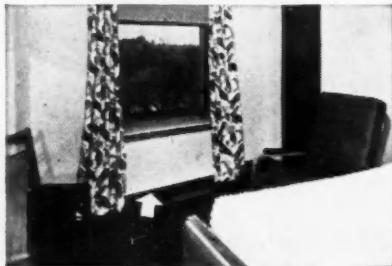
Distributing units in Baltimore, Boston, Brooklyn, Buffalo, Chicago, Cincinnati, Cleveland, Detroit, Fresno, High Point, Los Angeles, Milwaukee, Newark, New York, Oakland, Philadelphia, Pittsburgh, Portland, Ore., Richmond, Rochester, San Francisco, Seattle. Also

U. S.-Mengel Plywoods, Inc., distributing units in Atlanta, Birmingham, Dallas, Houston, Jacksonville, Louisville, New Orleans, San Antonio, St. Louis, Tampa. In Canada: United States Plywood of Canada, Limited, Toronto. Send inquiries to nearest point.

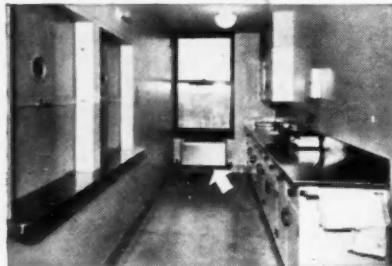
YOUNG CONVECTORS PROVIDE Clean, Healthful Heat for Hospitals



IN OPERATING ROOMS



IN CONVALESCENT ROOMS



IN KITCHENS

Young Convectors are specified for modern hospitals because they are easy to keep clean, and provide a steady, draftless flow of heat at proper temperatures. Such qualities make them ideal also for homes, apartments, offices, public and commercial buildings, schools and institutions. Mail coupon now.

Above: Typical installations in Swedish and Deaconess Hospitals, Minneapolis; Magney-Tusler & Setter, Architects and Engineers.

YOUNG RADIATOR CO. Dept. 709-A Racine, Wis.
Sales and Engineering Offices in all Principal Cities
General Offices: Racine, Wisconsin
Plants at Racine, Wisconsin and Mattoon, Illinois

YOUNG

HEAT TRANSFER PRODUCTS

HEATING, COOLING, AIR CONDITIONING PRODUCTS
Convectors • Unit heaters • Heating coils • Cooling coils • Evaporators • Air conditioning units.

AUTOMOTIVE AND INDUSTRIAL PRODUCTS

Gas, gasoline, Diesel engine cooling, radiators • Jacket water coolers • Heat exchangers • Intercoolers • Condensers • Evaporative coolers • Oil coolers • Gas coolers • Atmospheric cooling and condensing units • Supercharger intercoolers • Aircraft heat transfer equipment.

YOUNG RADIATOR CO.
Dept. 709-A
Racine, Wisconsin
Send me a copy of the
Young Convector Catalog
No. 4046.

Name _____
Address _____
City _____ Zone _____ State _____

M. C. Fairfield Elected President of Insulation Board Institute

M. C. FAIRFIELD, Minneapolis, Minn., was elected president of the Insulation Board Institute at the Institute's annual meeting in Chicago, Ill. Fairfield, who is sales manager of



M. C. FAIRFIELD

Insulite, succeeds James V. Jones of Armstrong Cork Co., Lancaster, Pa.

Dean Crandall of National Gypsum Co., Buffalo, N.Y., was named vice president, and Marvin Greenwood of Celotex Corp., Chicago, became the new treasurer. The board of directors, in addition to the officers, includes Jones, plus James B. McCorkle of United States Gypsum Co., and D. M. Pattie of Wood Conversion Co.

Wood Conversion Company Names New Sales Manager

THE APPOINTMENT of Marland S. Wolf as general sales manager, Wood Conversion Co., was announced by D. M. Pattie, vice president and general manager.

Wolf, formerly associated with the U. S. Gypsum Co., has spent more



MARLAND S. WOLF

than 19 years in the insulation and building products field.

He will be located in the Wood Conversion Co. general sales offices in St. Paul, where he will direct the sales programs of Balsam-Wool, Nu-Wood, Tufflex and other products. Wolf, who attended Knox college and

University of London School of Economics, has written several popular books on home insulation and modernization.

Realtors to Continue Work For Unshackled Housing

THE NATIONAL Association of Real Estate Boards will continue to explain to the public how perpetuation of residential rent control in peace time and the extension of federally owned and operated housing void the constitutional guarantees of individual property ownership. This was the promise made by Hobart C. Brady, retiring president of NAREB at the association's 41st annual convention in New York.

The realtors also will continue to explain to people, he said, how the mounting costs of government lower our standard of living by increasing deductions from the paycheck. Large scale government spending has contributed to the high cost of housing while lowering the buying power of the people.

Pointing out that the passing year has provided a challenge to coura-



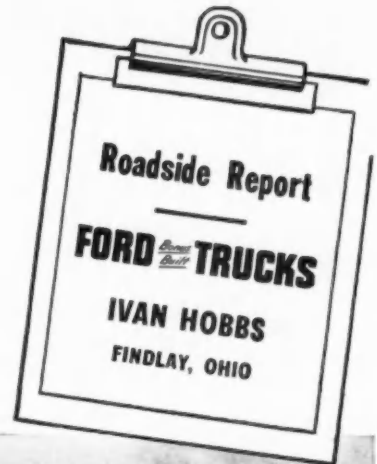
THEODORE H. MAENNER

geous citizenship, he declared, "It has been our privilege to lead the resistance to attacks on individual property ownership in America. We have steadfastly reminded the people that our experiment in popular constitutional government succeeded where others failed because the founders of our republic understood that only freeholders can be free. They sought to preserve in our Constitution the freedom of property ownership as a basis for the preservation of civil liberties. They considered the encouragement of individual property ownership a proper concern of government."

Home building for the low income group is expected to move forward in 1949, W. L. Cooper of Port Huron told the convention. "The home building industry is making a real drive to build economy houses with the new

(Continued to page 146)

"My FORD is the BEST truck I ever OWNED"



"MY F-7 FORD dump truck has already given me 7,000 miles of top service, and I haven't babied it either," reports Ivan Hobbs who uses his truck in construction work in the Findlay, Ohio area.

"My usual load is 18,000 lbs. of crushed stone and my hauls are under all kinds of conditions. My Ford is the best truck I ever owned and I bought it because my previous Ford Trucks lasted longer and cost me less to operate."

Thus does Mr. Hobbs add his voice to a nationwide chorus of Ford Truck enthusiasts. Truck users everywhere are pepped up about Ford Truck performance. They love the luxury of the new Ford Million Dollar Cab. And they get the biggest bang out of Ford Bonus Built construction . . . the superstrong construction that contributes to long truck life. Life insurance experts prove Ford Trucks last longer.



BUILT STRONGER TO LAST LONGER

USING LATEST REGISTRATION DATA ON 5,444,000 TRUCKS,
LIFE INSURANCE EXPERTS PROVE FORD TRUCKS LAST LONGER!

ONLY THE FORD BIG JOB HAS ALL THESE FEATURES!

- ★ New 145-h.p. Ford V-8 engine for top performance.
- ★ Ford exclusive concentric dual-throat carburetor for more power, more economy.
- ★ New heavy duty 5-speed transmissions for operating flexibility.
- ★ Big Ford 16-inch by 5-inch rear brakes in the F-8; 16½-inch by 3½-inch in the F-7.
- ★ Ford Super Quadrax 2-speed axle with vacuum shift for performance flexibility in Model F-8 (single speed axle also available); single-speed Quadrax Hypoid Axle in Model F-7.
- ★ Large diameter (10-inch) wheel bolt circle with 8 studs to allow for extra-strong hub construction.
- ★ Million Dollar Cab with Ford Exclusive Level Action suspension for greater driving comfort.
- ★ Nationwide service from over 6,400 Ford Dealers.
- ★ Ford Bonus Built construction for long truck life.

Gross Vehicle Weight Ratings: F-8 up to 21,500 lbs., F-7 up to 19,000 lbs. Gross combination ratings: F-8 up to 39,000 lbs., F-7 up to 35,000 lbs.

**SOUTHERN
BRAND
LUMBER PRODUCTS**



Pre-Finished
Hardwood Flooring



OAK
BEECH, GUM and PINE
Flooring in Standard Strip



Wrapped Trim
Mouldings
Casing and Base
in

ARKANSAS SOFT PINE
WHITE & RED OAK
RED & SAP GUM



ARKANSAS SOFT PINE
Satin-like Interior Trim
Soft Textured Lumber

Our pine production is
backed by a forest manage-
ment program providing a
perpetual timber supply.



Available at
Your Lumber Dealer's



SOUTHERN LUMBER CO.
WARREN, ARKANSAS

(Continued from page 144)

sections of the Housing Act of 1948. Reports from FHA indicate that construction of rental housing under this act is accelerating."

Planning for permanence was indicated as a basic challenge to builders and realtors by J. C. Nichols of Kansas City.

To check depreciation losses, he indicated, homes must have value lasting for generations. Neighborhoods must have ample playgrounds (but not the 10 per cent of whole subdivisions advocated by some federal planners); adequate park areas, quiet, carefully planned curving residential streets to discourage through traffic; major highways, boulevards, parkways and circumferential drives, all worked out to fit a good municipal and regional pattern.

Theodore H. Maenner of Omaha was elected president of NAREB to succeed Brady. Other newly elected officers included H. Walter Graves of Philadelphia, treasurer, and the following regional vice presidents: Tom Coppage, Seattle; Claiborn A. Saint, Los Angeles; Ray E. Patterson, Fort Smith, Ark.; Clarence W. Treadwell, Detroit; Robert W. Leavitt, Lake George, N.Y.; Harold J. Grove, Omaha; Albert M. Rome, Hartford; William Lynes, Savannah, Ga.; Russell Wilkinson, Memphis; F. Orin Woodbury, Salt Lake City; Henry W. Matthieu, Norristown, Pa.; Jules Fisher, Chicago, and Charles A. Bourgeois, New Orleans.

**Insulating Siding
Elects New Officers**

HARRY F. ALTHEIDE, vice president of Globe Siding Products Co., Chicago, was elected president of the



HARRY F. ALTHEIDE

Insulating Siding Association, succeeding Gordon Estes, vice president of Jones and Brown, Inc. Stuart Ralph, vice president of Flintkote Co. continues as vice president of the I.S.A. Eli Chamberlain, vice president of Bird and Son, Inc., was elected treasurer.

Altheide, in heading the association during its third year, announced the further expansion of a publicity program for insulating siding that will include newspaper, trade and farm paper publicity. A special slide film presentation of the application of siding to farm structures for use at various group meetings is also planned.

**Devoe Appoints New
Advertising Manager**

WILLIAM J. NEVIN is the new advertising manager and executive assistant to A. H. Mohrhusen, general merchandising manager of Devoe &



WILLIAM J. NEVIN

Raynolds Co., Inc. The announcement was made by William H. Mathews, executive vice president of Devoe & Raynolds.

Nevin joins Devoe & Raynolds with twenty years merchandising and advertising experience; twelve years devoted to the paint industry. He succeeds G. Purdy Hall, who has returned to a sales capacity as New York branch manager.

**John D. McCrystle
Joins Upson Company**

APPOINTMENT of John D. McCrystle as assistant to the president has been announced by W. H. Upson, Jr., president of the Upson Co., Lockport, N.Y.

McCrystle is a graduate of the University of Maine with the professional degree of chemical engineer. For about 20 years, he was associated with The Brown Co. in Latuque, Quebec, Canada, and Berlin, N.H., in progressive executive positions to the post of manager of operations.

For the past five years, McCrystle has been serving the paper, textile and plastics industries as management consultant with offices in New York City. He is widely known as an authority on fibres and fibre processes. At different times he has been associated in an executive capacity with Johnson & Johnson, and the Barrett division of Allied Chemical & Dye Co.

Will owners of your new houses find the kitchen their only warm room?

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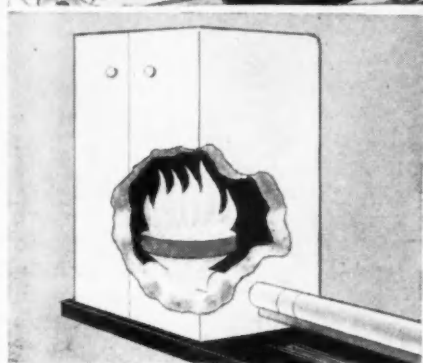
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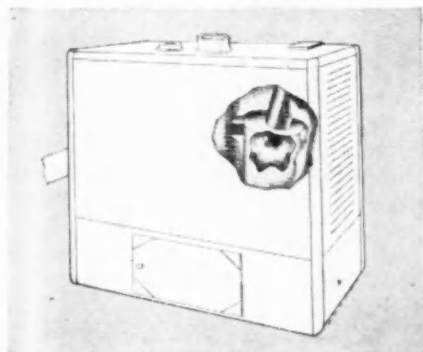
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& Dye



Automatic Anthracite Stokers Installed in an existing boiler or furnace and in new houses, automatic hard coal stokers deliver *plenty* of heat quickly . . . save up to 50% on fuel bills . . . eliminate fuel worries.



The Revolutionary Anthratube—The Anthratube saves on fuel bills . . . its proved efficiency is over 80%. This scientifically engineered boiler-burner unit, with "Whirling Heat" and other revolutionary features, produces quicker response and superior performance than units using other types of fuel.

There are no ifs, Ands or Buts when you specify Automatic Anthracite Heating

OWNERS of your new houses *can* have *plenty* of worry-free heat because there's plenty of hard coal and there is anthracite equipment to fit any heating requirement.

A whole winter's supply of anthracite can be stored easily in advance. Everyone wants this kind of security and convenience. They have *just that* when you specify automatic anthracite equipment.

Look over the two types of domestic anthracite equipment shown here. They burn the cheaper sizes of economical hard coal . . . completely automatic from bin feed to ash removal.

Write to us for more detailed information on all types of anthracite heating equipment—domestic and commercial.



ANTHRACITE INSTITUTE

101 Park Avenue

New York 17, New York

ELIMINATE "Price Resistance" By BUILDING LFI HOMES



MODEL 2432-1B1 Plus 6 x 8' Porch and CT420 Garage

Buyer resistance to the ever-increasing prices of homes can be eliminated only by reducing building costs. That is exactly what you do when you build with LFI Homes that are factory produced in standard sections. Available in many types and sizes, LFI houses are "builder's houses" . . . factory manufacture has been carried only to the point where it results in maximum savings to the builder but does not hamper him in interior arrangement and finish.



MODEL 2434-1U1



MODEL 2448-1U1-Special

Make More Money

Builders now using LFI Homes find that they can sell for less than their competitors and still earn a larger profit.

Fast Turnover

LFI Homes can be ready for occupancy in surprisingly short time. Section-built and precision-cut materials are carried in stock for immediate shipment.

Exceptional Quality

LFI Homes are made from dry, thoroughly seasoned lumber, joists, studding and rafters are spaced on 16" centers.

Easier to Finance

Dealers report they require lower down payment as they get higher percentage of selling figure in FHA appraisal.

LUMBER FABRICATORS INC.
728 FISHER BLDG. • DETROIT 2, MICH.
A NATIONWIDE ORGANIZATION FROM COAST TO COAST
Northern Plant, Elkton, Mich. • Southern Plant, Fort Payne, Ala.

- LUMBER FABRICATORS INC., 728 Fisher Building, Detroit 2, Mich. Dept. A
- Please send me complete information on how I can use LFI to offer better homes at lower prices and at the same time make more money for myself.
- NAME _____
- COMPANY _____
- ADDRESS _____
- CITY AND ZONE _____ STATE _____

**MAIL
COUPON
TODAY**

Booklet Reveals Secret Of Beautiful Woodwork

HOW SUCCESSFULLY woodwork lends itself to paint or finishes depends on the physical make-up of the wood itself. What that make-up should be, and the texture of wood needed to obtain it comprise the subject of a booklet titled "How To Have Beautiful Woodwork," published by the Arkansas Soft Pine Bureau, Little Rock, Ark.

In concise, easy-to-read language, the booklet points out the causes of raised grain, discoloration, and mitred joints that open up, and tells how these objectionable hazards can be avoided. It stresses the importance of using quality paints and finishes, and offers as a guide specifications for finishing prepared in collaboration with representative paint and varnish makers.

Single copies of the booklet will be furnished retail lumber dealers on request.

Leading Producers of Prefabricated Homes Represented at Meeting

THE FALL meeting of Prefabricated Home Manufacturers' Institute was held in the Pantlind hotel, Grand Rapids, Mich., with 45 delegates representing the leading producers of prefabricated homes in the United States and Canada attending.

Institute President John W. Pease of Cincinnati, Ohio, in opening the meeting, emphasized that prefabricated homes are not a "war baby," pointing to the experience of member companies in manufacturing permanent-type housing. "One member produced prefabricated homes in 1905, some 43 years ago; 16 companies were in production prior to World War II, and 12 members started producing during the war years, 1942 to 1946," he explained.

The industry will concentrate on the production of low-cost housing in 1949. The meeting adopted a resolution indorsing the low-cost housing program sponsored by FHA under recent legislative enactments. The resolution also said that all companies present stated their ability to manufacture, erect and sell homes, including land, under the FHA regulations providing for \$6,000, 95 per cent mortgages.

In order to accomplish the low-cost housing program, however, the meeting in the resolution called for a 100 per cent secondary market for mortgages in the Federal National Mortgage Association if sufficiently high interest rates are not permitted by the government to attract private capital to invest in mortgages.

ANNOUNCING

another **FIRST** *for*

- *cuts* **ASPHALT FLOOR TILE**
- *cuts* **RUBBER FLOOR TILE**
- *cuts* **PLASTIC FLOOR TILE**
- *cuts* **LINOLEUM**
- *cuts* **CORK FLOOR TILE**



Model FT-1
PAT. PENDING

We proudly present our newest achievement in the cutting field designed specifically to meet flooring contractors demands. Now you need only this one machine to cut accurately all the above types of floor tile, which you can readily see means more jobs in less time at less cost than ever before. Cut yourself in on your share of the profits from the biggest installation success in years!

SPECIFICATIONS

Overall length	_____	21-3/4"
Width	_____	16"
Height	_____	12"
Length of Blades	_____	14"
Weight	_____	18 lbs.

We Will Answer All Inquiries Promptly

J.M.J. PRODUCTS CO.

NOW...WATERPROOF IN FREEZING WEATHER!



with CRYSTAL Silicone WATERPROOFING NON-FREEZING! LASTINGLY EFFECTIVE!

When cold weather *slows up* construction jobs—you can *speed up* their completion by following through with CRYSTAL exterior waterproofing. CRYSTAL can be applied quickly and easily by brush or spray—AT TEMPERATURES *BELOW* FREEZING—an exclusive feature that can save you time and money this winter on concrete block, brick and stucco construction.*



All these extra advantages—found only in CRYSTAL—mean faster, more dependable waterproofing jobs for you all year 'round!

- **ONE-COAT.** Crystal penetrates deeply, waterproofs the entire depth. One gallon covers 100 to 200 square feet of surface.
- **TRANSPARENT.** Crystal is invisible after application. Will not change surface color or texture.
- **STAINPROOFS.** Makes surfaces self-cleansing, prevents efflorescence.

* SURFACES MUST BE DRY.

**TRY CRYSTAL
AT OUR RISK!**



Send this convenient coupon for **PROMPT ACTION**

WURDACK CHEMICAL CO., 4956 Fyler Ave., St. Louis, Mo.

- Ship to me, one gallon can of CRYSTAL — for which I will pay \$5.35 if I am satisfied... otherwise there will be no charge or obligation on my part.
- Send me literature and prices on CRYSTAL.

Name

Firm

Address

City State Zone

My supplier's name is:

*Structural.
Reinforcing or
other Blding Steel
Shipped from Stock*

Write for Stock List—your guide to over 10,000 different kinds, shapes and sizes of steel for quick shipment from ten plants.

Joseph T. Ryerson & Son, Inc., Plants at: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles.

RYERSON

**TAKES THE GUESSWORK
OUT OF MEASURING!**



The unique design of this fine measuring instrument makes guesswork and inaccuracies in measuring a thing of the past. Note the lever brake for holding a reading on an inside measurement — which is read directly on the rule — no adding or subtracting. Extra long tip, graduations on both sides of the blade and smooth sliding action are only some of its outstanding features. Add to these its rugged construction, sleek polished chrome finish, and you have the finest in steel tapes. 6 and 8 foot lengths. Blades replaceable. See your hardware dealer or use the coupon.

MASTER

REG. U.S. PAT. OFF.

WOOD AND STEEL TAPE RULES

Master Rule Mfg. Co., Inc.
201 Main Street, White Plains, N. Y.

F-1

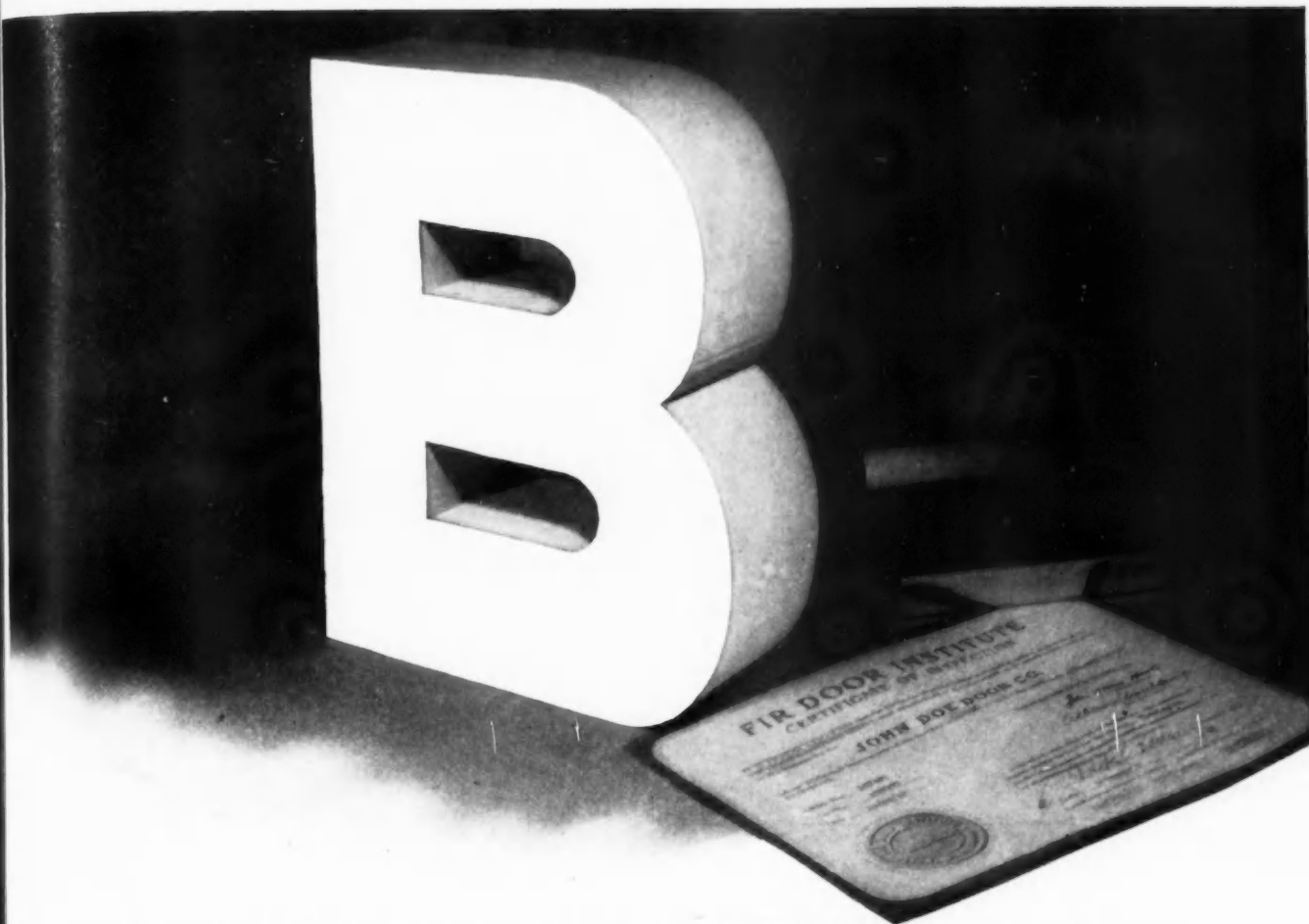
Gentlemen:

- I enclose \$2.25 for the 6 ft. Streamline.
- I enclose \$2.50 for the 8 ft. Streamline.

Name

Address

City State



Douglas Fir Doors marked "FDI-B" meet these Department of Commerce Standards

FDI-B

FDI-BP

When the letters FDI appear as part of the grade trade-mark they certify that the doors so marked not only meet *quality* but have been officially inspected—Commercial Standards CS73-48 ed by the Fir Door Institute and, at the buyer's request, will be covered by notarized Certificate of Inspection.

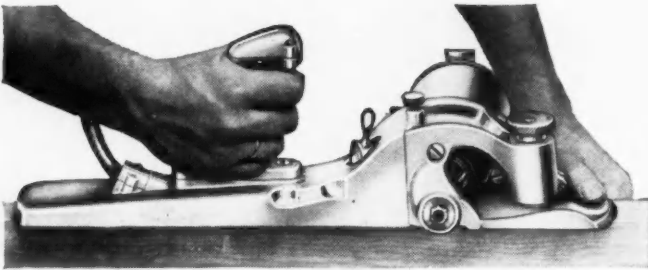
BP doors are of multiple-piece-stile construction; and are so designated because they are ideal for paint or enamel finish.

FIR DOOR INSTITUTE
Tacoma 2, Washington

STILES, RAILS, AND MULLIONS—This stock shall be of vertical grain faces with some coarse grain permitted. It shall be sound in all respects, and may contain sap, light stains, streaks, burls, and neatly repaired pitch seams. Glued-up members are permissible. A moisture-resistant glue shall be used. Mixing of woods is permissible provided both stiles are of a single specie.

PANELS—FLAT VENEERED—The standard thickness of 3-ply flat veneered panels shall be $\frac{1}{4}$ inch after sanding. Each face shall be of one or more pieces of firm smoothly cut veneer. When of more than one piece, it shall be well joined and reasonably matched for grain and color at the joints. It shall be free from knots, splits, checks, pitch pockets, and other open defects. Streaks, discolorations, sapwood, shims, and neatly made patches shall be admitted.

PANELS—RAISED—The standard thickness of raised panels shall be not more than $\frac{9}{16}$ inch before sanding and not less than $\frac{7}{16}$ inch after sanding. They may be either slash or mixed grain, or mixed woods and shall conform to the grade of the stiles and rails. Glued-up, solid panels are permissible.



Power-Sharpens

**ITS OWN CUTTER
RIGHT ON THE JOB!**



Keep your power plane cutter sharp on the job. You can resharpen the cutter in a matter of minutes, sharp as new. Just set the plane in the bench bracket, remove the cutter arbor and replace it with the grinding arbor and wheel. Mount the grinding attachment on the plane and switch on the power.

3 to 5 times faster than hand planing . . . Doors, screens, storm sash, transoms . . . any edge at all . . . can be planed faster than the best hand planing with a Stanley-Carter Power Plane. And better!

Smoother, even against the grain . . . The combination of real speed . . . 18,000 r.p.m. . . and patented spiral cutter gives perfectly smooth cuts at any depth setting, regardless of grain direction.

Convenient adjustments . . . Depth of cut is adjusted before or during work just by turning dial on front of plane. Fence can be adjusted in a second for any bevel cut up to 45 degrees.

* * *

Here's the hurry-up tool you need to compete in costs, in time, in quality of work. Get the whole story on the J-5. Write for folder, Stanley Electric Tools, Stanley-Carter Sales Dept., 534 Myrtle St., New Britain, Conn.

THE GREATEST NAME IN TOOLS



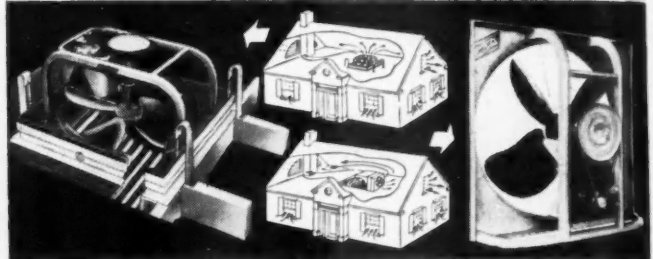
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HARDWARE • HAND TOOLS • ELECTRIC TOOLS • STEEL STRAPPING

INCLUDE
HOME COMFORT-COOLING
IN YOUR BUILDING PLANS
CHELSEA
SPRING-MOUNTED FANS



- Easy To Install
- Certified Air Output
- Quiet in Operation
- A Quality-Built Product
- Unconditionally Guaranteed
- Complete Package Unit



TYPE EV-HORIZONTALLY MOUNTED FAN: A popular, all-in-one, package unit for attic floor installation. Includes automatic ceiling shutter, mounting accessories.

TYPE EH-VERTICALLY MOUNTED FAN: Package unit wall type cooler for wall mounting. Includes automatic outside wall louvers and all mounting accessories.



Home buyers today are demanding comfort cooling as a necessary feature in the modern home. A definite asset to any builder or contractor is the statement "Comfort-Cooled by Chelsea"—makes a house easier to sell, easier to buy and better to live in!

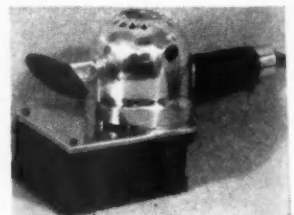
WRITE FOR MANUAL AND CATALOG

Tells how to select and install the right Chelsea Fan for thorough, home comfort-cooling. Detailed description of how comfort-cooling works; address Department B-1.

CHELSEA FAN & BLOWER CO., INC.
1206 GROVE STREET, IRVINGTON, NEW JERSEY



**CONTRACTORS!
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THE JITTERBUG—Portable Electric Sander was made *ESPECIALLY* for you.

Sands **DRY WALL CONSTRUCTION** perfectly—unexcelled on interior finish, cabinets, treads, and risers—a fine edging sander equally good on new and old work.

Patented compound motion eliminates hand sanding—sands closed corners **CLEAN**.

See your Dealer or write for complete information and Free Trial Offer—Price \$87.50 FOB, Menominee, Michigan.

A PENINSULA TOOL

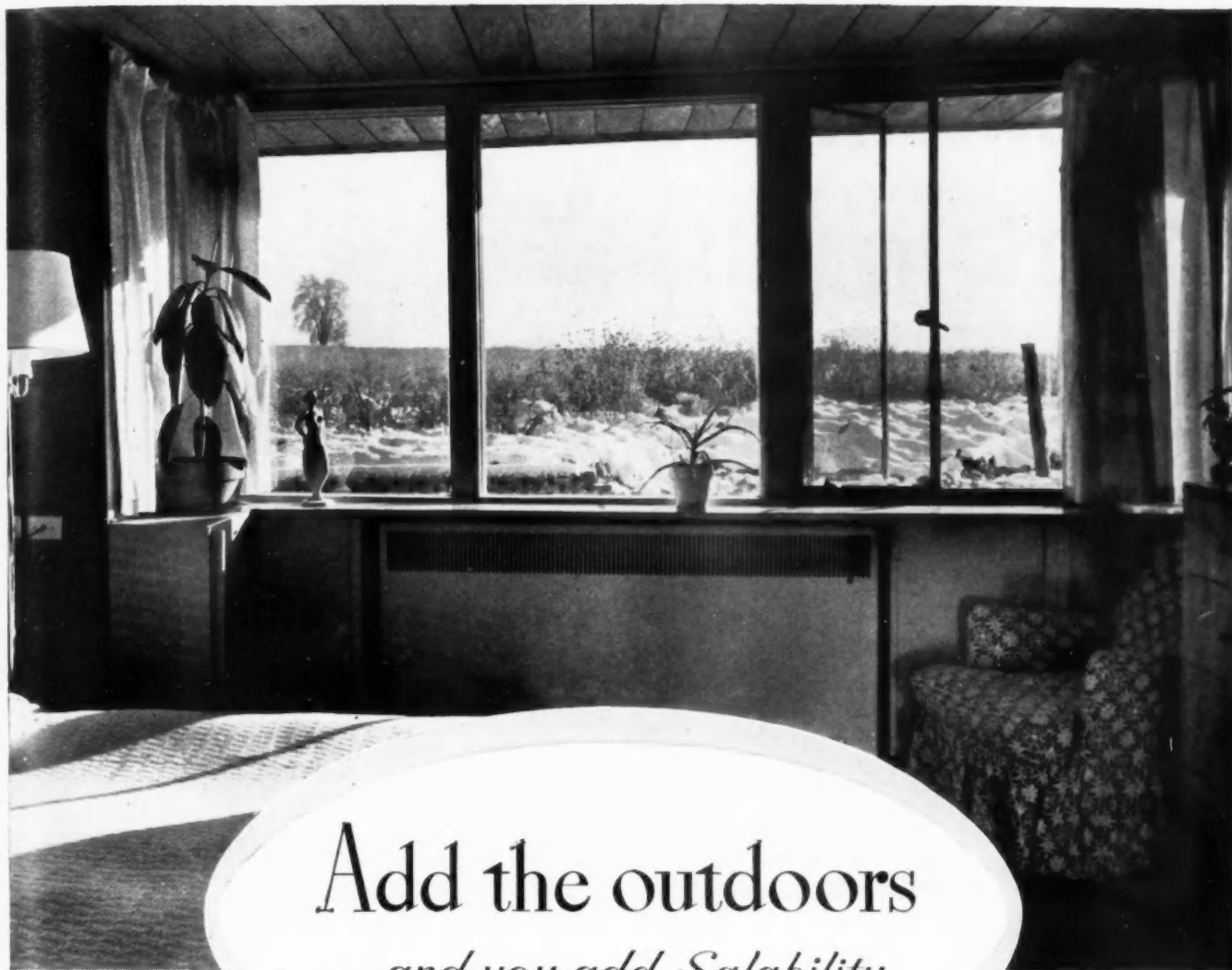
JITTERBUG SANDER COMPANY,

Inc.

Subsidiary L. E. Jones Co.

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L-O-F
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pane®-



Add the outdoors
...and you add Salability

Architect:
 Victor Hornbein, Denver
 Photo by
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The spaciousness, the color and the sunlight of the outdoors are added attractions when you use quality glass in the windows of your houses. Good glass is not an expensive material—it adds so much for so little.

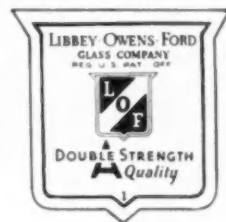
Today, home buyers expect generous window treatment—more windows, bigger windows. They are the mark of an up-to-date house.

This makes your choice of the right glass more important than ever. The well-known

L·O·F label on window glass in your houses tells prospects that you use good materials . . . that you have provided better, clearer glass for their enjoyment of the outdoor view.

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a Great Name in **GLASS**

Universal LEVEL-TRANSIT



**MOST PRACTICAL
ALL-AROUND BUILDER'S
INSTRUMENT
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Highly accurate, amazingly rugged, the Universal Level-Transit does all survey and check-up operations in building and road construction!

Quickly convertible from level to transit, its novel type of design protects parts which were formerly exposed to damage and inaccuracies. Other features include: a patented ball-bearing race, lock and release lever system, and perfect alignment adjustments.

12" Telescope, 25 power, horizontal guarded circle, Verniers to 5 minutes, Vertical arc, 3".

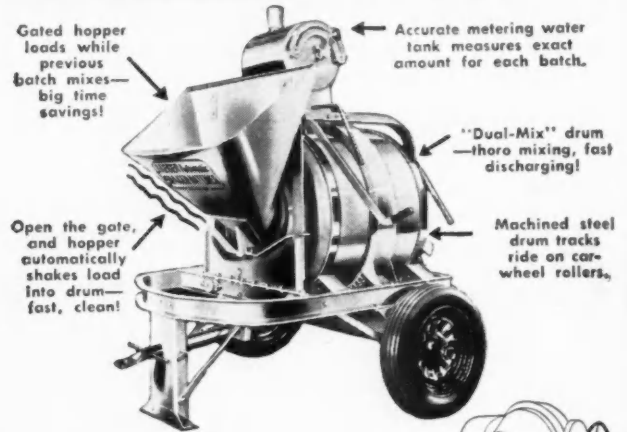
Write today for full details and free booklet "How to lay out building lots."

We repair all makes of instruments



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INSTRUMENTS FOR ENGINEERS,
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Mix 12 to 15 more yards a day with JAEGER 3 1/2 S "AUTO-LOADER"



You cut costs and boost profits when you mix 12 to 15 yards more concrete daily with no more manpower. And, you can do that with the Jaeger 3 1/2 S "Auto-Loader." It's the fastest half-bag mixer made. Catalog M-8 tells why—shows the complete Jaeger line. Write for it.



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all 4 IN La Belle Doorknob Lock

Widen your markets with this new hardware staple that ends the need for lockplates and old-fashioned key-holes. The compact, attractively styled LaBelle, with a tumbler cylinder lock built into its outer knob, is non-jamming and spins like a bearing when locked. You can easily sell it for outside and inside doors of new building or remodeling projects — homes, schools, apartments and government jobs.

SPECIAL . . .
With your initial shipment of one dozen LaBelle Doorknob Locks, you will receive, at no extra charge, a "use-it-yourself" display to help you sell. Order from your jobber or write direct.

**La Belle
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NOW! AMAZING NEW STEEL CASEMENT BORN OF REVOLUTIONARY MANUFACTURING METHOD...

BETTER 11 WAYS!

CHECK THESE 11 BIG ADVANTAGES:

1. Deeper Sections . . . 1 1/4" . . . Mean Added Strength, Rigidity.
2. Double Weathering Water-Tight Contact All Around.
3. Cold Rolled Steel Construction Makes Smoother, More Accurate Sections.
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5. Mitred, Butt-Welded Corners Mean Tighter, Smoother Joints.
6. Deeper (1 1/4") Muntins Add Greater Strength to Entire Casement.
7. 1 1/4" Section Depth Permits Double, Thermopane, or Insulation Glazing.
8. Easier, Better Glazing.
9. Designed With More Hinge Clearance at Jamb.
10. Larger Bottom Slots for Condensation Drainage.
11. IMMEDIATE DELIVERY FOR YOU!

You Are Assured Prompt Delivery . . . and Complete Home-Owner Satisfaction!

This is it . . . clearly the first major improvement in the casement window industry since the introduction of the *under-screen geared operator* 20 years ago! Now, after months of intensive research, STEELCRAFT has developed a standard casement window to make the once exceptional product even better than ever before. Here is truly a revelation in casement manufacture—a cold rolled steel sash with deeper sections, that makes the most economical use of materials, that becomes strongest, most adaptable, most perfectly constructed casement in building history.

The combined viewpoints of contractors, glaziers, engineers and architects formed the groundwork for the design of this new casement. On that STEELCRAFT'S top-skilled engineers built this new standard type casement, embodying all the advantages of the far more costly custom-built window . . . and then some—yet staying well within the economy-priced bracket of standard casements. Send now for complete construction and installation details of the brand new, ALL-NEW STEELCRAFT Standard Type Casement . . . as well as information on the complete line of STEELCRAFT Casements.

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Write Now for Catalog on Complete STEELCRAFT Casement Line . . . Showing Construction Details, Typical Installations, Best Adaptations for Your Needs!

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Please send me your free new catalog on the Complete Steelcraft Casement Window Line.

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HEAT
 WHERE YOU WANT IT--
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 without waste



**THE ORIGINAL HERMAN NELSON
 Gasoline-Burning Portable Heater**

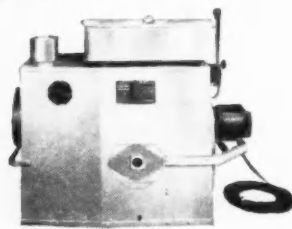
- Provides Quick, Clean, Safe Heat—without soot, fumes or open flame!
- Abundant fresh, heated air—forced to areas where most needed!

These time-tested, job-proved Portable Heaters step up winter production by eliminating delays caused by cold weather. Can be used for countless applications requiring temporary or emergency heat. Especially suited to jobs requiring a self-contained, self-powered heating unit. Full 250,000 BTU per hour capacity—enough to heat three ordinary five room houses—yet no bigger than a kitchen stove!

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New Herman Nelson De Luxe Model Portable Heater — Oil Burning — Electric Motor Powered — Automatic Ignition — 250,000 BTU per hour.



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**How to be Sure About Costs
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THE SIMPLE TAMBLYN SYSTEM OF ESTIMATING REDUCES BUILDING MATERIALS and LABOR COSTS TO EASY-TO-USE FACTORS!

Do you get that *creepy feeling* about your estimates? Why take a chance when you can be sure! Just multiply by our simple factors to determine your labor and material costs. The Tamblyn System is simple, fast, accurate, complete and dependable!

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**SEND NO MONEY—TRY IT FOR 10 DAYS FREE!
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 Send me the complete Tamblyn System on free 10 days trial! If I like it I will pay \$8.75 when 10 days are up and \$7.50 per month until \$38.75 is paid. Otherwise I will return it.

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CITY STATE



"After the leaves fall...

JANITROL WARM COMFORT KEEPS MY HOMES SOLD"

Says Builder Dillon

**WITH JANITROL GRAVITY
FURNACES YOU FEATURE
MODERN HEATING AT LOW COST**

From the very beginning, early in 1948, Dillonvale, a model community in suburban Cincinnati, was a huge success. Developer and Builder Dillon is using quality materials and equipment... mass production methods for a contemplated 600 homes have kept these attractive two and three bedroom homes in a reasonable \$13,000 price bracket.

In keeping with the policy of using only high quality products, *Janitrol Gas-Fired Gravity Furnaces are used exclusively.*

Designed for easy installation, these Janitrol units provide economical, fully automatic heat... builders can feature their modern appearance and operation, yet make savings on their installation costs.

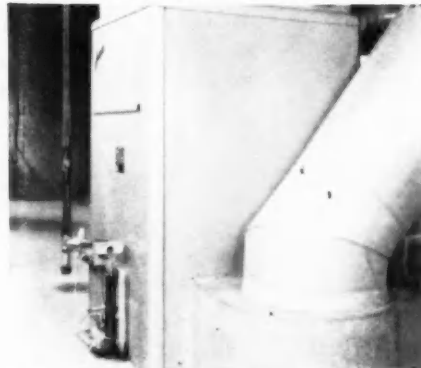
To add greater value and saleability to your homes without increasing your costs, write today for name of your local Janitrol representative, who is prepared to help you.



Careful and ingenious use of architectural detail results in varied and attractive exteriors, although floor plans are mostly identical.



Approximately 20% of the 600 homes are completed with owners moving in as quickly as units are ready for occupancy.



Note control cover on front of Janitrol Gravity Furnace is left off for economy reasons. Owners will have option of buying cover separately if so desired.

Janitrol

TIME-PROVEN GAS HEATING

Winter Air Conditioners, Gravity Furnaces,
Triple Service Systems, Boilers,
Conversion Burners

See Janitrol's exhibit,
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Booths 126-127—Hotel Stevens
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SURFACE COMBUSTION CORPORATION • TOLEDO 1, OHIO

HOME BUILDERS...

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Cost-saving construction methods, standardization and advanced design are the aims of NAHB's Technical Service Department. Established to provide a ready source of technical information for Home Builders, this department gathers latest data from construction laboratories and field operations.

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Firm

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READ THIS FACTUAL BOOKLET

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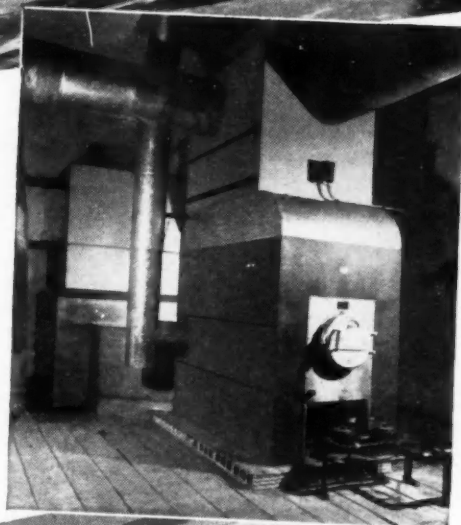
Mr. Alfred M. Klopf *
of A. C. Klopf & Sons

"I saved 40%
for my client...

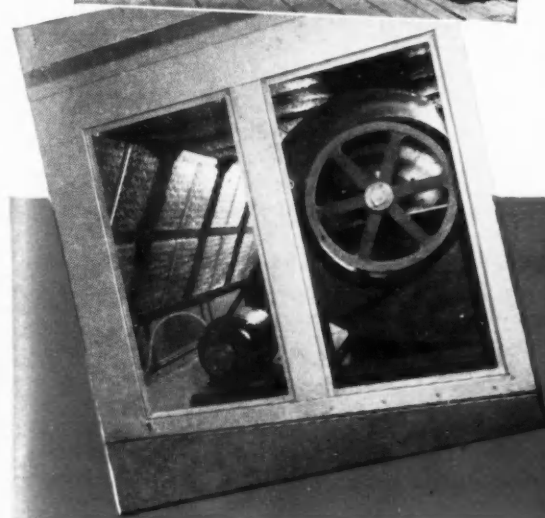
on installation costs by recom-
mending and installing WARM AIR
instead of wet heat"



View of Recreation Center,
Saginaw, Michigan.
Frantz & Spence, Archi-
tects, Heating contractor,
A. C. Klopf & Sons.



A Jackson & Church
"PowerRated" heater is
satisfying heat loss of
500,000 Btu's at low
cost. This unit is hand-
ling 11,000 cfm.



Blower unit equipped
with twenty 16" x 25"
filters provides four
changes of air per hour.
Installed in attic space
which otherwise would
have been unusable.

"My client. . . Mr. Frank Anderson,
owner of the Recreation Center at
Saginaw, Michigan. . . after a review
of actual warm air as compared to esti-
mated wet heat installation costs. . .
informed me that warm air was ap-
proximately 40% less expensive.

Besides cutting installation costs to
the bone. . . warm air heating has
given my client low cost operation and
top performance.

During the summer months, the
blower and ductwork are utilized to
provide frequent filtered and humidi-
fied air changes and thus obviate a
summer air conditioning system. . . a
definite plus feature. . . cost-and-com-
fort-wise.

All in all, I have found that warm
air heating has so many exclusive com-
binations of values that it is my first
choice every time."



* Statement of Mr. Alfred M. Klopf on file with Jackson
& Church Company.



... AMERICA'S LARGEST AND MOST
COMPLETE WARM AIR HEATING LINE



A PRODUCT OF
JACKSON & CHURCH CO., SAGINAW, MICHIGAN

"WORK WELL DONE SINCE '81"



Hidalift

THE 100% CONCEALED SASH BALANCE for

Lifetime Service

In a scientifically controlled test, a sash equipped with HIDALIFT Sash Balances was subjected to a full continuous movement for 270 hours. This test is equivalent to opening and closing the sash once a day for 715 years. The balance disclosed no signs of wear.

Easy Installation

Hidalift is the quickest, easiest sash balance to install. Simply plough the sash and attach with two screws. A self centering guide bushing maintains perfect balance . . . prevents jamming . . . eliminates the use of templates in installation.

.. and Economy

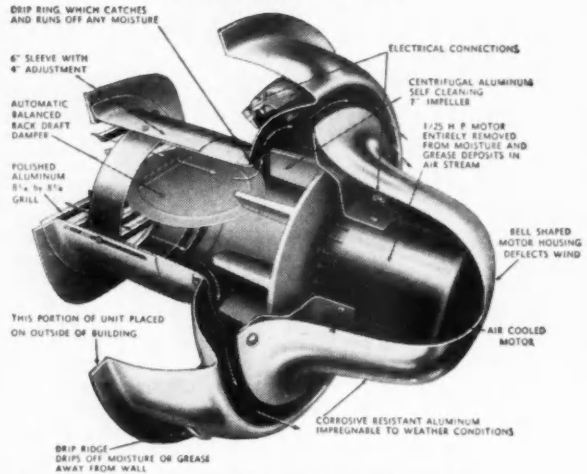
In these days of costly hard-to-get labor, HIDALIFT which cuts installation time in two, offers you real savings in time and money on the job. The building owner will appreciate the freedom from maintenance costs. Tenants will like the lowered fuel costs afforded by weather tight windows. With HIDALIFT Sash balances there's true economy all around.

WRITE for name of your nearest dealer. Completely descriptive literature showing installation and sizes and specifications available.

THE TURNER & SEYMOUR MFG. CO.
TORRINGTON, CONN.



THE KITCHEN-AIRE EXHAUST FAN Is Different . . . !



Check these outstanding features . . .

- **MAXIMUM EFFICIENCY**—exhaust grill may be mounted above cooking range, even on an inside wall.
- **FIRE-SAFE**—grease laden air is NOT drawn over motor.
- **QUIET**—operating mechanism is mounted OUTSIDE the wall!
- **WEATHERPROOF**—back draft damper protects against heat loss; operating mechanism is housed in corrosion-free aluminum.
- **ECONOMICAL**—low in cost; easy to install. Grease and moisture laden air is not deposited on kitchen walls—saves on cleaning and decorating.
- **WIDE USEFULNESS**—electrically operated, can be installed anywhere, in new or old houses—keeps kitchens cool and odorless, bathrooms and recreation rooms fresh, and basements dry.

These are features that the conventional exhaust units can't offer . . . Kitchen-aire units are actually SUPERIOR, and they're selling fast!

Write for particulars

As Advertised in Better Homes and Gardens

STEWART MANUFACTURING COMPANY
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1. QUALITY TESTED This seal on a Kitchen Cabinet means that cabinets bearing this seal have met rigid tests in an independent testing laboratory.

2. AVAILABLE These tests are available to all manufacturers of steel kitchen cabinets. NO MANUFACTURER IS EXCLUDED.

3. CUSTOMER APPEAL This seal means that you can be assured that steel cabinets that carry it will give long years of trouble-free service.

4. FOR YOUR PROTECTION Due to 11 tests for mechanical fitness, 10 tests for finish . . . cabinets bearing this seal have been BUILT UP to a standard . . . NOT DOWN to a price!

... for additional information — WRITE



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140 PUBLIC SQUARE • CLEVELAND 14, OHIO
DEPT. A

BUILDERS SAY:

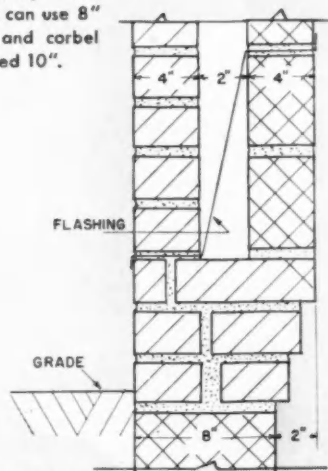
Brick is first

TEN IMPORTANT WAYS!

TIPS ON GOOD MASONRY PRACTICE

CORBELLING 8 INCH FOUNDATIONS

Many building codes permit 8" foundations for 10" cavity and brick veneered walls not over 1½ stories high. For economy in construction you can use 8" foundations and corbel to the required 10".



PROCEDURE:

1. The first course of brick is composed of 2 stretchers with the inner wythe projecting over the foundation wall 1/3 of the desired maximum corbelling. (Note: Building codes limit the projection of any one unit to 1/3 its height.)
2. The second course consists of a stretcher unit and a clipped header unit projecting as shown.
3. The third course consists of a "queen" brick as a stretcher and a full header as back-up. (Note: Building codes require top corbel course to be a full header.)

Write for planbook 'BRICK ENGINEERED HOMES'

Shows you how to build all of brick's advantages into six beautiful small homes. Easy to build, modular designed, detailed drawings available. Send 25¢ with your name and address to Structural Clay Products Institute, 1756 K Street, N.W., Dept. AB-1, Washington 6, D. C.

You builders are the men who *know*.

And you say, by an overwhelming majority, that brick is tops.

Tops with your customers and tops with you . . . for beauty, permanence, fire safety, real value . . . for almost every other quality that helps you build better—sell faster.

In a recent nationwide survey you rated brick *first*, over all other structural materials, in 10 such qualities out of 12 (and very near first in the other two)!

What better assurance of dependability and all-around quality than the endorsement of men like yourself—whose job it is to know? Remember this endorsement and remember *brick*, next time you build.



STRUCTURAL CLAY PRODUCTS INSTITUTE
1756 K Street, N. W. Washington 6, D. C.

Makes difficult jobs
Easy




the new
FULLY ENCLOSED
INSL-COTTON
INSULATION

Insulation problems are simplified with the new fully enclosed Insl-Cotton insulation on the job. A rugged insulation built to take rough handling, it can be jerked and pulled with no danger of the insulation coming loose. Fully protected, it has a heavy vapor-proof barrier with tacking flaps on one side and strong, sturdy paper on the other. Enclosed Insl-Cotton cuts installation time and trouble... it is the ideal insulation where *extra* strength is needed.

FULLY ENCLOSED OR OPEN TYPE INSL-COTTON
EXCEEDS GOVERNMENT SPECIFICATIONS...

With a "K" value of 0.24, Insl-Cotton exceeds technical requirements for approved insulation in FHA, FPHA, HH-1-528 and 7d specifications. Tests by the U. S. Department of Agriculture and leading laboratories have proved Insl-Cotton to be from 4% to 36% more efficient than any other available type insulation when made to 7d specifications.

This, plus Insl-Cotton's extreme light weight, easy installation at low labor cost, its always uniform thickness, moisture and insect immunity and non-settling qualities are some of the reasons why Insl-Cotton is rapidly becoming first choice among architects, contractors, builders and homeowners alike.

Certified Insl-Cotton contains no second-hand material. Every lot is tested and certified to the U. S. Government. No other insulation except flame-proof, fire-retarding cotton insulation made under Federal supervision can make this claim.

INSL-COTTON DIVISION
TAYLOR BEDDING MFG. CO.
TAYLOR, TEXAS • BELTON, TEXAS

Originators of Flame-Proof, Fire Retarding Cotton Insulation

ALL COTTON INSULATION IS NOT
INSL-COTTON... INSIST ON THE
ORIGINAL AND GENUINE
INSL-COTTON

MAIL THIS COUPON TODAY!

TAYLOR BEDDING MFG. CO., Taylor, Texas

Gentlemen:

Please send specifications and full information on Insl-Cotton

Name _____

Address _____

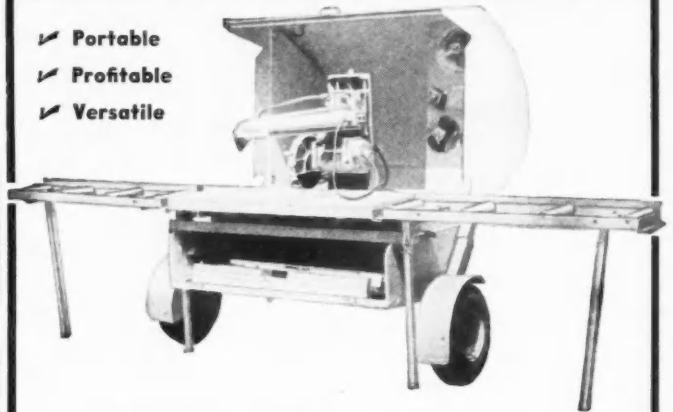
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Check Here:

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**THE BUILDER'S SAW
—ON WHEELS!**

- ✓ Portable
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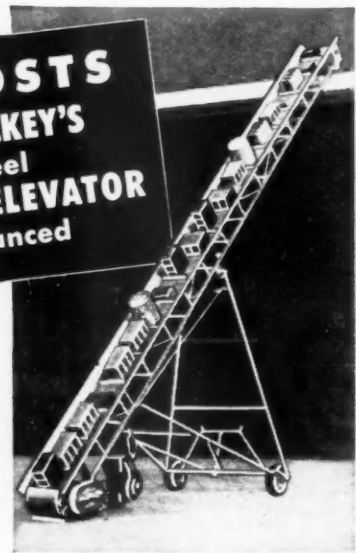
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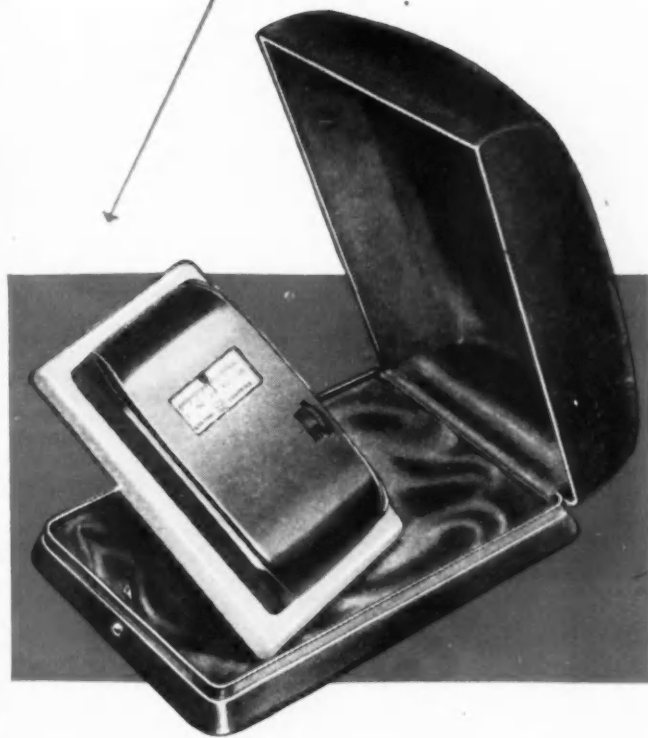
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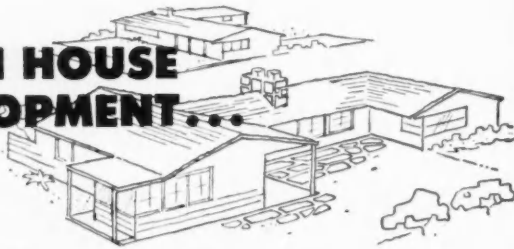
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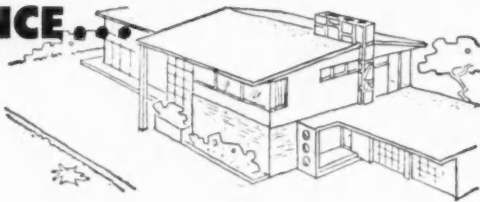
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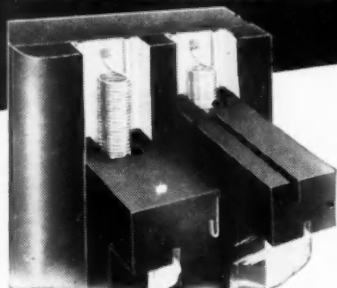
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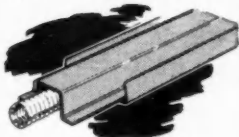
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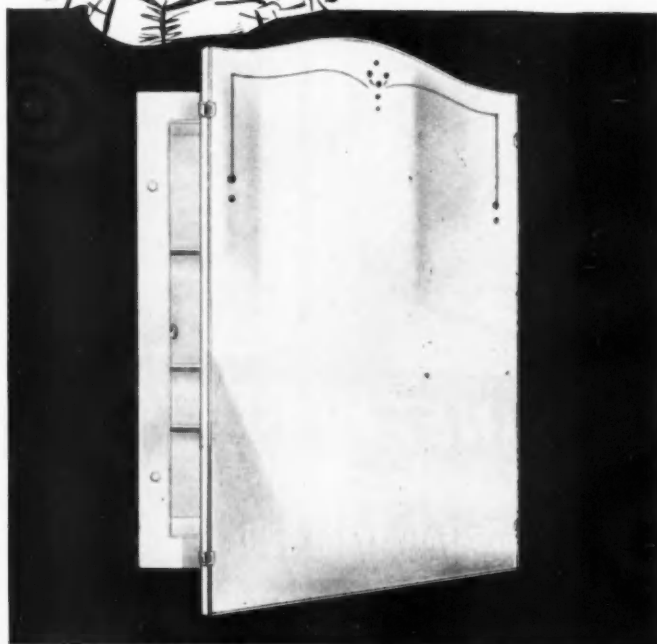
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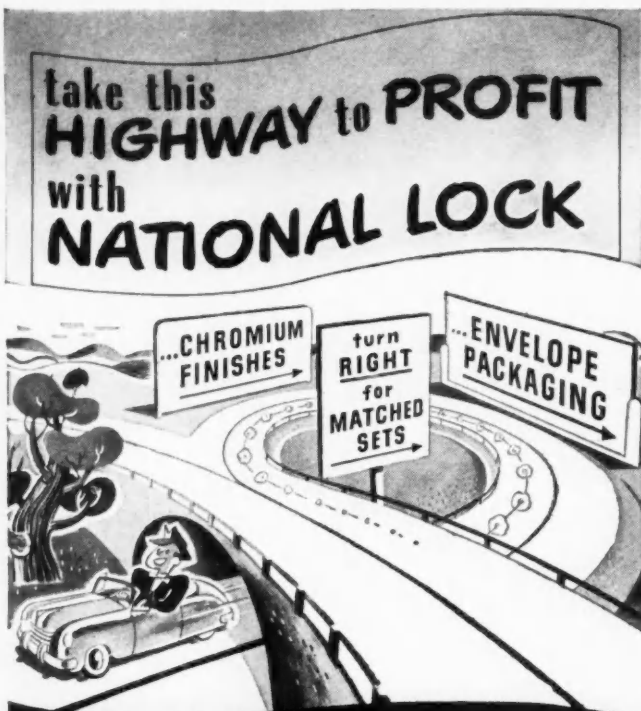
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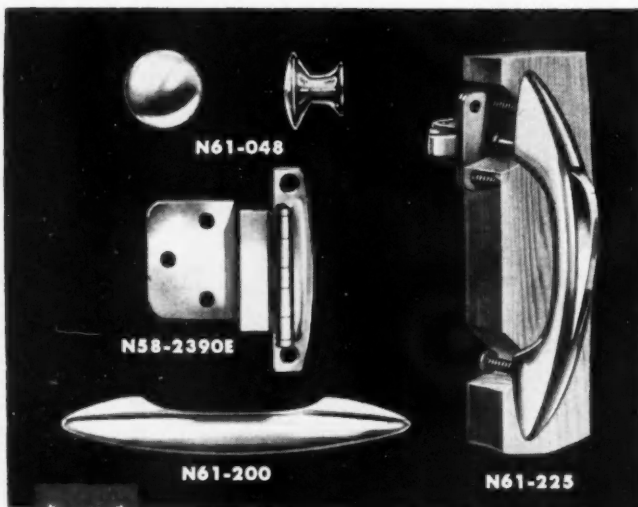
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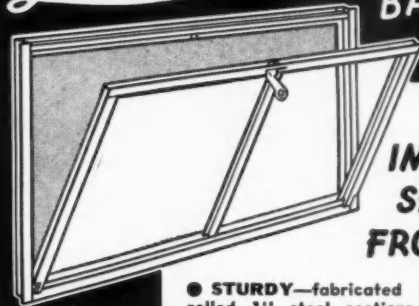


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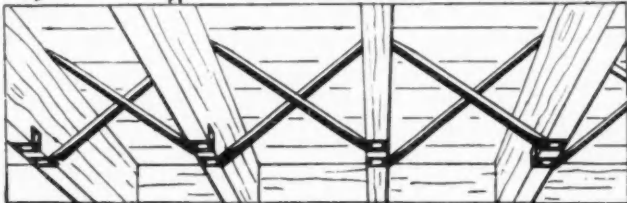
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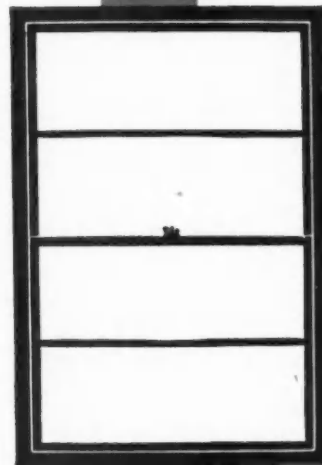


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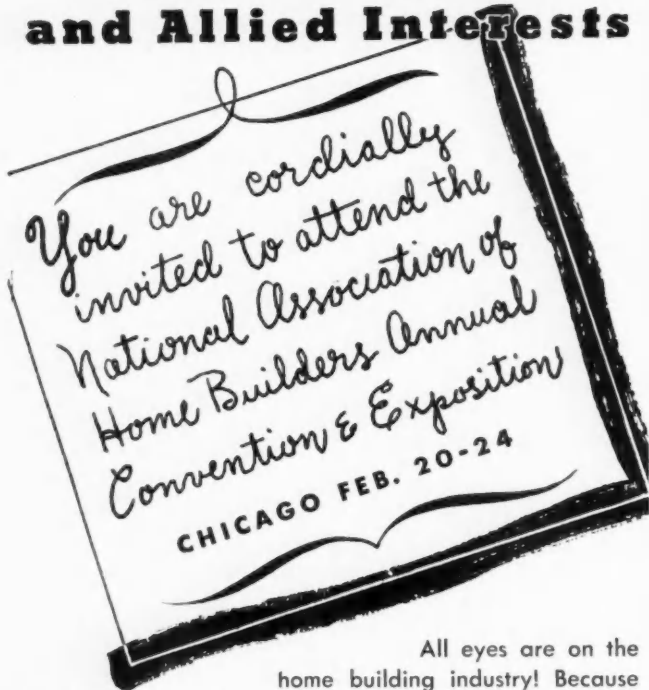
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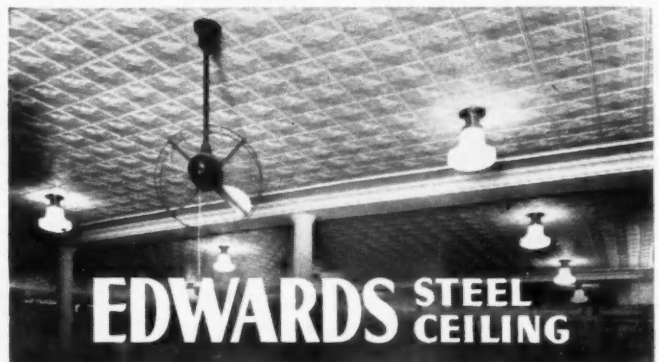
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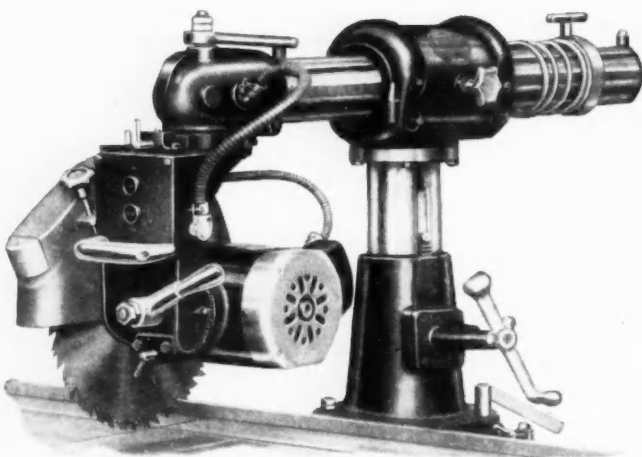
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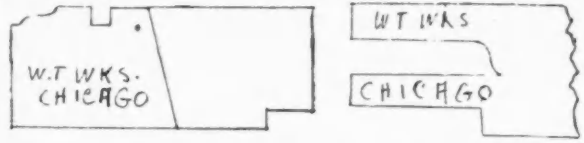


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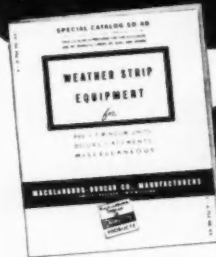


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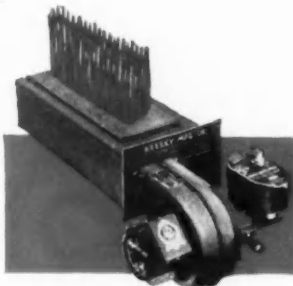
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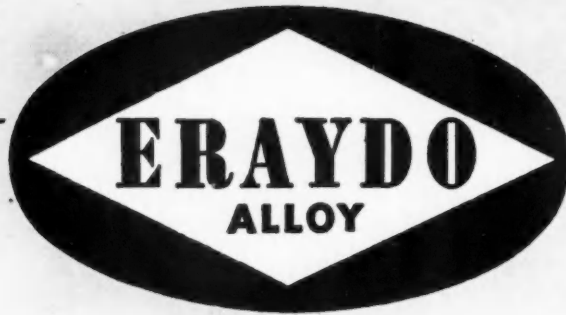


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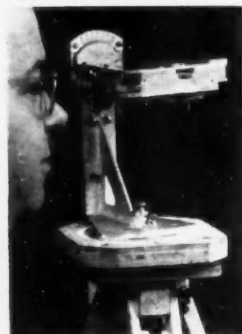
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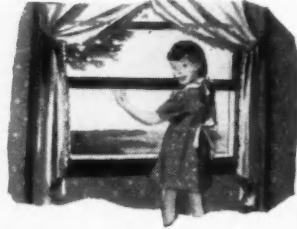
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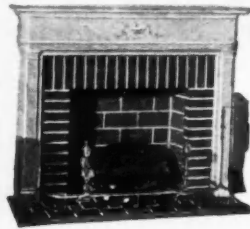
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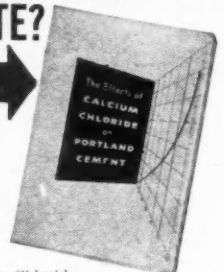
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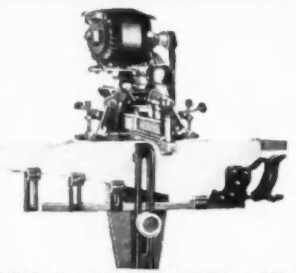
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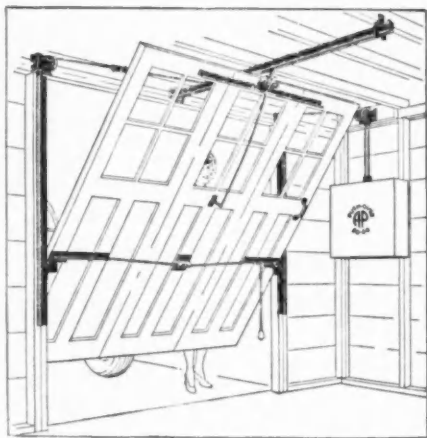
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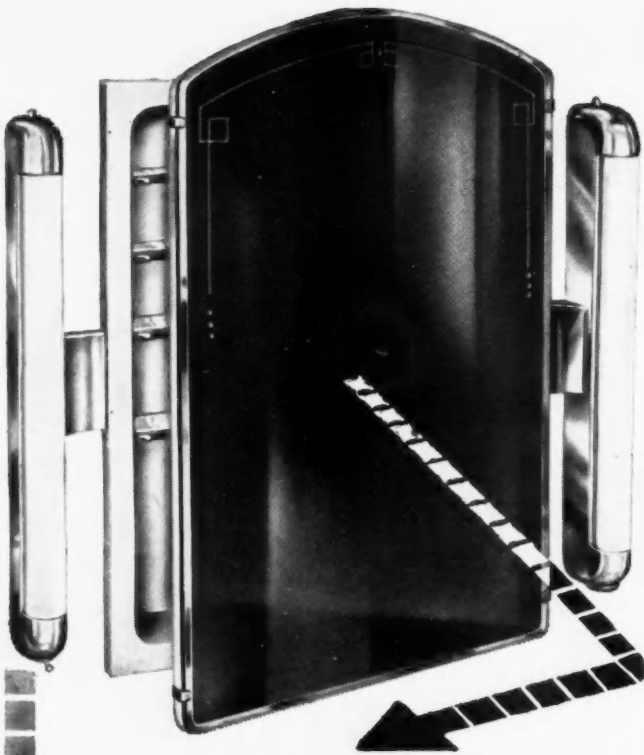


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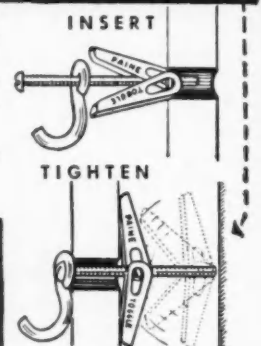
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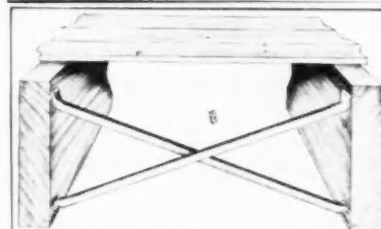


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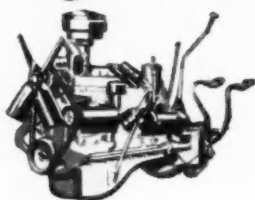
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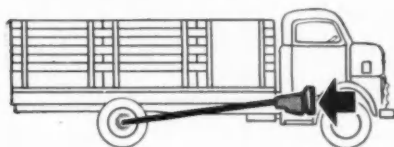
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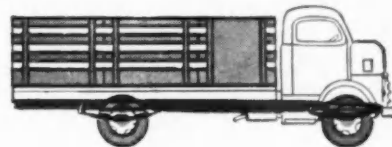
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1949



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